Screening for esophageal adenocarcinoma and precancerous conditions (dysplasia and Barrett's esophagus) in patient with chronic gastroesophageal reflux disease with or without other risk factors: introduction of two systematic reviews to inform a guideline of the Canadian Task Force on Preventive Health Care (CTFPHC)

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KQ1: Benefits and Harms of screening
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KQ2: Patient Values and Preferences
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CH, AB, MT participated in the collection of data, data management and analyses for the review. CH drafted the review. BS developed the search strategy and provided text for the review. JL, DM, AS, BJS, BH, critically reviewed the review and provided methodological expertise. AC, DM reviewed the review and provided clinical expertise.

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Author contribution for KQ2
CH and AB participated in the collection of data, data management and analyses for the review. CH drafted the review. BS developed the search strategy and provided text for the review. JL, DM, AS, BJS, BH, critically reviewed the review and provided methodological expertise. KD, DM, LB reviewed the review and provided clinical expertise.

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Role of funder
The funder provided feedback on the protocol and draft systematic review, but was not involved in the study selection, data extraction, or analysis and were not involved in a decision to seek publication.

Contents

Abbreviations/Glossary

ACG	American College of Gastroenterology
ACP	American College of Physicians
AGA	American Gastroenterological Association
AMSTAR	A Measurement Tool to Assess Systematic Reviews
BE	Barrett's Esophagus
BMI	Body mass index
CAG	Canadian Association of Gastroenterology
CI	Confidence interval
COMET	Core Outcome Measures in Effectiveness Trials
CTFPHC	Canadian Task Force on Preventive Health Care
EAC	Esophageal adenocarcinoma
EGD	Esophagogastroduodenoscopy
EME	Enhanced magnification-directed endoscopy
ESCC	Esophageal squamous cell carcinoma
GERD	Gastroesophageal reflux disease
GI	Gastrointestinal
GRADE	Grading of Recommendations, Assessment, Development and Evaluation
HR	Hazard ratio
ITS	Interrupted time series
NICE	National Institute for Health and Care Excellence
NOS	Newcastle-Ottawa Scale
NR	Not reported
P-EGD	Peroral endoscopy
PCORI	Patient Centered Outcomes Research Institute
PICOS	Population, Interventions, Comparisons, Outcomes, Study design
PPI	Proton pump inhibitors
PRESS	Peer Review of Electronic Search Strategies
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
RCT	Randomized controlled trial
ROB	Risk of bias
RR	Risk ratio
SD	Standard deviation
SPOR	Strategy for Patient-Oriented Research
SR	Systematic review
TNE	Transnasal esophagoscopy
Transoral-EGD	Transoral esophagoscopy
VCE	Video capsule esophagoscopy
ZAP	Z-line appearance

Chapter 1

1 Introduction

1.1 Background

Purpose

These systematic reviews (SR) outline knowledge syntheses that will be used by the Canadian Task Force on Preventive Health Care (CTFPHC) to inform a guideline on screening adults (≥18 years) with chronic gastroesophageal reflux disease (GERD) with or without other risk factors for esophageal adenocarcinoma and associated precancerous lesions (Barrett's Esophagus (BE) and dysplasia). These SRs synthesize the evidence on the benefits and harms of screening in this population and the preferences and values in relation to screening.

Definition

In esophageal cancer, malignant cells form in the tissues of the esophagus, primarily in glandular cells (esophageal adenocarcinoma or EAC) or squamous cells (esophageal squamous cell carcinoma or ESCC).

Prevalence and burden of esophageal adenocarcinoma

ESCC is the most prominent form of esophageal neoplasm worldwide, with 398,000 cases of ESCC compared to 52,000 cases of EAC in 2012[1]. Nearly 50% of the worldwide cases of EAC occur in Northwestern Europe and North America[2].

Rates in Canada provided by the Canadian Cancer Society do not separate EAC and ESCC, and report the overall rates of esophageal cancer. In 2017, projected new cases of esophageal cancer were 2,330 cases (1,800 among men and 530 among women) with 2,130 deaths from the disease (1,650 among men and 480 among women). Although esophageal cancer has a lower incidence than other cancers (ranked 13th among men and 19th among women), it has a high mortality rate and a low five-year survival rate (14%), the second lowest survival rate after pancreatic cancer[3]. The probability of developing esophageal cancer in the next 10 years increases with age in men, but not women (**Figure 1**)[3].

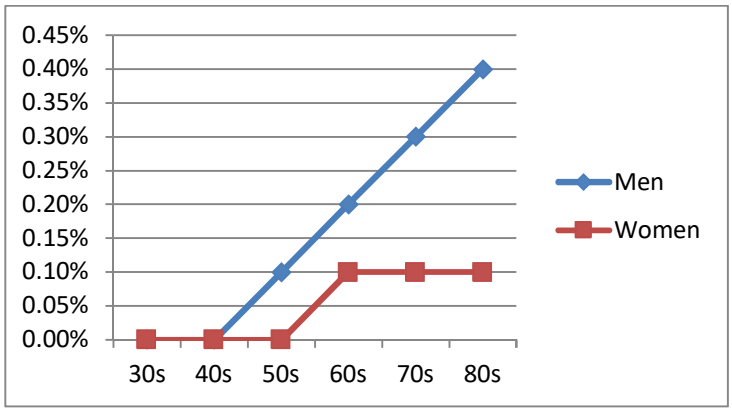

Figure 1 - Probability of developing esophageal cancer in the next 10 years

From 1986-2006, EAC incidence in Canada rose by 3.9% in males and 3.6% in females per year, while the incidence of ESSC declined by 3.3% in males and 3.2% in females per year[2]. Given the geographic distribution and increasing incidence of EAC in Canada, the focus of the guideline will be on EAC.

Risk factors

Commonly cited risk factors for EAC are chronic GERD, BE, age ≥50 years, male sex, European descent, obesity, smoking, a family history of BE or EAC, and a diet low in fruits and vegetables[4–7].

Chronic GERD and precancerous conditions

The prevalence of GERD in Western countries has increased over the past few decades and is one of the most commonly encountered conditions in primary care practice with an estimated prevalence of between 18-27% in the United States and 9-26% in Europe[8]. Extrapolating these prevalence estimates to the Canadian population, since no Canadian incidence studies exist, would mean that 3.4-6.8 million persons in Canada experience GERD[9]. GERD is a chronic disease with varying definitions[9–12]. The Montreal definition has been adopted by clinicians and researchers, and defines GERD as "a condition which develops when the reflux of stomach contents causes troublesome symptoms (e.g., retrosternal burning (heartburn), regurgitation) and/or complications (e.g., esophagitis, esophageal stricture)"[13]. According to the American Society for Gastrointestinal Endoscopy, chronic, long-standing GERD is defined as frequent severe GERD symptoms for over five years and requiring regular acid suppression therapy[14]. However, experts differ in the definition of the duration of symptoms and whether acid suppression therapy is considered in defining chronic GERD[15–17].

The most common complications of GERD are esophagitis, esophageal stricture, BE (a premalignant lesion, further described below), and EAC[9]. Approximately 60% of people with EAC have experienced symptoms of GERD and there is an association between the frequency and severity of symptoms and increased risk of EAC[18,19]. In a 2008 guideline developed by the American College of Gastroenterology, BE was defined as "a change in the distal esophageal epithelium of any length that can be recognized as columnar type mucosa at endoscopy and is confirmed to have intestinal metaplasia by biopsy of the tubular esophagus."[20] BE is known to develop in around 6%-14% of people with GERD, and among those with BE (with or without GERD), 0.2%-0.5% develop EAC[21]. However, not all individuals with BE will experience chronic GERD symptoms, and it is still unclear why such a small percentage of people with GERD develop BE[22,23]. Once an individual is diagnosed with BE, regular surveillance using endoscopy should be considered, as BE can progress over time from low- to high-grade dysplasia and into EAC[24,25]. Patients who have EAC discovered as a result of endoscopic screening or as part of a surveillance program for BE are diagnosed with earlier-stage tumours, are less likely to have lymph node involvement, and have better short-term life expectancies than those who present with alarm symptoms such as dysphagia and weight loss[26].

With Canada's increasing senior population and longer life expectancy, there is an expected increase in the incidence rates of GERD and EAC, and, therefore, increased demand for gastrointestinal endoscopies[9,27]. From the Canadian Institute for Health Information National Physician Database, between 2004 and 2008 the number of upper endoscopies performed in

Canada has increased by approximately 16%[28]. However, the reason for the endoscopy was not detailed.

Current recommendations and clinical practice in Canada

We are not aware of any primary care national recommendations on screening for EAC in Canada.

However, the BC Cancer Agency provides a guideline for primary care on prevention, screening, diagnosis, treatment, and follow-up of upper gastrointestinal diseases and cancer[29]. They do not recommend screening asymptomatic patients for BE, and follow the American Gastroenterological Association (AGA) recommendations that screening should be considered among those with persistent reflux or with multiple EAC risk factors (e.g., chronic GERD, ≥ 50 years of age, tobacco smoking)[30]. The province of Alberta has a guideline on the diagnostic work-up, treatment and management of patients with esophageal cancer (both EAC and ESCC)[31]. The 2004 Canadian Association of Gastroenterology (CAG) has recommendations focused on the management of GERD and BE, including a consensus statement on management of GERD, based on expert opinion[32]. The Compendium of Therapeutic Choices, although not a screening guideline, is used by many Canadian primary care physicians for guidance about the management of GERD, which includes suggestions on when to investigate[33].

The reference method in clinical practice to detect EAC and precancerous conditions (BE with or without low- or high-grade dysplasia) is to perform an endoscopy, which typically includes the esophagus, stomach and duodenum called (i.e. esophagogastroduodenoscopy or EGD)[2,34]. If lesions or anomalies consistent with BE, dysplasia or possible EAC are suspected, the reference method for diagnosis is to perform targeted 4-quadrant biopsies every 1-2 cm along the length of the BE segment (Seattle Protocol) with histological examination of the biopsies[5,35]. If BE is confirmed, proton pump inhibitor (PPI) therapy is started or continued in addition to endoscopic surveillance with biopsies at different intervals, depending on the presence and level of dysplasia.

Several adjunct techniques, such as chromoendoscopy, narrow-band imaging, confocal microscopy, spectroscopy, magnification endoscopy, and high definition endoscopy have been reported to aid in the detection of early stage cancer[36]. Other detection technologies include barium swallow, transnasal ultrathin endoscopy, cytologic examination (brush, balloon, sponge, liquid), and capsule endoscopy, many of which are emerging and not currently used in Canadian clinical practice. New methods for detection such as flow cytometry, molecular biomarkers, and laser-induced fluorescence spectroscopy have also been proposed for use in screening.

International guidelines

The following organizations outside Canada have released guidelines on endoscopic screening for esophageal cancer, including information on screening people diagnosed with GERD: the American College of Gastroenterology (ACG)[20], the American College of Physicians (ACP)[10], the American Gastroenterological Association (AGA)[26], and the UK's National Institute for Health and Care Excellence (NICE)[37]. The ACP has also developed a guideline for best practices in individuals with BE[7].

There is a general consensus among the CAG, ACG, ACP, and AGA against screening the general population with GERD for EAC or BE. Diagnostic testing is not seen as an appropriate first step in most patients presenting with only GERD symptoms[10,26]. However, there is a consensus on

screening males 50 years and older who are suffering from chronic GERD symptoms (defined as symptoms for more than five years[10,26] or ten years[32]) and who have one or more additional risk factors for EAC (European descent, nocturnal reflux symptoms, hiatal hernia, high body mass index, large waist circumference (abdominal obesity), and/or tobacco use)[10,26,32,38].

The ACP and NICE provide information on diagnostic testing individuals with alarm symptoms (i.e., dysphagia, bleeding, anemia, weight loss, and recurrent vomiting); however, this population subgroup would be considered different from that of interest to the proposed guideline, which considers only individuals with chronic GERD and no alarm symptoms. The ACP and NICE guidelines recommend routine testing in men and women with heartburn and alarm symptoms, individuals who experience GERD symptoms after four to eight weeks of PPI therapy or who have been treated two months for a severe erosive esophagitis, or individuals who have a history of esophageal stricture with recurrent symptoms of dysphagia[10,37].

1.2 Objective

The CTFPHC is undertaking a systematic evaluation of the evidence to inform its recommendations for primary healthcare in Canada on screening for EAC among patients with GERD because: 1) incidence of EAC is increasing in North America and Europe; 2) EAC is usually diagnosed at an advanced stage and has high mortality; 3) there are common risk factors identifiable in primary care that could be the basis for a risk calculator for selection for testing for BE, dysplasia, and early stage EAC; 4) some estimates indicate that 2.4%-13.2% of patients with GERD who are already undergoing endoscopy for surveillance will be diagnosed with BE; 5) BE with dysplasia is one pathway to the development of EAC, although there are other possible pathways; 6) preventive behavioural interventions (e.g., tobacco cessation) can be undertaken and individuals with a high risk might have increased compliance with preventive behavioural interventions; 7) interventions are available for patients with BE that may prevent EAC; and 8) treatment of early EAC may increase survival[18,39–44].

This document contains two SRs. The first SR (Chapter 2) focuses on synthesizing the evidence on the effectiveness (benefits and harms) of screening for EAC and precancerous conditions (BE and dysplasia). The second review (Chapter 3) evaluates patient preferences and values about undergoing screening for EAC. The analytic framework is provided below in **Figure 2**. This review is not designed to evaluate the association between different severities of GERD (mild, moderate, and severe) and progression to EAC. Rather the specific objective is to evaluate the potential benefits and harms of screening in a defined high-risk group, individuals with chronic GERD, who can be identified with some consistency in primary care practice.

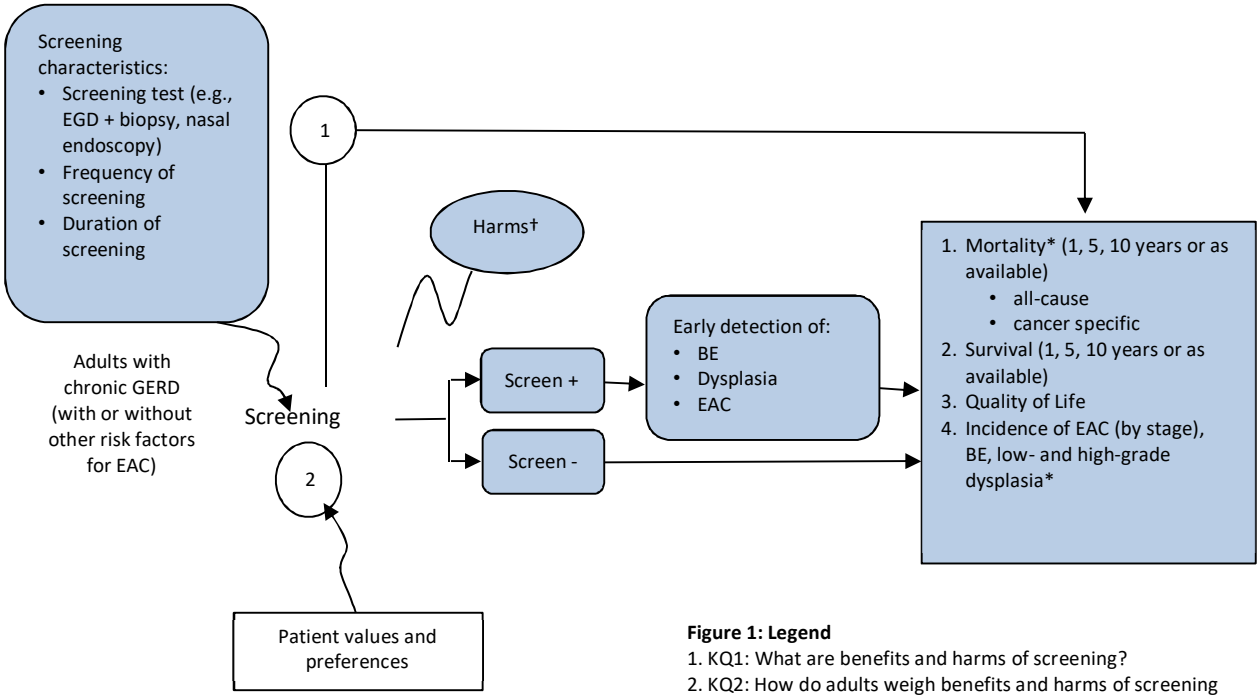

Figure 1: Legend
1. KQ1: What are benefits and harms of screening?
2. KQ2: How do adults weigh benefits and harms of screening (patient preferences)?

†Harms of screening
- Life threatening, severe, or medically significant consequences (such as requiring hospitalization or prolongation of hospitalization; disabling (limiting self-care or activities of daily living)
- Psychological effects (i.e., anxiety and depression)
- Major or minor medical procedures*
- Overdiagnosis‡

‡ Outcomes with * will be used to calculate overdiagnosis

Figure 2 - Analytic Framework

In addition to these systematic reviews, a study on patient values and preferences is ongoing to help inform Task Force recommendations. The two groups being assessed in this study are those with GERD who can potentially be screened and those assigned or who are under surveillance with EGD. These results are not presented within this document, but will be considered in developing the guideline recommendations.

Chapter 2: Screening for esophageal adenocarcinoma and precancerous conditions (dysplasia and Barrett's esophagus) in patients with chronic gastroesophageal reflux disease with or without other risk factors: systematic review to inform a guideline of the Canadian Task Force on Preventive Health Care

Hamel C, Beck A, Thuku M, Stevens A, Skidmore B, Chatterjee A, Maziak D, Shea B, Hutton B, Little J, Moher D.

Abstract

Background: This systematic review was produced for the Canadian Task Force on Preventive Health Care to inform the development of a guideline on screening adults with chronic gastroesophageal reflux disease (GERD) with or without other risk factors for esophageal adenocarcinoma (EAC) and associated precancerous lesions (Barrett's Esophagus (BE) and dysplasia).

Objective: The goal was to systematically review the evidence on the effectiveness (benefits and harms) of screening for EAC and precancerous conditions (BE and dysplasia) among adults with chronic GERD in primary care or related settings.

Methods: We searched Ovid MEDLINE®, Ovid MEDLINE® Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Embase Classic + Embase and the Cochrane Library, and unpublished literature using the CADTH Grey Matters checklist. The search was run on October 29, 2018.

The population of interest was adults (≥18 years old) with chronic GERD with or without other risk factors for EAC. We were interested in all screening modalities used for detecting EAC and precancerous conditions (BE and dysplasia), such as esophagogastroduodenoscopy (EGD) and transnasal endoscopy. The outcomes of interest were EAC-related and all-cause mortality; survival (at 1, 5, and 10 years or as available); life threatening, severe, or medically significant consequences; incidence of EAC, BE, low- and high-grade dysplasia; quality of life; psychological effects; major or minor medical procedures; and overdiagnosis. We included randomized controlled trials (RCTs), and as few RCTs were available, we also considered non-randomized controlled clinical trials, controlled before-after, interrupted times series, cohort studies, and case-control studies.

The liberal accelerated approach was taken for title and abstract screening and full-text screening was performed independently by two reviewers. Data extraction and risk of bias assessments were completed by one reviewer and verified by a second reviewer. Any disagreements were resolved by consensus. The rating of the certainty of the evidence was completed using the GRADE framework.

Results: After screening 7,292 studies, a total of ten studies (six RCTs, one randomized cross-over, one prospective cohort, and two retrospective cohorts) were included in this review. However, only two studies (both retrospective cohorts) compared screening (received prior EGD)

versus no screening. Authors from one study reported that there was no difference in long-term survival (approximately 6 to 12 years) between those who had received a prior EGD and those who had not (adjusted HR 0.93, 95% confidence interval (CI) 0.58-1.50), even though there may be higher odds of a stage 1 diagnosis than a more advanced diagnosis (stage 2-4) if an EGD had been performed in the previous five years (OR 2.27, 95% CI 1.00-7.67). Those who received an EGD where more likely to be diagnosed at stage 1 compared to all other stages (stage 2 through 4) (p=0.0497). The other study reported only one participant who received an EGD in the previous five years. Regarding studies that compared different screening modalities, there was some evidence of a significant difference between screening modalities for endoscopically suspected BE. In general, results across the outcomes were not statistically significant with the exception of psychological effects (i.e. levels of anxiety), which was lower in individuals undergoing the video capsule EGD before the procedure compared to those undergoing transnasal EGD. During the procedure, participants randomized to receive EGD experienced less anxiety than those randomized to transnasal EGD. The discomfort of the unsedated transnasal procedure may contribute to the increased anxiety. Overall, the body of evidence across available outcomes was assessed as having very low certainty.

Limitations: Only two included studies were considered low risk of bias (for histologically confirmed BE outcome). Most outcomes across comparisons were a moderate or high risk of bias. All studies performed only a one-time screening test with no follow-up and the average sample size of included trials was small (n=172). Due to the lack of included studies, the definition of chronic GERD was expanded to what study authors considered chronic GERD. This affected the indirectness of the evidence for the key question and was addressed with GRADE. This review only included studies in English or French language.

Conclusions: This systematic review synthesized the available evidence on the effectiveness (benefits and harms) of screening for EAC and precancerous conditions (BE and dysplasia). In summary, little evidence exists on the effectiveness of screening adults with chronic GERD for EAC and precancerous conditions, and what evidence does exist was rated as very low certainty. Further, currently no evidence exists on cancer-related or all-cause mortality, quality of life, major or minor medical procedures, or overdiagnosis. To increase the quantity and certainty of the evidence, more and better designed trials are needed that measure the missing outcomes of interest. As well, the development of a definition of chronic GERD would help identify individuals where screening can be better targeted to evaluate the effectiveness.

2 KQ1 Methods

This systematic review (SR) was developed, conducted, and prepared according to the Canadian Task Force for Preventive Health Care (CTFPHC) Procedure Manual[45] or as methods were updated by the CTPHFC. The protocol for this SR has been published with PROSPERO (CRD42017049993) and is available on the CTFPHC website.

The review is reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (**Appendix 1**)[46] and includes a PRISMA flow diagram. We also used AMSTAR (A Measurement Tool to Assess the Methodological Quality of Systematic Reviews) for additional quality control[47].

No work within this SR updates any previously conducted SR. Any amendment made to the protocol when conducting the review has been outlined in this manuscript.

2.1 Analytic Framework for EAC Screening

The analytic framework for this review is presented in **Figure 2** and includes both the benefits and harms of screening and patient values and preferences.

2.2 Research Key Questions

The key research questions developed were:

Key Question 1a: In adults (≥18 years) with chronic GERD* with or without other risk factors†, what is the effectiveness (benefits and harms) of screening for EAC and precancerous conditions (BE and low- and high-grade dysplasia)? What are the effects in relevant subgroup populations?
* As defined by study authors
† Risk factors will be deemed so by included studies

Key Question 1b: If there is evidence of effectiveness‡, what is the optimal time to initiate and to end screening, and what is the optimal screening interval (includes single and multiple tests and ongoing 'surveillance')?
‡ If there is evidence of at least moderate certainty of evidence of benefit, according to GRADE

2.3 Inclusion and Exclusion Criteria

A narrative of the inclusion and exclusion criteria is provided below and the PICOS (Population, Interventions, Comparison, Outcomes, Study design) table can be found in **Appendix 2**.

Population
The population of interest for this SR was adults (≥18 years old) with chronic GERD with or without other risk factors for EAC. Those experiencing alarm symptoms for EAC, including dysphagia, recurrent vomiting, anorexia, weight loss, gastrointestinal bleeding or other symptoms identified by authors as 'alarm' were excluded. In addition, those diagnosed with other gastro-esophageal conditions (e.g., gastric cancer, esophageal atresia, and other life threatening esophageal conditions) or pre-existing disease (BE, dysplasia, or EAC) were also excluded.

Intervention
All modalities used to screen for EAC and precancerous conditions (BE and dysplasia) were considered, including EGD (also known as upper GI endoscopy) with or without biopsy, EGD plus adjunct techniques (e.g., chromoendoscopy and narrow-band imaging), transnasal endoscopy, cytologic examination, and capsule endoscopy. We excluded any follow-up diagnostic tests, such as 24-hour esophageal pH test or any test for staging purposes, such as CT (computerized tomography) and magnetic resonance imaging.

Comparison
For key question 1a, we included studies that compared screening versus no screening, and one screening modality to another screening modality. For key question 1b, we included any study that compared one interval of screening versus another interval of screening, one timepoint at which to initiate screening versus another timepoint, and one timepoint at which to cease screening versus another timepoint.

Outcomes
To measure screening effectiveness, outcomes were selected and ranked by the CTFPHC and a patient group. The patient group comprised of a sample of 17 participants (7 women and 10 men aged 18-68 years old (mean age 37.18 years (standard deviation (SD) 13.28 years)) diagnosed with GERD (6 were diagnosed with either BE or dysplasia and three were currently undergoing screening for esophageal cancer). Patients represented urban, suburban, and rural areas from six Canadian provinces.

The outcomes of interest that are considered *critical* for decision-making are:

1. Mortality (all-cause and EAC-related) at 1, 5 and 10 years or as available, considered from the time of allocation to screening or control arm;
2. Survival at 1, 5, and 10 years or as available, considered from the time of allocation to screening or control arm; and
3. Life threatening, severe, or medically significant consequences of screening, such as requiring hospitalization or prolongation of hospitalization; disabling, limiting self-care or activities of daily living.

Outcomes considered *important* for decision-making are:

4. Incidence of EAC (by stage), BE, low- and high-grade dysplasia;
5. Quality of life (validated scales only);
6. Psychological effects (e.g., anxiety and depression);
7. Major and minor medical procedures following screening; and
8. Overdiagnosis

Overdiagnosis, defined as the diagnosis of disease which would never have become clinically apparent in a person's lifetime (i.e., causing neither symptoms nor death)[48], would be considered as judged by the study author or by the CTFPHC working group using information provided by authors, where available. In the absence of reporting of overdiagnosis by study authors, outcomes 1, 4, and 7 were used to judge the extent of overdiagnosis, if available.

Study design
Relevant study designs included randomized controlled trials (RCTs), including cluster RCTs, non-randomized controlled clinical trials, controlled before-after studies, studies of interrupted time series, cohort studies, and case-control studies. Cross-sectional studies, case series, case reports, and other publication types (editorials, commentaries, notes, letter, and opinion pieces) were excluded.

Settings
Settings were limited to primary care or settings in which a primary care physician could refer a patient for esophageal screening.

Timing
There were no limits set for publication dates.

Language
There was no language restriction in the electronic searches. However, only English and French articles were included at full-text.

2.4 Literature Search

The search strategy was developed and tested through an iterative process by an experienced medical information specialist in consultation with the review team. Using the OVID platform, we searched Ovid MEDLINE®, Ovid MEDLINE® Epub Ahead of Print, In-Process & Other Non-Indexed Citations, and Embase Classic + Embase. We also searched the Cochrane Library on Wiley. There were no language or date restrictions in the search. The searches were run from the inception date of the databases on October 29, 2018.

Strategies utilized a combination of controlled vocabulary (e.g., "Gastroesophageal Reflux", "Esophageal Neoplasms", "Endoscopy") and keywords (e.g., "GERD", "esophageal cancer", "esophagoscopy"), with vocabulary and syntax adjusted across databases, as required. When possible, animal-only and opinion-pieces were removed from the results.

The search strategy, which was peer-reviewed using the PRESS 2015[49], can be found in **Appendix 3**.

To search for unpublished literature (e.g., reports, theses, governmental publications) we used the CADTH Grey Matters checklist. The CADTH checklist includes national and international health technology assessment agencies, clinical practice guideline organizations, drug and device regulatory agencies, health economics resources, clinical trials registries, Canadian health prevalence and incidence databases, statistics, search engines, and databases. The clinical trial registries listed within the checklist included the Canadian Cancer Trials, ClinicalTrials.gov, WHO International Clinical Trials Registry Platform, ISRCTN, CenterWatch, and Clinical Trials Registry India.

In addition to the Grey Matters checklist, we searched the following websites suggested by our clinical experts: Canadian Association of Gastroenterology, Cancer Care Ontario, Canadian Cancer Society, Canadian Digestive Health Foundation, Ontario Association of Gastroenterology,

American Society for Gastrointestinal Endoscopy, American College of Gastroenterology, American Gastroenterological Association, British Society of Gastroenterology, American College of Physicians, American Cancer Society, US Preventive Services Task Force, Agency for Healthcare Research and Quality, and the Centers for Disease Control and Prevention.

The searches utilized the following terms "GERD", "GORD", "gastroesophageal", "gastro-esophageal", "gastro-oesophageal", "reflux", "endoscopy", "esophageal".

2.5 Study Selection

Duplicates across searches were identified and removed using Reference Manager[50]. The remaining articles were uploaded into Distiller Systematic Review (DistillerSR) Software©[51] for title and abstract screening and full-text screening of the remaining potential relevant articles.

A pilot testing phase among reviewers was performed prior to commencing broad screening of titles and abstracts (50 titles and abstracts) and screening of full-text potentially relevant articles (25 studies) (**Appendix 4**). Titles and abstracts were independently screened for relevance by two reviewers, using the liberal accelerated method, which requires one user to include for further assessment at full-text and two reviewers to exclude. References were reviewed in random order, with each reviewer unaware if the reference had already been assessed and excluded by the other reviewer. Subsequently, full-texts were retrieved and two reviewers independently assess the article for relevancy. Conflicts at full-text were resolved by consensus or a third team member. Articles not available for download were ordered from the library through interlibrary loans. Those that were not received within 30 days were excluded and labelled accordingly. We also scanned the bibliographies of relevant systematic reviews and clinical practice guidelines.

Where chronic GERD was not defined in a study, we attempted to contact the study authors twice over two weeks by email to obtain more information. If authors did not respond, and the lack of definition for chronic GERD was the only reason for possible exclusion, we included the study.

Reports in abstract form and protocols were coded as such, and a search was completed to see if the full-text was available. Those that were not available as full-texts were excluded and studies available only are abstract form is available in the list of excluded studies (**Appendix 7**).

2.6 Data extraction and management

Full data extraction was completed by one reviewer and verified by a second reviewer. Any disagreements were resolved by consensus. Study characteristics were summarized narratively and are presented in the table of study characteristics (**Table 1**) (e.g., funding source, setting, GERD definition, inclusion/exclusion criteria). Where information was unclear or missing, authors were contacted by email twice over two weeks. If no response was received and the information affected the ability for quantitative analysis, the study was analyzed narratively.

2.7 Risk of Bias (ROB) Assessment

All included studies were assessed for the ROB by one reviewer, with verification completed by a second reviewer. Disagreements were resolved by consensus or third party adjudication. Assessments were considered in the Grading of Recommendations Assessment, Development and

Evaluation (GRADE) domain of study limitations. The Cochrane ROB tool[52] (**Appendix 5**) was used to evaluate the ROB in RCTs. The Newcastle-Ottawa scale (NOS)[53] (**Appendix 6**) was used to evaluate the ROB in cohort studies. Outcome-specific domains were assessed at the outcome level. The overall ROB for the body of evidence involved a judgement of the relative importance of domains, guided by known empirical evidence of bias, the likely direction of bias, and the likely magnitude of bias[52].

2.8 Analysis

Study characteristics of all included studies are presented in tables and summarized narratively.

2.8.1 Meta-Analysis

Raw data were extracted from all articles when available. Raw data were entered into Review Manager Software version 5.3[54] and Hazard Ratios (HR) were produced for the survival outcome and Risk Ratios (RR) were calculated for all other outcomes.

2.8.2 Subgroup analysis

A priori-defined subgroup analysis variables included age, sex, body mass index (BMI), smoking history, duration of chronic GERD, definition of chronic GERD, groupings of risk factors, and various ethnic groups. Reporting did not allow for these to be undertaken.

2.8.3 Sensitivity analysis

Sensitivity analyses were planned to restrict to those studies as being low risk of bias, and based on the timing of publication. Sensitivity analysis was not undertaken.

2.8.4 Small study effects

To assess for small study effects, a combination of graphical aids (e.g., funnel plot) and/or statistical tests (e.g., Egger regression test, Hedges-Olkin) were planned if at least 10 studies were available in any given analysis.

2.8.5 Rating the certainty of the evidence

For each critical and important outcome, the GRADE framework[45,55] was used to assess the strength and certainty of the evidence. We followed the GRADE guidance for determining the extent of the risk of bias for the body of evidence[56]. The online software GRADEpro GDT (https://gradepro.org/) was used for the GRADE assessments. Assessment of each GRADE domain (study limitations, consistency, precision, directness, reporting bias) was presented, where possible, with the information provided in the studies. If there was missing information, a narrative description was provided.

2.9 Amendments to the protocol

A predefined definition of chronic GERD described in the protocol was: (1) symptoms for ≥12 months, with no specific frequency; and/or (2) PPI (or other pharmacotherapy) use for GERD for ≥12 months. The timing of symptoms for ≥12 months which was used to be over-inclusive as a scoping exercise resulted in few studies that defined chronic GERD. Using the pre-defined

definition of chronic GERD would have resulted in no included studies. The definition has been expanded to include what study authors considered chronic GERD, and indirectness to the main study question has been addressed in the GRADE assessments.

We originally intended to include lower quality study designs only if there were five or fewer RCTs. Although there were six included RCTs, all relevant studies were included as there were few studies under each comparison and only two observational studies were located.

3 Results

3.1 Summary of the Literature Search

The search for key question 1 resulted in 7,292 records. After de-duplication and the addition of records identified from the grey literature search, bibliography search, and search for full-text articles based on abstracts and protocols, 4,384 unique records were evaluated at the title and abstract level. A total of 1,645 records were evaluated at full text, with a total of ten studies included; six RCTs[57–62], one randomized cross-over trial[63], one prospective cohort[64], and two retrospective cohort studies[65,66]. (**Figure 3**)

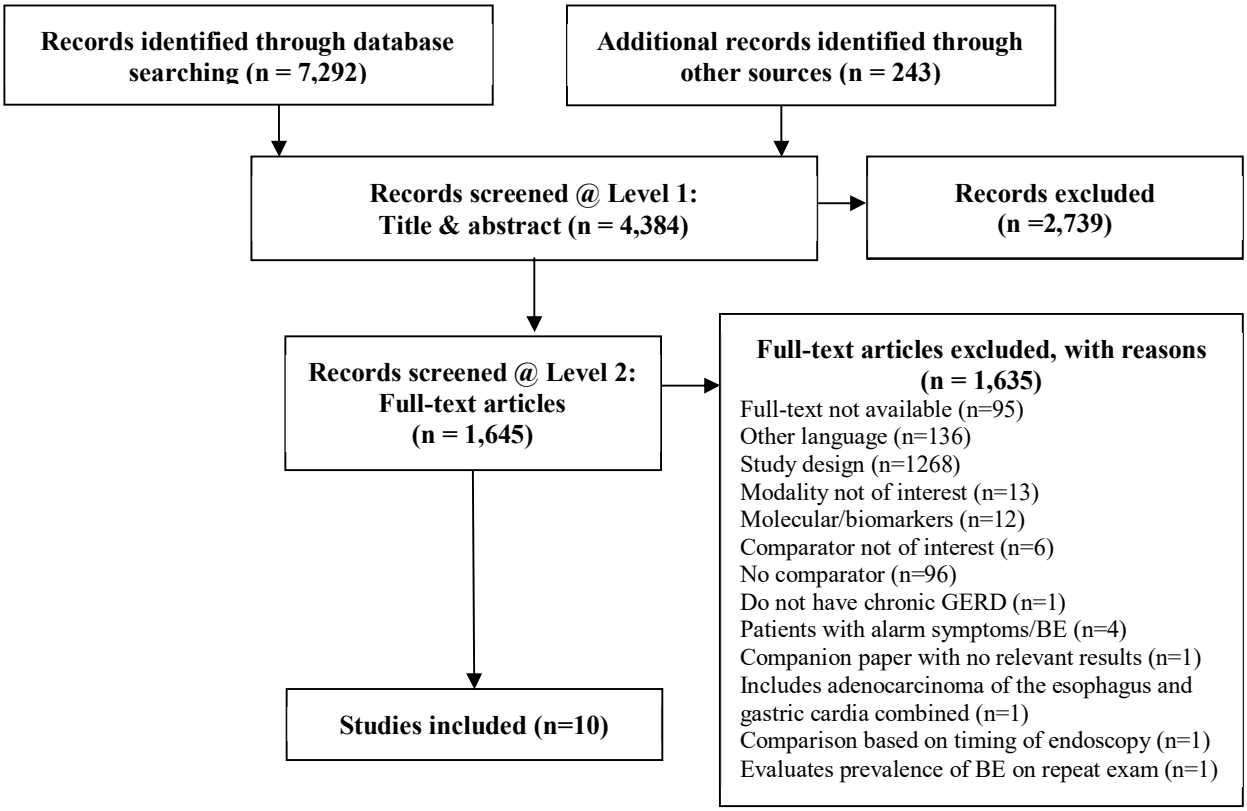

Figure 3 - KQ1 PRISMA flow diagram

Appendix 7 provides a list of excluded studies at full-text, with reasons. No studies provided adequate information to answer key question 1b. A list of ongoing studies is listed in **Appendix 8**.

3.2 Results for Key Question 1a

Key Question 1a: In adults with chronic GERD with or without other risk factors, what is the effectiveness (benefits and harms) of screening for EAC and precancerous conditions (BE and low- and high-grade dysplasia)? What are the effects in relevant subgroup populations?

3.2.1 Characteristics of Included Studies

Study characteristics of the ten included studies are shown in **Table 1**. Two retrospective cohort studies evaluated screening compared to no screening, among patients diagnosed with EAC who either had an esophagogastroduodenoscopy (EGD) in the past five years or not[65,67]. Seven studies were randomized controlled trials, randomizing patients to different screening modalities (conventional EGD, transnasal esophagoscopy (TNE), video capsule esophagoscopy (VCE), transoral esophagoscopy (Transoral-EGD))[57,58,60,62,63] or different biopsy methods (enhanced magnification-directed endoscopy (EME) directed-biopsies, four-quadrant random biopsy, and chromoendoscopy)[59,61]. Lastly, one cohort study by Mori et al[64] allowed participants to select between three screening modalities (conventional EGD, transnasal or ultrathin transoral esophagoscopy).

Men represented anywhere from 42-99% of the participants in the studies, and among the five studies that reported on ethnicity, White ethnicity represented 41-99% of the participants. The mean age of the participants ranged from 48-67 years old, with wide measures of dispersion. Most studies did not report on the proportion of participants who smoked or took proton pump inhibitors (PPI) (or other medication for GERD); two studies reported that 43% and 80% were smokers and three studies reported that 17% and 48% were taking PPI and 78% were taking antisecretory medication. Only four studies reported on the mean BMI of included participants, ranging from a mean of 29.0 to 31.4.

Eight studies were conducted in the USA and one each in India and Japan. Study sizes were small, ranging from 20 participants up to 92 participants per screening modality, and a total of 60 to 378 participants for RCTs. The prospective cohort study was larger, including a total of 1580 participants, and the two retrospective cohort studies included 155 and 153 EAC patients.

Four of the included studies used questionnaires[68–70] to help define GERD. Sami 2015[60] and Chang 2011[58] defined GERD using the GERQ, with Chang 2011 using two additional questionnaires.

Studies did not report on all critical and important outcomes of interest. None of the studies reported on all-cause or cause-specific mortality, quality of life, major or minor medical procedures, or overdiagnosis. Furthermore, BE is presented separately for endoscopically suspected BE (based on screening modalities evaluated in the study) and histologically confirmed BE (based on biopsy).

3.2.2 Risk of Bias

Only two studies were considered low risk of bias for the histologically confirmed BE outcome[57,63]. Overall, most outcomes across comparisons were at a moderate or high risk of bias (**Table 2a. Cochrane ROB for RCTs**). Within the RCTs, most studies used an appropriate method of randomization; however, there was little description of allocation concealment. For performance

and detection bias, several outcomes would not have been possible to blind the participants, the personnel or the outcome assessors (e.g., suspected BE), and this could bias the results. As the majority of studies were a one-time test with no follow-up of the participants, most included all participants in the outcome data. Few studies reported on a protocol, and only two were registered in ClinicalTrials.gov. Outcomes reported in the two studies with registered protocols did not match the main objectives or outcomes that were listed in these protocols and were considered high risk for selective reporting bias. In addition, studies tended to report on an outcome that was not listed in the objectives or methods section. Regarding other potential sources of bias, most studies did not report on how it was funded, and among those that did, one was funded by the manufacturer of the screening equipment[58], and another study had authors who had received funding from the manufacturer of the screening equipment[60]. Neither of these studies provided any information on if and how the manufacturer was involved in any part of the study or the decision to publish, however, one study declared that there were no conflicts of interest to disclose. Both studies were judged as unclear for this bias.

Outcomes in the three observational studies evaluated with NOS were of moderate[65,67] or high risk[64] of bias (**Table 2b. NOS for cohort studies)**. Some questions in NOS were difficult to assess or were not relevant (e.g., comparability) because of a lack of reporting by study authors. Cohorts were not truly representative of the population, as both retrospective cohort studies included patients with EAC not specific to those with chronic GERD and the other study reported on a cohort where the purpose was to diagnose GERD. For all studies, the ascertainment of exposure was completed with secure records. Demonstration that the outcome of interest was not present at the start of study was not applicable in the retrospective cohort studies[65,67] and was not reported in Mori 2010[64]. Both retrospective cohort studies received a negative assessment for the comparability of cohorts on the basis of the design or analysis as they only provided comparison based on age and comorbidities, without further description[65], while the Hammad et al. did not provide any details specific to the population of interest for this review[67]. For the assessment of incidence of EAC, BE, and low- and high-grade dysplasia outcome, Rubenstein 2008[65] and Hammad 2019[67] used medical records and Mori 2010 did not provide any information on how this was collected. There was no follow-up in the cohort study by Mori 2010[64], as it was a one-time test.

3.2.3 Comparison: Screening versus no screening

3.2.3.1 Esophagogastroduodenoscopy (EGD) versus no prior EGD

Two retrospective cohort studies by Rubenstein 2008[65] and Hammad 2019[67], studied a group of individuals with EAC and evaluated their electronic medical records or the institutional cancer registry to see if they had an EGD in the five years prior to cancer diagnosis or not. In Rubenstein et al, GERD was identified in the electronic medical records on the basis of International Classification of Diseases codes. Rubenstein et al. reported on survival and EAC stage at diagnosis, while Hammad et al. reported on EAC stage at diagnosis. A table of results, forest plots, and the GRADE evidence profile and summary of findings tables can be found in **Evidence Set 1**.

Survival

Survival data was reported using a Kaplan-Meier curve, which showed no difference between survival rates at year 1 and 10. Authors report that there was no difference in long-term survival

(approximately 6 to 12 years) between those who had received a prior EGD and those who had not (adjusted HR 0.93, 95% confidence interval (CI) 0.58-1.50).

A GRADE assessment of very low certainty was given because the risk of bias, indirectness, and imprecision were deemed as serious concerns.

Incidence of EAC (stage at diagnosis)

Two studies reported information to evaluate whether an EGD in the previous five years influenced the incidence of EAC by stage of diagnosis at time of detection. It was difficult to determine a range of effects across studies for most stage-based analyses as one study only had one eligible patient with a prior EGD and the stage of diagnosis unknown (author correspondence)[67]. The other study, Rubenstein et al., reported that there may be a higher odds of a stage 1 diagnosis than a more advanced diagnosis (stages 2-4) (OR 2.77, 95% CI 1.00-7.67; p=0.0497), corroborated by the data shown in Evidence Set 1 – Results table. But, there is uncertainty in this estimate due to wide confidence intervals from a small data set.

A GRADE assessment of very low certainty was given because the risk of bias, indirectness, and imprecision were deemed as serious concerns.

3.2.4 Comparison: One screening modality versus another screening modality

3.2.4.1 Esophagogastroduodenoscopy (EGD) versus transnasal esophagoscopy (TNE)

Four studies evaluated EGD compared to TNE; two RCTs by Chang 2011[58] and Sami 2015[60], one randomized crossover study by Jobe 2006[63], and one cohort study by Mori 2010[64]. A table of results, forest plots, and the GRADE evidence profile and summary of findings tables can be found in **Evidence Set 2**.

Sami 2015[60] evaluated EGD compared to TNE in either a hospital- or mobile-based setting. Study authors did not provide raw results for each screening modality, but provided the overall p-value to measure differences between all three screening modalities (EGD, hospital-based TNE and mobile-based TNE). Chang 2011[58] was the pilot trial for Sami 2015[60], but due to the poor performance of video capsule endoscopy, TNE was evaluated, instead, for Sami 2015[60]. Although the same database for recruitment was used, the population in Chang 2011[58] was selected from 1976-2006 whereas for Sami 2015[60] the sample was from 1988-2009. Mori et al[64] allowed participants to select which screening modality they were given.

Life threatening, severe, or medically significant consequences of screening

Sami 2015[60] evaluated safety, defined as serious adverse events, including pain, abdominal discomfort, bleeding, perforation, or need for hospitalization at 1 and 30 days after the procedures in all participants. No serious adverse events were reported in either group.

A GRADE assessment of very low certainty was given because the risk of bias was a very serious concern. As well, indirectness and imprecision were deemed as serious concerns.

Incidence of EAC, BE and low- and high-grade dysplasia

Incidence of EAC

For this outcome, Jobe et al[63] reported only on those who were receiving initial screening (i.e. excluding those who were being followed with BE). There were no cases of EAC reported between either screening modality.

A GRADE assessment of very low certainty was given because the risk of bias, indirectness, and imprecision were deemed as serious concerns.

Incidence of endoscopically suspected BE

Chang 2011[58], Sami 2015[60], and Mori 2010[64] reported on the number of participants with endoscopically suspected BE. Outcomes were defined differently across those studies. Sami 2015 reported the results using a p-value, therefore a meta-analysis was not performed and results are presented narratively.

Both RCT studies showed no significant difference between screening modalities; Chang 2011[58] (RR 1.90, 95%CI 0.19-19.27) and Sami 2015[60] (p=0.37). However, Mori 2010[64] (observational study design) did show a significant difference between screening modalities, with those being screened with TNE having a higher incidence of suspected BE (RR 2.09, 95%CI 1.30-3.36; *Forest Plot 2.1*).

For the RCTs (Chang 2011[58] and Sami 2015[60]), a GRADE assessment of very low certainty was given because the risk of bias was a very serious concern. As well, indirectness and imprecision were deemed as serious concerns. For the observational study (Mori 2010)[64], a GRADE assessment of very low certainty was given because the risk of bias, indirectness, and imprecision were deemed as serious concerns.

Incidence of histologically confirmed BE

Sami 2015[60] and Jobe 2006[63] both defined confirmed BE as the presence of intestinal metaplasia with goblet cells in biopsies. Those with suspected BE in Sami 2015 were given EGD with a histological assessment by a gastrointestinal pathologist to confirm BE diagnosis. Jobe et al. obtained biopsies using the TNE device and a pathologist examined the results.

Both studies reported no difference in incidence of confirmed BE between screening modalities; Sami 2015 (p=0.44) and Jobe 2006 (RR 0.89, 95%CI 0.59-1.33).

A GRADE assessment of very low certainty was given because the risk of bias, indirectness, and imprecision were deemed as serious concerns.

Incidence of dysplasia

One RCT by Chang 2011[58] and one randomized crossover study by Jobe 2006[63] reported on incidence of dysplasia. Jobe et al reported low- and high-grade dysplasia while Chang et al reported on dysplasia which was undefined.

Chang et al[58] reported that there were no cases of dysplasia among the 40 participants, while Jobe et al[63] reported that five participants screened with EGD and four participants screened with TNE

had dysplasia. A meta-analysis of these results showed no difference of incidence between screening modalities (RR 1.54, 95%CI 0.44-5.44; *Forest Plot 2.2*).

A GRADE assessment of very low certainty was given because the risk of bias, indirectness, and imprecision were deemed as serious concerns.

Psychological effects

Chang 2011[58] Sami 2015[60], and Jobe 2006[63] used the same measurement tool to measure anxiety, however, there were differences in when the tool was utilized. Jobe 2006 reported on anxiety before the procedure, during insertion, and during procedure. Chang 2011 and Sami 2015 only reported on anxiety during the procedure.

No meta-analysis was performed and no forest plots were created for this outcome as all three studies used different methods of reporting outcomes. Chang et al[58] reported the median score (range 0-7) only among those who were screened with TNE. Sami et al[60] reported levels of anxiety using the mean (standard deviation (SD)) score (max of 10) for those given EGD, hospital TNE, and mobile TNE. Lastly, Jobe et al[63] reported the number of individuals whose anxiety levels were none, mild, moderate, and severe. A narrative analysis is therefore provided.

Anxiety before the procedure

Jobe 2006[63] reported no difference between screening modalities in the proportion of those who experienced anxiety before the procedure (p=0.084).

A GRADE assessment of very low certainty was given because the risk of bias was a very serious concern. As well, indirectness and imprecision were deemed as serious concerns.

Anxiety during insertion

Jobe 2006[63] reported that those given EGD had less anxiety overall during the insertion compared to those screened with TNE (p=0.0001).

A GRADE assessment of very low certainty was given because the risk of bias was a very serious concern. As well, indirectness and imprecision were deemed as serious concerns.

Anxiety during the procedure

Overall, those who were randomized to receive EGD experienced less anxiety during the procedure than those randomized to TNE. Both Sami 2015[60] and Jobe 2006[63] reported significantly less anxiety during the procedure for those given EGD compared to those with TNE, $p<0.001$ and p=0.0001, respectively. Chang et al[58] do not report if those given EGD were given the tolerability questionnaire.

A GRADE assessment of very low certainty was given because the risk of bias was a very serious concern. As well, indirectness and imprecision were deemed as serious concerns.

3.2.4.2 Esophagogastroduodenoscopy (EGD) versus Video Capsule Esophagoscopy (VCE)

One RCT by Chang (2011)[58] compared EGD to VCE to evaluate endoscopically suspected BE, dysplasia, and anxiety during the procedure. Table of results, forest plot, and GRADE evidence profile and summary of findings tables are presented in **Evidence Set 3**.

Incidence of EAC, BE and low- and high-grade dysplasia

Incidence of endoscopically suspected BE

Endoscopically suspected BE was classified as presence of 1 cm or more of columnar lined epithelium above the gastroesophageal junction for EGD and as ZAP grade 2 or 3 for VCE. There was no difference of incidence between screening modalities (RR 0.57, 95%CI 0.11-3.01; *Forest Plot 3.1*).

A GRADE assessment of very low certainty was given because the risk of bias was a very serious concern. As well, indirectness and imprecision were deemed as serious concerns.

Incidence of confirmed BE

Study authors do not describe if those initially given EGD were biopsied and confirmed. Participants with suspected BE based on VCE were offered EGD and BE was confirmed through biopsy. Of the three participants with suspected BE who received VCE, none were confirmed cases of BE.

A GRADE assessment of very low certainty was given because the risk of bias, indirectness, and imprecision were deemed as serious concerns.

Incidence of dysplasia

Author do not describe how dysplasia was defined, but do state that there were no cases of dysplasia among either group.

A GRADE assessment of very low certainty was given because the risk of bias, indirectness, and imprecision were deemed as serious concerns.

3.2.4.3 Esophagogastroduodenoscopy (EGD) versus Transoral-EGD

One cohort study by Mori 2010[64] included those who had previously been screened for upper intestinal tract disorders, and allowed participants to choose between three screening modalities. In addition to the 574 patients who initially chose transoral-EGD, 25 patients who chose transnasal endoscopy failed intubation and were assigned to transoral-EGD. There was no difference in gender and age among the participants in each screening modality group. Results comparing EGD to transoral-EGD, forest plots, and GRADE evidence and summary of findings tables are presented in **Evidence Set 4**.

Incidence of EAC, BE and low- and high-grade dysplasia

Incidence of endoscopically suspected BE

Suspected BE was defined using an older method of BE classification which measured the mucosa between the esophagogastric junction and squamocolumnar junction. Mucosa was graded as 0 (no BE) or grade 1, 2 or 3 based on length of circumferential or tongue type. Overall, the authors reported no difference in the frequency, distribution or severity of BE among EGD and transnasal-EGD modalities in those with grade 2 or 3 BE (RR 1.30, 95%CI 0.83-2.03; *Forest Plot 4.1*).

A GRADE assessment of very low certainty was given because the risk of bias was a very serious concern. As well, indirectness and imprecision were deemed as serious concerns.

3.2.4.4 Transnasal esophagoscopy (TNE) versus Video capsule esophagoscopy (VCE)

Chak 2014[57] and Chang 2011[58] compared TNE to VCE and reported on endoscopically suspected BE, histologically confirmed BE, dysplasia, and psychological effects. Chak 2014 included participants with and without GERD symptoms (approximately 50%)[68]. Chang 2011 provided baseline information on those eligible and contacted, but do not provide this information for those who took part in the study. Symptoms of GERD were obtained through three questionnaires[68–70]. They also only report on offering EGD to confirm BE for those in the VCE group and report that the tolerability questionnaire was given only to those randomized to the TNE screening modality. Due to these limitations in reporting, it was not possible to meta-analyze the results; therefore, a narrative synthesis is provided. A results table, forest plots, and GRADE evidence profile and summary of findings tables are presented in **Evidence Set 5**.

Incidence of EAC, BE and low- and high-grade dysplasia

Incidence of endoscopically suspected BE

Both Chak 2014[57] and Chang 2011[58] used the ZAP classification of grade 2 or higher to determine the need for biopsy. Suspected BE using TNE was defined as "endoscopic presence of 1 cm of more of columnar-lined distal esophagus above the gastroesophageal junction (either circumferential or in tongues) in Chang et al[58]. Overall, there was no difference in the prevalence of endoscopically suspected BE between screening modalities (RR 0.86, 95%CI 0.29-2.56; *Forest Plot 5.1*).

A GRADE assessment of very low certainty was given because the risk of bias was a very serious concern. As well, indirectness and imprecision were deemed as serious concerns.

Incidence of confirmed BE

Participants who were suspected of BE or had other abnormal findings were referred to EGD for histological confirmation. It is unclear in Chang (2011)[58] if those suspected of BE with TNE were referred to EGD. Chak 2014[57] reported no difference between TNE and VCE for those with confirmed BE (RR 0.62, 95%CI 0.15-2.52). Chang 2011 did not report on those who were screened with TNE and reported that 0 of the 3 participants suspected of BE with VCE had histologically confirmed BE.

A GRADE assessment of very low certainty was given because the risk of bias, indirectness, and imprecision were deemed as serious concerns.

Incidence of dysplasia

Chang 2011[58] does not describe how dysplasia was defined or diagnosed, but reported that there were no cases with either screening modality.

A GRADE assessment of very low certainty was given because the risk of bias, indirectness, and imprecision were deemed as serious concerns.

Psychological effects

Anxiety before the procedure

Chak 2014[57] reported a statistically significant difference in level of anxiety, nervousness, or worry before the procedure, with those in the TNE group experiencing more than those in the VCE group (RR 2.28, 95%CI 1.33-3.88; *Forest Plot 5.2*).

A GRADE assessment of very low certainty was given because the risk of bias was a very serious concern. As well, indirectness and imprecision were deemed as serious concerns.

Anxiety during the procedure

Levels of anxiety during the procedures were also significant in Chak et al[57] (RR 2.14, 95%CI 1.22-3.77; *Forest Plot 5.3*). Chang 2011[58] only reported giving the questionnaire to the participants in the TNE group and reported a median score and range, making it not possible to compare between screening modalities.

A GRADE assessment of very low certainty was given because the risk of bias was a very serious concern. As well, indirectness and imprecision were deemed as serious concerns.

3.2.4.5 Transnasal esophagoscopy (TNE) versus Transoral EGD

One RCT by Zaman 1999[62] randomized participants, with upper gastrointestinal (GI) symptoms, who accepted to be in the study (57% of those asked) to either modality. One cohort study by Mori 2010[64] included those who had previously been screened for upper intestinal tract disorders, and allowed participants to choose between three screening modalities. In addition to the 574 patients who initially chose transoral-EGD, 25 patients who chose transnasal endoscopy failed intubation and were assigned to transoral-EGD. There was no difference in gender and age among the participants in each screening modality group. Results comparing TNE to transoral-EGD, forest plots, and GRADE evidence and summary of findings tables are presented in **Evidence Set 6**.

Life threatening, severe, or medically significant consequences

Zaman et al[62] reported that one woman, who had received transnasal endoscopy, experienced facial swelling several hours after her discharge from the hospital. A small proximal esophageal perforation was diagnosed with an x-ray swallowing series using a water-soluble contrast. A

surgical exploration of the neck was then performed, with no perforation revealed. A full recovery was made from this complication. There were no other complications reported, and no differences between screening modalities (RR 4.04, 95% CI 0.17-95.20; *Forest Plot 6.1*).

A GRADE assessment of very low certainty was given because the risk of bias was a serious concern. As well, indirectness and imprecision were deemed as serious concerns.

Incidence of EAC, BE and low- and high-grade dysplasia

Incidence of endoscopically suspected BE

Zaman et al[62] reported no difference between screening modalities. There were three cases of suspected BE among the 59 participants who were successfully screened, with one in the transnasal and two in the transoral group (RR 0.68, 95%CI 0.07-7.09; *Forest Plot 6.2*).

In the observational study by Mori et al[64] suspected BE was defined as the mucosa between the esophagogastric junction and squamocolumnar junction. Mucosa was graded as 0 (no BE) or grade 1, 2 or 3 based on length of circumferential or tongue type. Overall, authors reported a significant difference in the frequency of BE, with those screened with TNE less likely to have suspected BE (grade 2 or 3) compared to transoral EGD (RR 0.62, 95%CI 0.41-0.94; *Forest Plot 6.3*).

A GRADE assessment of very low certainty was given because the risk of bias was a very serious concern. As well, indirectness and imprecision were deemed as serious concerns.

Psychological effects

Zaman et al[62] evaluated the levels of anxiety before the procedure, during insertion, and during the procedure. Anxiety was assessed on a scale of 10, with 0 representing no anxiety and 10 representing severe anxiety. Anxiety before the procedure was assessed prior to screening, while the other two measures were post-screening. Overall, there was no significant difference between levels of anxiety at any time (*Forest Plots 6.4-6.6*).

A GRADE assessment of very low certainty was given because the risk of bias was a serious concern. As well, indirectness and imprecision were deemed as serious concerns.

3.2.5 Comparison: One biopsy method versus another biopsy method

3.2.5.1 Random biopsy versus Enhanced magnification-directed endoscopy (EME) biopsies (with acetic acid)

One RCT study by Ferguson 2006[59] included patients with a threshold score on a validated GERD questionnaire[71], but it is unclear what this score was and how it was determined. All patients received standard sedated EGD. Participants with any variation of >5mm between the lowest and highest point of the squamocolumnar junction from the gastroesophageal junction using the findings from the standard endoscopy was considered as suspected BE, and participants were randomized at that point to different biopsy methods. Participants allocated to conventional random biopsy had random biopsies taken every 2 cm. Patients who did not have a circumferential appearance of BE had biopsies taken in proportion to the amount of mucosa involved. Participants

allocated to EME-directed biopsy had acetic acid sprayed and EME-directed biopsies performed. As all participants were evaluated on suspected BE through EGD, only incidence of histologically confirmed BE is reported in **Evidence Set 7**.

Incidence of EAC, BE and low- and high-grade dysplasia

Incidence of histologically confirmed BE

Overall, there was no difference in yield of confirmed BE between different methods of biopsy. This was found in both those with pattern III and IV specialized intestinal metaplasia (RR 0.98, 95%CI 0.59-1.64; *Forest Plot 7.1*) and among all specialized intestinal metaplasia pattern types (RR 1.14, 95%CI 0.71-1.82; *Forest Plot 7.2*).

A GRADE assessment of very low certainty was given to both incidences of confirmed BE with SIM pattern types III/IV and all SIM pattern types because the risk of bias, indirectness, and imprecision were deemed as serious concerns.

3.2.5.2 Random biopsy versus chromoendoscopy

One RCT by Wani 2014[61] compared EGD with random biopsy compared to EGD with chromoendoscopy. All participants were given conventional EGD (n=378) and those with suspected BE were randomized to either random biopsy (n=33) or chromoendoscopy (n=23). Suspected BE was defined as columnar lined epithelium that was reddish in colour and velvety texture which could be distinguished easily from normal pale and glossy esophageal squamous epithelium. This study reports only on histologically confirmed BE, defined as having specialized intestinal metaplasia with intestinal goblet cells present. Results, forest plot, and GRADE evidence profile and summary of findings tables are presented in **Evidence Set 8**.

Incidence of EAC, BE and low- and high-grade dysplasia

Incidence of confirmed BE

Wani et al[61] reported no difference in the number of participants with BE between random biopsy and chromoendoscopy (RR 0.87; 95%CI 026-2.90; *Forest Plot 8.1*).

A GRADE assessment of very low certainty was given because the risk of bias was a very serious concern. As well, indirectness and imprecision were deemed as serious concerns.

3.3 Results for Key Question 1b

If there is evidence of effectiveness†, what is the optimal time to initiate and to end screening, and the optimal screening interval (includes single and multiple tests and ongoing 'surveillance')? †If there is evidence of at least moderate certainty of evidence, according to GRADE

The certainty of the evidence to answer KQ1a was very low, therefore, this question was not addressed.

4 Discussion

Few studies have assessed the effectiveness of screening of individuals with chronic GERD. Only two retrospective cohort studies[65,67] evaluated screening compared to no screening among 308 individuals with EAC. Among all seven randomized studies, none compared screening to no screening, all performed a one-time screening test with no follow-up of these individuals, and had an average sample size of 172 included participants (range 60 to 378). One cohort study[64] was substantially larger (n=1580) and allowed people to select which modality they were given, among those evaluated in the study.

The lack of screening trials was also confirmed by a 2012 Cochrane systematic review by Yang et al[72], which set out to include only RCTs comparing screening versus no screening, and found no studies meeting their inclusion criteria. Five years later, the present systematic review found no additional randomized controlled trials comparing screening to no screening. As there were 95 articles where the full-text was not available, and 136 in a language other than English and French, it is possible that there may exist additional evidence not considered in this review.

In Rubenstein (2008)[65] there may be higher odds of stage 1 diagnosis if an EGD had been perfomed in the previous five years, although the study included a small number of cases, resulting in low precision. Those diagnosed at earlier stages (T1 and T2) can be treated with potentially curable therapies, primarily surgical and endoscopic therapies. In tertiary care centres, esophagectomy in patients with high-grade dysplasia and stage T1a cancer has been associated with a greater survival; 89% at 1-year, 77% at five-years, and 68% at 10-years[73]. Comparatively, those with late stage cancer that cannot be cured by surgery receive chemotherapy/chemoradiation and have a 15% five-year survival rate[1]. As only one EAC patient had received an EGD in the previous five years, and this patient was diagnosed with an unknown stage of EAC, the study by Hammad et al.[67] did not provide any additional data to that outcome.

There was some evidence that there was a significant difference between screening modalities for endoscopically suspected BE. The Mori (2010)[64] cohort study suggests less suspected BE in TNE compared to EGD. This study used an older method for defining suspected BE by measuring the mucosa between the squamocolumnar junction and the esophagogastric junction, rather than using the newer Prague Classification as used in Sami 2015[60]. Results across outcomes in RCTs were mainly not statistically significant with the exception of psychological effects (i.e. levels of anxiety). The discomfort of the unsedated transnasal procedure, which ultimately fails for some patients, could contribute to increased anxiety.

However, given the very low certainty of the evidence, true effects may be substantially different or uncertain in light of limitations in the body of evidence. There were several important methodological limitations leading to a moderate or high risk of bias among all study outcomes. The few included studies, and generally small sample sizes leads to imprecise results that could not be assessed for consistency or publication bias. A trend that may continue in this area, as half of the potentially relevant trials are expecting sample populations of less than 200 participants (**Appendix 8**).

Blinding of participants to screening modality was not possible in these studies. The inability to blind patients could affect psychological outcomes, as a patient might have a preference to one screening modality over another. For example, conventional EGD is done under sedation, which may decrease levels of anxiety during the procedure. Although not supported by most results in the included studies, there is risk of bias for unblinded screening personnel who might have a

preconceived belief that one modality is less accurate than another, and may refer more patients to biopsy for histological confirmation, as personnel are not able to perform biopsies at the time of screening depending on the screening modality used (e.g., video capsule).

The lack of a definition of chronic GERD (discussed further below), or even how studies defined GERD, reflect a serious concern for the direct generalizability of the population represented in these studies to the target population of this review. The Montreal definition provides guidance for defining GERD[13]; however, there is no standardized definition for what defines "chronic" GERD. For this systematic review, a working group developed a pre-defined definition for what would be considered chronic GERD. No studies met this definition either from a lack of reporting or description provided in the studies. Due to a lack of response from study authors, this uncertainty has been reflected in grading the certainty of the evidence under the indirectness domain. Among studies that did provide a description on how GERD was defined, not all studies used a validated questionnaire to define GERD, while some defined GERD inclusion based on "typical symptoms". Some studies did not define GERD at all. Jobe 2006[63] included those with heartburn, regurgitation or dysphagia, but did not state how many participants experienced each of these symptoms. This is of importance for this review as an exclusion criterion included those with dysphagia. The article was included, but results should be taken with caution.

Overall tolerability of the screening procedure was evaluated in half of the included studies, which included pain, choking, gagging, and anxiety. As EGD is done while the patient is sedated, it is to be likely that there would be less anxiety experienced during the procedure. However, there is also a chance for increased anxiety prior to the procedure as individuals may be anxious about going under sedation. These are considerations that should be considered in practice.

New methods of screening, such as transnasal and transoral esophagoscopy, are considered less invasive and can be performed without the use of sedation in a doctor's office. However, the trade-off between a less invasive procedure and a higher level of anxiety for the patient must also be considered.

There was little difference in the incidence rates of EAC, BE, and dysplasia using alternative screening methods. The results from these studies may encourage increased usage of alternative methods of screening for BE and EAC. Conventional EGD uses sedation, which increases the cost of screening (e.g. monitoring patients post-procedure) and resources used (e.g. availability of a gastroenterologist, recovery room). Alternate methods do not require sedation, can be done in a primary care setting, and require little monitoring post-procedure.

Mori 2010[64] included participants who had experienced a previous screening, and allowed participants to select which screening modality they wanted. There was a large difference in what was selected (transnasal=721, transoral=599, and EGD=254) and 25 patients who chose transnasal failed intubation and were assigned to transoral. Further supporting patient choice of screening modality, RCTs reported higher levels of dropouts among those randomized to EGD compared to other screening modalities, although not always significant.

Histologically confirmed BE was reported in six included studies. In two studies, all participants received standard EGD, with the biopsy method as the comparison of interest. In the four other studies, regardless of what method was used for endoscopically suspected BE (e.g., TNE, VCE), confirmatory diagnosis was performed though standard sedated EGD with biopsy. Therefore, the histologically confirmed BE outcome for these studies do not actually reflect the screening modalities being evaluated in the study.

Dysplasia was reported in two studies, Chang 2011[58] and Jobe 2006[63]. Neither study defined how dysplasia was defined or diagnosed. Additionally, the main and secondary objectives of Chang et al[58] was to determine how many people needed to be contacted to recruit 20 for each screening modality, to assess the variables for prediction of participation. This meant small group sizes and could represent a population of health seekers or those who were less healthy than the general population. Therefore, rates of dysplasia among those included would likely not be representative of the overall population, as those with symptoms may be more inclined to participate and receive screening.

Several other outcomes of interest, including mortality, quality of life, and overdiagnosis, were not reported in any of the included studies. This is mostly because the study results were cross-sectional in nature and these outcomes would require follow-up. In the absence of the outcomes of interest to calculate overdiagnosis, we were unable to address this.

Due to the poor reporting of variables, we were not able to perform our *a priori*-defined subgroup analysis (e.g., age, sex, BMI, smoking history, definition of chronic GERD, duration of chronic GERD, various ethnic groups and groupings of risk factors). We planned sensitivity analyses to restrict to those studies as being low risk of bias and based on the timing of publication. However only two studies, Chak 2014[57] and Jobe 2006[63], were considered low risk for the incidence of histologically confirmed BE and sensitivity analyses were not undertaken.

Potentially relevant, unpublished trials were identified from our grey literature search and may prove informative for any subsequent updates of this review (**Appendix 8**). The ongoing BEST3 cluster randomized controlled trial in the UK involves 120 primary care practices with a planned sample of 9000 participants. The aims are to assess whether the Cytosponge test for patients with reflux symptoms will be effective in increasing the detection of BE in primary care compared to usual care, and to evaluate cost-effectiveness and patient acceptability. However, only the planned outcomes of the incidence of BE and adverse events may be relevant. Results are anticipated for late 2019.

4.1 Implications for Research

As indicated above, the current literature contains several methodologic and issues around the certainty of the evidence, which limits our ability in considering the applicability of the evidence. Researchers might want to consider recent recommendations by the REWARD Alliance to reduce research waste and increase its value (http://rewardalliance.net/about/recommendations/). For example, although checklists have been developed and published (e.g. CONSORT, STROBE) providing authors with a checklist on what should be reported, many studies lack the methodological details necessary to accurately perform risk of bias. One REWARD recommendation states "Investigators, funders, sponsors, regulators, research ethics committees, and journals should systematically develop and adopt standards for the content of study protocols and full study reports, and for data sharing practices." This would help with risk of bias assessments, and in determining the applicability of the evidence.

A consistent and transparent definition of "chronic GERD" should be developed, which would help update this systematic review and guide medical professionals in which patients should be screened for EAC and precancerous lesions. A consistent classification of BE (e.g. Prague Classification) should also be used to allow for comparability between studies.

Most included studies compared one screening method versus another screening method. As EAC is a rare disease, to more accurately assess screening effectiveness, good quality, large multi-centre (including community hospitals and university centres) RCTs on screening versus no screening should be performed. These studies should perform follow-up of the participants over time, with clearly defined pathways, to evaluate EAC-related mortality, survival time and other critical outcomes better reported and defined, as discussed by the Core Outcome Measures in Effectiveness Trials (COMET) initiative[74].

The low quality of reporting in this area is of concern and underscores the importance of proper reporting for trials using the CONSORT statement[75]. Low quality reporting influences the true effects of interventions. Several journals have endorsed and incorporated the CONSORT statement in their instructions to authors. Specialty journals for gastroenterology should consider this approach in order to improve the quality of reporting of RCTs and help reduce bias[76].

Overdiagnosis has not been addressed in the current literature. de Gelder 2011[77] outlines seven approaches to estimating overdiagnosis, depending on choice of numerator and denominator. Individual patient data in studies to test the seven approaches would be ideal. This could provide additional information to a study by Pohl 2005 where it was concluded that overdiagnosis in EAC should be excluded as an explanation for the rise in incidence[48].

5 Conclusion

This review synthesized the evidence on the effectiveness (benefits and harms) of screening for EAC and precancerous conditions (BE and dysplasia). In summary, sparse evidence exists and is of very low certainty to conclude whether or not people with chronic GERD should be screened for EAC and precancerous lesions. More and better designed trials are needed and a definition of what is considered chronic GERD should be developed to help identify a patient group where screening can be better targeted to evaluate the effectiveness.

Chapter 3: Patient values and preferences in relation to screening for esophageal adenocarcinoma and precancerous conditions (dysplasia and Barrett's esophagus) in patients with chronic gastroesophageal reflux disease with or without other risk factors: systematic review to inform a guideline of the Canadian Task Force on Preventive Health Care

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Abstract

Background: This systematic review was produced for the Canadian Task Force on Preventive Health Care to inform the development of a guideline on screening adults with chronic gastroesophageal reflux disease (GERD) with or without other risk factors for esophageal adenocarcinoma (EAC) and associated precancerous lesions (Barrett's Esophagus (BE) and dysplasia).

Objective: To systematically review the current evidence regarding how adults with chronic GERD weigh the benefits and harms of screening, and what factors contribute to these preferences and to their decisions to undergo screening.

Methods: We searched Ovid MEDLINE®, Ovid MEDLINE® Epub Ahead of Print, In-Process & Other Non-Indexed Citations (searched 7 April 2017), Embase Classic + Embase (searched 7 April 2017), CINAHL (searched 7 April 2017), and the Cochrane Library (searched 7 April 2017) and followed the CADTH Grey Matters checklist to search for unpublished literature.

We were interested in adults (≥18 years old) with chronic GERD with or without other risk factors for EAC. All screening modalities used for EAC and precancerous conditions (BE and dysplasia), such as esophagogastroduodenoscopy (EGD) and transnasal endoscopy, were included. The outcomes of interest were how patients weigh the benefits and harms of screening, willingness to be screened, uptake of screening, factors considered in decision to be screened, and intrusiveness of the screening modality. We considered randomized controlled trials (RCTs), controlled clinical trials, controlled before-after, case-controls, and cohort study designs.

The liberal accelerated approach was taken for title and abstract screening, and full-text screening was performed independently by two reviewers. Data extraction and risk of bias assessments were completed by one reviewer and verified by a second reviewer. Any disagreements were resolved by consensus. Due to the small number of included studies and lack of data, a meta-analysis of outcomes was not conducted and a narrative synthesis was provided.

Results: Of the 1,443 studies screened, three studies were included (two RCTs and one cohort study). All three studies reported on reasons why participants were unwilling to be screened or participate in a study. No demographic or descriptive information was provided on the participants who contributed outcome data. For the two studies that provided details, reasons for patients'

unwillingness to be screened were due to anxiety (17% [18/105] and 19% [12/62]), fear of gagging (10% [10/105] and 5% [3/62]), not interested in the study or being a study subject (10% [10/105] and (6% [4/62]), and did not want to undergo a transnasal procedure (7% [7/105]). Only one study provided related information on the uptake of screening, although it was reported as the reasons why patients declined screening post-randomization. Five of 92 participants randomized to unsedated transnasal esophagoscopy (TNE) refused the screening modality because they wanted the unsedated video capsule esophagoscopy instead. Two of 92 participants randomized to unsedated video capsule esophagoscopy (VCE) group refused the procedure because they were worried that the capsule would become lodged after swallowing. There was no statistically significant difference in the uptake of screening between intervention groups (p=0.25). No other outcomes of interest were addressed in the included studies.

Limitations: Limitations of this review include limiting studies to English and French language studies; however, only one study was excluded as it was written in German. There were only three studies that were excluded because we could not retrieve access to the full text articles.

Conclusions: There is little evidence on the preferences and values of adults with chronic GERD for the willingness (or unwillingness) to be screened and the uptake of screening. Further, no evidence currently exists on how patients weigh the benefits and harms of screening, the factors considered in their decision to be screened, and the intrusiveness of the screening modality. To enhance the quality and quantity of evidence, adults need to be enrolled in screening trials and measures of patient preferences and values need to be included. There is a critical knowledge gap that requires new primary research in this area.

6 KQ2 Methods

This systematic review (SR) was developed, conducted, and prepared according to the Canadian Task Force on Preventive Health Care (CTFPHC) Procedure Manual[45] or as methods were updated by the Task Force. The protocol for this SR has been registered with PROSPERO (CRD# 42017050014) and is available on the CTFPHC website (https://canadiantaskforce.ca/).

The SR is reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (**Appendix 9**)[46], and includes a PRISMA flow diagram. We also used AMSTAR (A Measurement Tool to Assess the Methodological Quality of Systematic Reviews) for additional quality control[47].

This SR does not update any previously conducted SR. Any amendments made to the protocol when conducting the review has been outlined in this manuscript.

6.1 Analytic Framework for EAC Screening

The analytic framework for this review is presented in **Figure 1** and includes both the benefits and harms of screening and patient values and preferences.

6.2 Research Key Questions

The key research question is:

KQ2. In adults with chronic gastroesophageal reflux disease (GERD), with or without other risk factors, who have been offered, received, or allocated to receive screening for esophageal adenocarcinoma (EAC) and precancerous conditions (Barrett's Esophagus (BE) and dysplasia), how do they weigh the benefits and harms of screening, and what factors contribute to these preferences and to their decisions to undergo screening?

6.3 Inclusion and Exclusion Criteria

The inclusion and exclusion criteria are specified below and the tabular presentation of this information can be found in **Appendix 10**.

Population

The population of interest for this SR was adults (≥ 18 years) with chronic GERD* with or without other risk factors for EAC.

* As defined by study authors

Those experiencing alarm symptoms for EAC, including dysphagia, recurrent vomiting, anorexia, weight loss, gastrointestinal bleeding or other symptoms identified by authors as 'alarming' were excluded. In addition, those diagnosed with other gastro-esophageal conditions (e.g., gastric cancer, esophageal atresia, and other life threatening esophageal conditions) or pre-existing disease (BE, dysplasia, or EAC) were excluded.

Intervention
Screening for EAC and other precancerous lesions (BE and/or dysplasia) with any screening modality. We excluded any follow-up diagnostic tests, such as 24-hour esophageal pH test or any test for staging purposes, such as CT (computerized tomography) and magnetic resonance imaging.

Comparison
Comparators of interest included: different screening modalities, different screening intervals, different lengths/duration of screening, and those offered screening compared to those not offered screening. Although, we did consider comparative studies that included a no screening group, we understand that the outcomes of interest would not apply to people who were not offered screening. For such studies, we only considered data for those who were offered screening.

Outcomes
The following outcomes were of interest:

- How patients weigh the benefits and harms of screening (e.g., ranking/rating of benefits and harms outcomes)
- Willingness to be screened
- Uptake of screening
- Factors considered in decision to be screened: what components/outcomes of screening do patients place more value on when deciding whether to be screened or not (e.g. potential complications resulting from screening)
- Intrusiveness of the screening modality

Study design
We planned to focus first on evidence from randomized controlled trials (RCTs). Given few RCTs were located, controlled clinical trials, controlled before-after, case-controls, cohort, interrupted time series (ITS), and cross-sectional (e.g., surveys) designs were sought. As insufficient data for the above study designs were located, qualitative studies and mixed-methods studies were also sought.

Settings
Settings were limited to primary care or settings in which a primary care practitioner could refer a patient for esophageal screening.

Timing
There were no limits set for publication dates.

Language
There was no language restriction in the electronic searches. However, only English and French articles were included in the review.

6.4 Literature Search

The search strategy was developed and tested through an iterative process by an experienced medical information specialist in consultation with the review team. Using the OVID platform,

we searched MEDLINE®, MEDLINE® Epub Ahead of Print, In-Process & Other Non-Indexed Citations, and Embase Classic + Embase. We also searched CINAHL using the EBSCO platform and the Cochrane Library on Wiley. The searches were run from the inception date of the databases on October 29, 2018.

Strategies utilized a combination of controlled vocabulary (e.g., "Gastroesophageal Reflux", "Patient Acceptance of Health Care", "Informed Consent") and keywords (e.g., "GERD", "patient perspective", "informed decision-making"). Vocabulary and syntax were translated, as needed, across databases. When possible, animal-only records and opinion publication types were removed from the results.

The search strategy was peer-reviewed using the Peer Review of Electronic Search Strategies (PRESS) 2015 tool [49], and can be found in **Appendix 11**.

To search for unpublished literature, we used the CADTH Grey Matters checklist. This CADTH checklist includes national and international health technology assessment agencies, clinical practice guideline organizations, drug and device regulatory agencies, health economics resources, clinical trials registries, Canadian health prevalence and incidence databases, statistics, search engines, and databases. The clinical trial registries listed within the checklist included the Canadian Cancer Trials, ClinicalTrials.gov, WHO International Clinical Trials Registry Platform, ISRCTN, CenterWatch, and Clinical Trials Registry India. We also searched the following websites: the Esophageal Cancer Awareness Association, the Canadian Cancer Society, the American Cancer Society, the American Association for Cancer Research, the Oesophageal Patients Association, the Esophageal Cancer Education Foundation, Canadian Association of Gastroenterology, and the Esophageal Cancer Action Network. Bibliographies of included studies were also scanned based on title.

6.5 Study Selection

Duplicate records across searches were identified and removed using Reference Manager[50]. The remaining articles were uploaded into Distiller Systematic Review (DistillerSR) Software©[51] for study selection.

A pilot testing phase of randomly selected titles and abstracts (n=50) and potentially relevant full-text articles (n=25) was performed among reviewers prior to commencing broad screening at each of those stages (**Appendix 12**). Titles and abstracts were independently screened for relevance by two independent reviewers using the liberal accelerated method (potentially relevant titles and abstracts were identified by one reviewer, and a second reviewer verified those potentially excluded). Subsequently, full-texts were retrieved and two reviewers independently assessed all articles for relevancy. Conflicts at full-text were resolved by consensus or a third team member. Articles not available for download were ordered from the library through interlibrary loans; those not received within 30 days were excluded and labelled accordingly. We also scanned the bibliographies of relevant systematic reviews and clinical practice guidelines identified from the search strategies and grey literature searching.

When chronic GERD had not been defined in a study, we contacted the study authors twice over a two-week period, by email to attempt to obtain more information. If there was no response by authors, and this was the only reason for possible exclusion, we included the study.

Protocols and reports in abstract form were excluded, but an internet search was undertaken to see if full-text reports were available.

6.6 Data extraction and management

Full data extraction was completed by one reviewer and 100% of these were verified by a second reviewer. Any disagreements were resolved by consensus. Study characteristics were summarized narratively and variable that were extracted are those presented in the table of study characteristics (**Table 3**) (e.g., funding source, setting, GERD definition, inclusion/exclusion criteria). Where information was unclear or missing, authors were contacted by email twice over a two-week period.

6.7 Risk of Bias (ROB) Assessment

All included studies, where relevant, were assessed for the ROB by one reviewer, with verification completed by a second reviewer. Disagreements were resolved by consensus. The Cochrane ROB tool[52] (**Appendix 5**) was used to evaluate the ROB of the one RCT (Chak 2014[57]) that reported an outcome which could be amenable to evaluation (**Table 4**). Outcome-specific domains (i.e., blinding of participants/personnel, blinding of outcome assessors, and incomplete outcome data) were assessed at the outcome level.

The remaining evidence that was located addressed the 'willingness to participate/be screened' outcome, which would have been collected only during the consent period of the studies. This, therefore, would have related to all potentially eligible participants in the study, but not determined separately for the groups being compared. In these cases, a formal ROB assessment was not performed, as relevant tools would apply to study conduct as of allocation onward.

6.8 Analysis

Study outcome data are presented in **Table 5**. Due to the nature of the data, a meta-analysis of outcomes was not done. A narrative synthesis was undertaken. Accordingly, *a priori* sensitivity analyses could not be undertaken.

6.9 Amendments to the protocol

A predefined definition of chronic GERD described in the protocol was: (1) symptoms for ≥12 months, with no specific frequency; and/or (2) proton pump inhibitors (PPI) (or other pharmacotherapy) use for GERD for ≥12 months. The timing of symptoms for ≥12 months was used to be over-inclusive as a scoping exercise resulted in few studies that defined chronic GERD. Using the pre-defined definition of chronic GERD would have resulted in no included studies. The definition has been expanded to include what study authors considered chronic GERD and reflected this uncertainty in our interpretation of the findings.

How patients weigh the benefits and harms was included in the question formulation, but the outcome was inadvertently missed in the outcomes list. This outcome has now been added.

7 Results

7.1 Summary of the Literature Search

The search resulted in 1,614 records. After de-duplication and the addition of records identified from the grey literature search, bibliography search, and search for full-text articles based on abstracts and protocols (n=117), 1,600 unique records were evaluated at the title and abstract level. Among these, 103 were evaluated at full-text and three studies were identified (**Figure 4**).

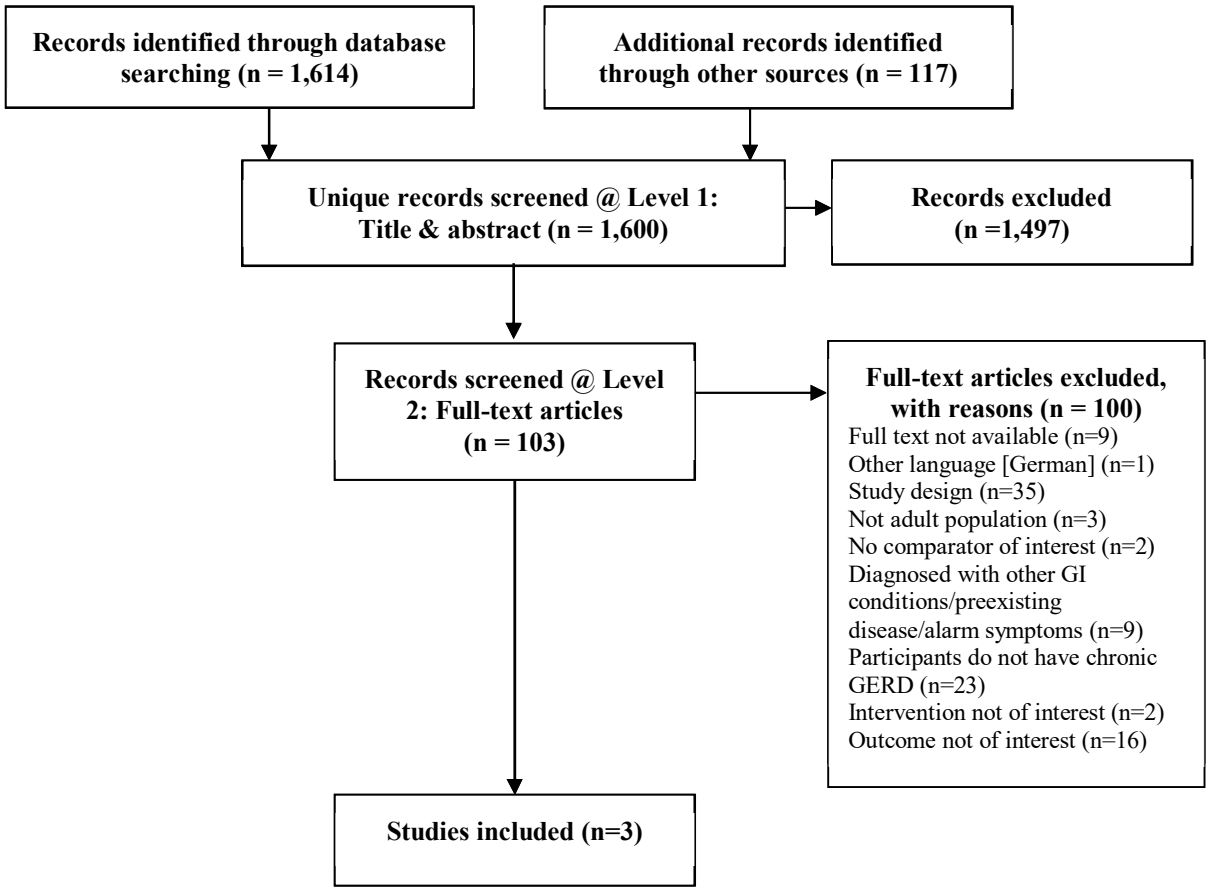


Figure 4 - PRISMA flow diagram for KQ2

Appendix 13 provides a list of studies that were excluded after full text screening, with reasons. A list of ongoing studies is provided in **Appendix 14**.

7.2 Results for Key Question 2

Three studies (Chak 2014[57], Zaman 1999[62], and Zaman 1998[78]) provided information on reasons why participants were unwilling to be part of the study or reasons for deciding against the uptake of screening once allocated[57]. All studies were conducted in the USA, and consisted of two RCTs[57,62] and one cohort[78]. Objectives of the included studies were to determine the acceptance and tolerability of different screening modalities and provide data on screening results. Studies reported on those who refused participation prior to study commencement (i.e. either prior to being

screened or prior to randomization), but did not provide participant characteristics on this patient subset.

7.2.1 Characteristics of Included Studies

Table 3 provides detailed information about each of the three included studies. No demographic or descriptive information was provided on the participants who contributed outcome data. Briefly, Chak 2014[57] is a RCT which asked eligible patients to participate in a study that would randomize them to either unsedated transnasal esophagoscopy (TNE) or unsedated video capsule esophagoscopy (VCE) in an outpatient clinic. Reasons for unwillingness to participate prior to randomization were given. Allocation of those who agreed to participate was then performed, and participants were given the option of forgoing the allocated screening procedure. Zaman 1999[62] is a RCT which asked consecutive patients with gastrointestinal (GI) symptoms to participate in a study that would randomize them to either TNE or unsedated peroral endoscopy (P-EGD). It is unclear if those invited refused to participate prior to or after randomization. Lastly, Zaman 1998[78] is a cohort which asked eligible patients, undergoing endoscopy because of upper GI symptoms, to participate in a study where they would receive P-EGD followed by sedated endoscopy. Both Zaman studies were set in the hospital gastroenterology clinic and endoscopy unit.

7.2.2 Risk of Bias

A formal ROB assessment was only performed for the uptake of screening outcome, in Chak et al[57] (**Table 4**) Overall ROB was judged to be high risk due to the inability to blind the participants, who were also the outcome assessors in this case. No studies protocols were found, therefore, selective outcome reporting could not be properly assessed. It was unclear if those randomized to each study group were similar, as the study authors did not report information about these individuals. Lastly, only one study provided information about the source of funding.

7.2.4 Results of Included Studies

A narrative summary of the results is provided herein, with detailed results in **Table 5**.

How patients weigh the benefits and harms of screening

No studies provided any data for this outcome.

Willingness to be screened

All three studies provided reasons on why those asked refused to be screened/participate in the study. A large proportion of these individuals were in one study[57] with 1,026 of the 1,210 people asked not participating, and 184 who agreed to participate. Among those who did not participate during the invitation period, 627 (52%) did not return the phone call or respond to the letter, 385 (32%) refused to participate (with no reason provided), 12 (1%) were ineligible, and two did not participate because of difficulty getting to the hospital.

The other two studies by Zaman et al invited 105 outpatients in one study and 62 in the other. Zaman 1999[62] reported 45 of 105 (43%) patients were unwilling to participate in the study comparing transnasal to peroral EGD. Zaman 1998[78] reported 19 of 62 (31%) patients unwilling to participate in the study comparing peroral to sedated EGD.

Anxiety

The main reason unwillingness to be screened in both studies was due to anxiety, with 17% (18/105)[62] and 19% (12/62)[78] of all those asked to participate reporting this.

Fear of gagging

Both studies also reported that a fear of gagging was the reason, with 10% (10/105)[62] and 5% (3/62)[78] reporting this as the reason.

Other reasons

One study each reported the following reasons: not being interested in the study (10/105, 10%)[62], not wishing to undergo a transnasal procedure (7/105, 7%)[62], and unwillingness to be a study subject (4/62, 6%)[78].

Uptake of screening

Chak et al[57] reported seven individuals who did not receive the allocated intervention after randomization (n=184; 92 in each group). Five people randomized to the TNE group did not receive the procedure because they wanted capsule instead. Two people randomized to the VCE group did not receive the procedure because they were worried about the capsule getting stuck. There was no statistically significant difference in uptake between intervention groups (p=0.25).

Factors considered in decision to be screened

No studies provided any data for this outcome.

Intrusiveness of the screening modality

No studies provided any data for this outcome.

8 Discussion

Three studies reported on the willingness, or in this case the unwillingness, to participate and be screened in a study on screening for EAC and precancerous conditions. One study also provided outcome information on uptake of screening, more specifically reasons why they did not uptake screening after allocation. No other outcomes of interest were addressed in these studies, overall providing little evidence to answer the question. We are not aware of any other reviews that have been done in the area of upper GI screening in relation to how patients weigh the benefits and harms of screening and what factors contribute to these preferences and to their decision to undergo screening, so there is nothing to compare it to.

It was difficult to accurately assess risk of bias for these studies, as the primary purpose of the included studies was to evaluate acceptability after screening and effectiveness of the screening modality, a different lens to the context of this review. Most outcome data was collected before randomization, and as there is no formal tool to assess risk of bias prior to randomization, these outcomes were not assessed. Measurement bias may present, as studies did not clearly state how this outcome data was collected. It is not clear how the data were collected among those who refused participation during the consent period, as there is no mention of questionnaires or if and how study personnel collected this information. Only the uptake of screening outcome in one study stated that a non-completion questionnaire was given to ascertain reasons for non-completion.

The three included studies were limited to the USA. It is known that preferences for sedated or unsedated endoscopy vary among countries. For example, sedated endoscopy is more common in the USA, whereas unsedated endoscopy is routine in most European and Asian countries[79].

Two included studies stated that participating individuals had been invited to undergo endoscopy for "upper gastrointestinal symptoms", rather than chronic GERD specifically. The indications for endoscopy for those who refused to participate were not specified. If we were to infer from those who did participate in the study, approximately 80% were undergoing upper GI for GERD (no definition was provided), dyspepsia, and other indications (e.g. abdominal pain). Therefore, the results from these studies may include participants not actually relevant to the context of this review.

It was difficult to assess the inconsistency among the included studies, mainly due to a lack of information among those contributing to outcome results. For example, the largest study invited 1210 participants, with 38% (385/1026) of those declining to participate not providing any information on why they refused. Poor reporting of patient information for those who contributed outcome data was seen in all studies. None reported on the age and sex of these participants, and indication for screening (as described above), making it difficult to understand how comparable these studies might have been.

There are several potentially relevant ongoing studies in the area of screening for EAC and precancerous lesion identified from our grey literature search that may provide additional information (**Appendix 14**). However, few actually list how patient weigh the benefits and harms of undergoing screening as a primary or secondary outcome of interest. The ongoing BEST3 cluster randomized controlled trial in the UK involves 120 primary care practices comparing the cytosponge test and usual care with usual care only. One of the possible relevant outcomes is patient acceptability. Results are anticipated for late 2019.

8.1 Implications for Research

No studies were found that focused on evaluating how adults weigh the benefits and harms of screening for EAC and pre-cancerous conditions, what factors contribute to these preferences, and to the decisions to undergo screening. The limited data on patients' reasons for deciding against screening (e.g., preference for another modality, anxiety and fear of gagging, difficulty getting to the hospital) may help inform and stimulate future studies to consider examining the preferences of modalities and reasons why this is important to them. This identifies a need for future primary research projects on these issues.

Incorporating a systematic evaluation of patient values and preferences into the evidence considered in developing guidelines is important, and primary studies must contribute to this knowledge base. In addition, considering the gender perspective is important in recruitment strategies, should a screening program ever exist. Researchers can access national initiatives such as the Strategy for Patient-Oriented Research (SPOR) in Canada and the Patient Centered Outcomes Research Institute (PCORI) in the USA, who provide funding in research to integrate patient involvement, which is believed to lead to greater use and uptake of the research results. Additionally, INVOLVE, established in the UK in 1996, supports active public involvement in public and social care research.

Some studies provided results on those who would be screened again, if they were required to do so. These studies were not included in this review as they did not provide information on how these participants weighed the benefits and harms of screening in their decision to undergoing screening again, but rather just provided a number of those who would. Among those asked, 85% (61/72) would undergo future peroral endoscopy, and 69% (20/29) would undergo transnasal endoscopy. This information could be useful for those considering first time screening to see what other patients report.

8.2 Limitations of the review

This review was developed using rigorous methodological standards, as detailed *a priori* in a registered protocol. There may however be some limitations. There is a risk of missing studies, although we feel this risk is low as we searched multiple databases, and used several techniques to search for grey literature. We included only English and French language studies; however, only one study was excluded due to language of publication. Also, there were nine studies that were excluded because we could not get access to the full text, although many were abstracts and not full-text publications.

9 Conclusion

There is currently insufficient evidence to make firm conclusions on how adults with chronic GERD weight the benefits and harms of screening, and what factors contribute to these preferences and to their decisions to undergo screening. As the importance of this area is well documented, there is a critical information gap that requires new primary research.

References

1. Rubenstein, J. H. & Shaheen, N. J. Epidemiology, Diagnosis, and Management of Esophageal Adenocarcinoma. *Gastroenterology* **149**, 302–317 (2015).
2. Otterstatter, M. C. *et al.* Esophageal cancer in Canada: trends according to morphology and anatomical location. *Can J Gastroenterol* **26**, 723–727 (2012).
3. Canadian Cancer Society's Advisory Committee on Cancer Statistics; *Canadian Cancer Statistics 2017*. (2017).
4. Arnold, M., Soerjomataram, I., Ferlay, J. & Forman, D. Global incidence of oesophageal cancer by histological subtype in 2012. *Gut* **64**, 381–387 (2015).
5. Domper Arnal, M. J., Ferrandez, A. A. & Lanas, A. A. Esophageal cancer: Risk factors, screening and endoscopic treatment in Western and Eastern countries. *World J Gastroenterol* **21**, 7933–7943 (2015).
6. Kamangar, F., Dores, G. M. & Anderson, W. F. Patterns of cancer incidence, mortality, and prevalence across five continents: defining priorities to reduce cancer disparities in different geographic regions of the world. *J Clin Oncol* **24**, 2137–2150 (2006).
7. Shaheen, N. J., Falk, G. W., Iyer, P. G. & Gerson, L. B. ACG Clinical Guideline: Diagnosis and Management of Barrett's Esophagus. *Am. J. Gastroenterol.* **111**, 30–50 (2016).
8. El-Serag, H. B., Sweet, S., Winchester, C. C. & Dent, J. Update on the epidemiology of gastro-oesophageal reflux disease: a systematic review. *Gut* **63**, 871–880 (2014).
9. Fedorak, R. N., Veldhuyzen van, Z. S. & Bridges, R. Canadian Digestive Health Foundation Public Impact Series: gastroesophageal reflux disease in Canada: incidence, prevalence, and direct and indirect economic impact. *Can J Gastroenterol* **24**, 431–434 (2010).

10. Shaheen, N. J. *et al.* Upper endoscopy for gastroesophageal reflux disease: best practice advice from the clinical guidelines committee of the American College of Physicians. *Ann. Intern. Med.* **157**, 808–816 (2012).
11. Kahrilas, P. J. *et al.* American Gastroenterological Association Medical Position Statement on the management of gastroesophageal reflux disease. *Gastroenterology* **135**, 1383–1391 (2008).
12. Jones, R. & Galmiche, J. P. Review: what do we mean by GERD?--definition and diagnosis. *Aliment Pharmacol Ther* **22**, 2–10 (2005).
13. Vakil, N. *et al.* [The Montreal definition and classification of gastroesophageal reflux disease: a global, evidence-based consensus paper]. *Z. Gastroenterol.* **45**, 1125–1140 (2007).
14. Hirota, W. K. *et al.* ASGE guideline: the role of endoscopy in the surveillance of premalignant conditions of the upper GI tract. *Gastrointest. Endosc.* **63**, 570–580 (2006).
15. Mahon, D. *et al.* Randomized clinical trial of laparoscopic Nissen fundoplication compared with proton-pump inhibitors for treatment of chronic gastro-oesophageal reflux. *Br J Surg* **92**, 695–699 (2005).
16. Anvari, M. *et al.* A randomized controlled trial of laparoscopic Nissen fundoplication versus proton pump inhibitors for the treatment of patients with chronic gastroesophageal reflux disease (GERD): 3-year outcomes. *Surg Endosc* **25**, 2547–2554 (2011).
17. Grant, A. M. *et al.* Minimal access surgery compared with medical management for gastro-oesophageal reflux disease: five year follow-up of a randomised controlled trial (REFLUX). *BMJ* **346**, f1908 (2013).
18. Spechler, S. J. Barrett's esophagus. *N. Engl. J. Med.* **371**, 836–845 (2014).

19. Lagergren, J., Bergström, R., Lindgren, A. & Nyrén, O. Symptomatic gastroesophageal reflux as a risk factor for esophageal adenocarcinoma. *N. Engl. J. Med.* **340**, 825–831 (1999).
20. Wang, K. K. & Sampliner, R. E. Updated guidelines 2008 for the diagnosis, surveillance and therapy of Barrett's esophagus. *Am. J. Gastroenterol.* **103**, 788–797 (2008).
21. de Jonge, P. J. F., van Blankenstein, M., Grady, W. M. & Kuipers, E. J. Barrett's oesophagus: epidemiology, cancer risk and implications for management. *Gut* **63**, 191–202 (2014).
22. Gorospe, E. C. & Wang, K. K. Barrett oesophagus in 2013: risk stratification and surveillance in Barrett oesophagus. *Nat Rev Gastroenterol Hepatol* **11**, 82–84 (2014).
23. Weijenborg, P. Reflux perception and the esophageal mucosal barrier in gastroesophageal reflux disease. (University of Amsterdam, 2016).
24. Eloubeidi, M. A. & Provenzale, D. Clinical and demographic predictors of Barrett's esophagus among patients with gastroesophageal reflux disease: a multivariable analysis in veterans. *J. Clin. Gastroenterol.* **33**, 306–309 (2001).
25. Lao-Sirieix, P. & Fitzgerald, R. C. Screening for oesophageal cancer. *Nat Rev Clin Oncol* **9**, 278–287 (2012).
26. Spechler, S. J., Sharma, P., Souza, R. F., Inadomi, J. M. & Shaheen, N. J. American gastroenterological association technical review on the management of Barrett's esophagus. *Gastroenterology* **140**, e18–e52 (2011).
27. Leddin, D. *et al.* The 2012 SAGE wait times program: Survey of Access to GastroEnterology in Canada. *Can J Gastroenterol* **27**, 83–89 (2013).
28. Armstrong, D. & Khanna, S. Gastrointestinal endoscopy in Canada: National trends from 2004-5 to 2008-9. *Can. Journla Gastroenterol. Hepatol.* **Suppl A**, 97A (2012).

29. BC Cancer Agency. *Family Practice Oncology Network Clinical Practice Guidelines. Upper Gastrointestinal Cancer (Suspected) Part 1*. (2016).
30. BC Cancer Agency. *Cancer management guidelines - Gastrointestinal cancer Esophageal and esophagogastric junction*. (2013).
31. Alberta Health Services. *Clinical Practice Guideline GI-009 Version 4. Esophageal Cancer*. (2016).
32. Armstrong, D. *et al.* Canadian Concensus Conference on the management of gastroesophageal reflux disease in adults - Update 2004. *Can. J. Gastroenterol.* **19**, 15–35 (2005).
33. Canadian Pharmacists Association. *Compendium of Therapeutic Choices: Canada's Trusted Reference for Primary Care Therapeutics (CTC 7)*. (2014).
34. Sonnenberg, A., Amorosi, S. L., Lacey, M. J. & Lieberman, D. A. Patterns of endoscopy in the United States: analysis of data from the Centers for Medicare and Medicaid Services and the National Endoscopic Database. *Gastrointest. Endosc.* **67**, 489–496 (2008).
35. Pennathur, A., Gibson, M. K., Jobe, B. A. & Luketich, J. D. Oesophageal carcinoma. *Lancet* **381**, 400–412 (2013).
36. American Society for Gastrointestinal Endoscopy. The role of endoscopy in the assessment and treatment of esophageal cancer. Guideline. *Gastrointest. Endosc.* **77**, 328–334 (February 13).
37. NICE. *Suspected cancer: recognition and referral (NG12). NICE guideline*. (2015).
38. Steffen, A. *et al.* General and abdominal obesity and risk of esophageal and gastric adenocarcinoma in the European Prospective Investigation into Cancer and Nutrition. *Int J Cancer* **137**, 646–657 (2015).

39. Wheeler, J. B. & Reed, C. E. Epidemiology of esophageal cancer. *Surg Clin North Am* **92**, 1077–1087 (2012).

40. Schweigert, M., Dubecz, A. & Stein, H. J. Oesophageal cancer--an overview. *Nat Rev Gastroenterol Hepatol* **10**, 230–244 (2013).

41. El-Serag, H. *et al.* Surveillance endoscopy is associated with improved outcomes of esophageal adenocarcinoma (EA) detected in patients with barrett's esophagus (BE). *Gastroenterology* **146**, S-123 (2014).

42. Torre, L. A., Siegel, R. L., Ward, E. M. & Jemal, A. Global Cancer Incidence and Mortality Rates and Trends--An Update. *Cancer Epidemiol Biomark. Prev* **25**, 16–27 (2016).

43. Alderson, D. & Wijnhoven, B. P. Interventions for Barrett's oesophagus and early cancer. *Br J Surg* **103**, 475–476 (2016).

44. Kuipers, E. J. Barrett esophagus and life expectancy: implications for screening? *Gastroenterol Hepatol N* **7**, 689–691 (2011).

45. *Canadian Task for on Preventive Health Care Procedure Manual*. (2014).

46. Moher, D., Liberati, A., Tetzlaff, J. & Altman, D. G. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Ann. Intern. Med.* **151**, 264–269, W64 (2009).

47. Shea, B. J. *et al.* Development of AMSTAR: a measurement tool to assess the methodological quality of systematic reviews. *BMC Med Res Methodol* **7**, 10 (2007).

48. Pohl, H. & Welch, H. G. The role of overdiagnosis and reclassification in the marked increase of esophageal adenocarcinoma incidence. *J. Natl. Cancer Inst.* **97**, 142–146 (2005).

49. McGowan, J. *et al.* PRESS Peer Review of Electronic Search Strategies: 2015 Guideline Statement. *J. Clin. Epidemiol.* **75**, 40–46 (2016).

50. *Reference Manager 12*. (Thomson Reuters, 2011).

51. *DistillerSR*. (Evidence Partners, 2011).

52. Higgins, J. & Green, S. *Cochrane handbook for systematic reviews of interventions*. (Wiley Online Library, 2008).

53. Wells, G. *et al. The Newcastle-Ottawa Scale (NOS) for assessing the quality of nonrandomised studies in meta-analyses*. (2000).

54. *Review Manager (RevMan)*. (The Nordic Cochrane Centre, The Cochrane Collaboration, 2014).

55. Atkins, D. *et al.* Grading quality of evidence and strength of recommendations. *BMJ* **328**, 1490 (2004).

56. Balshem, H. *et al.* GRADE guidelines: 3. Rating the quality of evidence. *J Clin Epidemiol* **64**, 401–406 (2011).

57. Chak, A. *et al.* Comparative acceptability of transnasal esophagoscopy and esophageal capsule esophagoscopy: a randomized, controlled trial in veterans. *Gastrointest. Endosc.* **80**, 774–782 (2014).

58. Chang, J. Y. *et al.* Population screening for barrett esophagus: A prospective randomized pilot study. *Mayo Clin. Proc.* **86**, 1174–1180 (2011).

59. Ferguson, D. D. *et al.* Enhanced magnification-directed biopsies do not increase the detection of intestinal metaplasia in patients with GERD. *Am. J. Gastroenterol.* **101**, 1611–1616 (2006).

60. Sami, S. S. *et al.* A randomized comparative effectiveness trial of novel endoscopic techniques and approaches for Barrett's esophagus screening in the community. *Am. J. Gastroenterol.* **110**, 148–158 (2015).

61. Wani, I. R., Showkat, H. I., Bhargav, D. K. & Samer, M. Prevalence and Risk Factors for Barrett's Esophagus in Patients with GERD in Northern India; Do Methylene Blue-directed Biopsies Improve Detection of Barrett's Esophagus Compared the Conventional Method? *Middle East J. Dig. Dis.* **6**, 228–236 (2014).
62. Zaman, A. *et al.* A randomized trial of peroral versus transnasal unsedated endoscopy using an ultrathin videoendoscope. *Gastrointest. Endosc.* **49**, 279–284 (1999).
63. Jobe, B. A. *et al.* Office-based unsedated small-caliber endoscopy is equivalent to conventional sedated endoscopy in screening and surveillance for Barrett's esophagus: a randomized and blinded comparison. *Am. J. Gastroenterol.* **101**, 2693–2703 (2006).
64. Mori, A. *et al.* Unsedated transnasal ultrathin esophagogastroduodenoscopy may provide betterdiagnostic performance in gastroesophageal reflux disease. *Dis. Esophagus* **24**, 92–98 (2011).
65. Rubenstein, J. H., Sonnenberg, A., Davis, J., McMahon, L. & Inadomi, J. M. Effect of a prior endoscopy on outcomes of esophageal adenocarcinoma among United States veterans. *Gastrointest. Endosc.* **68**, 849–855 (2008).
66. Hammad, T. A., Thrift, A. P., El-Serag, H. B. & Husain, N. S. Missed Opportunities for Screening and Surveillance of Barrett's Esophagus in Veterans with Esophageal Adenocarcinoma. *Dig. Dis. Sci.* (2018). doi:10.1007/s10620-018-5336-5
67. Hammad, T. A., Thrift, A. P., El-Serag, H. B. & Husain, N. S. Missed Opportunities for Screening and Surveillance of Barrett's Esophagus in Veterans with Esophageal Adenocarcinoma. *Dig. Dis. Sci.* **64**, 367–372 (2019).
68. Locke, G. R., Talley, N. J., Weaver, A. L. & Zinsmeister, A. R. A new questionnaire for gastroesophageal reflux disease. *Mayo Clin Proc* **69**, 539–547 (1994).

69. Talley, N. J., Phillips, S. F., Melton, J., III, Wiltgen, C. & Zinsmeister, A. R. A patient questionnaire to identify bowel disease. *Ann. Intern. Med.* **111**, 671–674 (1989).

70. Talley, N. J., Phillips, S. F., Wiltgen, C. M., Zinsmeister, A. R. & Melton, L. J., III. Assessment of functional gastrointestinal disease: the bowel disease questionnaire. *Mayo Clin Proc* **65**, 1456–1479 (1990).

71. Ofman, J. J. *et al.* Identifying patients with gastroesophageal reflux disease: validation of a practical screening tool. *Dig Sci* **47**, 1863–1869 (2002).

72. Yang, S. *et al.* Screening for oesophageal cancer. *Cochrane Database Syst Rev* **12**, CD007883 (2012).

73. Rice, T. W. *et al.* Superficial adenocarcinoma of the esophagus. *J Thorac Cardiovasc Surg* **122**, 1077–1090 (2001).

74. Clarke, M. Standardising outcomes for clinical trials and systematic reviews. *Trials* **8**, 39 (2007).

75. Schulz, K. F., Altman, D. G. & Moher, D. CONSORT 2010 statement: updated guidelines for reporting parallel group randomised trials. *BMJ* **340**, c332 (2010).

76. Moher, D. *et al.* Does quality of reports of randomised trials affect estimates of intervention efficacy reported in meta-analyses? *Lancet* **352**, 609–613 (1998).

77. de Gelder, R. *et al.* Interpreting overdiagnosis estimates in population-based mammography screening. *Epidemiol Rev* **33**, 111–121 (2011).

78. Zaman, A., Hapke, R., Sahagun, G. & Katon, R. M. Unsedated peroral endoscopy with a video ultrathin endoscope: patient acceptance, tolerance, and diagnostic accuracy. *Am. J. Gastroenterol.* **93**, 1260–1263 (1998).

79. Aljebreen, A. M. Unsedated endoscopy: is it feasible? *Saudi J Gastroenterol* **16**, 243–244 (2010).

Tables

Table 1. KQ1 Study Characteristics

Study year Country	Study design (total sample)	Data collection	Intervention & Comparator(s) (n allocated) Setting	Population			Outcome(s)
				GERD[1] definition	Inclusion/Exclusion criteria	Patient characteristics	
Chak 2014[57] USA	Randomized Controlled Trial (n=184)	Not reported **Follow-up:** one time test	Transnasal esophagoscopy (TNE)[2] (n=92) Video capsule esophagoscopy (VCE)[3] (n=92) Outpatient clinic	Symptoms of GERD (from questionnaire[4]) or use of acid suppression medicine (within 7 days of screening)	**Inclusion**: Veterans aged 45-85 years, without a prior EGD in the past 10 years and with no contraindications to VCE or TNE (history of recurrent epistaxis), with or without GERD. **Exclusion**: Altered nasopharyngeal anatomy, allergy to lidocaine derivatives, bleeding diathesis, prolonged prothrombin time, known swallowing disorders, having a cardiac pacemaker or other eletromechanical implants, suspected gastrointestinal obstruction, strictures, or fistulas based on clinical picture.	Mean (SD) age: 59 (8) years Males: 96% White ethnicity: 41% PPI therapy: 46% Smokers: 80% Mean (SD) BMI: TNE: 31.25 (7.66) ECE: 31.38 (6.98)	Endoscopically suspected BE Histologically confirmed BE Anxiety, nervousness, or worry before and during the procedure
Chang 2011[58] USA	Randomized Controlled Trial (n=60)	Feb 2009 - May 2010 **Follow-up:** one-time test	Transnasal esophagoscopy T(NE)[5] (n=20) Video capsule esophagoscopy (VCE)[2] (n=20)	Symptoms obtained through three validated questionnaires[4,8,9]	**Inclusion**: Patients over 50 years old from the Olmsted Country cohort, who had not undergone sedated EGD in the past 5 years **Exclusion**: History of known BE, upper endoscopy within past 5 years, history of dysphagia, Zenker	Age: NR Males: 55% White ethnicity: NR PPI therapy: NR Smokers: NR Mean (SD) BMI: NR	Endoscopically suspected BE Histologically confirmed BE Dysplasia

[1] Gastro-esophageal Reflux Disease
[2] Performed with Vision Sciences disposable sheath TNE-5000 digital esophagoscope
[3] Performed with the Given Imaging PillCam ESO 2 capsule endoscopy
[4] Locke GR, Talley NJ, Weaver AL, et al. A new questionnaire for gastroesophageal reflux disease. Mayo Clin Proc. 1994; 69:539–47
[5] Performed with Fujinon EG-530N endoscope
[8] Talley NJ, Phillips SF, Melton J III, Wiltgen C, Zinsmeister AR. A patient questionnaire to identify bowel disease. Ann Intern Med 1989; 111 :671-674.
[9] Talley NJ, Phillips SF, Wiltgen CM, Zinmeister AR, Melton LJ III. Assessment of functional gastrointestinal disease: the bowel disease questionnaire. Mayo Clin Proc 1990; 65: 1456-1479.

Study year Country	Study design (total sample)	Data collection	Intervention & Comparator(s) (n allocated) Setting	Population			Outcome(s)
				GERD[1] definition	Inclusion/Exclusion criteria	Patient characteristics	
			EGD[6,7] (n=20) Clinical research centre		diverticulum, epiphrenic diverticulum, known or suspected intestinal obstruction, cardiac pacemaker, any implanted electromedical device, pregnancy, any MRI anticipated within 7 days, any abdominal surgery within previous 6 months (except cholecystectomy), history of recurrent epistaxis, no longer an Olmsted Country, Minnesota resident, deceased, any serious illness that may impair ability to complete a questionnaire, any contraindication to esophageal biopsy		
Ferguson 2006[59] USA	Randomized Controlled Trial (n=137)	Not reported **Follow-up:** one time test	EGD + biopsy[10] (n=69) Enhanced magnification-directed endoscopy[11] biopsies (with acetic acid) (n=68) Outpatient clinic	Validated questionnaire,[12] GERD score	**Inclusion**: Patients presenting for EGD with a history of GERD **Exclusion**: Patients with a known history of esophageal cancer, BE with dysplasia, esophagectomy, previous endoscopic ablation therapy, contraindication to procurement of biopsies, or those with an allergy to acetic acid	Age: EGD: 62.8 y (15.0) EME: 62.2 y (15.6) Male: 42% White ethnicity: NR PPI therapy: NR Smokers: NR Mean (SD) BMI: NR	Specialized Intestinal Metaplasia

[6] Esophagogastroduodenoscopy
[7] Performed with PENTAX Medicalvideo endoscope
[10] Conventional four-quadrant random biopsies taken every 2 cm
[11] Performed with the Olympus GIF-Q160-Z endoscope
[12] Ofman J, Shaw M, Sadik K, et al. Identifying patients with gastroesophageal reflux disease: Validation of a practical screening tool. Dig Dis Sci 2002; 47: 1863-9.

Study year Country	Study design (total sample)	Data collection	Intervention & Comparator(s) (n allocated) Setting	Population			Outcome(s)
				GERD[1] definition	Inclusion/Exclusion criteria	Patient characteristics	
Sami 2015[60] USA	Randomized Controlled Trial (n=209)	Apr 2011 - Oct 2013 **Follow-up:** one time test	EGD[13] (n=61) Hospital-based transnasal esophagoscopy[1] (n=72) Hospital outpatient endoscopy suite Mobile-based transnasal esophagoscopy[1] (n=76) Mobile research vehicle	GERQ questionnaire[4] and defined as "heartburn or acid regurgitation ≥1 week, <1 week, or none"	**Inclusion**: Subjects ≥50 years of age from the Olmsted Country cohort, who previously completed validated gastrointestinal symptom questionnaires from 1988 to 2009 **Exclusion**: History of progressive dysphagia or recurrent epistaxis, known Zenker's or epiphrenic diverticulum, moved out of Olmsted County or deceased, significant illness that may impair ability to complete questionnaires, and coagulopathy.	Mean (SD) age: 65 y (9) Males: 46% White ethnicity: 99% PPI therapy: 17% Smokers: NR BMI mean (SD): EGD: 28.8 (5.8) hTNE: 30.5 (13.9) mTNE: 29.0 (5.6)	Endoscopically suspected BE Histologically confirmed BE Anxiety experienced during the procedure Serious adverse events
Wani 2014[61] India	Randomized Controlled Trial (n=378)	Jan 2010-Feb 2012 **Follow-up:** one time test	EGD[14] + biopsy[10] (n=33) EGD[9] + chromo-endoscopy[15] (n=23) Setting not reported	Described as "characteristics symptoms of GERD".	**Inclusion**: Patients with GERD from five northern states of India **Exclusion**: Not reported	Mean (SD) age: 48.15 y (10.9) Males: 66.7% White ethnicity: NR PPI therapy: NR Smokers: NR Mean (SD) BMI: NR	Histologically confirmed BE (Specialized Intestinal Metaplasia)
Zaman 1999[62] USA	Randomized Controlled Trial (n=105)	Not reported	Unsedated transnasal endoscopy (T-EGD)[16]	not defined	**Inclusion**: Upper gastrointestinal symptoms. **Exclusion**: Acute gastrointestinal hemorrhage, history of sinus surgery	Mean age (range): 46 y (21-84) Males: 58% White ethnicity: NR PPI therapy: NR	Life threatening, severe, or medically

[13] Performed with the Olympus GIF-180 high definition endoscope
[14] Performed with Olympus GIF-Q180 video endoscope
[15] Done with methylene blue directed biopsies
[16] Olympus N200 and N230 ultrathin endoscopes

Study year Country	Study design (total sample)	Data collection	Intervention & Comparator(s) (n allocated) Setting	Population			Outcome(s)
				GERD[1] definition	Inclusion/Exclusion criteria	Patient characteristics	
		Follow-up: one time test	(n=29)[17] Unsedated peroral endoscopy (P-EGD)[16] (n=31)[17] Hospital gastroenterology clinics and endoscopy unit		or recurrent sinusitis, any current anticoagulation therapy, dysphagia possibly requiring esophageal dilation, a need for sclerotherapy or band ligation of varices, or surveillance for Barrett's esophagus.	Smokers: NR Mean (SD) BMI: NR	significant consequence Endoscopically suspected BE Anxiety before procedure, during insertion, and during procedure
Jobe 2006[63] USA	Randomized crossover study (n=134)	Mar 2004-Mar 2005 **Follow-up:** one time test for each modality	EGD + biopsy[10] then transnasal esophagoscopy [18] (n=62) Transnasal esophagoscopy then EGD + biopsy (n=72) Office-based screening performed in randomized order 1 week to 1 month later in all patients.	Heartburn, regurgitation or dysphagia	**Inclusion**: Outpatients ≥18 years who were scheduled for endoscopic screening for symptoms of chronic GERD and all patients ≥18 years of age with histologically proven BE who were enrolled in endoscopic surveillance **Exclusion**: Patients with a history of prior antireflux surgery, endoscopic antireflux procedure, Zenker's diverticulum, epiphrenic diverticulum, pregnancy, anticoagulation therapy, esophageal varices, history of recurrent epistaxis, or head or neck malignancy	Median age (IQR): 59 y (51-71) Males: 80% White ethnicity: 95% Antisecretory medication: 78% Smokers: 73% Mean (SD) BMI: 30.1 (5.9)	Histologically confirmed BE Dysplasia (low- and high-grade) Esophageal adenocarcinoma Anxiety before procedure, during insertion, and during procedure

[17] 4 patients randomized to transnasal required crossover to the peroral group. One crossover also could not complete the peroral screening and received endoscopy under general anesthesia.
[18] Transnasal esophagoscopy performed with Olympus 5.1 mm diameter flexible endoscope. Sedated EGD performed with Olympus 9.8 mm diameter flexible endoscope

Study year Country	Study design (total sample)	Data collection	Intervention & Comparator(s) (n allocated) Setting	Population			Outcome(s)
				GERD[1] definition	Inclusion/Exclusion criteria	Patient characteristics	
Mori 2010[64] Japan	Prospective cohort (n=1580)	Not reported **Follow-up:** one time test	EGD[19] (n=254) Ultrathin nasal EGD[5] (n=727)[20] Ultrathin oral EGD[5] (n=599) Hospital setting	Not defined	**Inclusion**: Consecutive outpatients who underwent EGD for screening upper intestinal tract disorders in Inuyama Chuo Hospital and Ichinomiya Nishi Hospital **Exclusion**: Patients with esophagogastric cancers, gastroduodenal ulcers, and histories of esophagogastrointestinal surgery as well as those taking proton-pump-inhibitors or histamine-2 receptor antagonists.	Mean (SD) age: 60 y (16) Males: 50% White ethnicity: NR PPI therapy: NR Smokers: NR Mean (SD) BMI: NR	Endoscopically suspected BE
Rubenstein 2008[65] USA	Retrospective controlled cohort study (n=155)	1995-2003 **Follow-up**: none or prior EGD in the past 5 years, depending on patient	EGD (n=25) no prior EGD (n=130)	GER identified by International Classification of Diseases codes 530.10-530.12, 530.81, or 787.1	**Inclusion**: Veterans diagnosed with adenocarcinoma of the distal third of the esophagus or of the gastric cardia from 1995 through 2003, and who had gastroesophageal reflux diagnosed before the diagnosis of cancer **Exclusion**: Subjects who did not have at least one admission or outpatient encounter in each of the 5 years before the cancer diagnosis, those with dysplasia but with no evidence of EAC, and subjects without EAC (such as gastric cardia adenocarcinoma, which shares the same ICD code as EAC) (based on the review of the electronic medical records).	Age: NR Males: 99% White ethnicity: 84% PPI therapy: NR Smokers: NR Mean (SD) BMI: NR	Esophageal adenocarcinoma stage at diagnosis Long-term survival

[19] Performed with Olympus GIF-XQ240 or XQ260. Appears to be unsedated.
[20] 25 patients chose N-EGD but had failed transnasal intubation and were converted to transoral EGD

Study year Country	Study design (total sample)	Data collection	Intervention & Comparator(s) (n allocated) Setting	Population			Outcome(s)
				GERD[1] definition	Inclusion/Exclusion criteria	Patient characteristics	
Hammad 2018[67] USA	Retrospective cohort study (n=153*) *excludes 29 patients under surveillance for BE	Feb 2005-Sept 2017 **Follow-up**: none or prior EGD in the past 5 years, depending on patient	No EGD (n=152) EGD <5 years ago (n=1)	Not defined	**Inclusion**: Patients diagnosed with EAC between February 2005 to September 2017. **Exclusion**: Not reported	Mean age: 67.5 y (SD 9.3) Males: 99.3% White ethnicity: 84.3% PPI therapy: 47.7% Any anti-acid: 58.8% Active smokers: 43.1% Ex-smoker: 41.2% Mean (SD) BMI: 30 (6.5)	Esophageal adenocarcinoma stage at diagnosis

Table 2. KQ1 Risk of Bias (ROB)

Table 2a. Cochrane ROB for RCTs

Author/Year	Sequence generation	Allocation Concealment	Blinding of Participants/ Personnel	Blinding of Outcome Assessors	Incomplete Outcome Data	Selective Outcome Reporting	Other	Overall ROB
Critical Outcome 1: Mortality								
All-cause mortality								
Not reported								
Cancer-related mortality								
Not reported								
Critical Outcome 2 Survival								
Not reported								
Critical Outcome 3: Life threatening, severe, or medically significant consequences								
Sami 2015[60]	+	-	-	-	+	-	?	High
Zaman 1999[62]	-	-	+	?	+	?	?	Moderate
Important Outcome 4: Incidence of EAC, BE, and low- and high-grade dysplasia								
Incidence of EAC								
Jobe 2006[63]	+	+	+	?	+	?	+	Moderate
Incidence of endoscopically suspected BE								
Chak 2014[57]	+	+	-	-	+	?	+	High
Chang 2011[58]	?	?	-	-	-	-	?	High
Sami 2015[60]	+	-	-	-	+	-	?	High
Zaman 1999[62]	?	?	-	-	+	?	?	High
Incidence of histologically confirmed BE								
Chak 2014[57]	+	+	+	+	+	?	+	Low
Chang 2011[58]	?	?	+	-	-	-	?	High
Ferguson 2006[59]	+	?	+	+	+	?	?	Moderate
Sami 2015[60]	+	-	+	+	+	-	?	High
Wani 2014[61]	?	?	+	+	+	?	?	Moderate
Jobe 2006[63]	+	+	+	+	+	?	+	Low
Incidence of low- and high-grade dysplasia								
Chang 2011[58]	?	?	?	?	?	-	?	Moderate
Jobe 2006[63]	+	+	?	?	+	?	+	Moderate
Important Outcome 5: Quality of Life								
Not reported								
Important Outcome 6: Psychological effects								
Chak 2014[57]	+	+	-	-	+	?	+	High
Sami 2015[60]	+	-	-	-	+	-	?	High
Jobe 2006[63]	+	+	-	-	+	?	+	High
Zaman 1999[62]	?	?	-	-	+	?	?	High
Important Outcome 7: Major or minor medical procedures								
Not reported								
Important Outcome 8: Overdiagnosis								
Not reported								

(+) low risk; (?) unclear risk; (-) high risk

Table 2b. Newcastle-Ottawa Scale (NOS) for Cohort studies

Author/Year	SELECTION				COMPARABILITY	OUTCOME			Overall ROB
	Representativeness of the Exposed Cohort	Selection of the Non-Exposed Cohort	Ascertainment of Exposure	Demonstration That Outcome of Interest Was Not Present at Start of Study	Comparability of Cohorts on the Basis of the Design or Analysis	Assessment of Outcome	Was Follow-Up Long Enough for Outcomes to Occur	Adequacy of Follow Up of Cohorts	
CRITICAL OUTCOME 1: Mortality									
All-cause mortality									
Not reported									
Cancer-related mortality									
Not reported									
CRITICAL OUTCOME 2: Survival									
Rubenstein 2008[65]	-	*	*	n/a	-	*	*	*	Moderate
CRITICAL OUTCOME 3: Life threating, severe, or medically significant consequences									
Not reported									
IMPORTANT OUTCOME 4: Incidence of EAC (by stage), BE, and low- and high-grade dysplasia									
Incidence of EAC									
Rubenstein 2008[65]	-	*	*	n/a	-	*	*	*	Moderate
Hammad 2019[67]	-	*	*	n/a	-	*	*	*	Moderate
Incidence of endoscopically suspected BE									
Mori 2010[64]	-	*	*	-	*	-	n/a	n/a	High
Incidence of histologically confirmed BE									
Not reported									
Incidence of dysplasia									
Not reported									
IMPORTANT OUTCOME 5: Quality of Life									
Not reported									
IMPORTANT OUTCOME 6: Psychological effects									
Not reported									
IMPORTANT OUTCOME 7: Major or minor medical procedures									
Not reported									
IMPORTANT OUTCOME 8: Overdiagnosis									
Not reported									

(*) low risk; (-) high risk; (n/a) not applicable

Table 3. KQ2 Study Characteristics

Study year Country Funding	Setting	Patient flow and timing of outcome data collection	Population			Intervention & Comparator(s)
			GERD[1] definition	Inclusion/Exclusion criteria	Patient characteristics providing outcome data[2]	
Chak 2014[57] USA U.S. Public Health Service	Outpatient clinic	1210 patients were asked to participate in a RCT. 1026 patients did not participate prior to randomization. The 184 who agreed to participate were given the option to withdraw after randomization. Seven patients withdrew - these patients were asked to fill out a non-completion questionnaire to ascertain reasons for non-completion.	Symptoms of GERD (from questionnaire[3]) or use of acid suppression medicine (within 7 days of screening)	**Inclusion**: Veterans aged 45-85 years, without a prior EGD in the past 10 years and with no contraindications to VCE or transnasal esophagoscopy (history of recurrent epistaxis), with or without GERD. **Exclusion**: Altered nasopharyngeal anatomy, allergy to lidocaine derivatives, bleeding diathesis, prolonged prothrombin time, known swallowing disorders, having a cardiac pacemaker or other eletromechanical implants, suspected gastrointestinal obstruction, strictures, or fistulas based on clinical picture.	Not reported	Transnasal esophagoscopy[4] Video capsule esophagoscopy[5]
Zaman 1999[62] USA NR	Hospital gastroenterology clinics and endoscopy unit over a 12- month period	105 consecutive patients were asked to participate in a RCT. 45 patients refused participation and provided reasons why.	Not defined	**Inclusion**: Upper gastrointestinal symptoms. **Exclusion**: Acute gastrointestinal hemorrhage, history of sinus surgery or recurrent sinusitis, any current anticoagulation therapy, dysphagia possibly requiring esophageal dilation, a need for sclerotherapy or band ligation of varices, or surveillance for Barrett's esophagus.	Not reported	Unsedated transnasal endoscopy[6] Unsedated peroral endoscopy[7]
Zaman 1998[78] USA NR	Hospital gastroenterology clinics and endoscopy units over a 6-month period	62 patients were asked to participate in a study where they would receive peroral endoscopy followed by standard sedated EGD. Those who refused participation were asked to provide their reasons.	Not defined	**Inclusion**: Patients being evaluated for upper gastrointestinal symptoms **Exclusion**: Evidence of acute gastrointestinal hemorrhage	Not reported	Unsedated peroral endoscopy[7] Standard sedated EGD[8]

1 Gastro-esophageal Reflux Disease
2 We only collected data on the population that is providing relevant outcome information (e.g., reasons for not participating in screening)
3 Locke GR, Talley NJ, Weaver AL, et al. A new questionnaire for gastroesophageal reflux disease. Mayo Clin Proc. 1994; 69:539–47
4 Performed with Vision Sciences disposable sheath TNE-5000 digital esophagoscope
5 Performed with the Given Imaging PillCam ESO 2 capsule endoscopy
6 Performed with the Olympus N200 or N230 ultrathin endoscopes (N200 is the original name, and the later model is N230). A 6-mm diameter upper endoscope
7 Performed with the Olympus XGIF-N200H. A 6-mm ultrathin (UT) video endoscope
8 Performed with the Olympus GIF-100. A 9.5 mm diameter upper endoscope

Table 4. KQ2 Risk of Bias (ROB)

Table 4a. Cochrane Risk of Bias for RCTs

Author/Year	Sequence generation	Allocation Concealment	Blinding of Participants/ Personnel	Blinding of Outcome Assessors	Incomplete Outcome Data	Selective Outcome Reporting	Other	Overall ROB
Chak 2014[57]	Low	Low	High	High	Low	Unclear	Unclear	High

Table 5. KQ2 Results

Author Year Study design	Intervention & Comparator(s)	Results
Chak 2014[57] RCT	Transnasal esophagoscopy vs. Video capsule esophagoscopy	1210 eligible participants were invited, and 184 agreed. **Unwillingness to participate** 1026 invited participants did not participate for the following reasons: - Did not return phone call/did not respond to letter (n=627) - *Declined to participate (n=385) [with no reasons provided]* - EGD in past 10 years (n=2) - Did not meet inclusion criteria (n=10) - *Difficulty getting to the hospital (n=2)* **Uptake of screening** 7 individuals declined post-randomization In the TNE group, 5 wanted capsule instead. In the ECE group, 2 were worried about capsule getting stuck (p=0.25).
Zaman 1999[62] RCT	T-EGD vs. P-EGD	105 consecutive outpatients undergoing upper endoscopy because of GI symptoms were asked to participate and 45 patients refused participation (43%). **Unwillingness to participate** Reasons given included anxiety (18/105, 17%), a fear of gagging (10/105, 10%), not being interested in the study (10/105, 10%), or not wishing to undergo a transnasal procedure (7/45, 7%). Many of these patients were expecting sedation when initially approached about the study.
Zaman 1998[78] Cohort	P-EGD and sedated EGD	62 patients undergoing outpatient endoscopy for gastrointestinal symptoms were asked to participate, of whom 19 refused participation (31%). **Unwillingness to participate** Reasons for nonparticipation included anxiety (12/62, 19%), fear of gagging (3/62, 5%), and unwillingness to be study subjects (4/62, 6%).

KQ1 Evidence Sets

The table below presents the outcomes of interest, the comparisons in the included studies, and which studies report on these comparisons and outcomes. If the cell is blank, no study reported this outcome for that comparator, and there are no results presented in the results tables or any results in the GRADE tables.

	Evidence Set 1	Evidence Set 2	Evidence Set 3	Evidence Set 4	Evidence Set 5	Evidence Set 6	Evidence Set 7	Evidence Set 8
	EGD vs no prior EGD	**EGD vs Transnasal esophagoscopy**	**EGD vs Video capsule esophagoscopy**	**EGD vs Transoral esophagoscopy**	**Transnasal esophagoscopy vs Video capsule esophagoscopy**	**Transnasal esophagoscopy vs Transoral esophagoscopy**	**Random biopsy vs Enhanced magnification-directed endoscopy**	**Random biopsy vs chromoendoscopy**
Mortality								
Survival	Rubenstein 2008							
Serious adverse events*		Sami 2015†				Zaman 1999		
Esophageal adenocarcinoma	Rubenstein 2008 Hammad 2019	Jobe 2006						
Suspected Barrett's Esophagus		Chang 2011; Sami 2015†; Mori 2010	Chang 2011	Mori 2010	Chak 2014; Chang 2011	Zaman 1999 Mori 2010		
Confirmed Barrett's Esophagus		Sami 2015†; Jobe 2006	Chang 2011		Chak 2014; Chang 2011		Ferguson 2006	Wani 2014
Dysplasia		Chang 2011; Jobe 2006	Chang 2011		Chang 2011			
QoL								
Psychological effects		Chang 2011; Sami 2015†; Jobe 2006			Chak 2014	Zaman 1999		
Medical procedures								
Overdiagnosis								

EGD: esophagogastroduodenoscopy
* Life threatening, severe or medically significant consequences
† Evaluates transnasal esophagoscopy in the hospital and in a mobile van.

Evidence Set 1: Esophagogastroduodenoscopy (EGD) versus no prior EGD

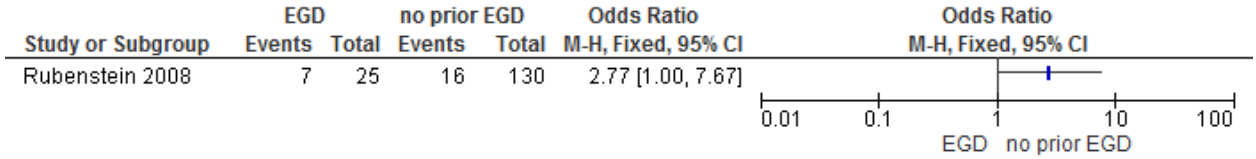
Evidence Set 1 - Results table

Author Year Study design	Outcome(s) description	Results		ROB assessment	Notes
		EGD	no prior EGD		
CRITICAL OUTCOME 2: Long-term survival					
Rubenstein 2008[65] Retrospective cohort	Long-term survival[21]:			Moderate	Study authors report that there was no difference in long-term survival between those who had received a prior EGD and those who had not (HR 0.82 [95%CI 0.52-1.29]). Adjusting for age, comorbidities, and year of diagnosis yielded similar results (HR 0.93 [95% CI, 0.58-1.50]).
	1 year after diagnosis of cancer	51.6%	50.2%		
	5 years after diagnosis of cancer	21.9%	10.3%		
	10 years after diagnosis of cancer	6.1%	6.1%		
IMPORTANT OUTCOME 4: Incidence of EAC (by stage), BE, and low- and high-grade dysplasia					
EAC					
Rubenstein 2008[65] Retrospective cohort	EAC stage at diagnosis[22]:			Moderate	It was difficult to determine a range of effects across studies due to very low sample size in the EGD group of the Hammad 2019 study. Of the 155 participants with EAC, 25 had previous EGD in the past 1-5 years, and 130 had not (Rubenstein). Among the 153 EAC patients with no previously known BE, 1 had a previous EGD in the last 5 years and 152 had not (Hammad).
	Stage 1	7/25 (28%)	16/130 (12%)		
	Stage 2	11/25 (44%)	47/130 (36%)		
	Stage 3	3/25 (12%)	31/130 (24%)		
	Stage 4	4/25 (16%)	36/130 (28%)		
Hammad 2019[67] Retrospective cohort	EAC stage at diagnosis:			Moderate	
	Stage 0	0/1 (0%)	2/152 (1%)		
	Stage 1	0/1 (0%)	8/152 (5%)		
	Stage 2	0/1 (0%)	37/152 (24%)		
	Stage 3	0/1 (0%)	31/152 (20%)		
	Stage 4	0/1 (0%)	70/152 (46%)		
	Unknown	1/1 (100%)	4/152 (3%)		

[21] numbers estimated from Kaplan-Meier curve
[22] numbers estimated from figure 2

Evidence Set 1 - Forest Plots

Forest Plot 1.1: EAC Stage 1 at diagnosis



Evidence Set 1 - GRADE evidence profile table

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	**Study design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**EGD**	**no EGD**	**Relative (95% CI)**	**Absolute (95% CI)**		
Survival												
1	observational studies	serious [a]	not serious	serious [b]	serious [c]	none	Study authors report that there was no difference in long-term survival between those who had received a prior EGD and those who had not (HR 0.82 [95% CI 0.52-1.29]). Adjusting for age, comorbidities, and year of diagnosis yielded similar results (HR 0.93 [95% CI, 0.58-1.50]).				⊕◯◯◯ VERY LOW	CRITICAL
EAC stage 1 at diagnosis												
1	observational studies	serious [a]	not serious	serious [b]	serious [c]	none	7/25 (28.0%)	16/130 (12.3%)	**RR 2.27** (1.04 to 4.95)	**156 more per 1,000** (from 5 more to 486 more)	⊕◯◯◯ VERY LOW	IMPORTANT
EAC stage at diagnosis												
1	observational studies	serious [d]	not serious	serious [e]	serious [c]	none	One out of 153 patients, not under surveillance for BE, had received an EGD in the previous five years. An additional 15 had received an EGD more than five years ago, with no additional details on timing. For the purposes of this review, these patients were grouped with those with no prior EGD. This one patient was diagnosed with "unknown stage" of EAC.				⊕◯◯◯ VERY LOW	IMPORTANT

CI: Confidence interval; **EGD**: Esophagogastroduodenoscopy; **RR:** Risk ratio

Explanations

a. The study consisted of a group of veterans, and there was a significant difference between groups on comorbidities.
b. GER identified by ICDs codes 530.10-530.12, 530.81, or 787.1
c. Too few participants.
d. This study consists of patients diagnosed with EAC at the VA Medical Centre. The authors do not provide a comparison for the participants of interest for this review, as their larger population included 29 patients undergoing surveillance for BE. These participants were excluded from our results. This left one patient not under surveillance for BE who received an EGD in the previous five years.
e. GERD was not defined and only two-thirds of the participants included in this review had GERD diagnosis.

Evidence Set 1 - Summary of Findings Table

EGD compared to no prior EGD for screening for EAC and precancerous conditions (BE and dysplasia)

Setting: Hospital-based
Intervention: EGD
Comparison: no prior EGD

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no prior EGD	Risk with EGD				
Survival	Study authors report that there was no difference in long-term survival between those who had received a prior EGD and those who had not (HR 0.82 [95% CI 0.52-1.29]). Adjusting for age, comorbidities, and year of diagnosis yielded similar results (HR 0.93 [95% CI, 0.58-1.50]).			(1 observational study)	⨁◯◯◯ VERY LOW [a,b,c]	
EAC stage 1 at diagnosis	123 per 1,000	**279 per 1,000** (128 to 609)	**RR 2.27** (1.04 to 4.95)	155 (1 observational study)	⨁◯◯◯ VERY LOW [a,b,c]	
EAC stage at diagnosis	One out of 153 patients, not under surveillance for BE, had received an EGD in the previous five years. An additional 15 had received an EGD more than five years ago, with no additional details on timing. For the purposes of this review, these patients were grouped with those with no prior EGD. This one patient was diagnosed with "unknown stage" of EAC.			153 (1 observational study)	⨁◯◯◯ VERY LOW [c,d,e]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **EGD**: Esophagogastroduodenoscopy **RR:** Risk ratio

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. The study consisted of a group of veterans, and there was a significant difference between groups on comorbidities.
b. GER identified by ICDs codes 530.10-530.12, 530.81, or 787.1
c. Too few participants.
d. This study consists of patients diagnosed with EAC at the VA Medical Centre. The authors do not provide a comparison for the participants of interest for this review, as their larger population included 29 patients undergoing surveillance for BE. These participants were excluded from our results. This left one patient not under surveillance for BE who received an EGD in the previous five years.
e. GERD was not defined and only two-thirds of the participants included in this review had GERD diagnosis.

Evidence Set 2: Esophagogastroduodenoscopy (EGD) versus Transnasal esophagoscopy (TNE)

Evidence Set 2 - Results table

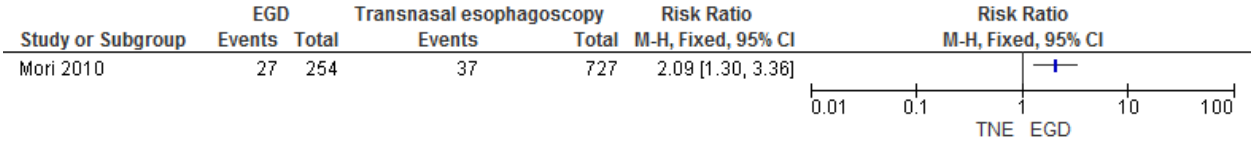
Author Year Study design	Outcome(s) description		Results		ROB assessment	Notes
			EGD	TNE		
CRITICAL OUTCOME 3: Life threatening, severe, or medically significant consequences						
Sami 2015[60] RCT	Serious adverse events (e.g., bleeding, perforation, hospitalization)		0/61	hospital TNE 0/72 mobile TNE 0/76	High	Assessed 1 and 30 days after the procedure.
IMPORTANT OUTCOME 4: Incidence of EAC (by stage), BE, and low- and high-grade dysplasia						
EAC						
Jobe 2006[63] Randomized crossover	EAC		0/43	0/54	Moderate	Excludes those undergoing surveillance endoscopy (analysis).
Suspected BE (endoscopically)						
Chang 2011[58] RCT	Classified as endoscopic presence of 1 cm or more of columnar-lined distal esophagus above the gastroesophageal junction (z-line appearance (ZAP) classification).		2/20 (10%)	1/19 (5%)	High	
Sami 2015[60] RCT	Defined as the presence of columnar mucosa at least 1 cm length in the tubular esophagus (Prague Classification)		There was no difference in procedure yield between the study arms with regards to suspected (p=0.37) BE.		High	
Mori 2010[64] Cohort study	Measurement of the mucosa between the esophagogastric junction and squamocolumnar junction.	Grade 1[23] Grade 2[24] Grade 3[25]	61/254 (24%) 26/254 (10.2%) 1/254 (0.39%)	188/727 (25.9%) 31/727 (4.3%) 6/727 (0.8%)	High	Patients were asked to select between screening options. There was no significant difference in the frequency distribution of the severity of BE.
Confirmed BE (histologically)						
Sami 2015[60] RCT	Defined as the presence of intestinal metaplasia with goblet cells in biopsies.		There was no difference in procedure yield between the study arms with regards to confirmed (p=0.44) BE.		High	Participants in the TNE groups were offered "confirmatory" EGD with histology in 2 weeks' time.
Jobe 2006[63] Randomized crossover	Intestinal metaplasia required the unequivocal presence of goblet cells within columnar epithelium.		32/121 (26%)	36/121 (30%) p-value=0.503	Moderate	Investigators performing TNE were unaware of whether the subject was undergoing a screening or surveillance procedure (28% (37/134)).

[23] BE grade 1 (circumferential (C) or tongue (T) type, longest BE <1cm)
[24] BE grade 2 (C type, 3cm > longest BE ≥1cm or T type, longest BE ≥1cm)
[25] BE grade 3 (C type, shortest BE ≥3cm)

Author Year Study design	Outcome(s) description	Results		ROB assessment	Notes
		EGD	TNE		
Dysplasia					
Chang 2011[58] RCT	Dysplasia (not defined)	0/20	0/20	Moderate	
Jobe 2006[63] Randomized crossover	Dysplasia Low-grade High-grade	 4 /52 1/52	 4/64 0/64	Moderate	Each modality detected 4 cases of low-grade dysplasia with concordance on only one case.
IMPORTANT OUTCOME 6: Psychological effects					
Chang 2011[58] RCT	Anxiety during the procedure (median score (range))	Not reported	1.5 (0-7)	High	Study only gave those in the TNE group the tolerability questionnaire.
Sami 2015[60] RCT	Anxiety during the procedure (Mean (SD)) (scale of 0-10, where 10 is severe)	0.8 (1.5)	hospital TNE 2.3 (2.2) mobile TNE 2.8 (2.8)	High	p<0.001 between modalities
Jobe 2006[63] Randomized crossover	Anxiety during procedure None Mild Moderate Severe	 87/116 11/116 11/116 7/116	 62/116 38/116 12/116 4/116	High	The largest differences in comfort level between procedure type occurred primarily within the "none" to "mild" range; the "moderate" to "severe" categories were statistically similar between endoscopic approaches in all questions.
		p=0.0001			
Jobe 2006[63] Randomized crossover	Anxiety before procedure None Mild Moderate Severe	 64/116 26/116 16/116 10/116	 59/116 39/116 13/116 5/116		
	Anxiety during insertion	p=0.084			
	None Mild Moderate Severe	83/116 15/116 7/116 11/116	45/116 43/116 19/116 9/116		
		p=0.0001			

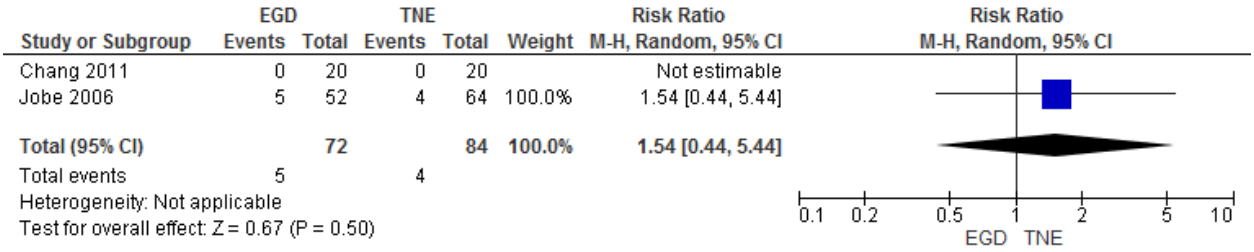
Evidence Set 2 - Forest Plots

Forest Plot 2.1: Incidence of endoscopically suspected BE (Grade 2 and 3) [observational]



Includes those with Barrett's Esophagus grade 2 and 3

Forest Plot 2.2: Incidence of dysplasia



Evidence Set 2 - GRADE evidence profile table

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	**Study design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**EGD**	**TNE**	**Relative (95% CI)**	**Absolute (95% CI)**		
Life threatening, severe, or medically significant consequences												
1 [a]	randomized trials	very serious [b]	not serious	serious [c]	serious [d]	none	Serious adverse events were assessed 1 and 30 days after the procedure. No serious adverse events were reported in any of the study arms. Hospital-based TNE and mobile-based TNE were combined for this outcome under TNE.				⊕◯◯◯ VERY LOW	CRITICAL
Incidence of EAC												
1 [e]	randomized trials	serious [f]	not serious	serious [g]	serious [d]	none	Among the participants who were receiving their initial screening (i.e., not those undergoing surveillance endoscopy), 0/43 and 0/54 were found to have EAC when randomized to be screened first with EGD or TNE, respectively.				⊕◯◯◯ VERY LOW	IMPORTANT
Incidence of suspected BE												
2	randomized trials	very serious [h]	not serious	serious [i]	serious [d]	none	Sami 2015 reported that there was no difference in procedure yield between study arms with regards to suspected BE (p=0.37) [this considers all three study arms]. Chang 2011 reported 2/20 participants in the EGD and 1/19 participants in the TNE group having suspected BE.				⊕◯◯◯ VERY LOW	IMPORTANT
Incidence of suspected BE												
1	observational studies	serious [j]	not serious	serious [k]	serious [d]	none	27/254 (10.6%)	37/727 (5.1%)	**RR 2.09** (1.30 to 3.36)	**55 more per 1,000** (from 15 fewer to 120 more)	⊕◯◯◯ VERY LOW	IMPORTANT
Incidence of confirmed BE												

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	EGD	TNE	Relative (95% CI)	Absolute (95% CI)		
2 [e]	randomized trials	serious [l]	not serious	serious [c,g]	serious [d]	none	Sami 2015 reported no difference in procedure yield between study arms (p=0.44) [this considers all three study arms]. Jobe 2006 reported 32/121 (26%) of those randomized first to EGD had confirmed BE and 36/121 (30%) randomized to TNE first had confirmed BE (p=0.503).				⨁◯◯◯ VERY LOW	IMPORTANT
Incidence of dysplasia												
2 [e]	randomized trials	serious [f]	not serious	serious [g,i]	serious [d]	none	5/72 (6.9%)	4/84 (4.8%)	**RR 1.54** (0.44 to 5.44)	**26 more per 1,000** (from 27 fewer to 211 more)	⨁◯◯◯ VERY LOW	IMPORTANT
Psychological effects (anxiety before the procedure)												
1 [e]	randomized trials	very serious [m]	not serious	serious [g]	serious [d]	none	Authors report those who experienced no anxiety, and mild, moderate and severe anxiety. There was no difference between screening modalities (p=0.084)				⨁◯◯◯ VERY LOW	IMPORTANT
Psychological effects (anxiety during insertion)												
1 [e]	randomized trials	very serious [m]	not serious	serious [g]	serious [d]	none	Authors report those who experienced no anxiety, and mild, moderate and severe anxiety. There was a statistically significant difference between modalities (p=0.0001), with those randomized to TNE experiencing more anxiety during insertion.				⨁◯◯◯ VERY LOW	IMPORTANT
Psychological effects (anxiety during procedure)												
3 [e]	randomized trials	very serious [m]	not serious	serious [c,g,i]	serious [d]	none	Chang 2011 appears to only have given the questionnaire to the TNE group and reports the results using median score and the range, Sami 2015 reports the results using mean (SD) on a scale of 0-10, and Jobe 2006 reports the results using the number of participants who selected the level of anxiety as "none", "mild", "moderate", and "severe". Both Sami and Jobe report a statistically significant differences between modalities with those randomized to TNE experiencing more anxiety during the procedure, p<0.001 and p=0.0001, respectively.				⨁◯◯◯ VERY LOW	IMPORTANT

CI: Confidence interval; **EGD**: Esophagogastroduodenoscopy; **RR:** Risk ratio; **TNE**: Transnasal esophagoscopy

Explanations

a. Defined in Sami 2015 as safety (adverse events including pain, abdominal discomfort, bleeding, perforation, or need for hospitalization)
b. Many domains were judged as high risk of bias (e.g., allocation concealment, blinding of participants, personnel and outcome assessors)
c. Defined as "heartburn or acid regurgitation >1 week, <1 week, or none" using a GERQ questionnaire
d. Too few participants.
e. One study is a randomized crossover design (Jobe 2006)
f. Many domains were judged as unclear (e.g., sequence generation, allocation concealment, blinding of participants and personnel, etc); as such the overall ROB was considered moderate risk.
g. GERD defined as "heartburn, regurgitation or dysphagia"
h. Many domains were judged as high risk of bias (e.g., blinding of participants, personnel and outcome assessors, etc).
i. Symptoms obtained through questionnaires and were not clearly defined
j. GERD was not defined in the cohort.
k. GERD was not defined and the assessment of the outcome could be influenced by the personnel's knowledge and possible bias to the screening modality.
l. No description of allocation concealment in Sami 2015, and some selective outcome reporting.
m. Participants were aware of what screening modality they were being given and this could influence the level of anxiety.

Evidence Set 2 - Summary of Findings Table

EGD compared to transnasal esophagoscopy (TNE) for screening for EAC and precancerous conditions (BE and dysplasia)

Setting: Hospital- and office-based (depending on modality)
Intervention: EGD
Comparison: TNE

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with TNE	Risk with EGD				
Life threatening, severe, or medically significant consequences	Serious adverse events were assessed 1 and 30 days after the procedure. No serious adverse events were reported in any of the study arms. Hospital-based TNE and mobile-based TNE were combined for this outcome under TNE.			209 (1 RCT) [a]	⨁◯◯◯ VERY LOW [b,c,d]	
Incidence of EAC	Among the participants who were receiving their initial screening (i.e., not those undergoing surveillance endoscopy), 0/43 and 0/54 were found to have EAC when randomized to be screened first with EGD or TNE, respectively.			97 (1 RCT) [e]	⨁◯◯◯ VERY LOW [d,f,g]	
Incidence of suspected BE	Sami 2015 reported that there was no difference in procedure yield between study arms with regards to suspected BE (p=0.37) [this considers all three study arms]. Chang 2011 reported 2/20 participants in the EGD and 1/19 participants in the TNE group having suspected BE.			(2 RCTs)	⨁◯◯◯ VERY LOW [d,h,i]	
Incidence of suspected BE	51 per 1,000	**106 per 1,000** (66 to 171)	**RR 2.09** (1.30 to 3.36)	981 (1 observational study)	⨁◯◯◯ VERY LOW [d,j,k]	Includes those with Grade 2 and 3, as those with Grade 1 would not have been considered as BE in Chang 2011 and Sami 2015.
Incidence of confirmed BE	Sami 2015 reported no difference in procedure yield between study arms (p=0.44) [this considers all three study arms]. Jobe 2006 reported 32/121 (26%) of those randomized first to EGD had confirmed BE and 36/121 (30%) randomized to TNE first had confirmed BE (p=0.503).			(2 RCTs) [e]	⨁◯◯◯ VERY LOW [c,d,g,l]	
Incidence of dysplasia	48 per 1,000	**73 per 1,000** (21 to 259)	**RR 1.54** (0.44 to 5.44)	156 (2 RCTs) [e]	⨁◯◯◯ VERY LOW [d,f,g,i]	
Psychological effects (anxiety before the procedure)	Authors report those who experienced no anxiety, and mild, moderate and severe anxiety. There was no difference between screening modalities (p=0.084)			(1 RCT) [e]	⨁◯◯◯ VERY LOW [d,g,m]	
Psychological effects (anxiety during insertion)	Authors report those who experienced no anxiety, and mild, moderate and severe anxiety. There was a statistically significant difference between modalities (p=0.0001), with those randomized to TNE experiencing more anxiety during insertion.			(1 RCT) [e]	⨁◯◯◯ VERY LOW [d,g,m]	

EGD compared to transnasal esophagoscopy (TNE) for screening for EAC and precancerous conditions (BE and dysplasia)

Setting: Hospital- and office-based (depending on modality)
Intervention: EGD
Comparison: TNE

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with TNE	**Risk with EGD**				
Psychological effects (anxiety during procedure)	Chang 2011 appears to only have given the questionnaire to the TNE group and reports the results using median score and the range, Sami 2015 reports the results using mean (Standard Deviation) on a scale of 0-10, and Jobe 2006 reports the results using the number of participants who selected the level of anxiety as "none", "mild", "moderate", and "severe". Both Sami and Jobe report a statistically significant differences between modalities with those randomized to TNE experiencing more anxiety during the procedure, p<0.001 and p=0.0001, respectively.			(3 RCTs) [e]	⨁◯◯◯ VERY LOW [c,d,g,i,m]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. Defined in Sami 2015 as safety (adverse events including pain, abdominal discomfort, bleeding, perforation, or need for hospitalization)
b. Many domains were judged as high risk of bias (e.g., allocation concealment, blinding of participants, personnel and outcome assessors)
c. Defined as "heartburn or acid regurgitation >1 week, <1 week, or none" using a GERQ questionnaire
d. Too few participants.
e. One study is a randomized crossover design (Jobe 2006)
f. Many domains were judged as unclear (e.g., sequence generation, allocation concealment, blinding of participants and personnel, etc); as such the overall ROB was considered moderate risk.
g. GERD defined as "heartburn, regurgitation or dysphagia"
h. Many domains were judged as high risk of bias (e.g., blinding of participants, personnel and outcome assessors, etc).
i. Symptoms obtained through questionnaires and were not clearly defined
j. GERD was not defined in the cohort.
k. GERD was not defined and the assessment of the outcome could be influenced by the personnel's knowledge and possible bias to the screening modality.
l. No description of allocation concealment in Sami 2015, and some selective outcome reporting.
m. Participants were aware of what screening modality they were being given and this could influence the level of anxiety.

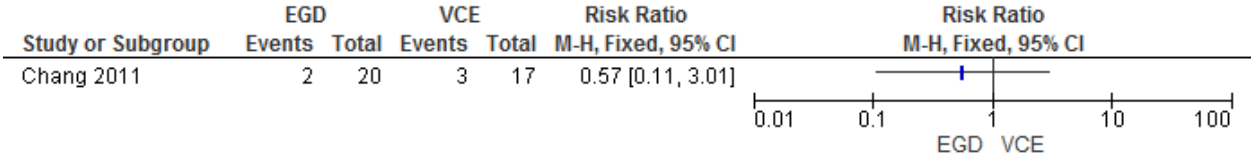
Evidence Set 3: Esophagogastroduodenoscopy (EGD) versus Video capsule esophagoscopy (VCE)

Evidence Set 3 - Results table

Author Year Study design	Outcome(s) description	Results		ROB assessment	Notes
		EGD	VCE		
IMPORTANT OUTCOME 4: Incidence of EAC (by stage), BE, and low- and high-grade dysplasia					
Suspected BE (endoscopically)					
Chang 2011[58] RCT	Endoscopically suspected BE, classified as endoscopic presence of 1 cm or more of columnar-lined distal esophagus above the gastroesophageal junction (with EGD) and as ZAP grade 2 or 3 (with VCE).	2/20 (10%)	3/17 (18%)	High	Three VCE patients had suspected BE and were offered EGD.
Confirmed BE (histologically)					
Chang 2011[58] RCT	Confirmed BE. Patients suspected of BE on VCE were offered EGD and BE was confirmed through biopsy.	Not reported	0/3 (0%)	High	The three patients in the were those who were identified as having suspected BE based on VCE. BE was histologically confirmated with EGD. All cases of BE were short-segment.
Dysplasia					
Chang 2011[58] RCT	Dysplasia (not defined)	0/20 (0%)	0/20 (0%)	Moderate	

Evidence Set 3 - Forest Plot

Forest Plot 3.1: Incidence of endoscopically suspected BE



Evidence Set 3 - GRADE evidence profile table

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	**Study design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**EGD**	**VCE**	**Relative (95% CI)**	**Absolute (95% CI)**		
Incidence of suspected BE												
1	randomized trials	very serious [a]	not serious	serious [b]	serious [c]	none	2/20 (10.0%)	3/17 (17.6%)	**RR 0.57** (0.11 to 3.01)	**76 fewer per 1,000** (from 157 fewer to 355 more)	⊕◯◯◯ VERY LOW	IMPORTANT
Incidence of confirmed BE												
1	randomized trials	serious [d]	not serious	serious [b]	serious [c]	none	Authors do not report on the incidence of confirmed BE in the EGD group and 0 of 3 had confirmed BE in the VCE group.				⊕◯◯◯ VERY LOW	IMPORTANT
Incidence of dysplasia												
1	randomized trials	serious [d]	not serious	serious [b]	serious [c]	none	There were no cases of dysplasia in either group.				⊕◯◯◯ VERY LOW	IMPORTANT

CI: Confidence interval; **EGD**: Esophagogastroduodenoscopy; **RR:** Risk ratio; **VCE**: video capsule esophagoscopy

Explanations

a. The lack of blinding of the study personnel could influence this outcome. There were also many other domains that were judged as unclear risk (e.g., sequence randomization, allocation concealment, blinding of outcome assessors, etc).

b. Chronic GERD was not defined. Symptoms were obtained through validated questionnaires.

c. Too few participants.

d. There were many domains that were unclear risk of bias, due to lack of reporting (e.g., sequence generation, allocation concealment, blinding of outcome assessors, etc); as such, it has been judged as moderate risk of bias.

Evidence Set 3 - Summary of Findings Table

Sedated EGD compared to esophageal video capsule esophagoscopy (VCE) for screening for EAC and precancerous conditions (BE and dysplasia)

Setting: Clinical Research Centre
Intervention: EGD
Comparison: Video capsule esophagoscopy (VCE)

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with VCE	Risk with EGD				
Incidence of suspected BE	176 per 1,000	**101 per 1,000** (19 to 531)	**RR 0.57** (0.11 to 3.01)	37 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	
Incidence of confirmed BE	Authors do not report on the incidence of confirmed BE in the EGD group and 0 of 3 had confirmed BE in the VCE group.			17 (1 RCT)	⨁◯◯◯ VERY LOW [b,c,d]	
Incidence of dysplasia	There were no cases of dysplasia in either group.			40 (1 RCT)	⨁◯◯◯ VERY LOW [b,c,d]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **EGD**: Esophagogastroduodenoscopy; **RR:** Risk ratio; **VCE**: video capsule esophagoscopy

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. The lack of blinding of the study personnel could influence this outcome. There were also many other domains that were judged as unclear risk (e.g., sequence randomization, allocation concealment, blinding of outcome assessors, etc).
b. Chronic GERD was not defined. Symptoms were obtained through validated questionnaires.
c. Too few participants.
d. There were many domains that were unclear risk of bias, due to lack of reporting (e.g., sequence generation, allocation concealment, blinding of outcome assessors, etc); as such, it has been judged as moderate risk of bias.

Evidence Set 4: Esophagogastroduodenoscopy (EGD) versus Transoral-EGD

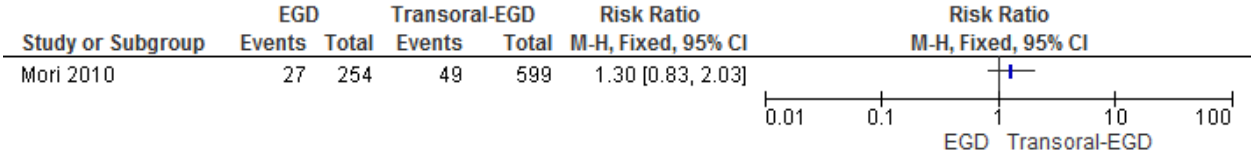
Evidence Set 4 - Results table

Author Year Study design	Outcome(s) description	Results		ROB assessment	Notes
		EGD	Transoral-EGD		
IMPORTANT OUTCOME 4: Incidence of EAC (by stage), BE, and low- and high-grade dysplasia					
Suspected BE (endoscopically)					
Mori 2010[64] Cohort study	Measurment of the mucosa between the esophagogastric junction and squamocolumnar junction			High	Patients were asked to select between screening options. There was no significant difference in the frequency distribution of the severity of BE among EGDs.
	Grade 1[23]	61/254 (24%)	150/599 (25%)		
	Grade 2[24]	26/254 (10.2%)	46/599 (7.7%)		
	Grade 3[25]	1/254 (0.39%)	3/599 (0.5%)		

[23] BE grade 1 (circumferential (C) or tongue (T) type, longest BE <1cm)
[24] BE grade 2 (C type, 3cm > longest BE ≥1cm or T type, longest BE ≥1cm)
[25] BE grade 3 (C type, shortest BE ≥3cm)

Evidence Set 4 - Forest Plot

Forest Plot 4.1: Incidence of suspected BE (grade 2 and 3)



Evidence Set 4 - GRADE evidence profile table: EGD compared to Transoral EGD for screening for EAC and precancerous conditions (BE and dysplasia)

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	**Study design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**EGD**	**Transoral EGD**	**Relative (95% CI)**	**Absolute (95% CI)**		
Incidence of suspected BE												
1	observational studies	very serious [a]	not serious	serious [b]	serious [c]	none	27/254 (10.6%)	49/599 (8.2%)	**RR 1.30** (0.83 to 2.03)	**25 more per 1,000** (from 14 fewer to 84 more)	⊕◯◯◯ VERY LOW	IMPORTANT

CI: Confidence interval; **RR:** Risk ratio

Explanations

a. A cohort who had received prior EGD who were allowed to select which screening modality they were exposed to. There is no description on how the outcome was assessed.
b. One of the main objectives of the study was to diagnose GERD. Patients who had previous EGD for screening upper intestinal tract disorders were enrolled in the present study.
c. Too few participants.

Evidence Set 4 - Summary of Findings Table

EGD compared to transoral EGD for screening for EAC and precancerous conditions (BE and dysplasia)

Setting: Hospital
Intervention: EGD
Comparison: Transoral EGD

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with transoral EGD	Risk with EGD				
Incidence of suspected BE	82 per 1,000	**106 per 1,000** (68 to 166)	**RR 1.30** (0.83 to 2.03)	853 (1 observational study)	⨁◯◯◯ VERY LOW [a,b,c]	Includes those with Grade 2 and 3, as those with Grade 1 would not normally be considered as having BE based on other included studies (Chang 2011 and Sami 2015).

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. A cohort who had received prior EGD who were allowed to select which screening modality they were exposed to. There is no description on how the outcome was assessed.
b. One of the main objectives of the study was to diagnose GERD. Patients who had previous EGD for screening upper intestinal tract disorders were enrolled in the present study.
c. Too few participants.

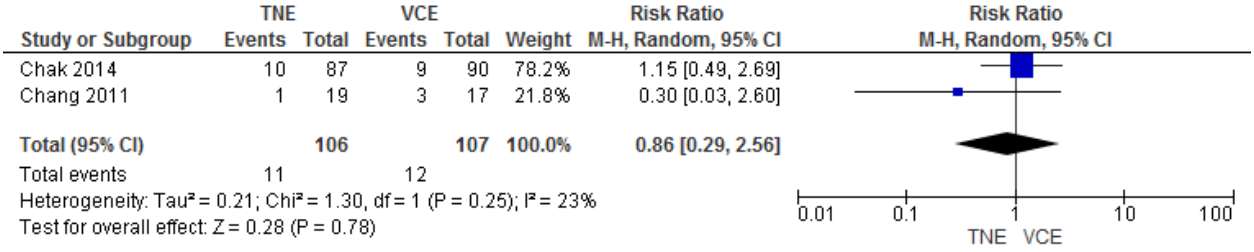
Evidence Set 5: Transnasal esophagoscopy (TNE) versus Video capsule esophagoscopy (VCE)

Evidence Set 5 - Results table

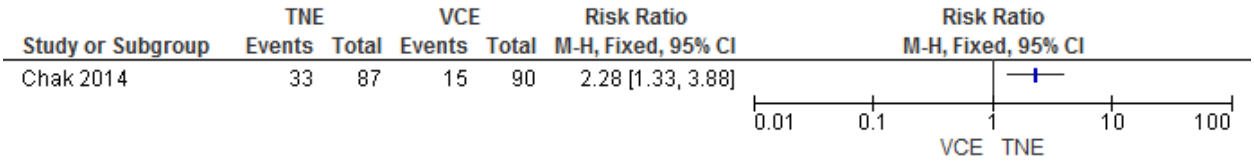
Author Year Study design	Outcome(s) description	Results		ROB assessment	Notes
		TNE	VCE		
IMPORTANT OUTCOME 4: Incidence of EAC (by stage), BE, and low- and high-grade dysplasia					
Suspected BE (endoscopically)					
Chak 2014[57] RCT	Suspected BE (ZAP classification) determined the need for biopsy.	10/87	9/90	High	Subjects with suspected BE (ZAP grade 2 or higher) or other findings (e.g., mass) were referred for EGD.
Chang 2011[58] RCT	Suspected BE, classified as endoscopic presence of 1 cm or more of columnar-lined distal esophagus above the gastroesophageal junction (for TNE) or as ZAP grade 2 or 3, and patients were offered EGD for confirmation (for VCE).	1/19 (5%)	3/17 (18%)	High	All cases of BE were short-segment. Three VCE patients had suspected BE and were offered EGD. Results of exam and biopsy were normal.
Confirmed BE (histologically)					
Chak 2014[57] RCT	BE (Prague classification) confirmed through sedated EGD and histologic examination of biopsy.	3/87	5/90	Low	Subjects with suspected BE (ZAP grade 2 or higher) or other findings (e.g., mass) were referred for EGD.
		p-value=0.49			
Chang 2011[58] RCT	Confirmed BE by sedated EGD exam and biopsy	Not reported	0/3 (0%)	High	
Dysplasia					
Chang 2011[58] RCT	Dysplasia (not defined)	0/20	0/20	Moderate	
IMPORTANT OUTCOME 6: Psychological effects					
Chak 2014[57] RCT	Anxiety, nervousness, or worry <u>before</u> the procedure	33/87 (38%)	15/90 (17%)	High	
		p-value=0.001			
Chak 2014[57] RCT	Anxiety, nervousness, or worry <u>during</u> the procedure	29/87 (33%)	14/90 (16%)		
		p-value=0.006			

Evidence Set 5 - Forest Plots

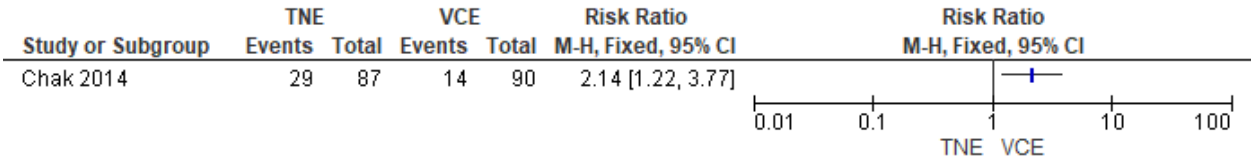
Forest Plot 5.1: Incidence of endoscopically suspected BE



Forest Plot 5.2: Anxiety before the procedure



Forest Plot 5.3: Anxiety during the procedure



Evidence Set 5 - GRADE evidence profile table

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	**Study design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**TNE**	**VCE**	**Relative (95% CI)**	**Absolute (95% CI)**		
Incidence of suspected BE												
2	randomized trials	very serious [a]	not serious	serious [b,c]	serious [d]	none	11/106 (10.4%)	12/107 (11.2%)	**RR 0.86** (0.29 to 2.56)	**16 fewer per 1,000** (from 80 fewer to 175 more)	⊕◯◯◯ VERY LOW	IMPORTANT
Incidence of confirmed BE												
2	randomized trials	serious [e]	not serious	serious [b,c]	serious [d]	none	Chak 2014 reports 3/87 and 5/90 (p=0.49) cases of confirmed BE from TNE and VCE, respectively. Chang 2011 does not report how many cases of confirmed BE were in the TNE group, and reports that 0/3 of those with suspected BE were confirmed.				⊕◯◯◯ VERY LOW	IMPORTANT
Incidence of dysplasia												
1	randomized trials	serious [f]	not serious	serious [c]	serious [d]	none	There were no cases of dysplasia in either group.				⊕◯◯◯ VERY LOW	IMPORTANT
Psychological effects (anxiety, nervousness, or worry before the procedure)												
1	randomized trials	very serious [g]	not serious	serious [b]	serious [d]	none	33/87 (37.9%)	15/90 (16.7%)	**RR 2.28** (1.33 to 3.88)	**213 more per 1,000** (from 55 more to 480 more)	⊕◯◯◯ VERY LOW	IMPORTANT
Psychological effects (anxiety during the procedure)												
1	randomized trials	very serious [g]	not serious	serious [b,c]	serious [d]	none	29/87	14/90	**RR 2.14** (1.22 to 3.77)	**177 more per 1,000** (from 34 more to 431 more)	⊕◯◯◯ VERY LOW	IMPORTANT

CI: Confidence interval; **RR:** Risk ratio; **TNE**: Transnasal esophagoscopy; **VCE**: video capsule esophagoscopy

Explanations

a. Personnel and outcome assessors were aware of screening modality and could be influenced by this knowledge.
b. Chak 2014 defined GERD based on symptoms of GERD (from questionnaire) or use of acid suppression medicine (within 7 days of screening).
c. Chang 2011 defined GERD based on symptoms obtained through validated questionnaires.
d. Too few participants.
e. Chak 2014 was considered low risk but contributed a greater amount of data to the outcome. Chang 2011 was considered high risk, but only contributed 20 participants to each comparison.
f. Many ROB domains were unclear due to lack of reporting for this study.
g. Participants were aware of screening modality and could be influenced by this knowledge. Personnel could also influence the level of anxiety by knowledge of the screening modality.

Evidence Set 5 - Summary of Findings Table

Transnasal esophagoscopy (TNE) compared to esophageal video capsule esophagoscopy (VCE) for screening for EAC and precancerous conditions (BE and dysplasia)

Setting: Outpatient clinic and Clinical Research Centre (depending on study)
Intervention: TNE
Comparison: VCE

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with VCE	Risk with TNE				
Incidence of suspected BE	112 per 1,000	**96 per 1,000** (33 to 287)	**RR 0.86** (0.29 to 2.56)	213 (2 RCTs)	⨁◯◯◯ VERY LOW [a,b,c,d]	
Incidence of confirmed BE	Chak 2014 reports 3/87 and 5/90 (p=0.49) cases of confirmed BE from TNE and VCE, respectively. Chang 2011 does not report how many cases of confirmed BE were in the TNE group, and reports that 0/3 of those with suspected BE were confirmed.			93 (2 RCTs)	⨁◯◯◯ VERY LOW [b,c,d,e]	
Incidence of dysplasia	There were no cases of dysplasia in either group.			40 (1 RCT)	⨁◯◯◯ VERY LOW [c,d,f]	
Psychological effects (anxiety, nervousness, or worry before the procedure)	167 per 1,000	**380 per 1,000** (222 to 647)	**RR 2.28** (1.33 to 3.88)	177 (1 RCT)	⨁◯◯◯ VERY LOW [b,d,g]	
Psychological effects (anxiety during the procedure)	156 per 1,000	**333 per 1,000** (190 to 586)	**RR 2.14** (1.22 to 3.77)	177 (1 RCTs)	⨁◯◯◯ VERY LOW [b,c,d,g]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio; **TNE**: Transnasal esophagoscopy; **VCE**: video capsule esophagoscopy

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. Personnel and outcome assessors were aware of screening modality and could be influenced by this knowledge.
b. Chak 2014 defined GERD based on symptoms of GERD (from questionnaire) or use of acid suppression medicine (within 7 days of screening).
c. Chang 2011 defined GERD based on symptoms obtained through validated questionnaires.
d. Too few participants.
e. Chak 2014 was considered low risk but contributed a greater amount of data to the outcome. Chang 2011 was considered high risk, but only contributed 20 participants to each comparison.
f. Many ROB domains were unclear due to lack of reporting for this study.
g. Participants were aware of screening modality and could be influenced by this knowledge. Personnel could also influence the level of anxiety by knowledge of the screening modality.

Evidence Set 6: Transnasal esophagoscopy (TNE) versus Transoral EGD

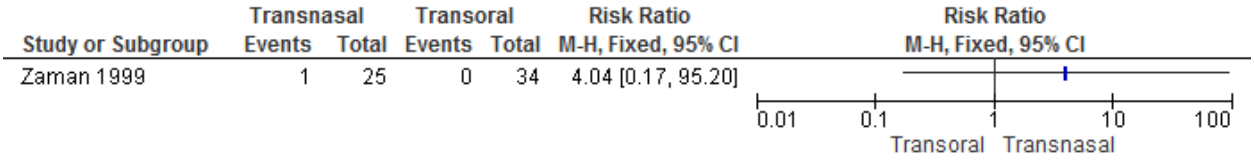
Evidence Set 6 - Results table

Author Year Study design	Outcome(s) description	Results		ROB assessment	Notes
		TNE	Transoral-EGD		
CRITICAL OUTCOME 3: Life threatening, severe, or medically significant consequenes					
Zaman 1999[62] RCT	Several hours after discharge, facial swelling developed, and eventually a small proximal esophageal performation was diagnosed by means of an x-ray swallowing series using water-soluable contrast. Surgical exploration of the neck did not reveal a perforation.	1/25	0/34	Moderate	A woman undergoing endoscopy for abdominal pain and early satiety.
IMPORTANT OUTCOME 4: Incidence of EAC (by stage), BE, and low- and high-grade dysplasia					
Suspected BE (endoscopically)					
Zaman 1999[62] RCT	Not defined	1/25	2/34	High	Patients were self-selected, as 43% of those approached declined to participate.
Mori 2010[64] Cohort study	Measurement of the mucosa between the esophagogastric junction and squamocolumnar junction			High	Patients were asked to select between screening options. There was no significant difference in the frequency distribution of the severity of BE among EGDs.
	Grade 1[23]	188/727 (25.9%)	150/599 (25%)		
	Grade 2[24]	31/727 (4.3%)	46/599 (7.7%)		
	Grade 3[25]	6/727 (0.8%)	3/599 (0.5%)		
IMPORTANT OUTCOME 6: Psychological effects					
Zaman 1999[62] RCT	Anxiety before the procedure (mean ± SE)	3.0 ± 0.6	3.6 ± 0.5	High	
		p=0.39			
Zaman 1999[62] RCT	Anxiety during insertion (mean ± SE)	4.4 ± 0.6	4.7 ± 0.5		
		p=0.63			
Zaman 1999[62] RCT	Anxiety during the procedure (mean ± SE)	3.3 ± 0.7	3.3 ± 0.5		
		p=0.99			

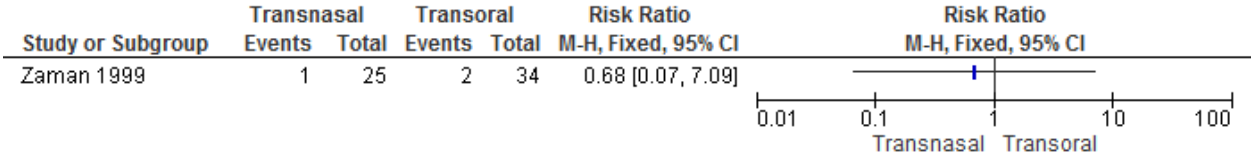
[23] BE grade 1 (circumferential (C) or tongue (T) type, longest BE <1cm)
[24] BE grade 2 (C type, 3cm > longest BE ≥1cm or T type, longest BE ≥1cm)
[25] BE grade 3 (C type, shortest BE ≥3cm)

Evidence Set 6 - Forest Plots

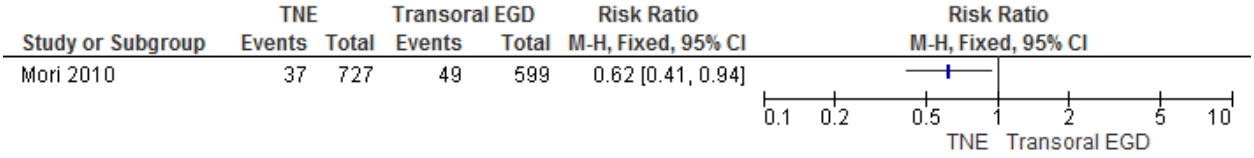
Forest Plot 6.1: Life threatening, severe, or medically significant consequences



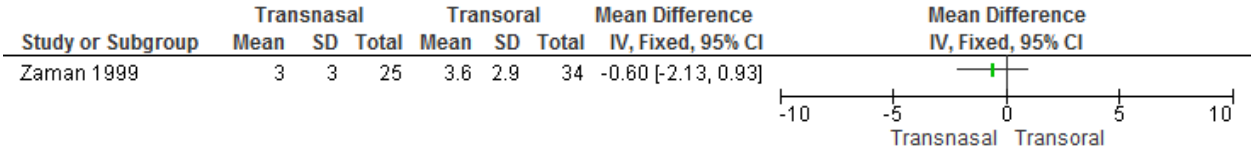
Forest Plot 6.2: Incidence of suspected BE (RCT)



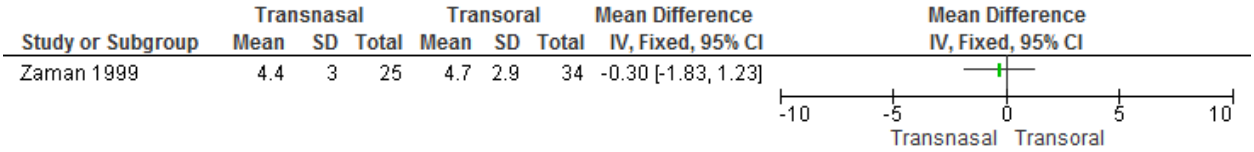
Forest Plot 6.3: Incidence of suspected BE (grade 2 and 3) (observational)



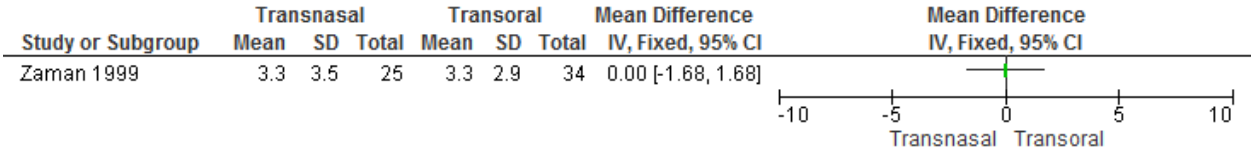
Forest Plot 6.4: Anxiety before the procedure



Forest Plot 6.5: Anxiety during insertion



Forest Plot 6.6: Anxiety during the procedure



Evidence Set 6 - GRADE evidence profile table

Setting: Hospital
Bibliography: Zaman A, Hahn M, Hapke R, Knigge K, Fennerty MB, Katon RM. A randomized trial of peroral versus transnasal unsedated endoscopy using an ultrathin videoendoscope. *Gastrointestinal Endoscopy* 1999; 49(3):279-284. Mori A, Ohashi N, Yoshida A, Nozaki M, Tatcbe H, Okuno M, Hoshihara Y, Hongo M. Unsedated transnasal ultrathin esophagogastroduodenoscopy may provide better diagnostic performance in gastroesophageal reflux disease. *Disease of the Esophagus* 2011; 24:92-98.

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	**Study design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**TNE**	**Transoral EGD**	**Relative (95% CI)**	**Absolute (95% CI)**		
Life threatening, severe, or medically significant consequences												
1	randomised trials	serious [a]	not serious	serious [b]	serious [c]	none	1/25 (4.0%)	0/34 (0.0%)	not estimable		⊕◯◯◯ VERY LOW	IMPORTANT
Incidence of suspected BE (RCT)												
1	randomised trials	very serious [a]	not serious	serious [b]	serious [c]	none	1/25 (4.0%)	2/34 (5.9%)	**RR 0.68** (0.07 to 7.09)	**19 fewer per 1,000** (from 55 fewer to 358 more)	⊕◯◯◯ VERY LOW	IMPORTANT
Incidence of suspected BE (grade 2 and 3) (obs)												
1	observational studies	very serious [d]	not serious	serious [e]	serious [c]	none	37/727 (5.1%)	49/599 (8.2%)	**RR 0.62** (0.41 to 0.94)	**31 fewer per 1,000** (from 5 fewer to 48 fewer)	⊕◯◯◯ VERY LOW	IMPORTANT
Anxiety prior to screening (Scale from: 0 to 10)												
1	randomised trials	very serious [a,f]	not serious	serious [b]	serious [c]	none	25	34	-	MD **0.6 lower** (2.13 lower to 0.93 higher)	⊕◯◯◯ VERY LOW	IMPORTANT
Anxiety during insertion (Scale from: 0 to 10)												
1	randomised trials	very serious [a,f]	not serious	serious [b]	serious [c]	none	25	34	-	MD **0.3 lower** (1.83 lower to 1.23 higher)	⊕◯◯◯ VERY LOW	IMPORTANT
Anxiety during the procedure (Scale from: 0 to 10)												

1	randomised trials	very serious [a,f]	not serious	serious [b]	serious [c]	none	25	34	-	MD **0** (1.68 lower to 1.68 higher)	⊕◯◯◯ VERY LOW	IMPORTANT

CI: Confidence interval; **EGD**: Esophagogastroduodenoscopy; **MD:** Mean Difference; **RR:** Risk ratio; **TNE**: Transnasal esophagoscopy

Explanations

a. There is no information provided on the method of randomization or allocation concealment. No protocol was found to determine if all outcomes were reported. There was no information provided on how the study was funded.

b. Participants were selected among those with upper GI symptoms, of which GERD was one reason. Other reasons included dyspepsia, abdominal pain, nausea/vomiting, anemia.

c. Too few participants.

d. A cohort who had received prior EGD who were allowed to select which screening modality they were exposed to. There is no description on how the outcome was assessed.

e. One of the main objectives of the study was to diagnose GERD. Patients who had previous EGD for screening upper intestinal tract disorders were enrolled in the present study.

f. Randomization to a particular method could cause different levels of anxiety prior to the procedure and during the procedure.

Evidence Set 6 - Summary of Findings table

TNE compared to Transoral EGD for screening for EAC and precancerous conditions (BE and dysplasia)

Setting: Hospital-based
Intervention: TNE
Comparison: Transoral EGD

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with Transoral EGD	Risk with TNE				
Life threatening, severe, or medically significant consequences	0 per 1,000	Not estimable due to zero count in comparison group	not estimable	59 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	
Incidence of suspected BE (RCT)	59 per 1,000	**40 per 1,000** (4 to 417)	**RR 0.68** (0.07 to 7.09)	59 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	
Incidence of suspected BE(grade 2 and 3) (obs)	82 per 1,000	**51 per 1,000** (34 to 77)	**RR 0.62** (0.41 to 0.94)	1326 (1 observational study)	⨁◯◯◯ VERY LOW [c,d,e]	
Anxiety prior to screening Scale from: 0 to 10		The mean anxiety prior to screening in the intervention group was 0.6 lower (2.13 lower to 0.93 higher)	-	59 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c,f]	
Anxiety during insertion Scale from: 0 to 10		The mean anxiety during insertion in the intervention group was 0.3 lower (1.83 lower to 1.23 higher)	-	59 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c,f]	
Anxiety during the procedure Scale from: 0 to 10		The mean anxiety during the procedure in the intervention group was 0 (1.68 lower to 1.68 higher)	-	59 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c,f]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).
CI: Confidence interval; **EGD**: Esophagogastroduodenoscopy; **RR:** Risk ratio; **TNE**: Transnasal esophagoscopy

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

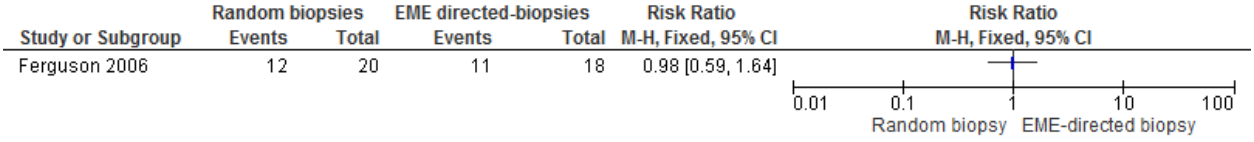
Evidence Set 7: EGD with random biopsy versus Enhanced magnification-directed endoscopy (EME) biopsies

Evidence Set 7 - Results table

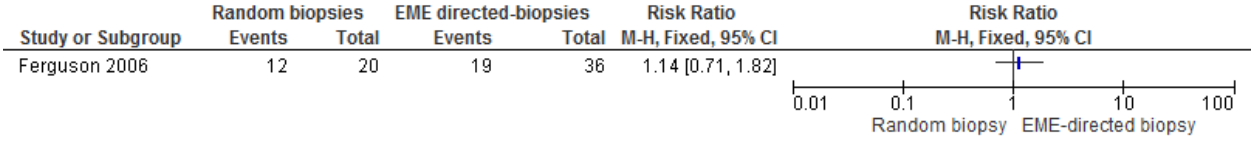
Author Year Study design	Outcome(s) description	Results		ROB assessment	Notes
		EGD with random biopsy	EME directed endoscopy biopsies		
IMPORTANT OUTCOME 4: Incidence of EAC (by stage), BE, and low- and high-grade dysplasia					
Confirmed BE (histologically)					
Ferguson 2006[59] RCT	Specialized intestinal metaplasia (SIM) among those with endoscopically apparent BE, which was defined as any variation of >5mm between the lowest and highest point of the squamocolumnar junction from the gastroesophageal junction using only the findings on standard (or non-magnified) endoscopy. The first result includes only those with SIM patterns III/IV, while the second results include all SIM pattern types.	12/20 (60%)	11/18 (61%)	Moderate	EME tissue was classified using four pattern types [I round pits, II recticular, III villous, and IV ridged].
		p-value: 1.00			
		12/20 (60%)	19/36 (53%)		
		p-value: 0.78			

Evidence Set 7 - Forest Plots

Forest Plot 7.1: Incidence of confirmed BE (specialized intestinal metaplasia pattern III and IV)



Forest Plot 7.2: Incidence of confirmed BE (specialized intestinal metaplasia all patterns)



Evidence Set 7 - GRADE evidence profile table

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	**Study design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**EGD with random biopsy**	**EME-directed endoscopy biopsies**	**Relative (95% CI)**	**Absolute (95% CI)**		
Incidence of confirmed BE (SIM pattern types III/IV)												
1	randomized trials	serious [a]	not serious	serious [b]	serious [c]	none	12/20 (60.0%)	11/18 (61.1%)	**RR 0.98** (0.59 to 1.64)	**12 fewer per 1,000** (from 251 fewer to 391 more)	⊕◯◯◯ VERY LOW	IMPORTANT
Incidence of confirmed BE (all SIM pattern types)												
1	randomized trials	serious [a]	not serious	serious [b]	serious [c]	none	12/20 (60.0%)	19/36 (52.8%)	**RR 1.14** (0.71 to 1.82)	**74 more per 1,000** (from 153 fewer to 433 more)	⊕◯◯◯ VERY LOW	IMPORTANT

CI: Confidence interval; **RR:** Risk ratio

Explanations

a. No details on allocation concealment, no protocol found, and no details on funding.

b. GERD score determined with a validated questionnaire (Ofman J, et al. Identifying patients with gastroesophageal reflux disease: Validation of a practical screening tool. Dig Dis Sci 2002; 47:1863-9), with no other information provided

c. Too few participants in the study

Evidence Set 7 - Summary of Findings Table

EGD with random biopsy compared to EME-directed endoscopy biopsies for screening for EAC and precancerous conditions (BE and dysplasia)

Setting: Outpatient clinic
Intervention: EGD random biopsy
Comparison: EME-directed endoscopy biopsies

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with EME-directed endoscopy biopsies	**Risk with EGD with random biopsy**				
Incidence of confirmed BE (SIM pattern types III/IV)	611 per 1,000	**599 per 1,000** (361 to 1,000)	**RR 0.98** (0.59 to 1.64)	38 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	
Incidence of confirmed BE (all SIM pattern types)	528 per 1,000	**602 per 1,000** (375 to 961)	**RR 1.14** (0.71 to 1.82)	56 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. No details on allocation concealment, no protocol found, and no details on funding.
b. GERD score determined with a validated questionnaire (Ofman J, et al. Identifying patients with gastroesophageal reflux disease: Validation of a practical screening tool. Dig Dis Sci 2002; 47:1863-9), with no other information provided
c. Too few participants in the study

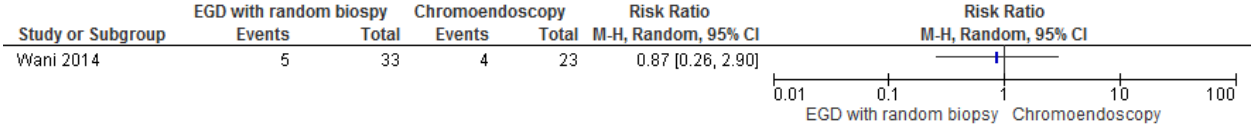
Evidence Set 8: EGD with random biopsy versus chromoendoscopy

Evidence Set 8 - Results table

Author Year Study design	Outcome(s) description	Results		ROB assessment	Notes
		EGD with random biopsy	Chromo-endoscopy		
IMPORTANT OUTCOME 4: Incidence of EAC (by stage), BE, and low- and high-grade dysplasia					
Confirmed BE (histologically)					
Wani 2014[61] RCT	Patients were suspected of having BE if they had columnar lined epithelium that was reddish in color and velvety texture which could be distinguished easily from normal pale and glossy esophageal squamous epithelium. Specialized intestinal metaplasia was diagnosed if the intestinal goblet cells were present.	5/33 (15.2%)	4/23 (17.4%)	Moderate	All patients (n=378) received EGD. Those with columnar lined epithelium were randomized to different biopsy methods (n=56).
		p=0.55			

Evidence Set 8 - Forest Plot

Forest Plot 8.1: Incidence of confirmed BE



Evidence Set 8 - GRADE evidence profile table

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	**Study design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**EGD with random biopsy**	**chromoendoscopy (methylene blue-directed biopsy)**	**Relative (95% CI)**	**Absolute (95% CI)**		
Incidence of confirmed BE												
1 [a]	randomised trials	serious [b]	not serious	serious [c]	serious [d]	none	5/33 (15.2%)	4/23 (17.4%)	**RR 0.87** (0.26 to 2.90)	**23 fewer per 1,000** (from 129 fewer to 330 more)	⨁◯◯◯ VERY LOW	IMPORTANT

CI: Confidence interval; **RR:** Risk ratio

Explanations

a. All participants were given EGD. If BE was suspected, patients were randomized to random biopsy or chromoendoscopy.
b. Method of allocation, and allocation concealment was not discussed. No protocol was found, there is no mention on how the study was funded, and there was no description of the baseline characteristics between the two study groups.
c. GERD was described as having "characteristics symptoms of GERD".
d. Too few participants included.

Evidence Set 8 - Summary of Findings Table

EGD with random biopsy compared to chromoendoscopy (methylene blue-directed biopsy) for screening for EAC and precancerous conditions (BE and dysplasia)

Setting: Not reported
Intervention: EGD with random biopsy
Comparison: Chromoendoscopy (methylene blue-directed biopsy)

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with chromoendoscopy (methylene blue-directed biopsy)	Risk with EGD with random biopsy				
Incidence of confirmed BE	174 per 1,000	**151 per 1,000** (45 to 504)	**RR 0.87** (0.26 to 2.90)	56 (1 RCT) [a]	⨁◯◯◯ VERY LOW [b,c,d]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. All participants were given EGD. If BE was suspected, patients were randomized to random biopsy or chromoendoscopy.
b. Method of allocation, and allocation concealment was not discussed. No protocol was found, there is no mention on how the study was funded, and there was no description of the baseline characteristics between the two study groups.
c. GERD was described as having “characteristics symptoms of GERD”.
d. Too few participants included.

Appendices

Appendix 1 KQ1 PRISMA checklist
Appendix 2 KQ1 PICOS table
Appendix 3 KQ1 Search strategy
Appendix 4 KQ1 Screening forms
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Appendix 6 NOS risk of bias tool
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Appendix 13 KQ2 List of excluded studies at full text
Appendix 14 KQ2 List of potentially relevant ongoing studies

Appendix 1. KQ1 PRISMA checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	

Section/topic	#	Checklist item	Reported on page #
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

Appendix 2: KQ1 PICOS table

	Inclusion	Exclusion
Population	Adults (≥18 years old) with chronic GERD with or without other risk factors† for EAC Studies addressing both adults and children, if data provided for adults are reported separately. Chronic GERD, as defined by study authors † Risk factors will be as deemed so by included studies	Experiencing alarm symptoms for EAC: dysphagia, recurrent vomiting, anorexia, weight loss, gastrointestinal bleeding or other symptoms identified by authors as 'alarm' Diagnosed with other gastro-esophageal conditions (e.g., gastric cancer, esophageal atresia, other life threatening esophageal conditions) or pre-existing disease (BE, dysplasia, or EAC)
Intervention and comparator – KQ1a	- Screening versus no screening - One screening modality versus another screening modality All screening modalities will be included, such as esophagogastroduodenoscopy (EGD)*†, EGD† plus adjunct techniques‡, transnasal endoscopy, cytologic examination *Also known as panendoscopy and upper GI endoscopy † with or without biopsy protocol ‡For example, chromendoscopy and narrow-band imaging Screening for BE, dysplasia, or EAC	Any follow-up diagnostic tests, such 24 hour esophageal pH test or any test for staging purposes, such as CT and MRI
Intervention and comparator – KQ1b	- One screening modality versus. another screening modality - One interval of screening versus. another interval of screening - Timepoint at which to initiate screening versus. another timepoint - Timepoint at which to cease screening versus. another timepoint	
Outcomes/Outcome domains	Critical for decision-making 1. Mortality - all-cause and EAC-related (1, 5 and 10 year or as available)†* 2. Survival (1, 5 and 10 year or as available)† 3. Life threatening, severe, or medically significant consequences (such as requiring hospitalization or prolongation of hospitalization; disabling (limiting self-care or activities of daily living) Important for decision-making	

	Inclusion	Exclusion
	4. Incidence of EAC (by stage), BE, low- and high-grade dysplasia* 5. Quality of life (validated scales only; e.g. SF-36, WHOQUAL) 6. Psychological effects (e.g., anxiety and depression) 7. Major or minor medical procedures* 8. Overdiagnosis‡ †from the time of allocation to screening or control arm *These outcomes will be used to judge the extent of overdiagnosis, which is defined as the diagnosis of disease which would never have become clinically apparent in a person's lifetime (i.e., causing neither symptoms nor death). ‡As judged by the study author or will be judged by the CTFPHC working group using information provided by authors, where available.	
Timing	No limits	
Settings	Primary care	
Study designs	Randomized controlled trials (RCTs), including cluster RCTs. If no or few randomized controlled trials (i.e. less than 5 trials) are available: Non-randomized controlled clinical trials, controlled before-after, interrupted times series, cohort studies, case-control studies, limiting to higher levels of evidence depending on the nature and volume of specific study designs. If no or few randomized controlled trials are available for the overdiagnosis outcome, ecological and cohort studies will be considered for all outcomes used for the judgment of overdiagnosis.	Cross-sectional studies, case series, case reports, and other publication types (editorials, commentaries, notes, letter, opinions).
Language	No language restrictions in the search, however only English and French articles will be included at full-text.	
Databases	Medline, Embase, Cochrane	

Appendix 3. KQ1 Search strategy

Date Ran: 2018 Oct 29

Database: Embase Classic+Embase <1947 to 2018 October 26>, Ovid MEDLINE(R) ALL <1946 to October 25, 2018>
Search Strategy:
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1 exp Gastroesophageal Reflux/ (84749)
2 ((esophageal or gastric* or gastro-esophageal or gastro-oesophageal or gastroesophageal or gastrooesophageal or supraesophageal or supra-esophageal or supraoesophageal or supra-oesophageal) adj2 reflux*).tw,kw. (60380)
3 GERD.tw,kw. (23254)
4 GORD.tw,kw. (2189)
5 SEGR.tw,kw. (14)
6 (gastric adj2 regurgitat*).tw,kw. (524)
7 or/1-6 (101149)
8 Esophageal Neoplasms/ (54194)
9 exp Esophagus/ and exp Neoplasms/ (37262)
10 ((esophag* or oesophag* or pharynx-esophag*) adj3 (neoplas* or cancer* or tumour* or tumor* or carcinoma* or malignan* or metasta* or oncolog* or adenoma* or adenocarcinoma* or adeno-carcinoma* or carcinosarcoma* or carcino-sarcoma*)).tw,kw. (115398)
11 Barrett Esophagus/ (23026)
12 (Barrett* adj1 (esophag* or oesophag* or epitheli* or metaplasi* or syndrome?)).tw,kw. (22711)
13 (dysplasia* or dysplastic* or precancer* or pre-cancer* or premalignan* or pre-malignan*).tw,kw. (237615)
14 or/8-13 (381903)
15 7 and 14 [GERD AND ESOPHAGEAL CANCER] (14039)
16 exp Infant/ not (exp Adult/ and exp Infant/) (1653036)
17 exp Child/ not (exp Adult/ and exp Child/) (3188154)
18 15 not (16 or 17) [CHILD-ONLY REMOVED] (13587)
19 exp Animals/ not (exp Animals/ and Humans/) (16928885)
20 18 not 19 [ANIMAL-ONLY REMOVED] (9917)
21 (comment or editorial or interview or news).pt. (1857143)
22 (letter not (letter and randomized controlled trial)).pt. (2039050)
23 20 not (21 or 22) [OPINION PIECES REMOVED] (9328)
24 limit 23 to systematic reviews [Limit not valid in Embase; records were retained] (5438)
25 meta analysis.pt. (93528)
26 exp meta-analysis as topic/ (55716)
27 (meta-analy* or metanaly* or metaanaly* or met analy* or integrative research or integrative review* or integrative overview* or research integration or research overview* or collaborative review*).tw. (320935)
28 (systematic review* or systematic overview* or evidence-based review* or evidence-based overview* or (evidence adj3 (review* or overview*)) or meta-review* or meta-overview* or meta-synthes* or "review of reviews" or technology assessment* or HTA or HTAs).tw. (380695)
29 exp Technology assessment, biomedical/ (23572)
30 (cochrane or health technology assessment or evidence report).jw. (38344)
31 or/25-30 (663092)

32 23 and 31 (237)
33 24 or 32 [REVIEWS] (5478)
34 exp Guidelines as Topic/ (618496)
35 exp Clinical Protocols/ (244747)
36 Guideline.pt. (16000)
37 Practice Guideline.pt. (24370)
38 standards.fs. (661949)
39 Consensus Development Conference.pt. (10837)
40 (guidance* or guideline* or standards or recommendation*).ti. (311034)
41 (expert consensus or consensus statement* or consensus conference* or practice parameter* or position statement* or policy statement* or CPG or CPGs).tw. (111573)
42 or/34-41 (1639102)
43 23 and 42 [GUIDELINES] (344)
44 (controlled clinical trial or randomized controlled trial or pragmatic clinical trial).pt. (558557)
45 clinical trials as topic.sh. (185080)
46 (randomi#ed or randomly or RCT$1 or placebo*).tw. (2078317)
47 ((singl* or doubl* or trebl* or tripl*) adj (mask* or blind* or dumm*)).tw. (382260)
48 trial.ti. (451524)
49 or/44-48 (2552566)
50 23 and 49 [RCTS] (446)
51 controlled clinical trial.pt. (92722)
52 Controlled Clinical Trial/ or Controlled Clinical Trials as Topic/ (564652)
53 (control* adj2 trial*).tw. (536268)
54 Non-Randomized Controlled Trials as Topic/ (10101)
55 (nonrandom* or non-random* or quasi-random* or quasi-experiment*).tw. (110148)
56 (nRCT or nRCTs or non-RCT$1).tw. (1682)
57 Controlled Before-After Studies/ (212209)
58 (control* adj3 ("before and after" or "before after")).tw. (8951)
59 Interrupted Time Series Analysis/ (204342)
60 (time series adj3 interrupt*).tw. (5071)
61 (pre- adj3 post-).tw. (194013)
62 (pretest adj3 posttest).tw. (10024)
63 Historically Controlled Study/ (222590)
64 (control* adj2 stud$3).tw. (488554)
65 Control Groups/ (123900)
66 (control$ adj2 group$1).tw. (1094939)
67 trial.ti. (451524)
68 or/51-67 (3041588)
69 23 and 68 [NON-RCTS] (859)
70 exp Cohort Studies/ (2201726)
71 cohort$1.tw. (1281888)
72 Retrospective Studies/ (1057885)
73 (longitudinal or prospective or retrospective).tw. (2746922)
74 ((followup or follow-up) adj (study or studies)).tw. (111610)
75 Observational study.pt. (53767)
76 (observation$2 adj (study or studies)).tw. (221881)
77 ((population or population-based) adj (study or studies or analys#s)).tw. (36252)
78 ((multidimensional or multi-dimensional) adj (study or studies)).tw. (245)

79 Comparative Study.pt. (1812404)
80 ((comparative or comparison) adj (study or studies)).tw. (234286)
81 exp Case-Control Studies/ (1099012)
82 ((case-control* or case-based or case-comparison) adj (study or studies)).tw. (214189)
83 Cross-Sectional Studies/ (423299)
84 ((cross-sectional or frequency or prevalence) adj (analys#s or study or studies or survey$1)).tw. (426217)
85 or/70-84 (7259652)
86 23 and 85 [OBSERVATIONAL STUDIES] (2373)
87 33 or 43 or 50 or 69 or 86 [ALL STUDY DESIGNS] (7084)
88 87 use medall [MEDLINE RECORDS] (1803)
89 gastroesophageal reflux/ (76189)
90 ((esophageal or gastric* or gastro-esophageal or gastro-oesophageal or gastroesophageal or gastrooesophageal or supraesophageal or supra-esophageal or supraoesophageal or supra-oesophageal) adj2 reflux*).tw,kw. (60380)
91 GERD.tw,kw. (23254)
92 GORD.tw,kw. (2189)
93 SEGR.tw,kw. (14)
94 (gastric adj2 regurgitat*).tw,kw. (524)
95 or/89-94 (94213)
96 exp esophagus tumor/ (77710)
97 exp esophagus/ and exp neoplasm/ (37262)
98 ((esophag* or oesophag* or pharynx-esophag*) adj3 (neoplas* or cancer* or tumour* or tumor* or carcinoma* or malignan* or metasta* or oncolog* or adenoma* or adenocarcinoma* or adeno-carcinoma* or carcinosarcoma* or carcino-sarcoma*)).tw,kw. (115398)
99 Barrett Esophagus/ (23026)
100 (Barrett* adj1 (esophag* or oesophag* or epitheli* or metaplasi* or syndrome?)).tw,kw. (22711)
101 (dysplasia* or dysplastic* or precancer* or pre-cancer* or premalignan* or pre-malignan*).tw,kw. (237615)
102 or/96-101 (388236)
103 95 and 102 [GERD AND ESOPHAGEAL CANCER] (13204)
104 exp juvenile/ not (exp juvenile/ and exp adult/) (2337309)
105 exp Infant/ not (exp Adult/ and exp Infant/) (1653036)
106 exp Child/ not (exp Adult/ and exp Child/) (3188154)
107 or/104-106 (3908908)
108 103 not 107 [CHILD, 17 AND UNDER, REMOVED] (12752)
109 exp animal experimentation/ or exp models animal/ or exp animal experiment/ or nonhuman/ or exp vertebrate/ (47785712)
110 exp human/ or exp human experimentation/ or exp human experiment/ (37610583)
111 109 not 110 (10176834)
112 108 not 111 [ANIMAL-ONLY REMOVED] (12412)
113 editorial.pt. (1053946)
114 letter.pt. not (letter.pt. and randomized controlled trial/) (2034134)
115 112 not (113 or 114) [OPINION PIECES REMOVED] (11719)
116 meta-analysis/ (244188)
117 "systematic review"/ (181694)
118 "meta analysis (topic)"/ (38725)

119 (meta-analy* or metanaly* or metaanaly* or met analy* or integrative research or integrative review* or integrative overview* or research integration or research overview* or collaborative review*).tw. (320935)
120 (systematic review* or systematic overview* or evidence-based review* or evidence-based overview* or (evidence adj3 (review* or overview*)) or meta-review* or meta-overview* or meta-synthes* or "review of reviews" or technology assessment* or HTA or HTAs).tw. (380695)
121 biomedical technology assessment/ (22465)
122 (cochrane or health technology assessment or evidence report).jw. (38344)
123 or/116-122 (719814)
124 115 and 123 [REVIEWS] (466)
125 exp practice guideline/ (496379)
126 (guidance* or guideline* or standards or recommendation*).ti. (311034)
127 (expert consensus or consensus statement* or consensus conference* or practice parameter* or position statement* or policy statement* or CPG or CPGs).tw. (111573)
128 or/125-127 (807229)
129 115 and 128 [GUIDELINES] (406)
130 randomized controlled trial/ or controlled clinical trial/ (1261895)
131 exp "clinical trial (topic)"/ (278077)
132 (randomi#ed or randomly or RCT$1 or placebo*).tw. (2078317)
133 ((singl* or doubl* or trebl* or tripl*) adj (mask* or blind* or dumm*)).tw. (382260)
134 trial.ti. (451524)
135 or/130-134 (2842728)
136 115 and 135 [RCTS] (792)
137 controlled clinical trial/ (551272)
138 "controlled clinical trial (topic)"/ (9690)
139 (control* adj2 trial*).tw. (536268)
140 (nonrandom* or non-random* or quasi-random* or quasi-experiment*).tw. (110148)
141 (nRCT or nRCTs or non-RCT$1).tw. (1682)
142 (control* adj3 ("before and after" or "before after")).tw. (8951)
143 time series analysis/ (21591)
144 (time series adj3 interrupt*).tw. (5071)
145 pretest posttest control group design/ (353)
146 (pre- adj3 post-).tw. (194013)
147 (pretest adj3 posttest).tw. (10024)
148 controlled study/ (6234502)
149 (control* adj2 stud$3).tw. (488554)
150 control group/ (123900)
151 (control* adj2 group$1).tw. (1094939)
152 trial.ti. (451524)
153 or/137-152 (8064899)
154 115 and 153 [NON-RCTS] (2112)
155 cohort analysis/ (640633)
156 cohort$1.tw. (1281888)
157 retrospective study/ (1418098)
158 longitudinal study/ (236664)
159 prospective study/ (965640)
160 (longitudinal or prospective or retrospective).tw. (2746922)
161 follow up/ (1364204)

162 ((followup or follow-up) adj (study or studies)).tw. (111610)
163 observational study/ (205270)
164 (observation$2 adj (study or studies)).tw. (221881)
165 population research/ (95192)
166 ((population or population-based) adj (study or studies or analys#s)).tw. (36252)
167 ((multidimensional or multi-dimensional) adj (study or studies)).tw. (245)
168 exp comparative study/ (3125774)
169 ((comparative or comparison) adj (study or studies)).tw. (234286)
170 exp case control study/ (1099012)
171 ((case-control* or case-based or case-comparison) adj (study or studies)).tw. (214189)
172 cross-sectional study/ (550186)
173 ((cross-sectional or frequency or prevalence) adj (analys#s or study or studies or survey$1)).tw. (426217)
174 or/155-173 (9122540)
175 115 and 174 [OBSERVATIONAL STUDIES] (3847)
176 124 or 129 or 136 or 154 or 175 [ALL STUDY DESIGNS] (5431)
177 176 use emczd [EMBASE RECORDS] (3828)
178 88 or 177 [BOTH DATABASES] (5631)
179 (2016 11* or 2016 12* or 2017* or 2018*).dt. (2466286)
180 88 and 179 [MEDLINE UPDATE RECORDS] (140)
181 (201611* or 201612* or 2017* or 2018*).dc. (3493794)
182 177 and 181 [EMBASE UPDATE RECORDS] (545)
183 180 or 182 [BOTH DATABASES - UPDATE PERIOD] (685)
184 remove duplicates from 183 (573)
185 184 use medall [UNIQUE MEDLINE UPDATE RECORDS] (140)
186 184 use emczd [UNIQUE EMBASE UPDATE RECORDS] (433)

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Cochrane

https://www.cochranelibrary.com/advanced-search/search-manager?search=2220030

Search Name: CTFPHC - Esophageal Cancer - GERD - No Screening Filters - Update
Date Run: 30/10/2018 03:16:43
Comment: CTFPHC (OHRI) - 2018 Oct 29 - Post-PRESS, Post-CTFPHC - updated from 2016 Nov 22

ID Search Hits
#1 MeSH descriptor: ["Gastroesophageal Reflux"] explode all trees 1740
#2 ((esophageal or gastric* or (gastro next esophageal) or (gastro next oesophageal) or supraesophageal or (supra next esophageal) or supraoesophageal or (supra next oesophageal)) near/2 reflux*):ti,ab,kw 1064
#3 GERD:ti,ab,kw 1185
#4 GORD:ti,ab,kw 148
#5 SEGR:ti,ab,kw 1
#6 (gastric near/2 regurgitat*):ti,ab,kw 67
#7 {or #1-#6} 2862
#8 MeSH descriptor: ["Esophageal Neoplasms"] explode all trees 1308
#9 MeSH descriptor: [Esophagus] explode all trees 267

#10 ((esophag* or oesophag* or (pharynx next esophag*)) near/3 (neoplas* or cancer* or tumour* or tumor* or carcinoma* or malignan* or metasta* or oncolog* or adenoma* or adenocarcinoma* or (adeno next carcinoma*) or carcinosarcoma* or (carcino next sarcoma*))):ti,ab,kw 3387
#11 MeSH descriptor: [''Barrett Esophagus''] explode all trees 207
#12 (Barrett* near/1 (esophag* or oesophag* or epitheli* or metaplasi* or syndrome*)):ti,ab,kw 471
#13 (dysplasia* or dysplastic* or precancer* or (pre next cancer*) or premalignan* or (pre next malignan*)):ti,ab,kw 3694
#14 {or #8-#13} 7045
#15 #7 and #14 133
#16 MeSH descriptor: [Infant] explode all trees 14928
#17 MeSH descriptor: [Child] explode all trees 1356
#18 #15 not (#16 or #17) with Cochrane Library publication date Between Oct 2016 and Oct 2018 35

DSR – 1
CENTRAL - 34

Appendix 4: KQ1 Screening forms

Title and Abstract screening form

1. Does this article discuss screening adults (without other gastroesophageal condition [e.g. gastric cancer] or pre-existing disease [e.g. BE*, dysplasia or EAC]) for esophageal adenocarcinoma, Barrett's Esophagus, and/or dysplasia? (exclude case studies)
   * BE may also be referred to as intestinal metaplasia, specialized intestinal metaplasia, gastric metaplasia, columnar-lined esophagus

   ❍ Yes/unclear

   ❍ No

2. Comment:

Full-text screening form

1. Full text not available:

❒ Yes

2. Language:

❍ English/French
❍ Other

3. What is the study design?

Select an Answer

4. **Does this study evaluate a screening modality/technique of interest?**
   (EGD, EGD plus biospy with/without adjunct techniques, capsule endoscopy, transnasal/transoral ultrathin endoscopy, barium swallow/barium radiology, cytologic examination (e.g., brush, balloon, sponge, liquid, flow cytometry), endoscopic ultrasonography (EUS), computed tomography (CT) scan, laser-induced fluorescence spectroscopy)

   ❍ Yes
   ❍ No
   ❍ Unclear
   ❍ Molecular (e.g., cells, genes) and other biomarkers (e.g., blood, stool, urine)

5. Does this study evaluate a comparator of interest?

❍ Yes (e.g., no screening, different test, different number of tests, different intervals)
❍ No (not of interest)

❍ No comparator (e.g., all participants received the same test/number/interval)
❍ Unclear

6. Do the participants have chronic GERD?
(defined as symptoms for ≥12 months, with no specific frequency, and/or proton pump inhibitor (PPI) (or other pharmacotherpay) use for GERD for ≥12 months)

❍ Yes (meets our def'n)
❍ Yes (does not meet our def'n)
❍ No
❍ Unclear

7. **How does the study define chronic GERD?**
Copy and paste from article. This will help us when we contact authors for those that are unclear. It will also help us know why we said yes/no/unclear while we do conflict resolution.

8. **Do participants have alarm symptoms of EAC or are diagnosed with other gastroesophageal conditions or pre-existing disease?**
Alarm symptoms: dysphagia, recurrent vomiting, anorexia, weight loss, gastrointestinal bleeding or other symptoms identified by authors as 'alarm'
Other gastroesophageal conditions: for example gastric cancer, other life threatening esophageal conditions)
Pre-existing disease: Barrett's esophagus, dysplasia, or esophageal cancer

❍ Yes
❍ No
❍ Unclear
❍ Case-control (case have disease, controls do not)

9. How old are the participants?

❍ Adults (18 yrs +)
❍ Children (<18 yrs)
❍ Adults and children (data separated)
❍ Adults and children (data not separated)
❍ Unclear

10. Comments:

Appendix 5: Cochrane risk of bias tool

1. **Selection bias domain**: Random sequence generation
    - ❍ Low risk
    - ❍ Unclear risk
    - ❍ High risk

    Support for judgement:

2. **Selection bias domain**: Allocation concealment
    - ❍ Low risk
    - ❍ Unclear risk
    - ❍ High risk

    Support for judgement:

3. **Performance bias domain**: Blinding of participants and personnel (for each outcome)
    - ❍ Low risk
    - ❍ Unclear risk
    - ❍ High risk

    Support for judgement:

4. **Detection bias domain**: Blinding of outcome assessment (for each outcome)
    - ❍ Low risk
    - ❍ Unclear risk
    - ❍ High risk

    Support for judgement:

5. **Attrition bias domain**: Incomplete outcome data (for each outcome)
    - ❍ Low risk
    - ❍ Unclear risk
    - ❍ High risk

    Support for judgement:

6. **Reporting bias domain**: Selective reporting
    - ❍ Low risk
    - ❍ Unclear risk
    - ❍ High risk

    Support for judgement:

7. **Other sources of bias**
    - ❍ Low risk
    - ❍ Unclear risk
    - ❍ High risk

    Support for judgement:

Appendix 6: NOS risk of bias tool

Note: A study can be awarded a maximum of one star for each numbered item within the Selection and Outcome categories. A maximum of two stars can be given for Comparability

Selection

1) Representativeness of the exposed cohort
   a) truly representative of the average _____ (describe) in the community ✸
   b) somewhat representative of the average _____ in the community ✸
   c) selected group of users eg nurses, volunteers
   d) no description of the derivation of the cohort

2) Selection of the non-exposed cohort
   a) drawn from the same community as the exposed cohort ✸
   b) drawn from a different source
   c) no description of the derivation of the non-exposed cohort

3) Ascertainment of exposure
   a) secure record (eg surgical records) ✸
   b) structured interview ✸
   c) written self-report
   d) no description

4) Demonstration that outcome of interest was not present at start of study
   a) yes ✸
   b) no

Comparability

1) Comparability of cohorts on the basis of the design or analysis
   a) study controls for _____ (select the most important factor) ✸
   b) study controls for any additional factor ✸ (This criteria could be modified to indicate specific control for a second important factor.)

Outcome

1) Assessment of outcome
   a) independent blind assessment ✸
   b) record linkage ✸
   c) self report
   d) no description

2) Was follow-up long enough for outcomes to occur
   a) yes (select an adequate follow up period for outcome of interest) ✸
   b) no

3) Adequacy of follow up of cohorts
   a) complete follow up - all subjects accounted for ✸
   b) subjects lost to follow up unlikely to introduce bias - small number lost - > ____ % (select an adequate %) follow up, or description provided of those lost) ✸
   c) follow up rate < ____% (select an adequate %) and no description of those lost
   d) no statement

Appendix 7: KQ1 List of excluded studies at full text

Full text not available (n=95)

1. Pace, F., Manes, G., Conio, M., and Bianchi, Porro G. Pretreatment edoscopy - Pro & contra: Endoscopy is needed before treatment in all patients with gastroesophageal reflux disease. Endoscopy 2006; 38 (3): 271-275.
2. Beck, I. T., Champion, M. C., Lemire, S., Thomson, A. B., Anvari, M., Armstrong, D., Bailey, R. J., Barkun, A. N., Boivin, M., Bursey, R. F., Chaun, H., Chiba, N., Cockeram, A. W., Connon, J. J., Da Costa, L. R., Faloon, T. R., Fedorak, R. N., Gillies, R. R., Goeree, R., Hunt, R. H., Inculet, R. I., Klein, A., Leddin, D. J., Love, J. R., and Worobetz, L. J. The Second Canadian Consensus Conference on the Management of Patients with Gastroesophageal Reflux Disease. Canadian journal of gastroenterology 1997; 11 Suppl B: 7B-20B.
3. Lam, C., Liu, W. F., Bel, R. D., Chan, K., Miller, L., Brown, M. C., Chen, Z., Cheng, D., Patel, D., Xu, W., Darling, G. E., and Liu, G. Polymorphisms of the FOXF1 and MHC locus genes in individuals undergoing esophageal acid reflux assessments. Diseases of the Esophagus 2017 Feb; 30(2):1-7.
4. Piche, T. Dietary intake and risk of gastroesophageal reflux disease: A cross study of volunteers. Hepato-Gastro 2005; 12 (3): 229-230.
5. Garrido, Serrano A., Guerrero Igea, F. J., Lepe Jimenez, J. A., and Perianes, Hernandez C. Clinical features and endoscopic progression of gastroesophageal reflux disease. Revista Espanola de Enfermedades Digestivas 2003; 95 (10): 712-716.
6. Dias, Moretzsohn L., Diniz De Miranda, C. H., Barbosa, A. J. A., and Gonzaga Vaz, Coelho L. The presence of serum anti-Cag A antibodies of Helicobacter pylori may not represent a protective factor in the severe esophageal forms of GERD. Gastrenterologia Endoscopia Digestiva 2003; 22 (5): 175-180.
7. Tutuian, R. and Castell, D. O. Barrett's esophagus prevalence and epidemiology. Gastrointestinal Endoscopy Clinics of North America 2003; 13 (2): 227-232.
8. Dincer, D., Besisik, F., Sahin, E., Demir, K., Tuncer, I., Cevikbas, U., Mungan, Z., Kaymakoglu, S., Boztas, G., Ozdil, S., Cakaloglu, Y., and Okten, A. Intestinal metaplasia of the gastric cardia: A study from Turkey. Hepato-gastroenterology 2002; 49 (46): 1153-1156.
9. Andrews, J. Hiatus hernia: What the GP needs to know. Medicine Today 2002; 3 (1): 39-43.
10. Csendes, A., Smok, G., Cerda, G., Burdiles, P., Mazza, D., and Csendes, P. Prevalence of Helicobacter pylori infection in 190 control subjects and in 236 patients with gastroesophageal reflux, erosive esophagitis or Barrett's esophagus. Diseases of the Esophagus 1997; 10 (1): 38-42.
11. D'Onofrio, V., Bovero, E., and Iaquinto, G. Characterization of acid and alkaline reflux in patients with Barrett's esophagus. Diseases of the Esophagus 1997; 10 (1): 16-23.
12. Lunedei, V., Bazzoli, F., Pozzato, P., De Luca, L., Zagari, R. M., Fossi, S., Ricciardiello, L., Maltoni, S., and Roda, E. Endoscopic surveillance in Barrett's esophagus. Minerva Gastroenterologica e Dietologica 2002; 48 (2): 63-71.
13. De Backer, A. I., De Schepper, A. M., and Pelckmans, P. The value of medical imaging in uncomplicated and complicated Barrett's esophagus. Acta Gastro-Enterologica Belgica 2000; 63 (1): 22-28.
14. Peng, S., Cui, Y., Xiao, Y. L., Xiong, L. S., Hu, P. J., Li, C. J., and Chen, M. H. Prevalence of erosive esophagitis and Barrett's esophagus in the adult Chinese population. Endoscopy 2009; 41 (12): 1011-1017.
15. Elhak, N. Gad, Mostafa, M., Salah, T., and Haleem, M. Duodenogastroesophageal reflux: results of medical treatment and antireflux surgery. Hepato-gastroenterology 2008; 55 (81): 120-126.
16. Koslowsky, B., Jacob, H., Eliakim, R., and Adler, S. N. PillCam ESO in esophageal studies: improved diagnostic yield of 14 frames per second (fps) compared with 4 fps. Endoscopy 2006; 38 (1): 27-30.
17. Sharma, Prateek Barrett esophagus: will effective treatment prevent the risk of progression to esophageal adenocarcinoma? The American journal of medicine 2004; 117 Suppl 5A: 79S-85S.

18. Ofman, Joshua J. Decision making in gastroesophageal reflux disease. What are the critical issues? Gastroenterology Clinics of North America 2002; 31 (4 Suppl): S67-S76.

19. Isolauri, J., Luostarinen, M., Isolauri, E., Reinikainen, P., Viljakka, M., and Keyrilainen, O. Natural course of gastroesophageal reflux disease: 17-22 year follow-up of 60 patients. The American journal of gastroenterology 1997; 92 (1): 37-41.

20. Kalsbeek, H. L. and van der Wouden, A. Barrett-oesophagus with papillomatous tumour. Archivum chirurgicum Neerlandicum 1971; 23 (4): 287-296.

21. Waheed, T. and Hurwitz, A. L. Elective upper gastrointestinal endoscopy in an outpatient endoscopy center: Impact on patient management. Practical Gastroenterology 2013; 37 (4): 38-46.

22. Lisovsky, M. and Srivastava, A. Barrett esophagus: Evolving concepts in diagnosis and neoplastic progression. Surgical Pathology Clinics 2013; 6 (3): 475-496.

23. Smoking Is an Independent Risk Factor for Barrett Esophagus. Clinical Advances in Hematology and Oncology 2012; 10 (10): 10.

24. Barrett's oesophagus: A low cancer risk. Medicine Today 2003; 4 (11): 10.

25. Conio, M., Cameron, A., Spechler, S., and Peters, J. H. Can reflux prevention prevent esophageal adenocarcinoma? Gastrointestinal endoscopy 2002; 56 (3): 457-461.

26. Loffeld, R. J. L. F. and van der Putten, A. B. M. M. Hiatal hernia, reflux-oesophagitis, and Barrett's oesophagus. A retrospective endoscopic and clinical study. Diseases of the Esophagus 1993; 6 (4): 57-61.

27. Parker, C., Alexandridis, E., Plevris, J., O'Hara, J., and Panter, S. Transnasal endoscopy: No gagging no panic! Frontline Gastroenterology 2016; 7 (4): 246-256.

28. Nasseri, Moghaddam S., Islami, L., Kalantarian, S., and Malekzadeh, R. Long term proton pump Inhibitor (PPI) use and incidence of gastric (pre) malignant lesions. Cochrane Database of Systematic Reviews 2008; (2).

29. Testoni, P. A., Mazzoleni, G., Distefano, G., Testoni, S. G., Antonelli, M., Fanti, L., and Passaretti, S. Transoral anterior fundoplication (TAF) with medigus ultrasound surgical endostapler (MUSE) for the treatment of gastroesophageal reflux disease (GERD): 12-months results from a single-center prospective study. Gastrointestinal endoscopy 2018. 87 (6 Supplement 1) AB235.

30. Saller, J., Diffalha, S. A., Neill, K., Oliveri, C., Levine, H., Boulware, D., and Coppola, D. CDX2 protein expression in esophageal biopsies without histological evidence of intestinal metaplasia may predict the presence of undetected Barrett's esophagus. Laboratory Investigation 2018. 98 (Supplement 1) 300.

31. Agoston, A., Dunbar, K. B., Souza, R., Spechler, S. J., and Odze, R. Comparison of HIF-2alpha and NF-kB proteins during development of acute reflux esophagitis in patients with and without long-segment barrett's esophagus. Laboratory Investigation 2018. 98 (Supplement 1) 240.

32. Hu, Z.-W., Tian, S.-R., Wu, J.-M., Wang, Z.-G., Zhang, Y., Wang, F., Du, X., and Zhang, D. General gastroscopy of gastroesophageal reflux disease: Analysis of 4086 cases. Medical Journal of Chinese People's Liberation Army 2018. 43 (1) 38-44.

33. Ortiz, P. and Henriquez, F. Esophageal carcinoma: A 20-year cohort study. American Journal of Gastroenterology 2017. 112 (Supplement 1) S189.

34. Enweluzo, C., Canning, A., and Hewlett, A. Does the degree of dysplasia affect post-endoscopy care of patients with Barrett's esophagus? American Journal of Gastroenterology 2017. 112 (Supplement 1) S632-S633.

35. Hoversten, P., Otaki, F., and Katzka, D. A. Candida esophagitis: Epidemiology, risk factors and outcomes. American Journal of Gastroenterology 2017. 112 (Supplement 1) S186-S187.

36. Barker, D. F., Dulaney, D. T., Dion, G. R., Stratton, A. N., and Gancayco, J. Impact of 24-hour PH/impedance on clinical outcomes at a tertiary care hospital. American Journal of Gastroenterology 2017. 112 (Supplement 1) S208.

37. Takeshita, E., Sakata, Y., Kawamura, S., Matsunaga, T., Tsuruoka, N., Miyahara, K., Tominaga, N., Matsunaga, K., Shimoda, R., Iwakiri, R., Kusano, M., and Fujimoto, K. Frequent upper gastrointestinal

symptoms in japanese females compared to males did not depend on endoscopic esophagitis. American Journal of Gastroenterology 2017. 112 (Supplement 1) S207.

38. Umar, S., Rana, A., and Kapetanos, A. Long-term proton pump inhibitor use in primary care internal medicine resident clinic. American Journal of Gastroenterology 2017. 112 (Supplement 1) S597.
39. Smith, M. and Clayton, S. Wats 3D brush biopsy variability compared to traditional forceps biopsy in the identification of barrett's esophagus and dysplasia diagnosis. American Journal of Gastroenterology 2017. 112 (Supplement 1) S177.
40. Robles-Medranda, C., Valero, M., Soria-Alcivar, M., Puga-Tejada, M., Ospina-Arboleda, J., Alvarado-Escobar, H., and Pitanga-Lukashok, H. Minimal esophageal lesions detected by digital chromoendoscopy using optical enhancement systemTM associated to high definition plus optical magnification in non-erosive reflux disease (NERD). American Journal of Gastroenterology 2017. 112 (Supplement 1) S176.
41. Reymunde, A. and Santiago, N. Fifteen plus years after stretta antireflux endoscopy procedure: Quality of life and PPI requirements. American Journal of Gastroenterology 2017. 112 (Supplement 1) S459-S460.
42. Sahebjam, F., Katoh, A., Knight, K., Grider, D., and Bern, M. J. Expression of MUC-2 and CDX-2 in mucosal brushings accurately predicts Barrett's esophagus (BE): 1 step closer to a non-invasive be screening test. American Journal of Gastroenterology 2017. 112 (Supplement 1) S225.
43. Lonie, J., Smith, S., Avramovic, J., and Baker, S. The incidence of pre-operative asymptomatic gastr-oesophageal reflux disease (gord) in a bariatric surgical population. integrated health/multidisciplinary care. Obesity surgery 2017. 27 (1 Supplement 1) 647.
44. Almontashery, A. Evidence of objective endoscopic gastroesophageal reflux post sleeve gastrectomy Post-operative complications. Obesity surgery 2017. 27 (1 Supplement 1) 155.
45. Genco, A., Ernesti, I., Soricelli, E., Casella, G., Leone, G., Petrucci, F. M., Monti, M., and Cipriano, M. Mid-term follow-up (3 years) of patients with barrett's esophagus after sleeve gastrectomy Post-operative complications. Obesity surgery 2017. 27 (1 Supplement 1) 758.
46. Itskoviz, D., Vilkin, A., Zvidi, I., Niv, Y., and Dickman, R. What is the clinical importance of an incidental irregular Z line? a long-term follow-up study. United European Gastroenterology Journal 2016. 4 (5 Supplement 1) A689.
47. Robles-Medranda, C., Valero, M., Soria, M., Puga, M., Ospina, J., Alvarado, H., and Pitanga, Lukashok H. Minimal esophageal lesions detected by digital chromoendoscopy using optical enhancement systemTM associated to high definition plus optical magnification in non erosive reflux disease (NERD). United European Gastroenterology Journal 2016. 4 (5 Supplement 1) A381-A382.
48. Carvalhana, S., Bernardo, S., Freitas, L., Ferreira, C., Ribeiro, L. C., and Velosa, J. Low yield repeat upper GI endoscopy for dyspepsia patients: Consecutive serie from a tertiary referral center. United European Gastroenterology Journal 2016. 4 (5 Supplement 1) A489.
49. Maddalo, G., Pilotto, V., Savarino, E., Orlando, C., Fassan, M., Basso, D., Rugge, M., and Farinati, F. Prevalence and pathophysiology of gastroesophageal reflux disease in patients with autoimmune gastritis. United European Gastroenterology Journal 2017. 5 (5 Supplement 1) A799.
50. Woodland, P., Ooi, J. L. S., Grassi, F., Lee, C., Evans, J., Koukias, N., Triantos, C., Mcdonald, S. A. C., Peiris, M., Aktar, R., Blackshaw, A., and Sifrim, D. The location of oesophageal mucosal afferent nerves are more superficial in patients with nerd than in healthy volunteers and patients with barrett's oesophagus. United European Gastroenterology Journal 2017. 5 (5 Supplement 1) A795-A796.
51. Castela, J., Vinha, Pereira D., Mao De, Ferro S., Casaca, R., Fonseca, R., Chaves, P., and Dias, Pereira A. Congenital or metaplastic: Evaluation of gastroesophageal neo-junctions to assess cardiac type epithelium origin. United European Gastroenterology Journal 2017. 5 (5 Supplement 1) A812.
52. Itskoviz, D., Tamary, H., Krasnov, T., Sahar, N., Zevit, N., Ben-Bassat, O., Leibovici, Wiseman Y., Boltin, D., Goldberg, Y., and Levi, Z. Esophageal reflux disease and esophageal squamous cell cancer in patients with fanconi anemia undergoing endoscopic surveillance. United European Gastroenterology Journal 2017. 5 (5 Supplement 1) A361.

53. Lin, E. C., Holub, J., Lieberman, D. A., and Hur, C. Esophagogastroduodenoscopy in the evaluation of gastroesophageal reflux disease without symptoms: improved endoscopic outcomes from 2003 to 2014. Gastrointestinal endoscopy 2017. 85 (5 Supplement 1) AB422.

54. Testoni, P. A., Testoni, S. G., Mazzoleni, G., Fanti, L., and Passaretti, S. Transoral anterior fundoplication (TAF) with medigus ultrasound surgical endostapler (MUSETM) for the treatment of gastroesophageal reflux disease (GERD): 6-month results from a single-center prospective study. Gastrointestinal endoscopy 2017. 85 (5 Supplement 1) AB562.

55. Noar, M. D., Squires, P., and Kahn, S. Spontaneous regression of barrett's mucosa occurs following sphincter targeted endoluminal gerd therapy. Gastrointestinal endoscopy 2017. 85 (5 Supplement 1) AB584-.

56. Testoni, P. A., Testoni, S. G. G., Mazzoleni, G., Fanti, L., and Passaretti, S. Transoral anterior fundoplication (TAF) with medigus ultrasound surgical endostapler (MUSETM) for the treatment of gastroesophageal reflux disease (GERD): 6-month results from a single-center prospective study. Digestive and Liver Disease 2017. 49 (Supplement 2) e86.

57. Nason, K. S., Levy, R. M., Sarkaria, I. S., Vaughan, T., Switzer, G. E., and Luketich, J. D. Current screening recommendations for Barrett's esophagus do not differentiate esophageal cancer patients from population controls. Gastroenterology 2017. 152 (5 Supplement 1) S1244.

58. Schlottmann, F., Andolfi, C., Herbella, F. A. M., and Patti, M. G. GERD and hiatal hernia: Presence and size infuence the clinical presentation, the esophageal function and reflux profile. Gastroenterology 2017. 152 (5 Supplement 1) S1215.

59. Smukalla, S., Pitman, M., Khan, A., Popov, V., and Thompson, C. C. Sleeve gastrectomy is a risk factor for Barrett's esophagus: A systematic review and meta-analysis. Gastroenterology 2017. 152 (5 Supplement 1) S457-S458.

60. Nwachokor, J., Gunewardena, S., Sharma, M., De, A., Sharma, P., Christenson, L., and Bansal, A. Use of molecular analysis to inform clinical management of black patients with Barrett's esophagus. Gastroenterology 2017. 152 (5 Supplement 1) S455-S456.

61. Woodland, P. J., Grassi, F., Peiris, M., Aktar, R., Ooi, J. L., Evans, J., Lee, C., McDonald, S. A., Blackshaw, L. A., and Sifrim, D. Innervation pattern of the distal mucosal squamous epithelium may underlie hyposensitivity to acid reflux in patients with Barrett's oesophagus. Gastroenterology 2017. 152 (5 Supplement 1) S236.

62. Lin, E. C., Holub, J., Lieberman, D. A., and Hur, C. Low risk of suspected long segment Barrett's esophagus in gastroesophageal reflux disease without alarm symptoms. Gastroenterology 2017. 152 (5 Supplement 1) S453-S454.

63. Hejazi, R., DeVault, K. R., and Francis, D. L. Case-control study of the prevalence of Barrett's esophagus in patients with a Schatzki ring. Gastroenterology 2017. 152 (5 Supplement 1) S453.

64. Saleh, M. A., Mansoor, E., Perry, Y., Lee, P. J., and Chak, A. Proportion of gastroesophageal reflux disease and Barrett's esophagus in laparoscopic sleeve gastrectomy vs. Roux-En-Y gastrojejunostomy: A population based study. Gastroenterology 2017. 152 (5 Supplement 1) S453.

65. Westerveld, D. R., Khullar, V., Mramba, L. K., Ayoub, F., Brar, T., Agarwal, M., Chakraborty, J., Riverso, M., Perbtani, Y. B., Draganov, P. V., and Yang, D. Adherence to quality indicators for the diagnosis and management of Barrett's esophagus: A single-center retrospective analysis. Gastroenterology 2017. 152 (5 Supplement 1) S448-S449.

66. Okusanya, O., Dhupar, R., Luketich, J. D., Apfel, A., Bertolet, M., Vaughan, T., Switzer, G. E., and Nason, K. S. Assessment of GERD frequency, severity and duration: patterns in esophageal adenocarcinomas cases do not differ from population controls. Gastroenterology 2017. 152 (5 Supplement 1) S1265.

67. Aguirre, A. P., Khoury, H., Rivas, H., and Morton, J. M. Prevalence of pre-operative endoscopic findings for sleeve gastrectomy patients. Gastroenterology 2017. 152 (5 Supplement 1) S1260.

68. Khalaf, M. H., Brock, A., and CASTELL, D. O. Sporadic fundic gland polyps and level of gastric acid suppression. Gastroenterology 2017. 152 (5 Supplement 1) S470.

69. Khasag, O., Boldbaatar, G., Namdag, B., and Nyamaa, B. Prevalence of gastroesophageal reflux disease among mongolian population. Gastroenterology 2017. 152 (5 Supplement 1) S660.

70. Jovani, M., Cao, Y., Feskanich, D., Hur, C., Jacobson, B. C., and Chan, A. T. Aspirin use is associated with lower risk of Barrett's esophagus in women. Gastroenterology 2017. 152 (5 Supplement 1) S105.

71. Kwak, Y. E., Saleh, A., Sanchez, M. J., and Masoud, A. Effectiveness of esophagogastroduodenoscopy in changing treatment measures in patients with refractory gastroesophageal reflux disease. Gastroenterology 2017. 152 (5 Supplement 1) S657.

72. Nwachokor, J., Gunewardena, S., De, A., Sharma, M., Sharma, P., Christenson, L., and Bansal, A. Cellular pathways are differentially activated in black versus white patients with gastroesophageal reflux disease: Implications for race-based disease pathogenesis. Gastroenterology 2017. 152 (5 Supplement 1) S663.

73. Zavala-Solares, M. R., Valdovinos, M. A., Fonseca-Camarillo, G., Grajales-Figueroa, G., Zamora-Nava, L. E., Aguilar-Olivos, N. E., Valdovinos-Garcia, L. R., and Yamamoto-Furusho, J. K. Expression of genes associated with inflammation in biopsies of esophageal mucosa of different phenotypes of gastroesophageal reflux disease. Gastroenterology 2017. 152 (5 Supplement 1) S237.

74. Kataria, R., Rosenfeld, B., Malik, Z. A., Harrison, M. J., Schey, R., Parkman, H. P., and Smith, M. S. Distal esophageal impedance measurements during high resolution esophageal manometry with impedance (HREMI) predicts presence and length of Barrett's esophagus (BE). Gastroenterology 2017. 152 (5 Supplement 1) S458.

75. Wang, K., Duan, L., Liu, Z., He, Z., Guo, C., He, Y., Zhang, L., Jin, Z., and Ke, Y. A population-based survey for the risk factors of GERD in an area with high esophageal cancer incidence of China. Journal of gastroenterology and hepatology 2017. 32 (Supplement 3) 32-33.

76. Zehetner, J., Rona, K. A., Yu, A., Bildzukewicz, N., Houghton, C., and Lipham, J. C. Hiatal hernia recurrence rate and durability after magnetic sphincter augmentation in patients with large hiatal hernias and gastroesophageal reflux disease. Hernia 2017. 21 (2 Supplement 1) S174.

77. Zhou, J., Shrestha, P., Ho, V., Turner, I., Teoh, W.-C., and Al-Sohaily, S. Stress proteins in oesophageal epithelium within the gastro-oesophageal diseases. Journal of Gastroenterology and Hepatology (Australia) 2017. 32 (Supplement 2) 63-64.

78. D'Alessandro, A., Esposito, G., Pesce, M., Cargiolli, M., Zito, F. P., Seguella, L., Gigli, S., De Palma, G. D., Cuomo, R., and Sarnelli, G. Role of S100beta protein in metaplasia-dysplasia-carcinoma sequence in Barrett's esophagus. Neurogastroenterology and Motility 2017. 29 (Supplement 1) 13.

79. Rona, K. A., Yu, A., Houghton, C., Bildzukewicz, N., and Lipham, J. C. Hiatal hernia recurrence rate and durability after magnetic sphincter augmentation in patients with large hiatal hernias and gastroesophageal reflux disease. Surgical Endoscopy and Other Interventional Techniques 2017. 31 (Supplement 1) S62.

80. Aguirre-Mar, D., Vazquez, G., Giasi, E., and Rickman, M. T. Initial experience of electro stimulation device (Endostim) therapy on patients with recurrent gerd after fundoplication failure. Preliminary report. Surgical Endoscopy and Other Interventional Techniques 2017. 31 (Supplement 1) S257.

81. Bell, R., Tripp Buckley, F. P., Freeman, K., Heidrick, R., and Doggett, S. Magnetic sphincter augmentation during repair of paraesophageal and large hiatal hernias results in favorable outcomes. Surgical Endoscopy and Other Interventional Techniques 2017. 31 (Supplement 1) S55.

82. Silva, L. E., Ruy, Jorge C., Ribeiro, P. C. P., Alves, M. M., El Ajouz, T. K., and Silva, R. A. Simple, safe and effective. the MGB added to nissen surgery (MGBN): 15-Year outcomes of 1452 cases from a single surgeon. Surgical Endoscopy and Other Interventional Techniques 2017. 31 (Supplement 1) S286.

83. Chen, G. L., Eisenberg, D., and Kubat, E. Laparoscopic Roux-En-Y gastric bypass in veterans with barrett's esophagus. Surgical Endoscopy and Other Interventional Techniques 2017. 31 (Supplement 1) S132.

84. Shirai, S., Takeshita, E., Kawakubo, H., Sakata, Y., Tominaga, N., Miyahara, K., Morisaki, T., Iwakiri, R., Kusano, M., and Fujimoto, K. Medical health checkups indicated high frequency of reflux and dyspeptic symptoms in females than males regardless of endoscopic esophagitis. Diseases of the Esophagus 2016. 29 (Supplement 1) 56A.

85. Yoshida, T., Nishino, T., Inoue, S., Matsumoto, D., Takasugi, H., Inui, T., Morimoto, M., Okumura, K., Takechi, H., and Tangoku, A. Implications for improvement of gastroesophageal reflux disease after esophagectomy. Diseases of the Esophagus 2016. 29 (Supplement 1) 62A.

86. Offman, J., Pesola, F., Fitzgerald, R., Hamilton, W., and Sasieni, P. Incidence and progression of Barrett's oesophagus in clinical practice: A cohort analysis for planning of the Barrett's ESophagus Trial 3 (BEST3) comparing the Cytosponge-TFF3 test with usual care. European Journal of Surgical Oncology 2016. 42 (11) S252-S253.

87. Haboubi, H. N., Williams, L., Manson, J., Al-Mossawi, N., Rees, B., Lawrence, R., Bodger, O., Griffiths, P., Thornton, C., and Jenkins, G. J. Blood-based biomarkers in the oesophageal cancer model - Results from the piga mutant phenotype study. Gut 2016. 65 (Supplement 1) A31-A32.

88. Preedy, R., Phillpotts, S., El, Menabawey T., and Besherdas, K. What is the value of performing an endoscopy in patients under the age of 50 with symptoms of gastro-oesophageal reflux disease. Gut 2016. 65 (Supplement 1) A67.

89. Wang, K., Duan, L., Zhang, L., Liu, Z., He, Z., and Ke, Y. The prevalence of GERD subtypes in the natural population with high esophageal cancer incidence of China. Journal of Gastroenterology and Hepatology (Australia) 2016. 31 (Supplement 3) 23.

90. Takalkar, U. V., Kulkarni, U., and Reddy, D. N. Diagnostic yield of upper gastrointestinal endoscopy with reference to Barrett's esophagus in a tertiary care center from India. Journal of Gastroenterology and Hepatology (Australia) 2016. 31 (Supplement 3) 26.

91. Yin, C., Zhang, J., and Wang, J. Prevalence and risk factors of Barrett's esophagusin Northwest China. Journal of Gastroenterology and Hepatology (Australia) 2016. 31 (Supplement 3) 24.

92. Boldbaatar, G., Tegshee, T., Khasag, O., Duger, D., Adiyasuren, B., Tomohisa, U., Subsomwong, P., Takeshi, M., Tsogt-Ochir, B., and Yoshio, Y. Validation of serum markers of precancerous condition in Mongolia, where burdens high gastric cancer. Journal of Gastroenterology and Hepatology (Australia) 2016. 31 (Supplement 3) 91.

93. Cooper, S. C., Prew, S., Podmore, L., and Trudgill, N. J. Gastro-oesophageal reflux symptoms and the development of oesophageal adenocarcinoma: Comparison with community and reflux oesophagitis controls from moses (midlands oesophageal adenocarcinoma epidemiology study). Gut 2010. 59 (Supplement 1) A114.

94. Powell, N., Russo, E. A., Hoare, J., Teare, J., Negus, R., Thomas, H., and Orchard, T. R. Longitudinal analysis of erosive and non-erosive gastro-oesophageal reflux disease. Gut 2010. 59 (Supplement 1) A25-A26.

95. NCT01288612. Comparative Effectiveness of Endoscopic Assessment of Gastroesophageal Reflux and Barretts Esophagus. Https://clinicaltrials.gov/show/nct01288612. 2011.

Other language (n=136)

1. Pech, Oliver [Gastroesophageal reflux disease and Barrett's dysplasia]. Deutsche medizinische Wochenschrift (1946) 2015; 140 (20): 1533-1536.

2. Rodriguez-DJesus, A., Gordillo, J., Uchima, H., Araujo, I., Saperas, E., Elizalde, I., and Fernandez-Esparrach, G. Prevalence and epidemiology of Barrett's esophagus in the province of Barcelona. Gastroenterologia y hepatologia 2014; 37 (7): 397-401.

3. Corvinus, F. M., Grimminger, P. P., and Lang, H. Multimodal treatment of early esophagial neoplasms. Internistische Praxis 2016; 56 (2): 253-262.

4. Kroupa, R. Barrett's esophagus, risk factors and management. Interni Medicina pro Praxi 2012; 14 (3): 104-106.

5. Marzo, M., Carrillo, R., Mascort, J. J., Alonso, P., Mearin, F., Ponce, J., Ferrandiz, J., Fernandez, M., Martinez, G., Saez, M., Bonfill, X., and Pique, J. M. Management of patients with GERD. Clinical practice guideline. 2008 update. Clinical Practice Guideline Working Group on GERD. Gastroenterologia y hepatologia 2009; 32 (6): 431-464.

6. Lubbers, H., Mahlke, R., Lankisch, P. G., and Stolte, M. Follow-up endoscopy in gastroenterology: When is it helpful? Deutsches Arzteblatt 2010; 107 (3): 30-.

7. Lukas, K., Bures, J., Drahonovsky, V., Jirasek, V., Martinek, J., Richter, P., Strosova, A., Hep, A., Mandys, V., Dite, P., and Svab, J. Gastroesophageal reflux disease updated guidelines of Czech gastroenterology society 2009. Ceska a Slovenska Gastroenterologie a Hepatologie 2009; 63 (2): 76-85.

8. Lin, S., Xu, G., and Hu, P. Chinese consensus on gastroesophageal reflux disease. Chinese Journal of Gastroenterology 2007; 12 (4): 233-239.

9. Messmann, H., Ell, C., Fein, M., Kiesslich, R., Ortner, M., Porschen, R., and Stolte, M. Consensus Conference on the DGVS on Gastroesophageal reflux. Subject group VI: Barrett's esophagus. Zeitschrift fur Gastroenterologie 2005; 43 (2): 184-190.

10. Seifert, B., Vojtiskova, J., Charvatova, E., and Koudelka, T. Management of gastroesophageal reflux disease (GERD) in primary care. Ceska a Slovenska Gastroenterologie a Hepatologie 2006; 60 (4): 157-162.

11. Sharma, P. Barrett's esophagus: From reflux disease to cancer. Therapeutic Research 2005; 26 (4): 701-713.

12. Fibbe, C., Keller, J., and Layer, P. Short practice guideline for the management of gastroesophageal reflux disease. Deutsche Medizinische Wochenschrift 2005; 130 (34-35): 1970-1973.

13. Endlicher, E., Knuchel, R., and Messmann, H. Surveillance of patients with Barrett's esophagus. Zeitschrift fur Gastroenterologie 2001; 39 (8): 593-600.

14. Zhang, Q.-Z., Yang, Q., Feng, J., Zhang, S.-X., and Wang, X.-R. Digital chrome endoscopy for diagnosis of Barrett's esophagus. World Chinese Journal of Digestology 2014; 22 (18): 2578-2582.

15. Aust, D. E. and Baretton, G. B. Barrett's esophagus: Indicators for cancer progression. Gastroenterologe 2013; 8 (6): 487-494.

16. Calvet, X. Gastroesophageal reflux disease and Barrett's esophagus: Epidemiology, diagnosis and treatment. Gastroenterologia y hepatologia 2011; 34 (SUPPL. 1): 28-34.

17. Wallner, G., Chibowski, D., Misiuna, P., Sory, A., Abramowicz, K., and Skomra, D. Comparative value of esophagoscopy and biopsy after antireflux procedure in patients operated on due to gastroesophageal reflux disease. Gastroenterologia Polska 1997; 4 (2): 125-134.

18. Kashin, S. V. and Ivanikov, I. O. [Barrett esophagus: modern diagnosis, drug therapy and reduce risk of cancer] [Russian]. Eksperimental'Naia I Klinicheskaia Gastroenterologiia 2009; (2): 90-98.

19. Tsukanov, V. V., Kasparov, E. V., Onuchina, E. V., Vasyutin, A. V., Butorin, N. N., Amelchugova, O. S., and Tonkikh, Yu L. [The frequency and clinical aspects of extraesophageal syndromes in elderly patients with gastroesophageal reflux disease]. Terapevticheskii arkhiv 2016; 88 (2): 28-32.

20. Kicinski, Przemyslaw, Mokrowiecka, Anna, Czkwianianc, Elzbieta, Kolasa-Kicinska, Marzena, Wozniakowska-Gesicka, Teresa, and Malecka-Panas, Ewa [The role of selected risk factors in Barrett's esophagus development]. Polski merkuriusz lekarski: organ Polskiego Towarzystwa Lekarskiego 2009; 26 (155): 390-394.

21. Demura, T. A., Kogan, E. A., Sklianskaia, O. A., and Mol', R. [Role of tight junction claudins in the morphogenesis of adenocarcinoma in the presence of Barrett's esophagus]. Arkhiv patologii 2008; 70 (5): 20-24.

22. Martinez de Haro, Luisa F., Munitiz, Vicente, Ortiz, Angeles, Ruiz de Angulo, David, Navarro, M. Dolores, and Parrilla, Pascual [Outpatient monitoring of oesophageal pH with a catheter-free pH-meter (Bravo System). A Study of tolerance, safety and efficacy]. Cirugia espanola 2008; 84 (4): 201-209.

23. Kim, Byung Chang, Yoon, Young Hoon, Jyung, Hyun Soo, Chung, Jae Bock, Chon, Chae Yun, Lee, Sang In, and Lee, Yong Chan [Clinical characteristics of gastroesophageal reflux diseases and association with Helicobacter pylori infection]. The Korean journal of gastroenterology = Taehan Sohwagi Hakhoe chi 2006; 47 (5): 363-369.

24. Carmona-Sanchez, Ramon and Navarro-Cano, Gregorio [Prevalence of Helicobacter pylori infection in patients with reflux esophagitis. A case-control study]. Revista de gastroenterologia de Mexico 2003; 68 (1): 23-28.

25. Lagergren, J. [Increased incidence of adenocarcinoma of the esophagus and cardia. Reflux and obesity are strong and independent risk factors according to the SECC study]. Lakartidningen 2000; 97 (16): 1950-1953.

26. Fahrlander, H. [Pathophysiology, clinical aspects and therapy of gastro-esophageal reflux disease]. Schweizerische medizinische Wochenschrift 1981; 111 (16): 550-555.

27. Wienbeck, M. [Benign diseases of the esophagus. An internist's view]. Zeitschrift fur Gastroenterologie 1976; 14 Suppl: 138-147.

28. Inda, Vargas, V, Torices, Escalante E., Dominguez, Camacho L., and Botello, Hernandez Z. Endoscopic and histopathological diagnosis of Barrett's esophagus compared, for the regional hospital 1.degree de Octubre (Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado) from may 2011 to may 2012. Endoscopia 2014; 26 (3): 83-86.

29. Yin, X., Xu, Y.-L., Zhou, J., and Chang, Y. Relationship among symptoms, endoscopic classification and pathological characteristics of Barrett esophagus. Journal of Shanghai Jiaotong University (Medical Science) 2013; 33 (1): 50-55.

30. Helman, L., Biccas, B. N., Lemme, E. M. O., Novais, P., and Fittipaldi, V. Esophageal manometry findings and degree of acid exposure in short and long Barrett's esophagus. Arquivos de Gastroenterologia 2012; 49 (1): 64-68.

31. He, S., Chen, Y., Xu, J., Tang, Y., Yao, Y., Sun, Y., and Ding, X. Analysis of esophageal motility in patients with nonerosive reflux disease. Chinese Journal of Gastroenterology 2011; 16 (8): 487-489.

32. Shi, X., Hao, H., Wang, L., Zhang, Y., and Ma, C. Study on reflux esophagitis, Barrett's esophagus and esophageal adenocarcinoma. Chinese Journal of Gastroenterology 2010; 15 (4): 233-236.

33. Kunsch, S., Neesse, A., Linhart, T., Steinkamp, M., Fensterer, H., Adler, G., Gress, T. M., and Ellenrieder, V. Impact of pantoprazole on duodeno-gastro-esophageal reflux (DGER). Zeitschrift fur Gastroenterologie 2009; 47 (3): 277-282.

34. Zhang, L.-Y., Lan, Y., and Wang, Q. Etiological differences for different types of gastroesophageal reflux disease. World Chinese Journal of Digestology 2009; 17 (8): 829-833.

35. Kunsch, S., Neesse, A., Huth, J., Steinkamp, M., Klaus, J., Adler, G., Gress, T. M., and Ellenrieder, V. Increased duodeno-gastro-esophageal reflux (DGER) in symptomatic GERD patients with a history of cholecystectomy. Zeitschrift fur Gastroenterologie 2009; 47 (8): 744-748.

36. De Freitas, M. C., Moretzsohn, L. D., and Coelho, L. G. V. Prevalence of Barrett's esophagus in individuals without typical symptoms of gastroesophageal reflux disease. Arquivos de Gastroenterologia 2008; 45 (1): 46-49.

37. Ringhofer, C., Lenglinger, J., Izay, B., Kolarik, K., Zacherl, J., Eisler, M., Wrba, F., Chandrasoma, P. T., Cosentini, E. P., Prager, G., and Riegler, M. Histopathology of the endoscopic esophagogastric junction in patients with gastroesophageal reflux disease. Wiener Klinische Wochenschrift 2008; 120 (11-12): 350-359.

38. Kula, Z. and Welshof, A. The prevalence of Barrett's oesophagus in own material of 6326 endoscopies. Gastroenterologia Polska 2007; 14 (2): 85-89.

39. Lenglinger, J., Ringhofer, C., Eisler, M., Sedivy, R., Wrba, F., Zacherl, J., Cosentini, E. P., Prager, G., Haefner, M., and Riegler, M. Histopathology of columnar-lined esophagus in patients with gastroesophageal reflux disease. Wiener Klinische Wochenschrift 2007; 119 (13-14): 405-411.

40. Svoboda, P., Ehrmann, J., Klvana, P., Machytka, E., Rydlo, M., and Hrabovsky, V. Endoscopic findings in upper gastrointestinal tract in patients with liver cirrhosis. Vnitrni Lekarstvi 2007; 53 (9): 968-971.

41. Pulanic, R. Gastroesophageal reflux disease. Medicus 2006; 15 (1): 25-37.

42. Hartmann, D., Kudis, V., Jakobs, R., Riemann, J. F., and Schilling, D. Course of erosive gastroesophageal reflux disease (ERD) - A prospective examination under therapeutic daily life conditions with a mean follow-up of 6.5 years. Zeitschrift fur Gastroenterologie 2006; 44 (10): 1039-1042.

43. Bajbouj, M., Reichenberger, J., Neu, B., Prinz, C., Schmid, R. M., Rosch, T., and Meining, A. A prospective multicenter clinical and endoscopic follow-up study of patients with gastroesophageal reflux disease. Zeitschrift fur Gastroenterologie 2005; 43 (12): 1303-1307.

44. Chen, X., Ouyang, Q., Zhang, W.-Y., Li, X.-S., and Liang, H.-L. The clinical, pathological features and expression of Ki-67 and COX-2 in severe reflux esophagitis and Barrett's esophagus. Journal of Sichuan University (Medical Science Edition) 2005; 36 (2): 207-209.

45. Huppe, D., Felten, G., and Gillessen, A. Gastroesophageal reflux disease and esophageal carcinoma. Is there an increase of Barrett's carcinomas? Verdauungskrankheiten 2002; 20 (3): 91-95.

46. D'Addazio, G., Conio, M., Aste, H., Cestari, R., Ravelli, P., and Missale, G. Gastroesophageal reflux and Barrett's esophagus: Correlations among endoscopy, histological and clinical evidence. Giornale Italiano di Endoscopia Digestiva 2000; 23 (1): 33-40.

47. De, Salvo L., Arezzo, A., Percivale, A., and Gianiorio, F. Personal experience in Barrett's esophagus treatment. Giornale Italiano di Endoscopia Digestiva 1997; 20 (2): 71-75.

48. Santo, Marco Aurelio, Quintanilha, Sylvia Regina, Mietti, Cesar Augusto, Kawamoto, Flavio Masato, Marson, Allan Garms, and de Cleva, Roberto. Endoscopic Changes Related to Gastroesophageal Reflux Disease: Comparative Study Among Bariatric Surgery Patients. Arquivos brasileiros de cirurgia digestiva: Brazilian archives of digestive surgery 2015; 28 Suppl 1: 36-38.

49. Rodriguez-D'Jesus, Antonio, Gordillo, Jordi, Uchima, Hugo, Araujo, Isis, Saperas, Esteban, Elizalde, Ignasi, and Fernandez-Esparrach, Gloria [Prevalence and epidemiology of Barrett's esophagus in the province of Barcelona]. Gastroenterologia y hepatologia 2014; 37 (7): 397-401.

50. Zsolt, Simonka, Paszt, Attila, Geczi, Tibor, Abraham, Szabolcs, Toth, Illes, Horvath, Zoltan, Pieler, Jozsef, Tajti, Janos, Varga, Akos, Tiszlavicz, Laszlo, Nemeth, Istvan, Izbeki, Ferenc, Rosztoczy, Andras, Wittmann, Tibor, and Lazar, Gyorgy [Comparison of surgical patients with gastroesophageal reflux disease and Barrett's esophagus]. Magyar sebeszet 2014; 67 (5): 287-296.

51. Riegler, M., Asari, R., Cosentini, E. P., Wrba, F., and Schoppmann, S. F. [Critical assessment of a new endoscopic anatomic concept for the so-called cardia in the sense of the notions of Parmenides and Martin Heidegger]. Zeitschrift fur Gastroenterologie 2014; 52 (4): 367-373.

52. Kirova, M. V. [Confocal laser endo-microscopy and confirming endoscopic procedures in the diagnosis of Barrett's esophagus]. Eksperimental'naia i klinicheskaia gastroenterologiia = Experimental & clinical gastroenterology 2012; (4): 98-103.

53. Choi, Cheul Young, Suh, Seungchul, Park, Jae Serk, Lee, Hyun Jeong, Lee, Jong Sup, Choi, Hyo Sun, Park, Hyun Sung, and Hong, Seung Goun [The prevalence of Barrett's esophagus and the comparison of Barrett's esophagus with cardiac intestinal metaplasia in the health screening at a secondary care hospital]. The Korean journal of gastroenterology 2012; 60 (4): 219-223.

54. de Faria, Plinio Conte Jr, Andreollo, Nelson Adami, Trevisan, Miriam Aparecida da Silva, and Lopes, Luiz Roberto [Relationship of the sialomucins (Tn and Stn antigens) with adenocarcinoma in Barrett's esophagus]. Revista da Associacao Medica Brasileira (1992) 2007; 53 (4): 360-364.

55. Lopes, L. R., Brandalise, N. A., Andreollo, N. A., and Leonardi, L. S. [Videolaparoscopic surgical treatment of gastroesophageal reflux disease: modified Nissen technique - clinical and functional results]. Revista da Associacao Medica Brasileira (1992) 2001; 47 (2): 141-148.

56. Kroshchuk, V. V., Miasoiedov, S. D., Andreieshchev, S. A., Buryi, O. M., Fediuchek, A. S., Umanets', M. S., Petunin, Iu I., and Oleksiuk, O. V. [Remote results of the treatment of patients for Barrett's esophagus]. Klinichna khirurhiia / Ministerstvo okhorony zdorov'ia Ukrainy, Naukove tovarystvo khirurhiv Ukrainy 2010; (5): 5-10.

57. Stiefelhagen, Peter [Barrett esophagus. Overkill for a killer?] MMW Fortschritte der Medizin 2008; 150 (45): 20.

58. Darvin, V. V. and Funygin, D. V. [Endoscopic chromoscopy in diagnosing and treatment of complicated gastroesophageal reflux disease]. Vestnik khirurgii imeni I.I.Grekova 2008; 167 (4): 30-31.

59. Hoara, P., Birla, R., Gindea, C., Constantin, A., Panaitescu, G., Iordan, N., and Constantinoiu, S. [The role of esophageal manometry in the management of the patients with gastro-esophageal reflux disease and Barrett's esophagus]. Chirurgia (Bucharest, Romania: 1990) 2008; 103 (4): 407-412.

60. Yoo, Seung Suk, Lee, Won Hyun, Ha, Jong, Choi, Sun Pil, Kim, Hyun Jin, Kim, Tae Hyo, and Lee, Ok Jae [The prevalence of esophageal disorders in the subjects examined for health screening]. The Korean journal of gastroenterology 2007; 50 (5): 306-312.

61. Blaszak, Antoni, Wojtun, Stanislaw, Gil, Jerzy, and Wojtkowiak, Marek [The analysis of hiatal hernia occurrence in connection with GERD]. Polski merkuriusz lekarski: organ Polskiego Towarzystwa Lekarskiego 2007; 22 (131): 357-361.

62. Lee, Sang Ho, Ryu, Chang Beom, Jang, Jae Young, and Cho, Joo Young [Magnifying endoscopy in upper gastrointestinal tract]. The Korean journal of gastroenterology 2006; 48 (3): 145-155.

63. Grater, H. [Gastroesophageal reflux disease]. Praxis 2005; 94 (48): 1899-1906.

64. Hanai, Masaaki, Kusano, Motoyasu, Kawamura, Osamu, Shimoyama, Yasuyuki, and Maeda, Masaki [Epidemiology of Barrett's esophagus--comparison of Japan and the West]. Nihon rinsho. Japanese journal of clinical medicine 2005; 63 (8): 1333-1339.

65. Holscher, A. H., Bollschweiler, E., Gutschow, Ch, and Malfertheiner, P. [Correct diagnosis for indication in gastroesophageal reflux disease]. Der Chirurg; Zeitschrift fur alle Gebiete der operativen Medizen 2005; 76 (4): 345-352.

66. Leers, J., Bollschweiler, E., and Holscher, A. H. [Symptoms in patients with adenocarcinoma of the esophagus]. Zeitschrift fur Gastroenterologie 2005; 43 (3): 275-280.

67. Neuhaus, H. [Barrett's esophagus]. Praxis 2004; 93 (47): 1951-1957.

68. Fiorentino, Eugenio, Cabibi, Daniela, Barbiera, Filippo, Pantuso, Gianni, Buscemi, Giuseppe, Latteri, Federica, Mastrosimone, Achille, and Valenti, Antonio [Hiatal hernia, gastro-oesophageal reflux and oesophagitis: videofluorographic, endoscopic and histopathological correlation]. Chirurgia italiana 2004; 56 (4): 483-488.

69. Csendes, Attila, Carcamo, Carlos, and Henriquez, Ana [Nutcracker esophagus. Analysis of 80 patients]. Revista Medica de Chile 2004; 132 (2): 160-164.

70. Fuessl, Hermann Sebastian [Heartburn--a symptom or an illness?] Medizinische Klinik (Munich, Germany : 1983) 2004; 99 (5): 237-250.

71. Endzinas, Z., Mickevicius, A., and Kiudelis, M. [The influence of Barrett's esophagus on the clinical signs and postoperative results of GERD]. Zentralblatt fur Chirurgie 2004; 129 (2): 99-103.

72. Caum, Leiber C., Bizinelli, Sergio L., Pisani, Julio Cesar, Amarantes, Heda Maria Barska dos Santos, Ioshii, Sergio O., and Carmes, Eliane R. [Specialized intestinal metaplasia of the distal esophagus in gastroesophageal reflux disease: prevalence and clinico-demographic features]. Arquivos de Gastroenterologia 2003; 40 (4): 220-226.

73. Zakharash, M. P., Ioffe, A. Iu, Zavernyi, D. G., Bekmuradov, A. R., Vasil'ev, A. V., and Kalashnikov, A. A. [Gastroesophageal reflux disease as a surgical problem]. Likars'ka sprava / Ministerstvo okhorony zdorov'ia Ukrainy 2003; (8): 90-94.

74. Stiefelhagen, Peter [Gastroesophageal reflux. Endoscopic control is mostly unnecessary]. MMW Fortschritte der Medizin 2003; 145 (50): 16.

75. Labenz, J. [Erosions, strictures, Barrett's esophagus? Investigate reflux thoroughly]. MMW Fortschritte der Medizin 2003; 145 (42): 69-70.

76. Fuessl, H. S. [Heartburn without esophagitis. Symptoms more important than the finding?]. MMW Fortschritte der Medizin 2003; 145 (39): 4-6.

77. Tagle Arrospide, M., Aguinaga Meza, M., and Vasquez Rubio, G. [Hiatal hernia as a risk factor for erosive esphagitis: experience and endoscopic findings of a Peruvian population with heartburn]. Revista de gastroenterologia del Peru: organo oficial de la Sociedad de Gastroenterologia del Peru 2003; 23 (1): 36-40.

78. Zaninotto, G., Costantini, M., Molena, D., Rizzetto, C., Ekser, B., and Ancona, E. [Barrett's esophagus. Prevalence, risk of adenocarcinoma, role of endoscopic surveillance]. Minerva chirurgica 2002; 57 (6): 819-836.

79. Allescher, H. D. [Diagnosis of gastroesophageal reflux]. Praxis 2002; 91 (18): 779-790.

80. Hollenz, M., Stolte, M., and Labenz, J. [Prevalence of gastro-oesophageal reflux disease in general practice]. Deutsche medizinische Wochenschrift (1946) 2002; 127 (19): 1007-1012.

81. von Schrenck, T. [Diagnosis of gastroesophageal reflux and Barrett esophagus]. Zentralblatt fur Chirurgie 2000; 125 (5): 414-423.

82. Hoshihara, Y. [Complications of gastroesophageal reflux disease. 2. Endoscopic diagnosis of Barrett esophagus--can Barrett esophagus be diagnosed by endoscopic observation alone?]. Nihon Naika Gakkai zasshi.The Journal of the Japanese Society of Internal Medicine 2000; 89 (1): 85-90.

83. Jaspersen, D., Diehl, K. L., Geyer, P., Martens, E., and Arps, H. [Benign proximal esophageal stenosis--mostly a complication of gastroesophageal reflux disease]. Deutsche medizinische Wochenschrift (1946) 1999; 124 (8): 205-208.

84. Schmidt, C. and Baumeister, B. [Gastroesophageal reflux disease]. Deutsche medizinische Wochenschrift (1946) 1999; 124 (3): 56-61.

85. Csendes, A., Smok, G., Christensen, H., Rojas, J., Burdiles, P., and Korn, O. [Prevalence of cardial or fundic mucosa and Helicobacter pylori in the squamous-columnar mucosa in patients with chronic patological gastroesophageal reflux without intestinal metaplasia comparated with controls]. Revista Medica de Chile 1999; 127 (12): 1439-1446.

86. Csendes, A., Burdiles, P., Smok, G., Rojas, J., Flores, N., Domic, S., Quiroz, J., and Henriquez, A. [Clinical and endoscopic findings and magnitude of gastric and duodenal reflux in patients with cardial intestinal metaplasia, short Barrett esophagus, compared with controls]. Revista Medica de Chile 1999; 127 (11): 1321-1328.

87. Csendes, A., Smok, G., Sagastume, H., and Rojas, J. [Biopsy and endoscopic prospective study of the prevalence of intestinal metaplasia in the gastroesophageal junction in controls and in patients with gastroesophageal reflux]. Revista Medica de Chile 1998; 126 (2): 155-161.

88. Wallner, G., Misiuna, P., Chibowski, D., Polkowski, W., Abramowicz, K., and Sory, A. [Postoperative evaluation of esophageal mucosal change dynamics in patients with reflux diseases]. Wiadomosci lekarskie (Warsaw, Poland : 1960) 1997; 50 Suppl 1 Pt 1: 273-281.

89. Csendes, A., Smok, G., Alvarez, F., Braghetto, I., and Blanco, C. [Patients with pathologic gastroesophageal reflux without erosive esophagitis: correlation of the endoscopic and histological aspect of the esophagus]. Revista Medica de Chile 1994; 122 (2): 159-163.

90. Pinero, R., Salomon, A., Gonzalez, R., Olavarria, R., and Poleo, J. R. [Barrett esophagus. Frequency, endoscopic, histologic, and clinical characteristics]. G.E.N 1990; 44 (1): 46-48.

91. Braghetto, I., Csendes, A., Diaz, J. C., Maluenda, F., and Henriquez, A. [Clinical and laboratory correlation of severe esophagitis compared to mild or moderate esophagitis]. Acta gastroenterologica Latinoamericana 1989; 19 (2): 75-82.

92. de Rezende, J. M., Rosa, H., Vaz, M. da, Andrade-Sa, N., Porto, J. D., Neves Neto, J., and Ximenes, J. A. [Endoscopy in megaesophagus. Prospective study of 600 cases]. Arquivos de Gastroenterologia 1985; 22 (2): 53-62.

93. Siewert, R., Koch, A., Stuhler, T., and Jennewein, H. M. [Cardia function and gastroesophageal reflux after distal gastric resection]. Zeitschrift fur Gastroenterologie 1974; 12 (8): 583-590.

94. Calvet, X. Oesophageal diseases: Gastroesophageal reflux disease, Barrett's disease, Achalasia and eosinophilic oesophagitis. Gastroenterologia y hepatologia 2015; 38: 49-55.

95. Karaca, A. S., Capar, M., and Ali, R. Laparoscopic nissen fundoplication, single center experience. Journal of Clinical and Analytical Medicine 2015; 6 (2): 205-207.

96. Oral. Journal of Gastroenterology and Hepatology (Australia) 2015; 30: 1-27.

97. Sharifi, A., Dolatshahi, S., Rezaeifar, A., and Ramim, T. Sensitivity and specificity of endoscopy in diagnosis for Barrett's esophagus. Tehran University Medical Journal 2014; 72 (6): 396-403.

98. Calvet, X. and Villoria, A. Esophageal diseases: GERD, barrett, achalasia and eosinophilic esophagitis. Gastroenterologia y hepatologia 2014; 37 (S3): 53-61.

99. Kroupa, R. Premalignant conditions of the esophagus. Klinicka Onkologie 2013; 26 (SUPPL): S17-S21.

100. Weiss, W. Treatment of gastroesophageal reflux disease (GERD) in Austria: LIFE observational program - Commentary. Journal fur Gastroenterologische und Hepatologische Erkrankungen 2009; 7 (4): 23-24.

101. Yang, H.-Y., Ge, Z.-Z., Dai, J., Li, X.-B., and Gao, Y.-J. Positive rate comparison between immunological and chemical methods of fecal occult blood test in upper digestive tract bleeding. World Chinese Journal of Digestology 2008; 16 (9): 946-950.

102. Gomez, Senent S., Raposo, C. G., and Cabral, J. M. S. Esophageal cancer. Medicina Clinica 2008; 130 (11): 423-428.

103. Kment, M. Barrett's esophagus - An ideal study model of carcinogenesis? Ceska a Slovenska Gastroenterologie a Hepatologie 2007; 61 (1): 47-54.

104. Belleri, G., Comini, L., Ramponi, G. P., Tabaglio, E., Archetti, G., Astori, P., Baldini, S., Baronchelli, M., Beltrami, G., Benini, F., Bertolotti, B., Bettoncelli, G., Bonardelli, E., Bovini, L., Chiappi, A., Ferrari, A., Guarnera, L., Mauro, N., Multineddu, M., Mutti, E., Palini, S., Palumbo, M., Pascarella, A., Pellizzari, R., Regazzoli, T., Sidari, G., Terranova, F. R., Zadra, A., and Zavanella, D. Peer review about gastro-esophageal reflux disease in primary care: Epidemiology, diagnostic and therapeutic management. Recenti Progressi in Medicina 2006; 97 (2): 74-78.

105. Hansmann, J. and Grenacher, L. Radiological imaging of the upper gastrointestinal tract. Part 1. The esophagus. Radiologe 2006; 46 (12): 1077-1088.

106. Trillo, Sallan E., Lopez Fananas, M. S., Villaverde Royo, M. V., and Isanta, Pomar C. Study of the gastroscopies requested at a health centre. Atencion Primaria 2005; 35 (7): 375-377.

107. Al-Tashi, M., Bures, J., Rejchrt, S., Kopacova, M., Siroky, M., Papik, Z., Repak, R., Tycova, V., Nozicka, J., Dedic, K., Langr, F., Bukac, J., Douda, T., Kupkova, B., Fejfar, T., Tacheci, I., Slezak, L., and Hulek, P. Barrett's esophagus. The occurrence and complications during 1994-2003. Ceska a Slovenska Gastroenterologie a Hepatologie 2005; 59 (2): 62-65.

108. Martinek, J., Hucl, T., and Spicak, J. The Prevalence of Helicobacter pylori Infection in Some Disease of the Esophagus, Stomach and Duodenum - A Retrospective Analysis. Ceska a Slovenska Gastroenterologie a Hepatologie 2003; 57 (6): 228-232.

109. Endlicher, E., Timmer, A., and Messmann, H. Does surveillance of patients with Barrett's esophagus improve survival? Zeitschrift fur Gastroenterologie 2003; 41 (7): 675-678.

110. Jaspersen, D., Diehl, K.-L., Geyer, P., Martens, E., and Arps, H. Benign stenosis of the proximal oesophagus, most often a complication of gastro-oesophageal reflux. Deutsche Medizinische Wochenschrift 1999; 124 (8): 205-208.

111. Rosch, W. Gastroesophageal reflux disease and Barrett's esophagus surveillance and therapy. Praxis 1994; 83 (25-26): 783-787.

112. Rosch, W. Esophagoscopy: indications. Fortschritte der Medizin 1974; 92 (5): 193-197.

113. Caroline, D. F. and Laufer, I. Double contrast examination of the esophagus. Revista Interamericana de Radiologia 1982; 7 (4): 119-125.

114. Lenglinger, Johannes, See, Stephanie Fischer, Beller, Lukas, Cosentini, Enrico P., Asari, Reza, Wrba, Fritz, Riegler, Martin, and Schoppmann, Sebastian F. Review on novel concepts of columnar lined esophagus. Wiener klinische Wochenschrift 2013; 125 (19-20): 577-590.

115. Bauerfeind, P., Mullhaupt, B., Schofl, R., Rosch, T., Schwizer, W., Wirth, H. P., Kullak-Ublick, G. A., and Fried, M. [Highlights in gastroenterology 2006]. Praxis 2006; 95 (46): 1793-1804.

116. Schepp, W., Allescher, H. D., Frieling, T., Katschinski, M., Malfertheiner, P., Pehl, C., Peitz, U., Rosch, W., and Hotz, J. [Topic complex I: Definitions, epidemiology and natural course]. Zeitschrift fur Gastroenterologie 2005; 43 (2): 165-168.

117. Holscher, A. H. and Blum, A. L. [Surgical and medical therapy for gastroesophageal reflux disease. Consensus of pro/contra clinical debate]. Zeitschrift fur Gastroenterologie 2003; 41 (8): 729-732.

118. Wang, Y.-K., Hu, H.-M., Hsu, W.-H., Wu, D.-C., and Kuo, C.-H. From gastroesophageal reflux disease to Barrett's esophagus. Journal of Internal Medicine of Taiwan 2012; 23 (4): 254-266.

119. Liu, F.-X., Wang, W.-H., and Shuai, X.-W. Prevalence of helicobacter pylori in patients with Barrett's esophagus: A meta-analysis. Chinese Journal of Evidence-Based Medicine 2008; 8 (12): 1086-1093.

120. Eickhoff, A. and Riemann, J. F. Clinical advances in gastroenterology. Deutsche Medizinische Wochenschrift 2006; 131 (25-26): 1452-1455.

121. Lutz, L. and Werner, M. [Barrett's esophagus and carcinoma: Recommendations of the S2k guideline 2014 and the S3 guideline 2015]. Der Pathologe 2016; 37 (2): 193-200.

122. Kinoshita, Yoshikazu, Ishimura, Norihisa, and Ishihara, Shunji [Revision process and present task: evidence-based clinical practice guidelines for gastroesophageal reflux disease]. Nihon rinsho.Japanese journal of clinical medicine 2015; 73 (7): 1190-1194.

123. Labenz, J. Barrett's esophagus. Internist 2016; 57 (11): 1079-1092.

124. Hongo, M. GERD Guideline Workshop Report 2002. Therapeutic Research 2003; 24 (5): 830-835.

125. Chen, Y., Liu, J., and Chen, S. Effect of proton pump inhibitor on gastric mucosal histological changes in patients with gastroesophageal reflux disease. Chinese Journal of Gastroenterology 2015; 20 (12): 717-721.

126. Vargas Cardenas, Gloria [Barrett's esophagus: prevalence and risk factors in the National Hospital Arzobispo Loayza in Lima-Peru]. Revista de gastroenterologia del Peru: organo oficial de la Sociedad de Gastroenterologia del Peru 2010; 30 (4): 284-304.

127. Rehfeld, J. F. and Gotze, J. P. Barrett's metaplasia and esophageal cancer. Ugeskrift for Laeger 2003; 165 (24): 2498.

128. Halm, U., Schoppmeyer, K., and Mossner, J. Pathogenesis of Barrett's esophagus and Barrett's carcinoma. Chirurgische Gastroenterologie Interdisziplinar 2001; 17 (1): 51-56.

129. Estevez-Fernandez, Sergio, Sanchez-Santos, Raquel, Marino-Padin, Esther, Gonzalez-Fernandez, Sonia, and Turnes-Vazquez, Juan Esophagogastric pathology in morbid obese patient: Preoperative diagnosis, influence in the selection of surgical technique. Revista espanola de enfermedades digestivas: organo oficial de la Sociedad Espanola de Patologia Digestiva 2015; 107 (7): 408-412.

130. Nassif, Paulo Afonso Nunes, Pedri, Lucas Eduardo, Martins, Priscila Reis, Foauni, Marcelo Morikuni, Justen, Marcel da Silva, Varaschim, Michelle, Bopp, Denise Serpa, and Malafaia, Osvaldo Incidence and predisponent factors for the migration of the fundoplication by Nissen-Rossetti technique in the surgical treatment of GERD. Arquivos brasileiros de cirurgia digestiva : Brazilian archives of digestive surgery 2012; 25 (2): 75-80.

131. Herbella, F. A., Del Grande, J. C., Lourenco, L. G., Mansur, N. S., and Haddad, C. M. [Late results of Heller operation and fundoplication for the treatment of the megaesophagus: analysis of 83 cases]. Revista da Associacao Medica Brasileira (1992) 1999; 45 (4): 317-322.

132. Parini, U., Fosson, A., Murix, E. L., and Liotta, G. [Laparoscopic treatment of gastroesophageal reflux]. Chirurgia italiana 1999; 51 (2): 121-126.

133. Rotterdam, H. Pathology of the gastric cardia. Verhandlungen der Deutschen Gesellschaft fur Pathologie 1999; 83: 37-42.

134. Spechler, S. J. [Pathogenesis and epidemiology of Barrett esophagus]. Der Chirurg; Zeitschrift fur alle Gebiete der operativen Medizen 1994; 65 (2): 84-87.

135. Gomez, Senent S., Raposo, C. G., and Cabral, J. M. S. Esophageal cancer. Medicina clinica 2008; 130 (11): 423-428.

136. Morales-Fuentes, G. A., Zarate-Osorno, A., Quinonez-Urrego, E. E., Antonio-Manrique, M., Martinez-Garcia, C. L., Figueroa-Barojas, P., Zamorano-Orozco, Y., Leal-Osuna, S. E., Martinez-Camacho, C., Mejia-Cuan, L. A., Rivera-Nava, C. A., Sanchez-Chavez, X., and Ramirez-Ramirez, M. A. [p53 expression in the gastric mucosa of patients infected with Helicobacter pylori]. Revista de gastroenterologia de Mexico 2013; 78 (1): 12-20.

Study design: Systematic review/Meta-analysis (n=13)

1. Song, Huan, Zhu, Jianwei, Lu, DongHao, and Cochrane Database of Systematic Reviews Long-term proton pump inhibitor (PPI) use and the development of gastric pre-malignant lesions. 2014; (12).

2. Curvers, W. L., Broek, F. J., Reitsma, J. B., Dekker, E., and Bergman, J. J. Systematic review of narrow-band imaging for the detection and differentiation of abnormalities in the esophagus and stomach (with video) (DARE structured abstract). Gastrointestinal endoscopy 2009; 69: 307-317.

3. Zagari, Rocco Maurizio, Eusebi, Leonardo Henry, Rabitti, Stefano, Cristoferi, Laura, Vestito, Amanda, Pagano, Nico, and Bazzoli, Franco Prevalence of upper gastrointestinal endoscopic findings in the community: A systematic review of studies in unselected samples of subjects. Journal of gastroenterology and hepatology 2016; 31 (9): 1527-1538.

4. Mallick, R., Patnaik, S. K., Wani, S., and Bansal, A. A Systematic Review of Esophageal MicroRNA Markers for Diagnosis and Monitoring of Barrett's Esophagus. Digestive diseases and sciences 2016; 61 (4): 1039-1050.

5. Astin, M. P., Martins, T., Welton, N., Neal, R. D., Rose, P. W., and Hamilton, W. Diagnostic value of symptoms of oesophagogastric cancers in primary care: A systematic review and meta-analysis. British Journal of General Practice 2015; 65 (639): e677-e691.

6. Thosani N, Dayyeh BK, Sharma P, Aslanian HR, Enestvedt BK, Komanduri S, Manfredi M, Navaneethan U, Maple JT, Pannala R, Parsi MA. ASGE Technology Committee systematic review and meta-analysis assessing the ASGE Preservation and Incorporation of Valuable Endoscopic Innovations thresholds for adopting real-time imaging–assisted endoscopic targeted biopsy during endoscopic surveillance of Barrett's esophagus. Gastrointestinal endoscopy. 2016 Apr 30; 83 (4):684-98.

7. Ip S, Chung M, Moorthy D, Yu WW, Lee J, Chan JA, Bonis PA, Lau J. Comparative effectiveness of management strategies for gastroesophageal reflux disease: update.

8. Peeters M, Lerut T, Vlayen J, Mambourg F, Ectors N, Deprez P, et al. Guideline pour la prise en charge du cancer oesophagien et gastrique : éléments scientifiques à destination du Collège d'Oncologie. Bruxelles: Centre fédéral d'expertise des soins de santé (KCE); 2008. KCE Reports 75B (D/2008/10.273/17)

9. National Institute for Health and Care Excellence. Dyspepsia and gastrooesophageal reflux disease: investigation and management of dyspepsia, symptoms suggestive of gastro-oesophageal reflux disease, or both. London: NICE, September 2014.

10. Yang S, Wu S, Huang Y, Shao Y, Chen XY, Xian L, Zheng J, Wen Y, Chen X, Li H, Yang C. Screening for oesophageal cancer. Cochrane Database of Systematic Reviews 2012, Issue 12. Art. No.: CD007883. DOI: 10.1002/14651858.CD007883.pub2

11. Swedish Council on Health Technology Assessment. Dyspepsia and Gastro-oesophageal Reflux: A Systematic Review [Internet]. SBU Systematic Review Summaries. 2007.

12. Iqbal, Umair, Siddique, Osama, Ovalle, Anais, Anwar, Hafsa, and Moss, Steven F. Safety and efficacy of a minimally invasive cell sampling device ('Cytosponge') in the diagnosis of esophageal pathology: a systematic review. European journal of gastroenterology & hepatology 2018. 30 (11) 1261-1269.

13. Song, H., Zhu, J., and Lu, D. Long-term proton pump inhibitor (PPI) use and the development of gastric pre-malignant lesions. Cochrane Database of Systematic Reviews 2014. 2014 (12) CD010623.

Study design: Protocol (n=30)

1. Kramer, J. R., Arney, J., Chen, J., Richardson, P., Duan, Z., Street, Jr, Hinojosa-Lindsey, M., Naik, A. D., and El-Serag, H. B. Patient-centered, comparative effectiveness of esophageal cancer screening: protocol for a comparative effectiveness research study to inform guidelines for evidence-based approach to screening and surveillance endoscopy. BMC health services research 2012; 12: 288.
2. Current Controlled Trials [Internet]. London: BioMed Central. [date unknown]. ISRCTN13256080, Barretts Oesophagus Screening Trial in a case-control study; 2011 June 16 [cited 2007 Feb 27]; Available from: http://www.controlledtrials.com/ISRCTN13256080
3. ISRCTN registry. Barrett's oesophagus screening trial in a case control study. ISRCTN12730505 DOI 10.1186/ISRCTN12730505. Available from: http://www.isrctn.com/ISRCTN12730505
4. ISRCTN registry. Cancer of the oesophagus or gastricus: new assessment of the technology of endosonography. ISRCTN01444215 DOI 10.1186/ISRCTN01444215
5. ISRCTN registry. Randomised controlled trial of surveillance and no surveillance for patients with Barrett's oesophagus. SRCTN54190466 DOI 10.1186/ISRCTN54190466. Available from: http://www.isrctn.com/ISRCTN54190466
6. ISRCTN registry. Endoscopic Tri-Modal Imaging for the detection of early neoplasia in patients with Barrett's oesophagus in tertiary referral Centres: a randomised cross-over multicentre study. ISRCTN68328077 DOI 10.1186/ISRCTN68328077. Available from: http://www.isrctn.com/ISRCTN68328077?q=&filters=recruitmentCountry:Netherlands,conditionCategory:Cancer&sort=&offset=67&totalResults=205&page=1&pageSize=100&searchType=basic-search
7. Endoscopic TriModal Imaging versus standard video endoscopy for the detection of early neoplasia in patients with lowgrade dysplasia in a Barrett's oesophagus a multicentre randomised crossover controlled study. ISRCTN91816824 DOI 10.1186/ISRCTN91816824. Available from: http://www.isrctn.com/ISRCTN91816824?q=&filters=conditionCategory:Digestive%20System,trialStatus:Completed,recruitmentCountry:Netherlands&sort=&offset=28&totalResults=67&page=1&pageSize=50&searchType=basic-search
8. Clinical Trials Registry-India.Possible beneficial role of CT scan combined with virtual endoscopy in cases of esophageal tumor. CTRI/2013/10/004043 [Registered on: 03/10/2013]. Available from: http://www.ctri.nic.in/Clinicaltrials/pdf_generate.php?trialid=7448&EncHid=&modid=&compid=%27,%277448det%27
9. Clinical Trials. Evaluation of Efficiency of Esophageal Capsule Endoscopy in the Screening of Patients with Gastroesophageal Reflux Disease or Dyspepsia as Compared to Upper Endoscopy. NCT00217347. Available from: https://clinicaltrials.gov/ct2/show/NCT00217347
10. Clinical Trials. Endoscopic Tri-Modal Imagine to Distinguish Functional Dyspepsia From Reflux Disease. NCT02685150. Available from: https://clinicaltrials.gov/ct2/show/NCT02685150
11. Clinical Trials. Endoscopic Findings in Patients with Typical Gastroesophageal Reflux Disease (GERD) Symptoms. NCT00730106. Available from https://clinicaltrials.gov/ct2/show/NCT00730106
12. Clinical Trials. Barrett's Esophagus & Gastroesophageal Reflux Disease. NCT00513331. Available from: https://clinicaltrials.gov/ct2/show/NCT00513331
13. Clinical Trials .Demographics and Findings of Upper Endoscopy Patients. NCT00576992. Available from https://clinicaltrials.gov/ct2/show/NCT00576992
14. Analysis of Biopsies From the Upper Gastrointestinal Tract (histoGERD). NCT01576289. Available from https://clinicaltrials.gov/ct2/show/NCT01576289
15. Clinical Trials.Study of Endoscopic Barrett's Esophagus Diagnosis. NCT0059146. Available from: https://clinicaltrials.gov/ct2/show/results/NCT00591461

16. Clinical Trials. Narrowband Imaging, Autofluorescence Imaging and Gastroesophageal Reflux Disease. NCT01504971. Available from: https://www.clinicaltrials.gov/ct2/show/NCT01504971
17. Clinical Trials. Pilot Study to Image the Esophagus Using a SECM Tethered Endoscopic Capsule (SECM). NCT02445014. Available from: https://clinicaltrials.gov/ct2/show/NCT02445014
18. Clinical Trials. Imaging Enhanced Endoscopy for the Screening of Barrett's Esophagus. NCT01976351. Available from https://clinicaltrials.gov/ct2/show/NCT02445014
19. Clinical Trials. Cytosponge Adequacy Study Evaluation II (CASEII). NCT02395471. Available from https://clinicaltrials.gov/ct2/show/NCT02395471
20. Clinical Trials. The Role of Chromoendoscopy in the Early Detection of Esophageal Cancer in Patients With Prior Head and Neck Cancers. NCT02435602. Available from: https://clinicaltrials.gov/ct2/show/NCT02435602
21. Clinical Trials. Esophageal Cytology With FISH in Detecting Esophageal Cancer in Participants Undergoing EsophagoGastroDuodenoscopy or Upper Endoscopy. NCT02100189 Available from: https://clinicaltrials.gov/ct2/show/NCT02100189
22. Clinical Trials. Endoscopy Every 2 Years or Only as Needed in Monitoring Patients With Barrett Esophagus. NCT00987857. Available from: https://clinicaltrials.gov/ct2/show/NCT00987857
23. Clinical Trials. Tethered Capsule Endoscope in Screening Participants for Barrett Esophagus. NCT00903136. Available from: https://clinicaltrials.gov/ct2/show/NCT00903136
24. Pronase Improves Efficacy of Chromoendoscopy Screening on Esophageal Cancer.NCT02030769. Available from: https://clinicaltrials.gov/ct2/show/NCT02030769
25. Gastrointestinal Biomarkers in Tissue and Biological Fluid Samples From Patients and Healthy Participants Undergoing Colonoscopy, Endoscopy, or Surgery. NCT00899626. Available from https://clinicaltrials.gov/ct2/show/NCT00899626
26. Early Detection of Esophageal Cancer. NCT00341523. Available from: https://clinicaltrials.gov/ct2/show/NCT00341523
27. Endoscopy Screening for Esophageal Cancer. NCT00927446. Available from: https://clinicaltrials.gov/ct2/show/NCT00927446
28. UMIN-CTR Clinical Trial Registry. A prospective randomized study to compare the tolerability of the magnifyi ng narrow–band imaging endoscopy with lugol chromoendoscopy for esophageal cancer screening. UMIN000012097 . Available from: https://upload.umin.ac.jp/cgi-open-bin/ctr_e/ctr_view.cgi?recptno=R000014135
29. Jiankun Wang, Lili Zhao, Zhining Fan, Li Liu, Xiang Wang, Min Wang. Diagnostic yield of capsule endoscopy versus conventional gastroscopy for gastric diseases: a systematic review and meta-analysis. PROSPERO International prospective register of systematic reviews.
30. Offman, J., Muldrew, B., O'Donovan, M., Debiram-Beecham, I., Pesola, F., Kaimi, I., Smith, S. G., Wilson, A., Khan, Z., Lao-Sirieix, P., Aigret, B., Walter, F. M., Rubin, G., Morris, S., Jackson, C., Sasieni, P., and Fitzgerald, R. C. Barrett's oESophagus trial 3 (BEST3): Study protocol for a randomised controlled trial comparing the Cytosponge-TFF3 test with usual care to facilitate the diagnosis of oesophageal pre-cancer in primary care patients with chronic acid reflux. BMC Cancer 2018. 18 (1) 784.

Study design: Abstract (n=230)

1. Tsukanov, V. V., Onuchina, E. V., Vasyutin, A. V., Amelchugova, O. S., and Tonkikh, J. L. H. Pylori eradication does not affect the GERD course in elderly patients: The results of a 5-year prospective study. Gastroenterology 2016; 150 (4 SUPPL. 1): S471-S472.
2. Park, C. and Portenier, D. Reflux, Barrett's esophagus & bariatric surgery: Working towards a clinical pathway for the management of a pre-cancerous condition in bariatric surgery patients. Surgery for Obesity and Related Diseases 2015; 11 (6 SUPPL. 1): S118-.

3. Cai, J. X., Campbell, E. J., and Richter, J. M. Evaluation of discordant upper endoscopy in outpatients with gastroesophageal reflux disorder. Gastroenterology 2015; 148 (4 SUPPL. 1): S210-.

4. Kramer, J. R., Shakhatreh, M. H., Naik, A. D., Duan, Z., and El-Serag, H. B. Use and yield of endoscopy in patients with uncomplicated gastroesophageal reflux disorder. JAMA Internal Medicine 2014; 174 (3): 462-465.

5. Khandwalla, H., Kramer, J. R., Ramsey, D. J., Duong, N. B., Green, L. K., and El-Serag, H. Barrett's esophagus at endoscopy but no intestinal metaplasia on biopsy, what's next?. Gastroenterology 2013; 144 (5 SUPPL. 1): S688-S689.

6. Tang, T. Q., Lee, C. T., Tai, C. M., and Chang, C. Y. Health-related quality of life in patients with Barrett's esophagus. Journal of Gastroenterology and Hepatology (Australia) 2015; 30: 301-302.

7. Tan, G. and Gandhi, M. Outcomes of open access endoscopy in dyspepsia/GERD patients without alarm features in a community medical center. American Journal of Gastroenterology 2015; 110: S641-S642.

8. Liu, D., Lv, J., Zhang, X., Ma, S., Zhang, L., Zou, B., Gong, J., and Zhang, J. Detection of Barrett's esophagus in columnar-lined esophagus by using narrow band imaging with magnifying endoscopy. Gastrointestinal endoscopy 2015; 81 (5 SUPPL. 1): AB392-AB393.

9. Crews, N. R., Dunagan, K. T., Johnson, M. L., Enders, F., Schleck, C. D., Wong Kee Song, L. M., Wang, K. K., Katzka, D. A., and Iyer, P. G. Increased number of risk factors predicts esophageal injury and metaplasia: Results from a large prospective population-based study. Gastroenterology 2015; 148 (4 SUPPL. 1): S215-.

10. Evsyutina, Y., Truhmanov, A., Lyamina, S., Malyshev, I., and Ivashkin, V. The circulating level of cytokines in patients with different forms of gastroesophageal reflux disease: Non-erosive reflux disease, erosive esophagitis and barrett's esophagus. United European Gastroenterology Journal 2014; 2 (1 SUPPL. 1): A263-A264.

11. Russo, E., Cereatti, F., Bruschini, P., Trentino, P., De, Giacomo T., D'Amati, G., Venuta, F., and Francioni, F. Barrett's esophagus and esophageal adenocarcinoma. A single center experience and changes of management. Diseases of the Esophagus 2014; 27: 154A-.

12. Crews, N. R., Dunagan, K. T., Johnson, M. L., Devanna, S., Wong Kee Song, L. M., Katzka, D. A., and Iyer, P. G. Prevalence and characteristics of esophagitis and barrett's esophagus in population subjects without gastroesophageal reflux symptoms: Results from a large randomized controlled study. Gastroenterology 2014; 146 (5 SUPPL. 1): S28-S29.

13. Alashkar, B., Faulx, A. L., Isenberg, G. A., Greer, K. B., Pulice, R., Hepner, A., Falck-Ytter, Y., and Chak, A. Comparative acceptance of transnasal esophagoscopy vs. Esophageal capsule endoscopy for barrett's esophagus screening. Gastroenterology 2013; 144 (5 SUPPL. 1): S689-S690.

14. Egginton, J., Dunagan, K. T., Shah, N. D., Blevins, C., Ragunathan, K., Leggett, C. L., and Iyer, P. G. Patient preferences for endoscopic assessment of gastroesophageal reflux and barrett's esophagus. Gastroenterology 2013; 144 (5 SUPPL. 1): S689-.

15. El-Serag, H., Hashmi, A. A., Garcia, J. M., Richardson, P., Alsarraj, A., Fitzgerald, S. J., Vela, M. F., Shaib, Y. H., Abraham, N., Velez, M. E., Cole, R. A., Rodriguez, M., Anand, B., Graham, D. Y., and Kramer, J. R. Visceral abdominal obesity measured by CT scan is associated with an increased risk of barrett's esophagus: A case-control study. Gastroenterology 2013; 144 (5 SUPPL. 1): S380-.

16. Rubenstein, J. H., Morgenstern, H., McConnell, D. S., Scheiman, J. M., Schoenfeld, P. S., Appelman, H. D., Metko, V., and Inadomi, J. M. Association of serum leptin with barrett's esophagus. Gastroenterology 2013; 144 (5 SUPPL. 1): S351-.

17. Lamzabi, I., Jain, R., and Jakate, S. Helicobacter carditis and its association with symptoms, egd findings and coexistent helicobacter gastritis, helicobacter duodenitis, gastroesophageal reflux and barrett's esophagus. Laboratory Investigation 2013; 93: 163A-.

18. Blevins, C., Sharma, A., Johnson, M., Dunagan, K., Gupta, M., and Iyer, P. Influence of reflux and central adiposity on intercellular space in squamous esophageal epithelium acg obesity award. American Journal of Gastroenterology 2013; 108: S7-.

19. Leggett, C., Gorospe, E. C., Dunagan, K. T., Katzka, D. A., Clemens, M. A., and Prasad, G. A. Influence of central obesity on esophageal injury: A population based study. Gastroenterology 2012; 142 (5 SUPPL. 1): S759-.

20. Wu, Y., Tseng, P., Wang, S., and Yang, W. 18Fluoro-deoxyglucose positron emission tomography in gastroesophageal reflux disease. European Journal of Nuclear Medicine and Molecular Imaging 2012; 39: S236-.

21. Neumann, H., GuNther, C., Vieth, M., and Neurath, M. F. 3-dimensional endoscopy (3De) improves the characterization of non-dysplastic and dysplastic barrett's esophagus. Gastrointestinal endoscopy 2012; 75 (4 SUPPL. 1): AB481-.

22. Chang, C.-Y., Lee, C.-T., Lo, J., Hwang, J.-C., Ou, T., and Lin, J.-T. Health-related quality of life in Barrett's esophagus. Journal of gastroenterology and hepatology 2011; 26: 212-.

23. Sugimoto, M., Nishino, M., Kodaira, C., Yamade, M., Ikuma, M., and Furuta, T. Esophageal mucosal injury with low-dose aspirin and its prevention by rabeprazole. Gastroenterology 2009; 136 (5 SUPPL. 1): A447-.

24. Sutheesuntorntham, B., Leelakusolvong, S., and Suthiwana, C. Quality of life in non-erosive reflux disease (NERD) before and after treatment with low dose and standard dose esomeprazole in thai patient. Digestion 2009; 79 (3 SUPPL. 1): 69-.

25. Ende, A. R., Higa, J. T., Singla, A., Choi, A. Y., Lee, A. B., Whang, S. G., Gravelle, K., D'Andrea, S., Bang, S. J., Schmidt, R. A., Yeh, M. M., and Hwang, J. H. Gastric intestinal metaplasia, dysplasia, and gastric cancer in a U.S. tertiary care population-who's at risk?. Gastrointestinal endoscopy 2016; 83 (5 SUPPL. 1): AB459-.

26. Cook, M. B., Drahos, J., Wood, S., Enewold, L., Parsons, R., Freedman, N. D., Taylor, P. R., Ricker, W., and Abnet, C. C. Pathogenesis and progression of esophageal adenocarcinoma by prior diagnosis of Barrett's esophagus. Cancer Research 2015; 75 (15 SUPPL. 1): no-.

27. Li, X., Chen, Y., Chandler, J., Girman, C. J., and Sturmer, T. Similarities regarding diagnostic workup utilization in two data systems. Pharmacoepidemiology and Drug Safety 2015; 24: 351-.

28. Kryvy, V., Klyarytska, I., Semenichina, E., Rabotyagova, Y., Ratan, G., and Tsapyak, T. 13C-octanoic acid breath test in diagnosis of gastroesophageal reflux disease in obese patients with type 2 diabetes mellitus. Neurogastroenterology and Motility 2015; 27: 77-78.

29. Genco, A., Soricelli, E., Maselli, R., Casella, G., Cipriano, M., Baglio, G., Leone, G., Basso, N., and Redler, A. Barrett's esophagus after sleeve gastrectomy for morbid obesity: Preliminary results. Gastrointestinal endoscopy 2015; 81 (5 SUPPL. 1): AB470-.

30. Yamamoto, S., Komori, M., Nishiyama, M., Fukuoka, M., Kudo, S., Maesaka, K., Shirai, K., Kimura, S.-Y., Okahara, T., Okuda, Y., Konoshita, M., Hirao, M., Hosui, A., and Yoshihara, H. Features of upper gastrointestinal abnormalities in non-alcoholic steatohepatitis (NASH) patients. United European Gastroenterology Journal 2014; 2 (1 SUPPL. 1): A450-.

31. Thomas, S. and Corley, D. Associations between leptin, ghrelin, and barrett's esophagus: A case-control study with stratified analyses. American Journal of Gastroenterology 2014; 109: S5-.

32. Genco, A., Maselli, R., Scucchi, L., Casella, G., Cipriano, M., Leone, G., Lorenzo, M., Baglio, G., Basso, N., and Redler, A. Barrett esophagus: A possible long-term complication after sleeve gastrectomy. Obesity Surgery 2014; 24 (8): 1145-1146.

33. Nguyen, T., Khalaf, N., Ramsey, D. J., and El-Serag, H. Statin use may decrease the risk of barrett's esophagus: A case-control study of U.S. Veterans. Gastroenterology 2014; 146 (5 SUPPL. 1): S-561.

34. Cui, R., Zhang, H., Lu, J., Xue, Y., Wang, Y., and Zhou, L. Diagnostic value of combination of intercellular space measurement and histopathologic score for gastroesophageal reflux disease. Gastroenterology 2014; 146 (5 SUPPL. 1): S-116.

35. Cheung, D., Menon, S., and Trudgill, N. How commonly is oesophageal cancer missed at endoscopy (a UK primary care based study)? Gut 2013; 62: A5-.

36. Rubenstein, J. H., Morgenstern, H., Appelman, H. D., Scheiman, J. M., Schoenfeld, P. S., McMahon, L. F., Metko, V., Near, E., Kellenberg, J. E., Kalish, T., and Inadomi, J. M. Risk factors for barrett's esophagus among men without gerd symptoms: Results from the newly diagnosed barrett's esophagus study. Gastroenterology 2012; 142 (5 SUPPL. 1): S72-.

37. Walia, R., Hodges, T. N., Huang, J. L., Varsch, K. A., Saggar, R., Naik, P. M., Kuo, E. Y., Bremner, R. M., and Smith, M. A. Incidence and clinical course of barrett's esophagus pre-and post-lung transplantation. Journal of Heart and Lung Transplantation 2012; 31 (4 SUPPL. 1): S180-S181.

38. Kumar, U., Cappell, M., Desai, T., and Batke, M. Barrett's esophagus in eosinophilic esophagitis, a coincidence or correlation? - A retrospective case-control study of 365 patients. American Journal of Gastroenterology 2011; 106: S8-.

39. Trapasso, R. and Genta, R. Helicobacter pylori gastritis is inversely correlated to dysplasia in patients with Barrett's esophagus ACG governors award for excellence in clinical research. American Journal of Gastroenterology 2011; 106: S1-S2.

40. Pacheco, Bastidas F., Alvarez, Uslar R., Molina, Zapata H., Alarcon, Mendez A., and Valdebenito, Quiroz M. Erosive esophagitis after laparoscopic sleeve gastrectomy. Obesity Surgery 2011; 21 (8): 1007-.

41. Cadman, L., Nelsen, E. M., Tian, J., Schleck, C., Zinsmeister, A. R., Locke, G. R., Talley, N. J., Wang, K. K., Dunagan, K. T., and Prasad, G. A. Metabolic syndrome is a risk factor for Barrett's esophagus : A population based case control study. Gastroenterology 2011; 140 (5 SUPPL. 1): S178-.

42. Tabbaa, M. G., Fernandez, R., and Muala, S. Acute upper gastro-intertinal bleeding (AUGIB) is a serious complication of GERD with different clinical features from bleeding peptic ulcers (PUD). Gastroenterology 2009; 136 (5 SUPPL. 1): A738-A739.

43. Singh, M., Wani, S. B., Rastogi, A., Hall, S. B., Higbee, A. D., Singh, V., Bansal, A., and Sharma, P. Is proton pump inhibitor (PPI) use associated with a lower prevalence of Barrett's esophagus (BE) in patients with chronic GERD. Gastroenterology 2009; 136 (5 SUPPL. 1): A595-.

44. Lord, R. V. N., Freeman, A., Botelho, N. K., Wettstein, A. R., El-Hammuri, N., Levert-Mignon, A., and Lord, S. J. Effect of barryx halo radiofrequency ablation treatment on mRNA gene expression in Barrett's esophagus with dysplasia. Gastroenterology 2009; 136 (5 SUPPL. 1): A593-.

45. Entezari, O., Nouri, Z., Dowlati, E., Scott, V. F., Frederick, W., Lee, E. L., Smoot, D. T., Hardy, A., Ibrahim, A. Z. A., and Ashktorab, H. Helicobacter pylori may protect African Americans from reflux esophagitis a hospital based study. Gastroenterology 2009; 136 (5 SUPPL. 1): A552-

46. Chen, M., Snyder, C., Hatcher, L., Lynch, H. T., Watson, P., and Gatalica, Z. Barrett's esophagus in the patients with familial adenomatous polyposis. Laboratory Investigation 2009; 89: 126A-.

47. Menon, S., Nightingale, P., Butterworth, J., and Trudgill, N. Severe oesophagitis and its complications are more common in women after the menopause. Gut 2009; 58: A145-.

48. Rajendra, S., Snow, E. T., Lai, H. J., Ball, M. J., and Robertson, I. K. Human papilloma virus and Barrett's oesophagus. Journal of gastroenterology and hepatology 2009; 24: A338-.

49. Carton, Mulligan, Keeling, Tanner, McDonald, and Reynolds Specialized intestinal metaplasia: analysis of prevalence, risk factors and association with gastro-oesophageal reflux disease. The British journal of surgery 2000; 87 (3): 362-373.

50. Felsenreich, D. M., Langer, F., Kefurt, R., Panhofer, P., Schermann, M., Beckerhinn, P., Sperker, C., Lenglinger, J., Kristo, I., Schoppmann, S., and Prager, G. Weight loss, reflux and reoperations: Our first 100 patients treated with lap. Sleeve Gastrectomy. Obesity Facts 2016; 9: 311-312.

51. Heberle, C. R., Kong, C. Y., and Hur, C. Cost effectiveness of a minimally invasive cell sampling device to screen for Barrett's esophagus in patients with Gerd symptoms. Value in Health 2016; 19 (3): A304-.

52. Parasa, S., Vennelaganti, S., Vennalaganti, P., Brown, J., Kanakadandi, V., Alsop, B., Titi, M. A., Kennedy, K., Kohli, K., Gachpaz, B., Vittal, A., Duvvuri, A., Bansal, A., Gupta, N., and Sharma, P. Epidemiology and risk factors for the presence of large hiatal hernias in GERD patients. Gastrointestinal endoscopy 2016; 83 (5 SUPPL. 1): AB588-.

53. Kanakadandi, V., Vennelaganti, S., Vennalaganti, P., Brown, J., Parasa, S., Alsop, B., Titi, M. A., Bansal, A., Kennedy, K., Kohli, K., Duvvuri, A., Gachpaz, B., Vittal, A., Gupta, N., and Sharma, P. Declining trends in the prevalence of barrett's esophagus among patients with gastroesophageal reflux disease (GERD). Gastrointestinal endoscopy 2016; 83 (5 SUPPL. 1): AB553-.

54. Dova, G., Caro, L. E., Brasesco, O., Paleari, J., Borlle, G. L., Durand, L., Bauer, I., Gajardo, C., Bolino, C., Dumonceau, J. M., and Cerisoli, C. L. Effects of gastric bypass in obese patients with barrett's esophagus. Gastrointestinal endoscopy 2016; 83 (5 SUPPL. 1): AB551-.

55. Preedy, R., El, Menabawey T., Phillpotts, S., and Besherdas, K. Is there any value of performing an endoscopy in GERD patients under 50? Gastrointestinal endoscopy 2016; 83 (5 SUPPL. 1): AB546-.

56. Solomon, A. and Besherdas, K. Is there any value of endoscopy for gastro-oesophageal reflux disease in patients under 45?. Gastrointestinal endoscopy 2016; 83 (5 SUPPL. 1): AB533-.

57. Daoud, D., Therrien, A., Soucy, G., and Bouin, M. Is the lymphocytic esophagitis a new clinical entity? Canadian Journal of Gastroenterology and Hepatology 2016.

58. Milne, K., Kathol, B., Swain, M., Johnstone, C., Kwan, J., Schoombee, W., Andrews, C., and Novak, K. Endoscopy utilization and outcome for the GI nurse navigator pathway: A quality improvement project for chronic dyspepsia, heartburn & irritable bowel syndrome. Canadian Journal of Gastroenterology and Hepatology 2016.

59. Chen, W-C., Hemminger, L. L., Bowers, S. P., and Wolfsen, H. C. Development of Barrett's esophagus after esophagectomy: Experience at a single tertiary center. Gastroenterology 2016; 150 (4 SUPPL. 1): S1225-.

60. Zackria, S., Thota, P. N., and Lopez, R. Prevalence of abnormal endoscopic findings in patients with laryngopharyngeal reflux (LPR). Gastroenterology 2016; 150 (4 SUPPL. 1): S861-.

61. Rubenstein, J. H., McConnell, D., Beer, D. G., Chak, A., Metko, V., and Clines, G. Association of proton pump inhibitor use with hyperparathyroidism. Gastroenterology 2016; 150 (4 SUPPL. 1): S835-.

62. Wright, M. R., Higginbotham, T., Slaughter, J. C., Ates, F., Yuksel, E. S., and Vaezi, M. Mucosal impedance in Barrett's Esophagus: Can it assess compliance with medication?. Gastroenterology 2016; 150 (4 SUPPL. 1): S260-.

63. Fock, K. M., Ang, T. L., Li, W. J., Poh, C. H., Law, N. M., and Ang, D. Refractory gastro-esophageal reflux symptoms in a multiracial Asian cohort: Roles of advanced imaging and functional testing in diagnosis. Gastroenterology 2016; 150 (4 SUPPL. 1): S35-.

64. Schlottmann, F., Reino, R., Spano, M., Galvarini, M., Gallesio, J. A., and Buxhoeveden, R. Preoperative endoscopy in bariatric patients may change surgical strategy. Surgical Endoscopy and Other Interventional Techniques 2016; 30: S261-.

65. Boys, J. A., Azadgoli, B., Martinez, M., Oh, D. S., Hagen, J. A., and DeMeester, S. R. Is EGD reporting adequate: A review of reports from 100 referring gastroenterologists. Surgical Endoscopy and Other Interventional Techniques 2016; 30: S214-.

66. Maddalo, G., Marafatto, F., Fassan, M., Cardin, R., Piciocchi, M., Pozzan, C., Zaninotto, G., Ruol, A., Castoro, C., Rugge, M., and Farinati, F. Serum determination of squamous cellular carcinoma antigen as a biomarker of Barrett-s esophagus and esophageal cancer: A phase iii study. Digestive and Liver Disease 2016; 48: e70-e71.

67. Onuchina, E., Tsukanov, V., Kasparov, E., Vasyutin, A., and Amelchugova, O. Monitoring of Barrett's esophagus in elderly patients: Results of five-year prospective study. Journal of Gastroenterology and Hepatology (Australia) 2015; 30: 58-59.

68. James, L. W., Kwongming, F., Tiingleong, A., Choohean, P., Ngai, Moh L., and Daphne, A. Refractory gastro-esophageal reflux disease in an Asian population: Roles of advanced imaging and functional testing in diagnosis and management. Journal of Gastroenterology and Hepatology (Australia) 2015; 30: 7-.

69. Horsley-Silva, J. L., Amer, S., Kommineni, V. T., Crowell, M. D., Lam-Himlin, D., and Nguyen, C. C. Gastric intestinal metaplasia: Defining the natural history. American Journal of Gastroenterology 2015; 110: S1021-S1022.

70. Higa, J. T., Ende, A. R., Choi, A. Y., Bang, S. J., Gravelle, K., Kang, S., Whang, S. G., Lee, A. B., D'Andrea, S., Schmidt, R. A., Yeh, M. M., and Hwang, J. H. Gastric intestinal metaplasia in a U.S. Tertiary care population. American Journal of Gastroenterology 2015; 110: S1016-.

71. Villa, N. A., Lam-Himlin, D., Pannala, R., Fleischer, D. E., Ramirez, F. C., and Faigel, D. Pancreatic acinar metaplasia at the gastroesophageal junction: A single institution experience. American Journal of Gastroenterology 2015; 110: S735-.

72. Tabbaa, M., Dizechi, S., and Newman, A. Nsaid use in patients with barrett's esophagus increased the severity of reflux esophagitis. American Journal of Gastroenterology 2015; 110: S724-.

73. Tang, Z., Akinyeye, S., Suarez, M. G., Berzosa, M., Ilyas, J., Zarrin-Khameh, N., and Vela, M. F. Yield of upper endoscopy and impedance-PH monitoring in PPI-refractory GERD patients with typical symptoms. American Journal of Gastroenterology 2015; 110: S699-.

74. Anapaz, V., Carvalho, R., Reis, J., Branco, J., Lourenco, L., Santos, L., Cardoso, M., and Oliveira, A. Impact of endoscopic surveillance in Barrett 'S esophagus without dysplasia-a retrospective study. United European Gastroenterology Journal 2015; 3 (5 SUPPL. 1): A657-A658.

75. Katopodi, K., Viazis, N., Karamanolis, G., Anastasiou, J., Denaxas, K., Giakoumis, M., Koukouratos, T., Kamberoglou, D., Christidou, A., Ladas, S. D., and Karamanolis, D. G. Proton pump inhibitor and selective serotonin reuptake inhibitor therapy for the management of non cardiac chest pain. United European Gastroenterology Journal 2015; 3 (5 SUPPL. 1): A476-A477.

76. Solomon, A. S. and Besherdas, K. Is there any value of endoscopy for gord in patients under 45? United European Gastroenterology Journal 2015; 3 (5 SUPPL. 1): A361-.

77. Evsyutina, Y., Trukhmanov, A., Storonova, O., Ivashkin, V., Lyamina, S., and Malyshev, I. Association between the form of gastroesophageal reflux disease, caracteristics of esophageal pH-impedance monitoring and cytokines expression. United European Gastroenterology Journal 2015; 3 (5 SUPPL. 1): A293-.

78. Sang, Kil L. and Lee, S. K. Sedation during upper endoscopy can decrease the detection of minimal change esophagitis and hiatal hernia. Neurogastroenterology and Motility 2015; 27: 97-.

79. Ding, Y., Cavichiolo, F., Ponnuswamy, S., Moattar, H., Alghamry, A., Croese, J., Hodgson, R., Appleyard, M., Howlett, M., Vandeleur, A., and Rahman, T. Service and quality improvement-Eosinophilic oesophagitis and food bolus impaction-an emergent emergency? Journal of Gastroenterology and Hepatology (Australia) 2015; 30: 179-180.

80. Wark, G., Turner, I., and Al-Sohaily, S. What is the utility of performing gastroscopy in patients with positive FOBT without upper GI symptoms, iron deficiency or anaemia? Journal of Gastroenterology and Hepatology (Australia) 2015; 30: 24-.

81. Kommineni, V. T., Pannala, R., Crowell, M. D., Burdick, G. E., Vela, M. F., Faigel, D. O., Fleischer, D. E., and Ramirez, F. C. Outcomes of endoscopic therapy for high-grade dysplasia(HGD) and esophageal adenocarcinoma(EAC) in long and short segment Barrett's esophagus. Gastrointestinal endoscopy 2015; 81 (5 SUPPL. 1): AB513-AB514.

82. Subramaniam, S., Goodchild, G., and Besherdas, K. The value of follow up endoscopy in oesophagitis patients: A UK district general hospital experience. Gastrointestinal endoscopy 2015; 81 (5 SUPPL. 1): AB237-.

83. Chang, C.-Y., Lee, C.-T., Tai, C.-M., and Lin, J.-T. Lower dysplastic progression of Barrett's Esophagus in asian population- an ethnic chinese prospective cohort study. Gastrointestinal endoscopy 2015; 81 (5 SUPPL. 1): AB500-.

84. Bibbo, S., Ianiro, G., Petruzziello, L., Spada, C., Larghi, A., Riccioni, M. E., Gasbarrini, A., Costamagna, G., and Cammarota, G. Esophageal posterior and right wall are the most common localizations of Barrett's esophagus. Gastrointestinal endoscopy 2015; 81 (5 SUPPL. 1): AB499-.

85. Bernal-Mendez, A. R., Tellez-Avila, F. I., Briseno, F. D., Romano, A. F., Barreto-Zuniga, R., Martinez-Lozano, J. A., Ramierz Polo, A. I., and Valdovinos-Andraca, F. Clinical and endoscopic differences between patients with barrett's esophagus without dysplasia and dysplasia/esophageal adenocarcinoma in Latin American population. Gastroenterology 2015; 148 (4 SUPPL. 1): S348-S349.

86. Rebecchi, F., Allaix, M., Giaccone, C., Merlo, P., and Morino, M. Laparoscopic roux-en-y-gastric bypass increases esophageal exposure to weakly acidic reflux. Surgical Endoscopy and Other Interventional Techniques 2015; 29: S50-.

87. Subramaniam, S., Goodchild, G., and Besherdas, K. Odynophagia and its yield on upper GI endoscopy-a symptom worth asking about. United European Gastroenterology Journal 2014; 2 (1 SUPPL. 1): A479-.

88. Subramaniam, S., Goodchild, G., and Besherdas, K. Limited value for follow up endoscopy in severe oesophagitis: Findings from a large london district general hospital. United European Gastroenterology Journal 2014; 2 (1 SUPPL. 1): A479-.

89. Robles-Medranda, C., Del, Valle R., Soria, M., Bravo, G., Lukashok, H., and Robles-Jara, C. Pentax i-scantm with magnification for the identification of underdiagnosis organic esophageal lesions (barret esophagus and esophagitis) in patients with functional dyspepsia: A prospective study. United European Gastroenterology Journal 2014; 2 (1 SUPPL. 1): A163-A164.

90. Gaikwad, N., Samarth, S. G. A., and Sawalakhe, N. Endoscopic profile of dysphagia-A prospective study. Indian Journal of Gastroenterology 2014; 33 (1 SUPPL. 1): A30-.

91. Gross, S., Kaul, V., and Smith, M. Increased detection of barrett's esophagus and dysplasia in community gastroenterology practices resulting from the addition of computer-assisted transepithelial brush biopsy to forceps biopsy. American Journal of Gastroenterology 2014; 109: S39-.

92. Alkaddour, A., McGaw, C., Hritani, R., Palacio, C., Munoz, J., and Vega, K. Clinical factors do not explain why barrett's esophagus primarily occurs among non-hispanic whites in North Florida. American Journal of Gastroenterology 2014; 109: S34-.

93. Toppino, M., Rebecchi, F., Allaix, M. E., Giaccone, C., Merlo, P., and Morino, M. Increased esophageal exposure to weakly acidic reflux after laparoscopic Roux-en-Y-gastric bypass for morbid obesity. Obesity Surgery 2014; 24 (7): 976-.

94. Sadek, R. W. and Wassef, A. M. Viabliltiy of simultaneous diaphragmatic hernia repair and longitudinal sleeve gastrectomy paired procedures. Obesity Surgery 2014; 24 (8): 1349-.

95. Cayado-Lopez, R., Bornschein, J., Zeki, S., Udarbe, M., and Di, Pietro M. Clinical utility of Endofaster in patients on chronic ppi therapy undergoing upper GI endoscopy. Gut 2014; 63: A117-.

96. Subramaniam, S., Goodchild, G., and Besherdas, K. Odynophagia - A symptom worth asking about? Gut 2014; 63: A60-A61.

97. Butt, S. K. and Besherdas, K. The value of gastroscopy in the investigation of non cardiac chest pain. Gut 2014; 63: A60-.

98. Buda, A., De, Bona M., Bellumat, A., Valiante, F., Piselli, P., Della, Libera D., Cian, E., Sturniolo, G. C., and De, Boni M. Predictors of barrett oesophagus in patients undergoing first time gastroscopy in a single centre: Potential implications for the screening dilemma. Digestive and Liver Disease 2014; 46: S90-.

99. DelRosso, L. M., Hoque, R., and Harper, M. Prevalence of obstructive sleep apnea and Barrett's esophagus in patients referred for esophagogastroduodenoscopy due to reflux symptoms. Sleep 2014; 37: A261-A262.

100. Chaudhry, U. I., Mikami, D. J., Needleman, B. J., Melvin, W. S., and Noria, S. F. Routine preoperative esophagogastroduodenoscopy in patients undergoing bariatric surgery. Surgical Endoscopy and Other Interventional Techniques 2014; 28: 398-.

101. Sormaz, I. C., Tunca, F., Iscan, Y. A., Meric, S., and Avtan, L. Laparoscopic nissen-rossetti fundoplication in gastro-oesophageal reflux disease; experience in 205 consecutive patients. Surgical Endoscopy and Other Interventional Techniques 2014; 28: S157-.

102. Bradley, D. D., Louie, B. E., Aye, R. W., McMahon, R., Chen, J., and Farivar, A. S. The effect of concurrent esophageal pathology on bariatric surgical planning. Gastroenterology 2014; 146 (5 SUPPL. 1): S-1026.

103. Patel, D. A., Ates, F., Slaughter, J. C., Higginbotham, T., and Vaezi, M. F. Esophageal acid exposure consistency as a measure of pH reliability: Should we abandon lower normative cutoffs? Gastroenterology 2014; 146 (5 SUPPL. 1): S751-S752.

104. Aberra, F., Ates, F., Li, Z., Slaughter, J. C., Higginbotham, T., and Vaezi, M. F. Appropriateness of upper endoscopy referrals in patients with GERD by specialty. Gastroenterology 2014; 146 (5 SUPPL. 1): S749-S750.

105. Onuchina, E. V., Amelchugova, O. S., and Tsukanov, V. V. The frequency of high-grade dysplasia in elderly patients with barrett's esophagus: Results of five-year prospective study. Gastroenterology 2014; 146 (5 SUPPL. 1): S306-S307.

106. Al, Kaddour A., McGaw, C., Hritani, R., Palacio, C., Munoz, J. C., and Vega, K. J. African Americans do not develop barrett's esophagus following erosive esophagitis. Gastroenterology 2014; 146 (5 SUPPL. 1): S302-S303.

107. Zaidi, A. H., Gopalakrishnan, V., Kasi, P. M., Malhotra, U., Balasubramanian, J., Visweswaran, S., Zeng, X., Sun, M., Bergman, J. J., Bigbee, W. L., and Jobe, B. A. Evaluation of a four-protein biomarker panel (biglycan, annexin-A6, myeloperoxidase and protein S100-A9; B-AMP©) for detection of esophageal adenocarcinoma. Gastroenterology 2014; 146 (5 SUPPL. 1): S-161.

108. Ketwaroo, G. A., Vivian, C., Makda, M., Magge, S., Feuerstein, J., Patil, D. T., Najarian, R. M., and Lembo, A. Long-term follow-up and incidence of HPV in the esophageal squamous papilloma. Gastrointestinal endoscopy 2014; 79 (5 SUPPL. 1): AB393-.

109. Bolino, C., Cerisoli, C. L., Durand, L., Avagnina, A., Elsner, B., De, Elizalde S., Domenichini, E., and Caro, L. E. Long term follow up in patients with columnar lined esophagus: A retrospective analysis of 12 years. Gastrointestinal endoscopy 2014; 79 (5 SUPPL. 1): AB387-AB388.

110. Saxena, A., Parikh, K., Lu, C., Chak, A., Greer, K. B., Cooper, G. S., Alashkar, B., and Faulx, A. L. Late stage diagnosis of esophageal adenocarcinoma (EAC) in veterans-could screening be effective?. Gastrointestinal endoscopy 2014; 79 (5 SUPPL. 1): AB385-.

111. Schneider, N., Plieschnegger, W., Schmack, B., Bordel, H., Hofler, B., Eherer, A., Wolf, E.-M., Rehak, P., Vieth, M., and Langner, C. Cardiac mucosa at the gastroesophageal junction: Indicator of gastroesophageal reflux disease? United European Gastroenterology Journal 2013; 1 (1 SUPPL. 1): A568-.

112. Lahcene, M., Oumnia, N., Chiali, N., Saadaoui, Y., Boudjella, M., and Tebaibia, A. Characteristics of esophageal involvement in scleroderma. United European Gastroenterology Journal 2013; 1 (1 SUPPL. 1): A256-.

113. Mukundan, S., Muthukumaran, K., Ramkumar, G., Ganesh, R. B., and Kumar, S. J. Methylene blue chromoendoscopy for early diagnosis of Barrett's metaplasia, dysplasia and early esophageal adenocarcinoma: A pilot study. Indian Journal of Gastroenterology 2013; 32 (1 SUPPL. 1): A10-.

114. Sugumaran, A. and Rasheed, A. Gastro-oesophageal reflux disease (GORD) symptomatology is not a reliable predictor of oesophageal adenocarcinoma. Gut 2013; 62: A194-.

115. Liu, X., Wong, A., Kadri, S. R., O'Donovan, M., Lao-Sirieix, P., Burnham, R., and Fitzgerald, R. Gord symptoms and demographic factors as a pre-screening tool for barrett's oesophagus. Gut 2013; 62: A119-.

116. Timratana, P., Lada, M. J., Nieman, D. R., Han, M. S., Peyre, C. G., Jones, C. E., Watson, T. J., and Peters, J. H. The clinical spectrum of esophagogastric junction outflow obstruction identified via high resolution manometry. Gastroenterology 2013; 144 (5 SUPPL. 1): S1099-.

117. Onuchina, E. V., Tsukanov, V. V., and Amelchugova, O. S. Changing of gerd structure in elderly patients: Results of five-year prospective study. Gastroenterology 2013; 144 (5 SUPPL. 1): S861-.

118. Kanakadandi, V., Giacchino, M., Gaddam, S., Bansal, A., Rastogi, A., Higbee, A. D., Gupta, N., and Sharma, P. Has there been a change in the prevalence of be or patient characteristics that may be contributing to the increasing EAC incidence?. Gastroenterology 2013; 144 (5 SUPPL. 1): S690-.

119. Bansal, A., Hong, X., Lee, I.-H., House, J., Mathur, S. C., Rastogi, A., Sharma, P., and Christenson, L. K. Serum exosomal microrna expression can be a novel non-invasive strategy for the screening of barrett's esophagus. Gastroenterology 2013; 144 (5 SUPPL. 1): S684-.

120. Bansal, A., Hong, X., Lee, I.-H., House, J., Mathur, S. C., Rastogi, A., Sharma, P., and Christenson, L. K. Evaluation of tissue microrna expression could increase the accuracy of non-endoscopic esophageal sampling

devices based testing for the diagnosis of barrett's esophagus. Gastroenterology 2013; 144 (5 SUPPL. 1): S674-S675.

121. Taggart, M. W., Ross, W. A., Rashid, A., and Abraham, S. Esophageal squamous dysplasia-clinical associations and follow-up. Gastroenterology 2013; 144 (5 SUPPL. 1): S517-.

122. Tsuji, N., Okumura, N., Taniike, S., Takaba, T., Matsumoto, N., Kono, M., Maruyama, Y., and Kudo, M. Verrucous antral gastritis is not related to H. Pylori-positive chronic gastritis, but is related to a high BMI and barrett's esophagus. Gastroenterology 2013; 144 (5 SUPPL. 1): S340-.

123. Rubenstein, J. H., Morgenstern, H., McConnell, D. S., Scheiman, J. M., Schoenfeld, P. S., Appelman, H. D., Metko, V., and Inadomi, J. M. Associations of hyperinsulinemia and diabetes mellitus with barrett's esophagus. Gastroenterology 2013; 144 (5 SUPPL. 1): S28-S29.

124. Gemignani, L., Savarino, E., Corbo, M., Dulbecco, P., Giacchino, M., Giambruno, E., Mastracci, L., Sarocchi, F., Fiocca, R., Repici, A., and Savarino, V. The diagnostic value of narrow-band imagingwith magnifying endoscopy in the detection of gastric intestinal metaplasia: A prospective study in an unselected population. Digestive and Liver Disease 2013; 45: S206-.

125. Bhattacharya, B. and Samaha, S. Granular cell tumors of the gastrointestinal tract: Clinicopathologic associations in a large series. Laboratory Investigation 2013; 93: 145A-.

126. Gashi, Z., Shabani, R., and Haziri, A. The histopathological correlation with clinical and endoscopic evidence in patients with Barrett's esophagus. Journal of Clinical Gastroenterology 2013; 47 (1): 93-.

127. Gonsalkorala, E. S., Roche, E., and Fairley, S. The incidence of oesophageal heterotopic gastric mucosa (O-HGM) in an Australian population. Journal of gastroenterology and hepatology 2013; 28: 40-.

128. Gupta, M., Sharma, A., Buttar, N., Geno, D., Katzka, D., Harmsen, W., Enders, F., Dunagan, K., and Iyer, P. Influence of central obesity and reflux on esophageal injury: A prospective study. American Journal of Gastroenterology 2013; 108: S23-.

129. Al-Subee, O., Al-Khawam, A., Allababidi, R., and Subei, I. Prevalence of barrett's esophagus in a community hospital in Saudi Arabia. American Journal of Gastroenterology 2013; 108: S5-.

130. Satarasinghe, R., Rathnayake, J., Ambawatte, S., Jayasinghe, N., Wijesinghe, R., De, Silva P., and Rasendran, N. Endoscopic outcome in a cohort of adult Sri Lankan dysphagics admitted to a tertiary care hospital. Journal of gastroenterology and hepatology 2013; 28: 722-.

131. Wang, Z. G., Hu, Z. W., Wu, J. M., Liu, J. J., Tian, S. R., Ji, F., and Li, Z. T. The interventional treatment on extra-esophageal symptoms: Preliminary experience on 2016 patients. Journal of gastroenterology and hepatology 2013; 28: 305-.

132. Radha, M., Kini, R., Mohammed, K. S., Kumar, K. P., Pugazhendhi, T., and Ali, M. Clinical significance and differential diagnosis of nodular lesions in the gastrointestinal tract by clinicopathological correlation in a tertiary care hospital in Southern India. Indian Journal of Gastroenterology 2012; 31 (1 SUPPL. 1): A109-.

133. Kumar, G. R., Kini, R., Kani, M. S., Kumar, P., Pugazhendi, T., and Ali, M. Barrett's esophagus-changing trends in incidence-a cross sectional study. Indian Journal of Gastroenterology 2012; 31 (1 SUPPL. 1): A16-A17.

134. Martin, L., Stavrou, M., El, Madani F., and Gupta, S. Six years of laparoscopic Nissen's fundoplication, was it worth it? An audit of 100 patients. Gut 2012; 61: A265-.

135. Hoppo, T., Komatsu, Y., and Jobe, B. A. Short-term outcome of antireflux surgery on patients with chronic cough and abnormal proximal exposure as measured by hypopharyngeal multichannel intraluminal impedance. Gastroenterology 2012; 142 (5 SUPPL. 1): S1075-.

136. Alsop, B. R., Gupta, N., Balasubramanian, G., Wani, S., Gaddam, S., Higbee, A. D., Shipe, T., Singh, M., Yandrapu, H., Giacchino, M., Rastogi, A., Bansal, A., and Sharma, P. Racial differences in prevalence of hiatal hernia and esophageal mucosal injury: Results from a large prospective GERD cohort. Gastroenterology 2012; 142 (5 SUPPL. 1): S759-.

137. Rubenstein, J. H., Morgenstern, H., Chey, W. D., Murray, J., Scheiman, J. M., Schoenfeld, P. S., Appelman, H. D., McMahon, L. F., Metko, V., Near, E., and Inadomi, J. M. Acid reflux, erosive esophagitis, and barrett's esophagus are associated with different measures of abdominal obesity in men. Gastroenterology 2012; 142 (5 SUPPL. 1): S754-.

138. Fasanella, K. E., Bista, R. K., Staton, K. D., Brand, R., McGrath, K., and Liu, Y. Assessment of gastric cardia to monitor the response to endoscopic therapy in patients with esophageal dysplasia and adenocarcinoma. Gastroenterology 2012; 142 (5 SUPPL. 1): S749-S750.

139. El-Serag, H., Hinojosa-Lindsey, M., Duan, Z., Hou, J., Naik, A. D., Street, R. L., Chen, G. J., and Kramer, J. R. Timing and diagnostic yield of endoscopy among patients with gerd. Gastroenterology 2012; 142 (5 SUPPL. 1): S576-S577.

140. Morales-Fuentes, G. A., Barojas, P. F., Antonio-Manrique, M., Clara Luz, M. G., Zamorano, Y., Zarate-Osorno, A., Quinonez-Urrego, E. E., Mejia-Cuan, L. A., Martinez-Camacho, C., Rivera-Nava, C. A., Sanchez-Chavez, X., Rojas-Macuil, P., Montenegro-Molina, W., al Osuna, S. E., and Ramirez-Ramirez, M. A. P53 expression in gastric mucosa of patients infected with helicobacter pylori. Gastroenterology 2012; 142 (5 SUPPL. 1): S476-.

141. Kidambi, T., Toto, E., Ho, N., Taft, T., and Hirano, I. Etiologies of dysphagia over the past decade-emergence of eosinophilic esophagitis. Gastroenterology 2012; 142 (5 SUPPL. 1): S430-S431.

142. Asaoka, D., Nagahara, A., Sasaki, H., Hojo, M., and Watanabe, S. The clinical characteristics of laryngopharyngeal reflux disease by using reflux finding score. Journal of gastroenterology and hepatology 2012; 27: 321-.

143. Lawrence, Ho K. Y. Barrett's esophagus: Situation in Asia-Pacific. Journal of gastroenterology and hepatology 2012; 27: 26-27.

144. Angeles, P.-A., Rosales Zabal, J. M., Lopez Vega, M. C., Fernandez, Cano F., Romero Ordonez, M. A., Gonzalez, Barcenas M., and Rivas, Ruiz F. Impact of the manometric esophageal alterations and the exposure to acid in the incidence of Barrett's Esophagus. Neurogastroenterology and Motility 2012; 24: 96-.

145. Lubwama, R. N., Chandler, J., and Kou, T. D. Impact of gastroesophageal reflux disease (GERD) definition on incidence rate of endoscopies among osteoporotic patients. Pharmacoepidemiology and Drug Safety 2012; 21: 421-422.

146. Gilani, S. N. S., Bass, G., Staunton, P., Kilc, S., Chrysostomou, K., Himy, N., Downes, M. R., Caffrey, J. F., Tobbia, I., and Walsh, T. N. Bile reflux: the link between cholecystectomy, Barrett's and oesophageal adenocarcinoma. Irish Journal of Medical Science 2012; 181: S14-S15.

147. Miranda, A., Romano, M., Ricciolino, S., Iadevaia, M., Mango, C., Gravina, A. G., Federico, A., and Loguercio, C. Does gender influence upper gastrointestinal symptoms and endoscopic diagnosis? Digestive and Liver Disease 2012; 44: S93-.

148. Parham, K. Evaluation of office-based transnasal esophagoscopy tolerance, safety and findings in the geriatric population. Journal of the American Geriatrics Society 2011; 59: S148-.

149. Tammana, V., Karpurapu, H., Chintala, R., Chava, S., Giday, S., Momodu, J., Sanderson, A., Smoot, D., Ali, E., and Sealy, P. Association of bmi and Barrett's esophagus/esophageal adenocarcinoma in african american population from an inner city hospital ACG IBD award. American Journal of Gastroenterology 2011; 106: S11-.

150. McIntire, M. Clinical and pathologic characteristics of patients with a diagnosis of intestinal metaplasia in biopsies of the gastroesophageal junction. American Journal of Gastroenterology 2011; 106: S10-.

151. Tyberg, A. M., Sundararajan, S., Zeffren, N., Ando, Y., Aden, B., Jacobson, I. M., and Gambarin-Gelwan, M. Cirrhosis and barrett's esophagus (BE): Diagnosis and prevalence. Hepatology 2011; 54: 1270A-.

152. Sanchez-Santos, R., Tome, Espineira C., Estevez, Fernandez S., Gonzalez, Fernandez S., Vazquez, Astray E., Turnes, J., Ulla, J. L., Brox, A., Marino, E., and Pinon, Cimadevila M. Esophago-gastric pathology in morbid obese: Preoperative diagnosis and influence in technique selection. Obesity Surgery 2011; 21 (8): 962-.

153. Rege, T. A., Goldblum, J. R., Falk, G., Kuo, F., and Odze, R. D. Does histology of gastroesophageal junction (GEJ) biopsies predict future development of Barrett's Esophagus (BE). Laboratory Investigation 2011; 91: 165A-.

154. Rebay, M. J., Durand, L., Cerisoli, C. L., Rodriguez, P. C., Bolino, C., De, Elizalde S., Elsner, B., Avagnina, A., and Caro, L. E. Prevalence of Barrett's esophagus, dysplasia and esophageal adenocarcinoma in a single centre in argentina. Gastrointestinal endoscopy 2011; 73 (4 SUPPL. 1): AB279-.

155. O'Leary, D. A., O'Connor, A., and O'Morain, C. A. Barrett's metaplasia: Underdiagnosed at endoscopy. Gastrointestinal endoscopy 2011; 73 (4 SUPPL. 1): AB210-AB211.

156. Manabe, N., Haruma, K., Hamada, H., Yamauchi, R., Teramen, K., Inoue, K., and Hata, J. Is the course of gastroesophageal reflux disease progressive? A 10-year follow-up of 200 patients. Gastroenterology 2011; 140 (5 SUPPL. 1): S581-S582.

157. Belhocine, K., Letessier, E., Coron, E., Boulanger, G., Galmiche, J. P., and Des Varannes, S. B. Laparoscopic sleeve gastrectomy (LSG) for obesity: Consequences on gastroesophageal reflux disease (GERD) symptoms, characteristics of reflux events and esophageal motility. Gastroenterology 2011; 140 (5 SUPPL. 1): S398-.

158. Altawil, J., Irwin, B., Jinjuvadia, R., Torrazza-Perez, E. G., and Antaki, F. Chemoprevention of Barrett's esophagus in patients with acid reflux. Gastroenterology 2011; 140 (5 SUPPL. 1): S258-.

159. Bashir, S., Doran, A. E., and Borum, M. L. Esophageal inlet patch: Experience in a tertiary care center. Gastroenterology 2011; 140 (5 SUPPL. 1): S233-.

160. Omer, Z., Liang, C., Nattinger, K. J., Yachimski, P. S., and Hur, C. Risk stratification for Barrett's esophagus: Interim results of a logistic regression analysis. Gastroenterology 2011; 140 (5 SUPPL. 1): S218-S219.

161. Bulsiewicz, W. J., Pasricha, S., Dellon, E. S., Madanick, R. D., Spacek, M., Orlando, R. C., and Shaheen, N. J. Efficacy and predictors of stricture development following radiofrequency ablation for Barrett's esophagus at a tertiary referral center. Gastroenterology 2011; 140 (5 SUPPL. 1): S217-.

162. Bulsiewicz, W. J., Pasricha, S., Dellon, E. S., Madanick, R. D., and Shaheen, N. J. Predictors of difficulty eradicating Barrett's esophagus with radiofrequency ablation. Gastroenterology 2011; 140 (5 SUPPL. 1): S216-.

163. Garman, K. S., Peery, A. F., Daugherty, N., Hoppo, T., Bream, S., Sanz, A. F., Spacek, M., Connors, D., Faulx, A. L., Chak, A., Luketich, J. D., Jobe, B. A., and Shaheen, J. Yield of transnasal endoscopy in an unselected general medical population. Gastroenterology 2011; 140 (5 SUPPL. 1): S211-.

164. Bulsiewicz, W. J., Pasricha, S., Dellon, E. S., Madanick, R. D., and Shaheen, N. J. The effect of operator experience on treatment of dysplastic Barrett's esophagus With radiofrequency ablation. Gastroenterology 2011; 140 (5 SUPPL. 1): S211-.

165. Yates, M., Luben, R., Cheong, E., Igali, L., Fitzgerald, R., Khaw, K.-T., and Hart, A. Dietary fat intake in the aetiology of Barrett's oesophagus and oesophageal adenocarcinoma - Data from a prospective cohort study (EPIC-Norfolk) using 7-day food diary data. Gastroenterology 2011; 140 (5 SUPPL. 1): S80-.

166. Wischin, C., Lenglinger, J., Wrba, F., Riegler, F. M., and Miholic, J. Reliability of reflux symptoms to detect recurrent gastro-esophageal reflux following fundoplication in patients with long segment Barrett's oesophagus. Journal of Clinical Gastroenterology 2011; 45 (2): 197-.

167. Zhang, M., Zou, X. P., Zhang, X. Q. I., Yu, C. G., Zhuge, Y. Z., Zhang, L. H., and Fan, X. S. Prevalence of Barrett's esophagus in Chinese mainland & #65,306; four years prospective study. Journal of Clinical Gastroenterology 2011; 45 (2): 184-.

168. Raman, S. R., Kella, V., Garber, S., Holover, S., and Cosgrove, J. M. Antireflux transoral incisionless fundoplication using esophyx: The New York evidence. Surgical Endoscopy and Other Interventional Techniques 2010; 24 (1 SUPPL. 1): S484-.

169. Bhattacharya, B. Granular cell tumors of the gastrointestinal tract: Clinicopathologic study of 63 cases. Histopathology 2010; 57: 89-.

170. Ngo, C., Mann, S., and Leung, J. Length of barrett's esophagus predicts progression. American Journal of Gastroenterology 2010; 105: S398-.

171. Lujan, G. and Genta, R. The inlet patch revisited: A clinicopathologic study of 569 patients with heterotopic gastric mucosa in the proximal esophagus. American Journal of Gastroenterology 2010; 105: S4-.

172. Dal-Paz, K., Navarro-Rodriguez, T., Natan, Eisig J., Correa, Barbuti R., Chinzon, D., and Prado Moraes-Filho, J. Patients with gastroesophageal reflux disease (GERD) treated with protonpump inhibitors have low adherence to outpatients-based treatment. Diseases of the Esophagus 2010; 23: 71A-72A.

173. Heimall, J., Arora, M., Holland, S. M., Heller, T., and Freeman, A. Gastrointestinal manifestations of autosomal dominant hyper IgE syndrome. Clinical Immunology 2010; 135 (2): 317-.

174. Gaddam, S., Rastogi, A., Gupta, N., Wani, S. B., Bansal, A., Singh, M., Singh, V., Reddymasu, S., Moloney, B., and Sharma, P. Prediction of Barrett's esophagus (BE) in patients with gastroesophageal reflux disease (GERD) using logistic regression model (LRM) and artificial neural network (ANN). Gastrointestinal endoscopy 2010; 71 (5): AB245-.

175. Singh, M., Gaddam, S., Singh, V., Gupta, N., Wani, S. B., Moloney, B., Higbee, A. D., Bansal, A., Rastogi, A., and Sharma, P. High prevalence of columnar lined esophagus in patients with chronic gastroesophageal reflux disease: Implications for disease definitions. Gastrointestinal endoscopy 2010; 71 (5): AB175-AB176.

176. Russo, E., Jonathan, H., Negus, R. P., Orchard, T., Teare, J. P., Thomas, H. J., and Powell, N. Longitudinal analysis of erosive and non-erosive GERD. Gastroenterology 2010; 138 (5 SUPPL. 1): S724-.

177. Vemulapalli, R., Genta, R. M., Souza, R. F., and Spechler, S. J. PPI-resistant heartburn in veteran patients: Underlying conditions and response to alterations in the dosage and type of PPI prescribed. Gastroenterology 2010; 138 (5 SUPPL. 1): S656-.

178. Ronkainen, J., Talley, N., Storskrubb, T., Vieth, M., Lind, T., Agreus, L., and Aro, P. Natural history of erosive esophagitis, the kalixanda study, a population-based study. Gastroenterology 2010; 138 (5 SUPPL. 1): S630-.

179. Gaddam, S., Wani, S. B., Gupta, N., Singh, M., Singh, V., Moloney, B., Rastogi, A., Bansal, A., and Sharma, P. Presence of hiatus hernia (HH) contributes to nocturnal reflux: Results from a large prospective cohort of patients with chronic gastroesophageal reflux disease (GERD). Gastroenterology 2010; 138 (5 SUPPL. 1): S558-.

180. Balbinot, S. S., Sakai, P., Ribeiro, U., Balbinot, R. A., Safatle-Ribeiro, A. V., Navarro-Rodriguez, T., Alves, V. A., Soares, I. C., and Carrilho, F. J. Comparative study of immunoexpression of junctional proteins (claudin 1, 3 and 4), cyclooxygenase-2 and inflammatory infiltrate in patients with erosive and non-erosive gastroesophageal reflux disease. Gastroenterology 2010; 138 (5 SUPPL. 1): S491-.

181. Galindo, G., Vassalle, J., Marcus, S. N., and Triadafilopoulos, G. Multi-modality evaluation of patients with GERD symptoms who have failed empiric PPI therapy. Gastroenterology 2010; 138 (5 SUPPL. 1): S487-.

182. Bardhan, K. D., Royston, C., Hoeroldt, B., Willemse, P. J., Lambertz, M. M., Srinivas, M., and Basumani, P. The natural history of Barrett's esophagus (BE): The view from a uk district general hospital (DGH). Gastroenterology 2010; 138 (5 SUPPL. 1): S334-.

183. Dann, M. D., Pickett-Blakely, O. E., Reynon, M. A., Walton, K. A., Furlong, M., Ebert, E. C., Shen, E., Manoukian, A. V., Michael, H., Ben-Menachem, T., and Das, K. M. Detection of early metaplasia at the esophagogastric junction (EGJ) in the absence of histological Barrett's epithelium using a monoclonal antibody. Gastroenterology 2010; 138 (5 SUPPL. 1): S332-.

184. Martinek, J., Strosova, A., Kostalova, K., Inna, T., Hrabal, P., Zavada, F., Suchanek, S., Stefanova, M., and Zavoral, M. Significant esophageal eosinophilia and typical endoscopic features are highly but not exclusively specific for eosinofilic esophagitis. Gastroenterology 2010; 138 (5 SUPPL. 1): S177-S178.

185. Rubenstein, J. H., Mattek, N., and Eisen, G. M. Assessment of risk for Barrett's esophagus by demographic features. Gastroenterology 2009; 136 (5 SUPPL. 1): A491-.

186. Tsibouris, P., Goula, K., Kalantzis, C., Apostolopoulos, P., Tsironis, C., Alexandrakis, G., Karameris, A., and Kalantzis, N. Carditis can partially regress after H. pylori eradication but not proton pump inhibitor treatment. Helicobacter 2009; 14 (4): 364-.

187. Tsibouris, P., Goula, K., Kalantzis, C., Liatsos, C., Tsironis, C., Kalafatis, E., Karameris, A., and Kalantzis, N. Intestinal metaplasia of the gastric cardia is more frequent in GERD patients with family history of GERD. Helicobacter 2009; 14 (4): 337-.

188. Cariello, M., Carrillo, P. A., Abecia, V. H., Talamazzi, A. R., Pogorelsky, V., Gomez, C. A. M., Davolos, J., and Paula, J. A. Epidemiology of Barrett esophagus in a university hospital health maintenance organization. Gastrointestinal endoscopy 2009; 69 (5): AB361-.

189. Poh, C. H., Gasiorowska, A., Navarro-Rodriguez, T., Willis, M. R., Noelck, N. J., Wendel, C., and Fass, R. Prevalence of upper gastrointestinal tract findings in patients with heartburn who failed PPI treatment versus those off antireflux treatment. Gastrointestinal endoscopy 2009; 69 (5): AB358-.

190. Chaurand-Lara, M., Sobrino-Cossio, S. R., Hernandez-Guerrero, A., Alonso-Larraga, J. O., Barranco, B. F., Alvaro, J., and Mora-Levy, J.-G. Narrow band imaging to identify short & ultra-short segment Barrett's esophagus in the presence of an irregular squamocolumnar junction. Gastrointestinal endoscopy 2009; 69 (5): AB354-.

191. Marek, T. A., Mularczyk, A., Szczepanska, A. J., Palen, P., Dziurkowska-Marek, A., Kajor, M., and Hartleb, M. Increasing prevalence of Barrett's esophagus with relatively low risk of neoplasia - Three-year prospective cohort study from central European country. Gastrointestinal endoscopy 2009; 69 (5): AB351-AB352.

192. Wu, W., Song, D.-D., Yuan, Y.-Z., Wu, Y.-L., and Zhu, Q. Esophageal adenocarcinoma in Shanghai China: A retrospective study. Digestion 2009; 79 (3 SUPPL. 1): 74-.

193. Lee, S. W., Jung, S. W., Ahn, J. H., Kim, S. Y., Park, S. M., Kim, J. N., Kim, D. I., Koo, J. S., Yim, H. J., Lee, H. S., and Choi, J. H. Risk factor of erosive esophagitis for adults with normal Z-line in Korea. Digestion 2009; 79 (3 SUPPL. 1): 73-.

194. Son, B. K., Baek, D. H., Jung, J. Y., Jun, D. W., Kim, S. H., Jo, Y. J., and Park, Y. S. Role of upper endoscopic evaluation in atypical chest pain patients with normal coronary angiographic fnding. Journal of gastroenterology and hepatology 2009; 24: A98-.

195. Kearney, D. J., Crump, C., Maynard, C., and Fisher, D. Exposure to EGD and mortality in a VA population with GERD. Evidence-Based Gastroenterology 2003; 4 (4): 120-121.

196. Gerson, L. B., Shetler, K., Triadafilopoulos, G., and Shaheen, N. J. What is the prevalence of Barrett's esophagus in asymptomatic populations? Evidence-Based Gastroenterology 2002; 3 (4): 110-111.

197. Shiota, S., Singh, S., Anshasi, A., and El-Serag, H. B. The prevalence of Barrett's esophagus in Asian countries: A systematic review and meta-analysis. Gastroenterology 2015; 148 (4 SUPPL. 1): S403-.

198. Gerson, L. B., Rutenberg, M., and Scott, R. Incremental benefit of computer-assisted brush-biopsy (WATS3D) compared to standard endoscopic biopsy for detection of barrett's esophagus (BE) and dysplasia: Systematic review and meta-analysis. Gastroenterology 2014; 146 (5 SUPPL. 1): S-307.

199. Miller, M. C., Brenner, A., Kroep, S., Inadomi, J. M., and Hur, C. Systematic review: Is there a secular trend in barrett's esophagus prevalence and incidence? Gastroenterology 2014; 146 (5 SUPPL. 1): S-185.

200. Pace, F. GERD natural history. Diseases of the Esophagus 2012; 25: 12A-13A.

201. Taylor, J. B. and Rubenstein, J. H. Meta-analysis of the association of gastroesophageal reflux disease with Barrett's esophagus: No association with short segment Barrett's esophagus. Gastroenterology 2010; 138 (5 SUPPL. 1): S330-.

202. Arastu, S., Henry, C. H., Infantolino, A., and Quirk, D. The frequency with which gastroenterologists follow guidelines in surveillance of barrett's esophagus. American Journal of Gastroenterology 2016; 111: S201-.

203. Wang, K., Duan, L., Zhang, L., Liu, Z., He, Z., and Ke, Y. The prevalence of GERD subtypes in the natural population with high esophageal cancer incidence of China. Journal of Gastroenterology and Hepatology (Australia) 2016; 31: 23-.

204. Takeshita, E., Sakata, Y., Hara, M., Tsuruoka, N., Sakata, N., Akutagawa, K., Matsunaga, K., Kusano, M., Iwakiri, R., and Fujimoto, K. Reflux symptoms and acid-related dyspepsia are more common in females than

males with or without endoscopic esophagitis: Analysis of 3,505 Japanese healthy subjects undergoing medical health checkups. Journal of Gastroenterology and Hepatology (Australia) 2016; 31: 301-.

205. Rubenstein, J., McConnell, D., Beer, D., Chak, A., Metko, V., and Clines, G. Associations of vitamin d deficiency and hyperparathyroidism with gastroesophageal reflux disease and its sequelae. American Journal of Gastroenterology 2016; 111: S203-S204.

206. Okada, T. and Adkins, G. Light endoscopic findings of okadaella gastrococcus like bacterium positive reactive gastropathy (OGLBP-RG). American Journal of Gastroenterology 2016; 111 (): S482-.

207. Chamarthy, P., Razjouyan, H., Chokhavatia, S., and Wang, X. Higher prevalence of non-erosive reflux disease (NERD) than erosive reflux disease (ERD) in type 2 diabetes mellitus (T2DM) patients. American Journal of Gastroenterology 2016; 111 (): S1249-S1250.

208. Yin, C., Zhang, J., and Wang, J. Prevalence and risk factors of Barrett's esophagusin Northwest China. Journal of Gastroenterology and Hepatology (Australia) 2016; 31: 24-.

209. David, W. J., Qumseya, B. J., Bartel, M. J., Badillo, R. J., Bhalla, R., Brahmbhatt, B., Melendez-Rosado, J., Moris, M., Kroner, T., Wolfsen, H. C., and Wallace, M. B. Interobserver agreement for differentiating normal vs. barrett's esophagus and erosive vs. non erosive esophagitis using volumetric laser endomicroscopy imaging technique. Gastroenterology 2014; 146 (5 SUPPL. 1): S-219.

210. Bond, A., Wilson, D., Hastings, A., Veeramootoo, D., and Singh, K. K. Barrett's oesophagus infers a higher rate of reflux following fundoplication. Diseases of the Esophagus 2012; 25:74A-.

211. Rebecchi, F., Giaccone, C., Festa, F., and Morino, M. Disappointing results of laparoscopic total fundoplication in the control of non acid reflux. Surgical Endoscopy and Other Interventional Techniques 2011; 25: S42-.

212. Dellon, E. S., Bower, J. J., Keku, T. O., Chen, X. L., Miller, C. R., Woosley, J. T., Orlando, R. C., and Shaheen, N. J. Markers of tyrosine kinase activity for diagnosis and treatment response in eosinophilic esophagitis: A pilot study of pERK 1/2 and pSTAT5. Gastroenterology 2011; 140 (5 SUPPL. 1): S187-.

213. Kahn, A., Al-Qaisi, M., Callaway, J., Burdick, G., Crowell, M. D., Vela, M., and Ramirez, F. C. The clinical course of women with barrett's esophagus. American Journal of Gastroenterology 2016; 111: S226-S227.

214. Takalkar, U. V., Kulkarni, U., and Reddy, D. N. Diagnostic yield of upper gastrointestinal endoscopy with reference to Barrett's esophagus in a tertiary care center from India. Journal of Gastroenterology and Hepatology (Australia) 2016; 31: 26-.

215. Arroyo-Martinez, Q., Rodriguez-Tellez, M., Garcia-Escudero, A., Brugal-Molina, J., Gonzalez-Campora, R., and Caunedo-Alvarez, A. Stem cells from submucosal glands as a possible origin for Barretts esophagus epithelium. Gastroenterology 2016; 150 (4 SUPPL. 1): S851-S852.

216. Gorodner, M. V., Clemente, G., and Grigaites, A. Barrett's esophagus after roux-en-y gastric bypass: Does regression occur? Surgical Endoscopy and Other Interventional Techniques 2016; 30: S255-.

217. Reynolds, J. L., Doggett, S., Mguyen, V., Bildzukewicz, N. A., Buckley III, F. P., and Lipham, J. C. Predicting magnetic sphincter augmentation failure. Surgical Endoscopy and Other Interventional Techniques 2016; 30: S237-. Najarian, R., Ketwaroo, G., Patil, D., and Lembo, A. Esophageal squamous papillomas: Incidentaloma or harbinger of human papilloma virus infection? Laboratory Investigation 2016; 96: 188A-.

218. Wang, Z., Lee, H.-C., Giacomelli, M. G., Liang, K., Ahsen, O. O., Figueiredo, M., Huang, Q., Fujimoto, J. G., and Mashimo, H. Automated optical coherence tomography image processing for three dimensional detection and visualization of subsurface glands in barrett's esophagus with dysplasia. Gastroenterology 2015; 148 (4 SUPPL. 1): S580-S581.

219. Siddiki, H. A., Lam-Himlin, D., Kahn, A., Alhalabi, K., Burdick, G. E., Crowell, M. D., De, Petris G., Pannala, R., Ramirez, F. C., and Fleischer, D. E. Intestinal metaplasia (IM) of the cardia: Incidence in patients with barrett's esophagus (BE) and those undergoing EGD for other indications. Gastroenterology 2015; 148 (4 SUPPL. 1): S219-.

220. Salem, A., Matthews, S., Mori, Y., Ibrahim, S., Meltzer, S., and Roland, B. C. Prevalence and associated risk factors of helicobacter pylori-negative gastritis. American Journal of Gastroenterology 2014; 109: S40-.

221. Wang, W., Uedo, N., Yang, Y., Peng, L., Wang, J., Li, H., and Wang, X. Autofluorescence imaging videoendoscopy predicts acid reflux in patients with gastroesophageal reflux disease. Gastroenterology 2013; 144 (5 SUPPL. 1): S848-.

222. Goldberg, A., Gerkin, R., and Young, M. A. Medical prevention of barrett's esophagus: Effects of statins and aspirin/NSAIDs. Gastroenterology 2013; 144 (5 SUPPL. 1): S701-.

223. Onuchina, E. and Tsukanov, V. The progressive course of gastroesophageal reflux disease in the elderly and its risk factors. Journal of gastroenterology and hepatology 2013; 28: 63-.

224. Abdalla, Y., Oshima, K., Howard, A., and Hachem, C. Practice patterns and outcomes in barrett's esophagus indeterminate for dysplasia. Gastrointestinal endoscopy 2012; 75 (4 SUPPL. 1): AB455-AB456.

225. Bandla, S., Thoms, K., Litle, V., Watson, T., Peters, J., Song, K., Godfrey, T. E., and Zhou, Z. Genomic analysis of esophageal columnar cell metaplasia reveals less frequent changes in non-goblet cell metaplasia than intestinal metaplasia. Laboratory Investigation 2012; 92: 155A-.

226. Cheung, C. K. Y., Wu, J., Chan, Y., Ching, J., Chan, F. K. L., and Sung, J. J. Increasing severity of reflux esophagitis (RE) among young patients with gastroesophageal reflux disease (GERD) in Chinese population: A 10-year prospective study. Gastroenterology 2009; 136 (5 SUPPL. 1): A737-.

227. Transnasal Oesophagoscopy (TNE). Health Technology Assessment Report, MOH/P/PAK/231.12 (TR), Issue 2011/111. Retrieved from: http://www.moh.gov.my/v/hta.

228. Endoscopic Ultrasound vs. Traditional Endoscopy for the Identification of Common Biliary and Gastroesophagael Problems: Clinical and Cost-Effectiveness.February 4, 2008. Retrieved from: https://v2disprod.evidencepartners.com/Generic/getAttachment2.php?id=1076

229. Gralnek IM, Adler SN, Yassin K, Koslowsky B, Metzger Y, Eliakim R. Detecting esophageal disease with second-generation capsule endoscopy: initial evaluation of the PillCam ESO 2. Endoscopy. 2008 Apr;40(04):275-9.

230. Neu B, Wettschureck E, Rösch T. Is esophageal capsule endoscopy feasible? Results of a pilot. Endoscopy. 2003 Nov;35(11):957-61.

Study design: Narrative review/report (n=349)

1. Vaezi, Michael F., Brill, Joel V., Mills, Michael R., Bernstein, Brett B., Ness, Reid M., Richards, William O., Brillstein, Lili, Leibowitz, Rebecca, Strople, Ken, Montgomery, Elizabeth A., and Patel, Kavita An Episode Payment Framework for Gastroesophageal Reflux Disease. Gastroenterology 2016; 150 (4): 1019-1025.

2. Vaezi, Michael F., Brill, Joel V., Mills, Michael R., Bernstein, Brett B., Ness, Reid M., Richards, William O., Brillstein, Lili, Leibowitz, Rebecca, Strople, Ken, Montgomery, Elizabeth A., and Patel, Kavita An Episode Payment Framework for Gastroesophageal Reflux Disease: Symptomatic Gastroesophageal Reflux Disease, Dysplastic and Nondysplastic Barrett's Esophagus, and Anti-Reflux Surgical and Endoscopic Interventions. Gastroenterology 2016; 150 (4): 1009-1018.

3. Leggit, Jeffrey C. Evaluation and treatment of GERD and upper GI complaints in athletes. Current sports medicine reports 2011; 10 (2): 109-114.

4. Scholl, Shannon, Dellon, Evan S., and Shaheen, Nicholas J. Treatment of GERD and proton pump inhibitor use in the elderly: practical approaches and frequently asked questions. The American journal of gastroenterology 2011; 106 (3): 386-392.

5. Morganstern, Bradley and Anandasabapathy, Sharmila GERD and Barrett's esophagus: diagnostic and management strategies in the geriatric population. Geriatrics 2009; 64 (7): 9-12.

6. Shaheen, Nicholas J. and Palmer, Lena B. Improving screening practices for Barrett's esophagus. Surgical oncology clinics of North America 2009; 18 (3): 423-437.

7. Ricer, Rick E. and Li, Christina Capsule endoscopy. What can we expect? The Journal of family practice 2005; Suppl: 15-18.

8. Piterman, Leon, Nelson, Mark, and Dent, John Gastro-oesophageal reflux disease--current concepts in management. Australian family physician 2004; 33 (12): 987-991.

9. Shalauta, Mark D. and Saad, Richard Barrett's esophagus. American family physician 2004; 69 (9): 2113-2118.

10. Spechler, S. J. and Barr, H. Review article: screening and surveillance of Barrett's oesophagus: what is a cost-effective framework? Alimentary pharmacology & therapeutics 2004; 19 Suppl 1: 49-53.

11. Spechler, Stuart Jon Barrett's esophagus and esophageal adenocarcinoma: pathogenesis, diagnosis, and therapy. The Medical clinics of North America 2002; 86 (6): 1423-1vii.

12. Delforge, M., Plomteux, O., Delfosse, V., Fontaine, F., Louis, E., and Societe Liegeoise de Gastro-Enterologie [Barrett's esophagus: overview]. Revue medicale de Liege 2002; 57 (8): 535-545.

13. Spechler, Stuart Jon Clinical practice. Barrett's Esophagus. The New England journal of medicine 2002; 346 (11): 836-842.

14. Axon, A. T. Chronic dyspepsia: who needs endoscopy?. Gastroenterology 1997; 112 (4): 1376-1380.

15. Fock, K. M., Talley, N., Goh, K. L., Sugano, K., Katelaris, P., Holtmann, G., Pandolfino, J. E., Sharma, P., Ang, T. L., Hongo, M., Wu, J., Chen, M., Choi, M.-G., Law, N. M., Sheu, B.-S., Zhang, J., Ho, K. Y., Sollano, J., Rani, A. A., Kositchaiwat, C., and Bhatia, S. Asia-Pacific consensus on the management of gastro-oesophageal reflux disease: An update focusing on refractory reflux disease and Barrett's oesophagus. Gut 2016; 65 (9): 1402-1415.

16. Rao, V. L., Micic, D., and Kim, K. E. Primary Care Evaluation and Management of Gastroenterologic Issues in Women. Obstetrics and Gynecology Clinics of North America 2016; 43 (2): 347-366.

17. Kapoor, H., Agrawal, D. K., and Mittal, S. K. Barrett's esophagus: Recent insights into pathogenesis and cellular ontogeny. Translational Research 2015; 166 (1): 28-40.

18. Sheu, B.-S., Chiu, C.-T., Lee, Y.-C., Chang, C.-Y., Wu, D.-C., Liou, J.-M., Wu, M.-S., Chang, W.-L., Wu, C.-Y., and Lin, J.-T. Consensus of gastroesophageal reflux disease in Taiwan with endoscopy-based approach covered by National Health Insurance. Advances in Digestive Medicine 2015; 2 (3): 85-94.

19. Sharma, P., Katzka, D. A., Gupta, N., Ajani, J., Buttar, N., Chak, A., Corley, D., El-Serag, H., Falk, G. W., Fitzgerald, R., Goldblum, J., Gress, F., Ilson, D. H., Inadomi, J. M., Kuipers, E. J., Lynch, J. P., McKeon, F., Metz, D., Pasricha, P. J., Pech, O., Peek, R., Peters, J. H., Repici, A., Seewald, S., Shaheen, N. J., Souza, R. F., Spechler, S. J., Vennalaganti, P., and Wang, K. Quality Indicators for the Management of Barrett's Esophagus, Dysplasia, and Esophageal Adenocarcinoma: International Consensus Recommendations from the American Gastroenterological Association Symposium. Gastroenterology 2015; 149 (6): 1599-1606.

20. Gupta, M. and Iyer, P. G. Screening for Barrett's Esophagus. Gastroenterology Clinics of North America 2015; 44 (2): 265-283.

21. Rubenstein, J. H. and Thrift, A. P. Risk factors and populations at risk: Selection of patients for screening for Barrett's oesophagus. Best Practice and Research: Clinical Gastroenterology 2015; 29 (1): 41-50.

22. Ro, T. H., Mathew, M. A., and Misra, S. Value of screening endoscopy in evaluation of esophageal, gastric and colon cancers 2015 Advances in Gastrointestinal Endoscopy. World journal of gastroenterology 2015; 21 (33): 9693-9706.

23. Hosoe, N., Naganuma, M., and Ogata, H. Current status of capsule endoscopy through a whole digestive tract. Digestive Endoscopy 2015; 27 (2): 205-215.

24. Ramzan, Z., Nassri, A. B., and Huerta, S. The use of imaging and biomarkers in diagnosing Barrett's esophagus and predicting the risk of neoplastic progression. Expert Review of Molecular Diagnostics 2014; 14 (5): 575-591.

25. Wood, R. K. Endoscopic aspects in diagnosis of gastroesophageal reflux disease and motility disorders: Bravo, capsule, and functional lumen imaging probe. Techniques in Gastrointestinal Endoscopy 2014; 16 (1): 2-9.

26. Loughrey, M. B. and Johnston, B. T. Guidance on the effective use of upper gastrointestinal histopathology. Frontline Gastroenterology 2014; 5 (2): 88-95.

27. Pauli, E. M. and Ponsky, J. L. A modern history of the surgeon-endoscopist. Techniques in Gastrointestinal Endoscopy 2013; 15 (4): 166-172.

28. Chokhavatia, S., Alli-Akintade, L., Harpaz, N., and Stern, R. Esophageal Pathology: A Brief Guide and Atlas. Otolaryngologic Clinics of North America 2013; 46 (6): 1043-1057.

29. Lagergren, J. and Lagergren, P. Recent developments in esophageal adenocarcinoma. CA Cancer Journal for Clinicians 2013; 63 (4): 232-248.

30. Katz, P. O., Gerson, L. B., and Vela, M. F. Guidelines for the diagnosis and management of gastroesophageal reflux disease. American Journal of Gastroenterology 2013; 108 (3): 308-328.

31. Varghese, Jr, Hofstetter, W. L., Rizk, N. P., Low, D. E., Darling, G. E., Watson, T. J., Mitchell, J. D., and Krasna, M. J. The society of thoracic surgeons guidelines on the diagnosis and staging of patients with esophageal cancer. Annals of Thoracic Surgery 2013; 96 (1): 346-356.

32. Illig, R., Klieser, E., Kiesslich, T., and Neureiter, D. GERD - Barrett - Adenocarcinoma: Do we have suitable prognostic and predictive molecular markers? Gastroenterology Research and Practice 2013 Article ID 643084, 14 pages

33. Krugmann, J., Neumann, H., Vieth, M., and Armstrong, D. What is the role of endoscopy and oesophageal biopsies in the management of GERD? Best Practice and Research: Clinical Gastroenterology 2013; 27 (3): 373-385.

34. Kheraj, R., Tewani, S. K., Ketwaroo, G., and Leffler, D. A. Quality Improvement in Gastroenterology Clinical Practice. Clinical Gastroenterology and Hepatology 2012; 10 (12): 1305-1314.

35. Appelman, H. D., Umar, A., Orlando, R. C., Sontag, S. J., Nandurkar, S., El-Zimaity, H., Lanas, A., Parise, P., Lambert, R., and Shields, H. M. Barrett's esophagus: Natural history. Ann New York Acad.Sci 2011; 1232 (1): 292-308.

36. Kadri, S., Lao-Sirieix, P., and Fitzgerald, R. C. Developing a nonendoscopic screening test for Barrett's esophagus. Biomarkers in Medicine 2011; 5 (3): 397-404.

37. Cash, B. D., Banerjee, S., Anderson, M. A., Ben-Menachem, T., Decker, G. A., Fanelli, R. D., Fukami, N., Ikenberry, S. O., Jain, R., Jue, T. L., Khad, K. M., Krinsky, M. L., Malpas, P. M., Maple, J. T., Sharaf, R., and Dominitz, J. A. Ethnic issues in endoscopy. Gastrointestinal endoscopy 2010; 71 (7): 1108-1112.

38. Ciriza-de-los-Rios, C. Barrett's esophagus - a review. Revista Espanola de Enfermedades Digestivas 2010; 102 (4): 257-269.

39. Garud, S. S., Keilin, S., Qiang, Cai, and Willingham, F. F. Review: Diagnosis and management of Barrett's esophagus for the endoscopist. Therapeutic Advances in Gastroenterology 2010; 3 (4): 227-238.

40. Spechler, S. J., Fitzgerald, R. C., Prasad, G. A., and Wang, K. K. History, Molecular Mechanisms, and Endoscopic Treatment of Barrett's Esophagus. Gastroenterology 2010; 138 (3): 854-869.

41. Lambert, R. and Halnaut, P. Esophageal cancer: Cases and causes (Part I). Endoscopy 2007; 39 (6): 550-555.

42. Schuchert, M. J. and Luketich, J. D. Management of Barrett's esophagus. Oncology 2007; 21 (11): 1382-1392.

43. Obesity. Annals of Internal Medicine 2008; 149 (7): ITC41-ITC416.

44. Wang, K. K. and Sampliner, R. E. Updated guidelines 2008 for the diagnosis, surveillance and therapy of Barrett's esophagus. American Journal of Gastroenterology 2008; 103 (3): 788-797.

45. Barritt IV, A. S. and Shaheen, N. J. Should patients with Barrett's oesophagus be kept under surveillance? The case against. Best Practice and Research: Clinical Gastroenterology 2008; 22 (4): 741-750.

46. Lichtenstein, D. R., Cash, B. D., Davila, R., Baron, T. H., Adler, D. G., Anderson, M. A., Dominitz, J. A., Gan, S.-I., Harrison III, M. E., Ikenberry, S. O., Qureshi, W. A., Rajan, E., Shen, B., Zuckerman, M. J., Fanelli, R. D., and VanGuilder, T. Role of endoscopy in the management of GERD. Gastrointestinal endoscopy 2007; 66 (2): 219-224.

47. Tse, E. and Holloway, R. H. Update on gastro-oesophageal reflux disease. Medicine Today 2007; 8 (4): 14-22.

48. Armstrong, D., Marshall, J. K., Chiba, N., Enns, R., Fallone, C. A., Fass, R., Hollingworth, R., Hunt, R. H., Kahrilas, P. J., Mayrand, S., Moayyedi, P., Paterson, W. G., Sadowski, D., and Veldhuyzen van Zanten, S. J. O. Canadian Concensus Conference on the management of gastroesophageal reflux disease in adults - Update 2004. Canadian Journal of Gastroenterology 2005; 19 (1): 15-35.

49. Aviv, J. E. Transnasal esophagoscopy: State of the art. Otolaryngology - Head and Neck Surgery 2006; 135 (4): 616-619.

50. Williams, L. J., Guernsey, D. L., and Casson, A. G. Biomarkers in the molecular pathogenesis of esophageal (Barrett) adenocarcinoma. Current Oncology 2006; 13 (1): 33.

51. Pennathur, A., Landreneau, R. J., and Luketich, J. D. Surgical aspects of the patient with high-grade dysplasia. Seminars in Thoracic and Cardiovascular Surgery 2006; 17 (4): 326-332.

52. Hirota, W. K., Zuckerman, M. J., Adler, D. G., Davila, R. E., Egan, J., Leighton, J. A., Qureshi, W. A., Rajan, E., Fanelli, R., Wheeler-Harbaugh, J., Baron, T. H., and Faigel, D. O. ASGE guideline: The role of endoscopy in the surveillance of premalignant conditions of the upper GI tract. Gastrointestinal endoscopy 2006; 63 (4): 570-580.

53. Sharma, V. K., Eliakim, R., Sharma, P., and Faigel, D. ICCE consensus for esophageal capsule endoscopy. Endoscopy 2005; 37 (10): 1060-1064.

54. Smith, L. and Coughlin, L. Updated ACG guidelines for diagnosis and treatment of GERD. American family physician 2005; 71 (12): 2376-2383.

55. Sidorenko, E. I. and Sharma, P. High-resolution chromoendoscopy in the esophagus. Gastrointestinal Endoscopy Clinics of North America 2004; 14 (3): 437-451.

56. Spechler, S. J. Review article: What I do now to manage adenocarcinoma risk, and what I may be doing in 10 years' time. Alimentary Pharmacology and Therapeutics, Supplement 2004; 20 (5): 105-110.

57. Katelaris, P., Holloway, R., Talley, N., Gotley, D., Williams, S., and Dent, J. Gastro-oesophageal reflux disease in adults: Guidelines for clinicians. Journal of Gastroenterology and Hepatology (Australia) 2002; 17 (8): 825-833.

58. Spechler, S. J. Barrett's esophagus. New England Journal of Medicine 2002; 346 (11): 836-842.

59. Basu, K. K. and De Caestecker, J. S. Surveillance in Barrett's oesophagus: A personal view. Postgraduate Medical Journal 2002; 78 (919): 263-268.

60. Spechler, S. J. Acid suppression therapy for Barrett's esophagus. European Journal of Surgery, Supplement 2001; 167 (586): 78-81.

61. Freston, J. W. Motion - All patients with GERD should be offered once in a lifetime endoscopy: Arguments against the motion. Canadian Journal of Gastroenterology 2002; 16 (8): 555-558.

62. Falk, G. W. Barrett's esophagus. Clinical Perspectives in Gastroenterology 2001; 4 (5): 267-275.

63. Spechler, S. J. Barrett's oesophagus: Diagnosis and management. Bailliere's Best Practice and Research in Clinical Gastroenterology 2000; 14 (5): 857-879.

64. Falk, G. W. Reflux disease and Barrett's esophagus. Endoscopy 1999; 31 (1): 9-16.

65. Lambert, R. The role of endoscopy in the prevention of esophagogastric cancer. Endoscopy 1999; 31 (2): 180-199.

66. Moss, S. F. Consensus statement for management of gastroesophageal reflux disease: Result of workshop meeting at Yale University School of Medicine, Department of Surgery, November 16 and 17, 1997. Journal of Clinical Gastroenterology 1998; 27 (1): 6-12.

67. Bhardwaj, A., Hollenbeak, C. S., Pooran, N., and Mathew, A. A meta-analysis of the diagnostic accuracy of esophageal capsule endoscopy for Barrett's esophagus in patients with gastroesophageal reflux disease (DARE structured abstract). American Journal of Gastroenterology 2009; 104: 1533-1539.

68. Singh, Rajvinder, Ragunath, Krish, and Jankowski, Janusz Barrett's Esophagus: Diagnosis, Screening, Surveillance, and Controversies. Gut and liver 2007; 1 (2): 93-100.

69. Barr, H., Kendall, C., and Stone, N. The light solution for Barrett's oesophagus Photodiagnosis and photodynamic therapy for columnar-lined oesophagus. Photodiagnosis and photodynamic therapy 2004; 1 (1): 75-84.

70. Vaira, Dino, Gatta, Luigi, Ricci, Chiara, Castelli, Valentina, Fiorini, Giulia, Kajo, Enkeleda, and Lanzini, Alberto Gastroesophageal reflux disease and Barrett's esophagus. Internal and emergency medicine 2011; 6 (4): 299-306.

71. Louis, H. Reflux disease and Barrett's esophagus. Endoscopy 2007; 39 (11): 969-973.

72. Eisen, Glenn M. Capsule endoscopy. New applications. The Journal of Family Practice 2005; 54(12): S9-

73. Kyrgidis, Athanassios, Kountouras, Jannis, Zavos, Christos, and Chatzopoulos, Dimitrios New molecular concepts of Barrett's esophagus: clinical implications and biomarkers. The Journal of surgical research 2005; 125 (2): 189-212.

74. Bergman, J. J. G. H. Gastroesophageal reflux disease and Barrett's esophagus. Endoscopy 2005; 37 (1): 8-18.

75. Peters, J. H. and Wang, K. K. How should Barrett's ulceration be treated? Surgical endoscopy 2004; 18 (2): 338-344.

76. DeVault, K. R. and Castell, D. O. Current diagnosis and treatment of gastroesophageal reflux disease. Mayo Clinic proceedings 1994; 69 (9): 867-876.

77. Pophali, P. and Halland, M. Barrett's oesophagus: Diagnosis and management. BMJ (Online) 2016; 353:i2373.

78. Lin, J., Kligerman, S., Goel, R., Sajedi, P., Suntharalingam, M., and Chuong, M. D. State-of-the-art molecular imaging in esophageal cancer management: Implications for diagnosis, prognosis, and treatment. Journal of Gastrointestinal Oncology 2015; 6 (1): 3-19.

79. Pech, O. Reflux and Barrett's disease. Endoscopy 2014; 46 (4): 306-309.

80. Pech, O. Esophageal disease. Gastrointestinal endoscopy 2013; 78 (3): 405-409.

81. De Palma, G. D. Management strategies of Barrett's esophagus. World journal of gastroenterology 2012; 18 (43): 6216-6225.

82. Anand, O., Wani, S., and Sharma, P. Gastroesophageal reflux disease and Barrett's esophagus. Endoscopy 2008; 40 (2): 126-130.

83. Sayana, H., Wani, S., and Sharma, P. Esophageal adenocarcinoma and Barrett's esophagus. Minerva Gastroenterologica e Dietologica 2007; 53 (2): 157-169.

84. Musana, A. K., Yale, S. H., and Lang, K. A. Managing dyspepsia in a primary care setting. Clinical Medicine and Research 2006; 4 (4): 337-342.

85. Barr, H., Stone, N., and Rembacken, B. Endoscopic therapy for Barrett's oesophagus. Gut 2005; 54 (6): 875-884.

86. Moayyedi, P. and Ford, A. Recent developments in gastroenterology. British Medical Journal 2002; 325 (7377): 1399-1402.

87. Bass, B. L. What's new in general surgery: Gastrointestinal conditions. Journal of the American College of Surgeons 2002; 195 (6): 835-854.

88. Koop, H. Reflux disease and Barrett's esophagus. Endoscopy 2000; 32 (2): 101-107.

89. Chang, Chi Yang, Cook, Michael B., Lee, Yi Chia, Lin, Jaw Town, Ando, Takafumi, Bhatia, Shobna, Chow, Wong Ho, El-Omar, Emad M., Goto, Hidemi, Li, Yang Qing, McColl, Kenneth, Reddy, Nageshwar, Rhee, Poong Lyul, Sharma, Prateek, Sung, Joseph J. Y., Ghoshal, Uday, Wong, Jennie Y. Y., Wu, Justin C. Y., Zhang, Jun, Ho, Khek Yu, and Asian Barrett's Consortium Current status of Barrett's esophagus research in Asia. Journal of gastroenterology and hepatology 2011; 26 (2): 240-246.

90. Schuchert, Matthew J., McGrath, Kevin, and Buenaventura, Percival O. Barrett's esophagus: diagnostic approaches and surveillance. Seminars in Thoracic and Cardiovascular Surgery 2005; 17 (4): 301-312.

91. Sharma, P. and Sidorenko, E. I. Are screening and surveillance for Barrett's oesophagus really worthwhile? Gut 2005; 54 Suppl 1: i27-i32.

92. Chen, X., Zhu, L.-R., and Hou, K.-H. The characteristics of Barrett's esophagus: An analysis of 4120 cases in China. Diseases of the Esophagus 2009; 22 (4): 348-353.

93. Quera, R., O'Sullivan, K., and Quigley, E. M. M. Surveillance in barrett's oesophagus: Will a strategy focused on a high-risk group reduce mortality from oesophageal adenocarcinoma? Endoscopy 2006; 38 (2): 162-169.

94. Sharma, P. Review article: Prevalence of Barrett's oesophagus and metaplasia at the gastro-oesophageal junction. Alimentary Pharmacology and Therapeutics, Supplement 2004; 20 (5): 48-54.

95. Assimakopoulos, D. and Patrikakos, G. The role of gastroesophageal reflux in the pathogenesis of laryngeal carcinoma. American Journal of Otolaryngology - Head and Neck Medicine and Surgery 2002; 23 (6): 351-357.

96. Spechler, S. J. Screening for Barrett's esophagus. Reviews in gastroenterological disorders 2002; 2 (SUPPL. 2): S25-S29.

97. Gerson, L. B. and Triadafilopoulos, G. Screening for esophageal adenocarcinoma: An evidence-based approach. American Journal of Medicine 2002; 113 (6): 499-505.

98. Pech, O., Gossner, L., May, A., and Ell, C. Management of Barrett's oesophagus, dysplasia and early adenocarcinoma. Best Practice and Research: Clinical Gastroenterology 2001; 15 (2): 267-284.

99. Sontag, S. J. Preventing death of Barrett's cancer: Does frequent surveillance endoscopy do it? American Journal of Medicine 2001; 111 (8 SUPPL. 1): 137S-141S.

100. Riddell, R. H. Early detection of neoplasia of the esophagus and gastroesophageal junction. American Journal of Gastroenterology 1996; 91 (5): 853-863.

101. Cooper, G. S. Indications and contraindications for upper gastrointestinal endoscopy. Gastrointestinal Endoscopy Clinics of North America 1994; 4 (3): 439-454.

102. Hetzel, D. P. and McCallum, R. W. The natural history of reflux esophagitis. Acta Endoscopica 1993; 23 (2): 73-81.

103. Whiteman, David C. and Kendall, Bradley J. Barrett's oesophagus: epidemiology, diagnosis and clinical management. The Medical journal of Australia 2016; 205 (7): 317-324.

104. Fry, Lucia C., Monkemuller, Klaus, and Malfertheiner, Peter Functional heartburn, nonerosive reflux disease, and reflux esophagitis are all distinct conditions--a debate: con. Current treatment options in gastroenterology 2007; 10 (4): 305-311.

105. di Pietro, Massimiliano and Fitzgerald, Rebecca C. Screening and risk stratification for Barrett's esophagus: how to limit the clinical impact of the increasing incidence of esophageal adenocarcinoma. Gastroenterology Clinics of North America 2013; 42 (1): 155-173.

106. Buxbaum, J. L. and Eloubeidi, M. A. Endoscopic evaluation and treatment of esophageal cance. Minerva Gastroenterologica e Dietologica 2009; 55 (4): 455-469.

107. di Pietro, Massimiliano, Peters, Christopher J., and Fitzgerald, Rebecca C. Clinical puzzle: Barrett's oesophagus. Disease models & mechanisms 2008; 1 (1): 26-31.

108. Sabate, Jean Marc, Jouet, Pauline, and Coffin, Benoit [Gastroesophageal reflux in adults. Hiatal hernia]. La Revue du praticien 2006; 56 (14): 1591-1596.

109. Goldblum, John R. Barrett's esophagus and Barrett's-related dysplasia. Modern pathology 2003; 16 (4): 316-324.

110. Katzka, David A. Barrett's esophagus: surveillance and treatment. Gastroenterology Clinics of North America 2002; 31 (2): 481-497.

111. Kleeff, J., Friess, H., Liao, Q., and Buchler, M. W. Immunohistochemical presentation in non-malignant and malignant Barrett's epithelium. Diseases of the esophagus 2002; 15 (1): 10-15.

112. Spechler, S. J. Screening and surveillance for complications related to gastroesophageal reflux disease. The American journal of medicine 2001; 111 Suppl 8A: 130S-136S.

113. Gopal, D. V. Another look at Barrett's esophagus. Current thinking on screening and surveillance strategies. Postgraduate medicine 2001; 110 (3): 57-58.

114. Bammer, T., Hinder, R. A., Klaus, A., Trastek, V. F., and Achem, S. R. Rationale for surgical therapy of Barrett esophagus. Mayo Clinic proceedings 2001; 76 (3): 335-342.

115. Katzka, D. A. and Rustgi, A. K. Gastroesophageal reflux disease and Barrett's esophagus. The Medical clinics of North America 2000; 84 (5): 1137-1161.

116. Boyer, J. [Barrett's esophagus]. La Revue du praticien 1999; 49 (11): 1159-1165.

117. Kuipers, E. J. Review article: exploring the link between Helicobacter pylori and gastric cancer. Alimentary pharmacology & therapeutics 1999; 13 Suppl 1 (): 3-11.

118. Spivak, H., Lelcuk, S., and Hunter, J. G. Laparoscopic surgery of the gastroesophageal junction. World Journal of Surgery 1999; 23 (4): 356-367.

119. Mabrut, J. Y. and Baulieux, J. [Management of Barrett's esophagus]. Journal de chirurgie 1999; 136 (6): 301-308.

120. Bartlesman, J. F., Hameeteman, W., and Tytgat, G. N. Barrett's oesophagus. European journal of cancer prevention 1992; 1 (4): 323-325.

121. Tepes, B. Population based Helicobacter pylori screening and eradication: Advances versus side effects. Current Pharmaceutical Design 2014; 20 (28): 4501-4509.

122. De Jonge, P. J. F., Van, Blankenstein M., Grady, W. M., and Kuipers, E. J. Barrett's oesophagus: Epidemiology, cancer risk and implications for management. Gut 2014; 63 (1): 191-202.

123. Sharma, V. K. Role of endoscopy in GERD. Gastroenterology Clinics of North America 2014; 43 (1): 39-46.

124. Bivin, W. W., Finkelstein, S. D., and Silverman, J. F. Molecular occurrences in the neoplastic progression of barrett esophagus: Can molecular analysis play a role in risk stratification? Pathology Case Reviews 2014; 19 (1): 28-35.

125. Parker, C. E., Spada, C., Mcalindon, M., Davison, C., and Panter, S. Capsule endoscopy-not just for the small bowel: A review. Expert Review of Gastroenterology and Hepatology 2014; 9 (1): 79-89.

126. Ishimura, N., Okada, M., Mikami, H., Okimoto, E., Fukuda, N., Uno, G., Aimi, M., Oshima, N., Ishihara, S., and Kinoshita, Y. Pathophysiology of barrett's esophagus-associated neoplasia: Circumferential spatial predilection. Digestion 2014; 89 (4): 291-298.

127. Schneider, A., Michaud, L., and Gottrand, F. Esophageal atresia: Metaplasia, Barrett. Diseases of the Esophagus 2013; 26 (4): 425-427.

128. Bush, C. M. and Postma, G. N. Transnasal Esophagoscopy. Otolaryngologic Clinics of North America 2013; 46 (1): 41-52.

129. Tiwari, A. K., Laird-Fick, H. S., Wali, R. K., and Roy, H. K. Surveillance for gastrointestinal malignancies. World journal of gastroenterology 2012; 18 (33): 4507-4516.

130. Huang, Q., Fang, D. C., Fang, J. Y., Chen, M. H., Zhang, J., Lin, L., Dai, N., Yu, C. G., and Zhang, H. J. How to diagnose and manage patients with Barrett's esophagus in China. Journal of Digestive Diseases 2012; 13 (3): 123-132.

131. Fisichella, P. M., Carter, S. R., and Robles, L. Y. Presentation, diagnosis, and treatment of oesophageal motility disorders. Digestive and Liver Disease 2012; 44 (1): 1-7.

132. Li, Z. and Rice, T. W. Diagnosis and Staging of Cancer of the Esophagus and Esophagogastric Junction. Surgical Clinics of North America 2012; 92 (5): 1105-1126.

133. Goh, K. Gastroesophageal Reflux Disease in Asia: A historical perspective and present challenges. Journal of Gastroenterology and Hepatology (Australia) 2011; 26 (SUPPL. 1): 2-10.

134. Fock, K. M. and Ang, T. L. Global epidemiology of Barrett's esophagus. Expert Review of Gastroenterology and Hepatology 2011; 5 (1): 123-130.

135. Fang, D. C., Lin, S. R., Huang, Q., Yu, Z. L., Yuan, Y. Z., Chen, M. H., Bai, W. Y., Chen, X. X., Zhang, J., Li, Y. Q., Zhou, L. Y., Ke, M. Y., Fang, X. C., and Lan, Y. Chinese National Consensus on diagnosis and management of Barrett's esophagus (BE): Revised edition, June 2011, Chongqing, China. Journal of Digestive Diseases 2011; 12 (6): 415-419.

136. Di, Pietro M. Barretts esophagus and reflux disease. Endoscopy 2010; 42 (11): 910-915.

137. Bisschops, R. and Demedts, I. Reflux and Barrett's disease. Endoscopy 2009; 41 (1): 42-45.

138. Niv, Y. Capsule endoscopy: No longer limited to the small bowel. Israel Medical Association Journal 2010; 12 (3): 178-180.

139. Madani, A., Sowerby, L., Gregor, J. C., Wong, E., and Fung, K. Detecting the other reflux disease. Journal of Family Practice 2010; 59 (2): 102-107.

140. Muto, M., Horimatsu, T., Ezoe, Y., Hori, K., Yukawa, Y., Morita, S., Miyamoto, S., and Chiba, T. Narrow-band imaging of the gastrointestinal tract. Journal of gastroenterology 2009; 44 (1): 13-25.

141. Herszenyi, L., Pregun, I., and Tulassay, Z. Diagnosis and recognition of early esophageal neoplasia. Digestive Diseases 2009; 27 (1): 24-30.

142. Lenglinger, J., Izay, B., Eisler, M., Wrba, F., Zacherl, J., Prager, G., and Riegler, F. M. Barrett's esophagus: Size of the problem and diagnostic value of a novel histopathology classification. European Surgery - Acta Chirurgica Austriaca 2009; 41 (1): 26-39. \

143. Westerhof, J., Koornstra, J. J., and Weersma, R. K. Capsule endoscopy: A review from the clinician's perspectives. Minerva Gastroenterologica e Dietologica 2008; 54 (2): 189-207.

144. Reddymasu, S. C. and Sharma, P. Advances in Endoscopic Imaging of the Esophagus. Gastroenterology Clinics of North America 2008; 37 (4): 763-774.

145. Mathus-Vliegen, E. M. H. The role of endoscopy in bariatric surgery. Best Practice and Research: Clinical Gastroenterology 2008; 22 (5): 839-864.

146. Nakamura, T. and Terano, A. Capsule endoscopy: Past, present, and future. Journal of gastroenterology 2008; 43 (2): 93-99.

147. Bittinger, M. and Messmann, H. Gastroesophageal reflux disease and Barrett's esophagus. Endoscopy 2007; 39 (2): 118-123.

148. Shapiro, M., Moore, A., and Fass, R. Refractory gastroesophageal reflux disease - What next?. Journal of Respiratory Diseases 2007; 28 (10): 427-435.

149. Ponsot, P. Barrett's oesophagus: Endoscopic diagnosis and follow-up. Annales de chirurgie 2006; 131 (1): 3-6.

150. Canon, C. L., Morgan, D. E., Einstein, D. M., Herts, B. R., Hawn, M. T., and Johnson, L. F. Surgical approach to gastroesophageal reflux disease: What the radiologist needs to know. Radiographics 2005; 25 (6): 1485-1499.

151. Saadi, A. and Fitzgerald, R. C. Mechanisms underlying the progression of Barrett's oesophagus. Drug Discovery Today: Disease Mechanisms 2006; 3 (4): 447-456.

152. Camilleri, M. Gastroenterology and Hepatology Clinical Research Update: 2005-2006. Clinical Gastroenterology and Hepatology 2006; 4 (12): 1428-1433.

153. Kiesslich, R. and Neurath, M. F. Magnifying chromoendoscopy for the detection of premalignant gastrointestinal lesions. Best Practice and Research: Clinical Gastroenterology 2006; 20 (1): 59-78.

154. Bergman, J. J. G. H. Latest developments in the endoscopic management of gastroesophageal reflux disease and Barrett's esophagus: An overview of the year's literature. Endoscopy 2006; 38 (2): 122-132.

155. Lambert, R. Upper gastrointestinal tumors. Endoscopy 2006; 38 (2): 133-136.

156. Takubo, K., Arai, T., Sawabe, M., Iwakiri, K., and Vieth, M. Columnar-lined esophagus, Barrett's esophagus and adenocarcinoma: Differences between east and west. Digestive Endoscopy 2006; 18 (SUPPL. 1): S16-S20.

157. Hongo, M. Review article: Barrett's oesophagus and carcinoma in Japan. Alimentary Pharmacology and Therapeutics, Supplement 2004; 20 (8): 50-54.

158. Mariani, G., Boni, G., Barreca, M., Bellini, M., Fattori, B., Alsharif, A., Grosso, M., Stasi, C., Costa, F., Anselmino, M., Marchi, S., Rubello, D., and Strauss, H. W. Radionuclide gastroesophageal motor studies. Journal of Nuclear Medicine 2004; 45 (6): 1004-1028.

159. Conio, M., Lapertosa, G., Blanchi, S., and Filiberti, R. Barrett's esophagus: An update. Critical Reviews in Oncology/Hematology 2003; 46 (2): 187-206.

160. Rosch, T. DDW Reports 2003 Orlando: Reflux disease and Barrett's esophagus. Endoscopy 2003; 35 (10): 809-815.

161. Koop, H. Gastroesophageal reflux disease and Barrett's esophagus. Endoscopy 2002; 34 (2): 97-103.

162. Cameron, A. J. Epidemiology of Barrett's esophagus and adenocarcinoma. Diseases of the Esophagus 2002; 15 (2): 106-108.

163. Moreto, M. Diagnosis of esophagogastric tumors. Endoscopy 2001; 33 (1): 1-7.

164. DeMeester, S. R. and DeMeester, T. R. Columnar mucosa and intestinal metaplasia of the esophagus: Fifty years of controversy. Annals of Surgery 2000; 231 (3): 303-321.

165. Rosch, T. Gastroesophageal reflux disease and Barrett's esophagus. Endoscopy 2000; 32 (11): 826-835.

166. Cittadini, G., Sardanelli, F., and De, Cicco E. State-of-the-art barium examination of gastroesophageal reflux disease. Gastroenterology International 1997; 10 (SUPPL. 2): 18-24.

167. Katzka, D. A. and Castell, D. O. Barrett's esophagus: Management and surveillance. Article seven in the series. Practical Gastroenterology 1996; 20 (1): 24-35.

168. Jung, Hye Kyung Epidemiology of gastroesophageal reflux disease in Asia: a systematic review. Journal of neurogastroenterology and motility 2011; 17 (1): 14-27.

169. ASGE Standards of Practice Committee, Muthusamy, V. Raman, Lightdale, Jenifer R., Acosta, Ruben D., Chandrasekhara, Vinay, Chathadi, Krishnavel V., Eloubeidi, Mohamad A., Fanelli, Robert D., Fonkalsrud, Lisa, Faulx, Ashley L., Khashab, Mouen A., Saltzman, John R., Shaukat, Aasma, Wang, Amy, Cash, Brooks, and DeWitt, John M. The role of endoscopy in the management of GERD. Gastrointestinal endoscopy 2015; 81 (6): 1305-1310.

170. De Palma, Giovanni D. and Forestieri, Pietro Role of endoscopy in the bariatric surgery of patients. World journal of gastroenterology 2014; 20 (24): 7777-7784.

171. Spechler, Stuart Jon Barrett esophagus and risk of esophageal cancer: a clinical review. JAMA 2013; 310 (6): 627-636.

172. ASGE Standards of Practice Committee, Sharaf, Ravi N., Shergill, Amandeep K., Odze, Robert D., Krinsky, Mary L., Fukami, Norio, Jain, Rajeev, Appalaneni, Vasundhara, Anderson, Michelle A., Ben-Menachem, Tamir, Chandrasekhara, Vinay, Chathadi, Krishnavel, Decker, G. Anton, Early, Dana, Evans, John A., Fanelli, Robert D., Fisher, Deborah A., Fisher, Laurel R., Foley, Kimberly Q., Hwang, Joo Ha, Jue, Terry L., Ikenberry, Steven O., Khan, Khalid M., Lightdale, Jennifer, Malpas, Phyllis M., Maple, John T., Pasha, Shabana, Saltzman, John, Dominitz, Jason A., and Cash, Brooks D. Endoscopic mucosal tissue sampling. Gastrointestinal endoscopy 2013; 78 (2): 216-224.

173. Shaheen, Nicholas J., Weinberg, David S., Denberg, Thomas D., Chou, Roger, Qaseem, Amir, Shekelle, Paul, and Clinical Guidelines Committee of the American College of Physicians Upper endoscopy for gastroesophageal reflux disease: best practice advice from the clinical guidelines committee of the American College of Physicians. Annals of internal medicine 2012; 157 (11): 808-816.

174. Taylor, Justin B. and Rubenstein, Joel H. Meta-analyses of the effect of symptoms of gastroesophageal reflux on the risk of Barrett's esophagus. The American journal of gastroenterology 2010; 105 (8): 1729-1738.

175. Shaheen, Nicholas and Ransohoff, David F. Gastroesophageal reflux, barrett esophagus, and esophageal cancer: scientific review. JAMA 2002; 287 (15): 1972-1981.

176. Fiocca, Roberto, Mastracci, Luca, Milione, Massimo, Parente, Paola, Savarino, Vincenzo, Gruppo Italiano Patologi Apparato Digerente (GIPAD), and Societa Italiana di Anatomia Patologica e Citopatologia Diagnostica/International Academy of Pathology, Italian division SIAPEC IAP Microscopic esophagitis and Barrett's esophagus: the histology report. Digestive and liver disease 2011; 43 Suppl 4: S319-S330.

177. Barbiere, Josephine M. and Lyratzopoulos, Georgios Cost-effectiveness of endoscopic screening followed by surveillance for Barrett's esophagus: a review. Gastroenterology 2009; 137 (6): 1869-1876.

178. Lin, San Ren, Xu, Guo Ming, Hu, Pin Jin, Zhou, Li Ya, Chen, Min Hu, Ke, Mei Yun, Yuan, Yao Zong, Fang, Dian Chun, Xiao, Shu Dong, and Chinese National Consensus Workshop on GERD Chinese consensus on gastroesophageal reflux disease (GERD): October 2006, Sanya, Hainan Province, China. Journal of digestive diseases 2007; 8 (3): 162-169.

179. Fullard, M., Kang, J. Y., Neild, P., Poullis, A., and Maxwell, J. D. Systematic review: does gastro-oesophageal reflux disease progress? Alimentary pharmacology & therapeutics 2006; 24 (1): 33-45.

180. Kang, J. Y. Systematic review: geographical and ethnic differences in gastro-oesophageal reflux disease. Alimentary pharmacology & therapeutics 2004; 20 (7): 705-717.

181. Sampliner, Richard E. and Practice Parameters Committee of the American College of Gastroenterology Updated guidelines for the diagnosis, surveillance, and therapy of Barrett's esophagus. The American journal of gastroenterology 2002; 97 (8): 1888-1895.

182. Shaheen, Nicholas J., Provenzale, Dawn, and Sandler, Robert S. Upper endoscopy as a screening and surveillance tool in esophageal adenocarcinoma: a review of the evidence. The American journal of gastroenterology 2002; 97 (6): 1319-1327.

183. Moraes-Filho, JoaquimPradoP, Cecconello, Ivan, Gama-Rodrigues, Joaquim, Castro, LuizdePaula, Henry, Maria Aparecida, Meneghelli, Ulisses G., Quigley, Eamonn, and Brazilian Consensus Group Brazilian consensus on gastroesophageal reflux disease: proposals for assessment, classification, and management. The American journal of gastroenterology 2002; 97 (2): 241-248.

184. Ofman, J. J., Shaheen, N. J., Desai, A. A., Moody, B., Bozymski, E. M., and Weinstein, W. M. The quality of care in Barrett's esophagus: endoscopist and pathologist practices. The American journal of gastroenterology 2001; 96 (3): 876-881.

185. Sampliner, R. E. Practice guidelines on the diagnosis, surveillance, and therapy of Barrett's esophagus. The Practice Parameters Committee of the American College of Gastroenterology. The American journal of gastroenterology 1998; 93 (7): 1028-1032.

186. Anderson, W. D., Strayer, S. M., and Mull, S. R. Common questions about the management of gastroesophageal reflux disease. American Family Physician 2015; 91 (10): 692-697.

187. Bouchard, S., Ibrahim, M., and Van, Gossum A. Video capsule endoscopy: Perspectives of a revolutionary technique. World journal of gastroenterology 2014; 20 (46): 17330-17344.

188. Yang, X.-B. and Yu, L.-F. Clinical outcomes and endoscopic surveillance of gastroesophageal reflux disease: A review. International Journal of Clinical and Experimental Medicine 2016; 9 (2): 682-691.

189. Rai, T., Vennalaganti, P., and Sharma, P. Role of endoscopy in gastroesophageal reflux disease. Journal of Digestive Endoscopy 2015; 6 (3): 89-95.

190. Dunbar, K. B. and Spechler, S. J. Controversies in Barrett esophagus. Mayo Clinic Proceedings 2014; 89 (7): 973-984.

191. Hawkshaw, M. J., Sataloff, J. B., and Sataloff, R. T. New concepts in vocal fold imaging: A review. Journal of Voice 2013; 27 (6): 738-743.

192. Di, Pietro M. and Fitzgerald, R. C. Research advances in esophageal diseases: Bench to bedside. F1000Prime Reports 2013; 5:44 (doi:10.12703/P5-44).

193. Parasa, S. and Sharma, P. Complications of gastro-oesophageal reflux disease. Best Practice and Research: Clinical Gastroenterology 2013; 27 (3): 433-442.

194. Dent, J., Becher, A., Sung, J., Zou, D., Agreus, L., and Bazzoli, F. Systematic Review: Patterns of Reflux-Induced Symptoms and Esophageal Endoscopic Findings in Large-Scale Surveys. Clinical Gastroenterology and Hepatology 2012; 10 (8): 863-873.

195. Choi, S. E. and Hur, C. Screening and surveillance for Barrett's esophagus: Current issues and future directions. Current opinion in gastroenterology 2012; 28 (4): 377-381.

196. Qumseya, B. J., Wolfsen, C. L., and Wolfsen, H. C. Reflux disease and Barretts esophagus. Endoscopy 2011; 43 (11): 962-965.

197. Fedeli, P., Gasbarrini, A., and Cammarota, G. Spectral endoscopic imaging: The multiband system for enhancing the endoscopic surface visualization. Journal of clinical gastroenterology 2011; 45 (1): 6-15.

198. Odze, R. D. Update on the diagnosis and treatment of Barrett esophagus and related neoplastic precursor lesions. Archives of Pathology and Laboratory Medicine 2008; 132 (10): 1577-1585.

199. Dilemmas in managing Barrett's oesophagus. Drug and Therapeutics Bulletin 2006; 44 (9): 69-72.

200. Katz, P. O. Gastroesophageal reflux disease symptoms on antisecretory therapy: Acid, non-acid, or no GERD. Reviews in gastroenterological disorders 2006; 6 (3): 136-145.

201. Rice, T. W., Mendelin, J. E., and Goldblum, J. R. Barrett's esophagus: Pathologic considerations and implications for treatment. Seminars in Thoracic and Cardiovascular Surgery 2006; 17 (4): 292-300.

202. Schneider, H. R. CPD: Is a proton pump inhibitor (PPI) the GP's gastroscopy?. South African Family Practice 2005; 47 (2): 24-29.

203. Sampliner, R. E. Epidemiology, pathophysiology, and treatment of Barrett's esophagus: Reducing mortality from esophageal adenocarcinoma. Medical Clinics of North America 2005; 89 (2): 293-312.

204. Koop, H. Gastroesophageal reflux disease and Barrett's esophagus. Endoscopy 2004; 36 (2): 103-109.

205. Bonino, J. A. and Sharma, P. Barrett esophagus. Current opinion in gastroenterology 2004; 20 (4): 375-380.

206. Pisegna, J., Holtmann, G., Howden, C. W., Katelaris, P. H., Sharma, P., Spechler, S., Triadafilopoulos, G., and Tytgat, G. Review article: Oesophageal complications and consequences of persistent gastro-oesophageal reflux disease. Alimentary Pharmacology and Therapeutics, Supplement 2004; 20 (9): 47-56.

207. Devault, K. R. and Castell, D. O. Updated guidelines for the diagnosis and treatment of gastroesophageal reflux disease. American Journal of Gastroenterology 1999; 94 (6): 1434-1442.

208. Freston, J. W., Malagelada, J. R., Petersen, H., and McCloy, R. F. Critical issues in the management of gastroesophageal reflux disease. European Journal of Gastroenterology and Hepatology 1995; 7 (6): 577-586.

209. Rosch, T. and Allescher, H. D. Congress report on the Digestive Diseases Week 1994 in New Orleans: Endoscopic abstracts. Endoscopy 1994; 26 (7): 635-658.

210. Yerian, Lisa Histology of metaplasia and dysplasia in Barrett's esophagus. Surgical oncology clinics of North America 2009; 18 (3): 411-422.

211. Golger, D., Probst, A., and Messmann, H. Barrett's esophagus: Lessons from recent clinical trials. Annals of Gastroenterology 2016; 29 (4): 417-423.

212. Recommendations for clinical practice. Gastroesophageal reflux in adults: Diagnosis and treatment. Journal Medical Libanais 1999; 47 (4): 238-242.

213. Fennerty, M. B., Castell, D., Fendrick, A. M., Halpern, M., Johnson, D., Kahrilas, P. J., Lieberman, D., Richter, J. E., and Sampliner, R. E. The diagnosis and treatment of gastroesophageal reflux disease in a managed care environment: Suggested disease management guidelines. Archives of Internal Medicine 1996; 156 (5): 477-484.

214. Carlson, D. A., Hinchcliff, M., and Pandolfino, J. E. Advances in the Evaluation and Management of Esophageal Disease of Systemic Sclerosis. Current Rheumatology Reports 2015; 17(1): 475.

215. Alsop, B. R. and Sharma, P. Esophageal Cancer. Gastroenterology Clinics of North America 2016; 45 (3): 399-412.

216. Galmiche, J.-P. and Des Varannes, S. B. Symptoms and disease severity in gastro-oesophageal reflux disease. Scandinavian Journal of Gastroenterology, Supplement 1994; 29 (201): 62-68.

217. Segal, Fabio and Breyer, Helenice Pankowski Diagnosis and management of Barrett's metaplasia: What's new. World journal of gastrointestinal endoscopy 2012; 4 (9): 379-386.

218. Davis-Yadley, Ashley H., Neill, Kevin G., Malafa, Mokenge P., and Pena, Luis R. Advances in the Endoscopic Diagnosis of Barrett Esophagus. Cancer control : journal of the Moffitt Cancer Center 2016; 23 (1): 67-77.

219. Raiser, F., Hinder, R. A., McBride, P. J., Katada, N., and Filipi, C. J. The technique of laparoscopic Nissen fundoplication. Chest surgery clinics of North America 1995; 5 (3): 437-448.

220. van Baal, J. W. P. M. and Krishnadath, K. K. High throughput techniques for characterizing the expression profile of Barrett's esophagus. Diseases of the Esophagus 2008; 21 (7): 634-640.

221. Cockeram A. Canadian Association of Gastroenterology Practice Guideline for clinical competence in diagnostic and therapeutic endoscopic retrograde cholangiopancreatography. Canadian Journal of Gastroenterology and Hepatology. 1997;11(6):535-8.

222. Springer J, Enns R, Romagnuolo J, Ponich T, Barkun AN, Armstrong D. Canadian credentialing guidelines for endoscopic retrograde cholangiopancreatography. Canadian Journal of Gastroenterology and Hepatology. 2008;22(6):547-51.

223. Armstrong D, Barkun A, Bridges R, Carter R, De Gara C, Dubé C, Enns R, Hollingworth R, MacIntosh D, Borgaonkar M, Forget S. Canadian Association of Gastroenterology consensus guidelines on safety and quality indicators in endoscopy. Canadian Journal of Gastroenterology and Hepatology. 2012;26(1):17-31.

224. Ponich T, Enns R, Romagnuolo J, Springer J, Armstrong D, Barkun AN. Canadian credentialing guidelines for esophagogastroduodenoscopy. Canadian Journal of Gastroenterology and Hepatology. 2008;22(4):349-54.

225. Cockeram AW. Canadian association of gastroenterology practice guidelines: evaluation of dysphagia. Canadian Journal of Gastroenterology and Hepatology. 1998;12(6):409-13.

226. Armstrong D, Marshall JK, Chiba N, Enns R, Fallone CA, Fass R, Hollingworth R, Hunt RH, Kahrilas PJ, Mayrand S, Moayyedi P. Canadian Consensus Conference on the management of gastroesophageal reflux disease in adults–update 2004. Canadian Journal of Gastroenterology and Hepatology. 2005;19(1):15-35.

227. Thomson AB, Chiba N, Armstrong D, Tougas G, Hunt RH. The second Canadian gastroesophageal reflux disease consensus: moving forward to new concepts. Canadian Journal of Gastroenterology and Hepatology. 1998;12(8):551-6.

228. Petersen BT, Chennat J, Cohen J, Cotton PB, Greenwald DA, Kowalski TE, Krinsky ML, Park WG, Pike IM, Romagnuolo J, Rutala WA. Multisociety guideline on reprocessing flexible gastrointestinal endoscopes: 2011. Gastrointestinal endoscopy. 2011 Jun 1;73(6):1075-84.

229. Shergill AK, Ben-Menachem T, Chandrasekhara V, Chathadi K, Decker GA, Evans JA, Early DS, Fanelli RD, Fisher DA, Foley KQ, Fukami N. Guidelines for endoscopy in pregnant and lactating women. Gastrointestinal endoscopy. 2012 Jul 1;76(1):18-24.

230. Early DS, Acosta RD, Chandrasekhara V, Chathadi KV, Decker GA, Evans JA, Fanelli RD, Fisher DA, Foley KQ, Fonkalsrud L, Hwang JH. Modifications in endoscopic practice for the elderly. Gastrointestinal endoscopy. 2013 Jul 1;78(1):1-7.

231. Muthusamy VR, Lightdale JR, Acosta RD, Chandrasekhara V, Chathadi KV, Eloubeidi MA, Fanelli RD, Fonkalsrud L, Faulx AL, Khashab MA, Saltzman JR. The role of endoscopy in the management of GERD. Gastrointestinal endoscopy. 2015 Jun 1;81(6):1305-10.

232. Pasha SF, Acosta RD, Chandrasekhara V, Chathadi KV, Decker GA, Early DS, Evans JA, Fanelli RD, Fisher DA, Foley KQ, Fonkalsrud L. The role of endoscopy in the evaluation and management of dysphagia. Gastrointestinal endoscopy. 2014 Feb 1;79(2):191-201.

233. Evans JA, Early DS, Chandraskhara V, Chathadi KV, Fanelli RD, Fisher DA, Foley KQ, Hwang JH, Jue TL, Pasha SF, Sharaf R. The role of endoscopy in the assessment and treatment of esophageal cancer. Gastrointestinal endoscopy. 2013 Mar 1;77(3):328-34

234. Evans JA, Early DS, Fukami N, Ben-Menachem T, Chandrasekhara V, Chathadi KV, Decker GA, Fanelli RD, Fisher DA, Foley KQ, Hwang JH. The role of endoscopy in Barrett's esophagus and other premalignant conditions of the esophagus. Gastrointestinal endoscopy. 2012 Dec 1;76(6):1087-94.

235. Ben-Menachem T, Decker GA, Early DS, Evans J, Fanelli RD, Fisher DA, Fisher L, Fukami N, Hwang JH, Ikenberry SO, Jain R. Adverse events of upper GI endoscopy. Gastrointestinal endoscopy. 2012 Oct 1;76(4):707-18.

236. Early DS, Ben-Menachem T, Decker GA, Evans JA, Fanelli RD, Fisher DA, Fukami N, Hwang JH, Jain R, Jue TL, Khan KM. Appropriate use of GI endoscopy. Gastrointestinal endoscopy. 2012 Jun 1;75(6):1127-31.

237. Parsi MA, Sullivan SA, Goodman A, Manfredi M, Navaneethan U, Pannala R, Smith ZL, Thosani N, Banerjee S, Maple JT. Automated endoscope reprocessors. Gastrointestinal endoscopy. 2016 Dec 1;84(6):885-92.

238. Lo SK, Fujii-Lau LL, Enestvedt BK, Hwang JH, Konda V, Manfredi MA, Maple JT, Murad FM, Pannala R, Woods KL, Banerjee S. The use of carbon dioxide in gastrointestinal endoscopy. Gastrointestinal endoscopy. 2016 May 1;83(5):857-65.

239. Varadarajulu S, Banerjee S, Barth BA, Desilets DJ, Kaul V, Kethu SR, Pedrosa MC, Pfau PR, Tokar JL, Wang A, Song LM. GI endoscopes. Gastrointestinal endoscopy. 2011 Jul 31;74(1):1-6.

240. Nelson DB, Barkun AN, Block KP, Burdick JS, Ginsberg GG, Greenwald DA, Kelsey PB, Nakao NL, Slivka A, Smith P, Vakil N. Transmission of infection by gastrointestional endoscopy. Gastrointestinal endoscopy. 2001 Dec 1;54(6):824-8.

241. Nelson DB, Barkun AN, Block KP, Burdick JS, Ginsberg GG, Greenwald DA, Kelsey PB, Nakao NL, Slivka A, Smith P, Vakil N. Transmission of infection by gastrointestional endoscopy. Gastrointestinal endoscopy. 2001 Dec 1;54(6):824-8.

242. Gottlieb KT, Banerjee S, Barth BA, Bhat YM, Desilets DJ, Maple JT, Pfau PR, Pleskow DK, Siddiqui UD, Tokar JL, Wang A. Monitoring equipment for endoscopy. Gastrointestinal endoscopy. 2013 Feb 1;77(2):175-80.

243. Rodriguez SA, Banerjee S, Desilets D, Diehl DL, Farraye FA, Kaul V, Kwon RS, Mamula P, Pedrosa MC, Varadarajulu S, Song LM. Ultrathin endoscopes. Gastrointestinal endoscopy. 2010 May 1;71(6):893-8.

244. Tierney WM, Adler DG, Conway JD, Diehl DL, Farraye FA, Kantsevoy SV, Kaul V, Kethu SR, Kwon RS, Mamula P, Pedrosa MC. Overtube use in gastrointestinal endoscopy. Gastrointestinal endoscopy. 2009 Nov 1;70(5):828-34.

245. Somogyi L, Chuttani R, Croffie J, DiSario J, Liu J, Mishkin D, Shah R, Tierney W, Song LM, Petersen BT. Guidewires for use in GI endoscopy. Gastrointestinal endoscopy. 2007 Apr 1;65(4):571-6.

246. Manfredi MA, Dayyeh BK, Bhat YM, Chauhan SS, Gottlieb KT, Hwang JH, Komanduri S, Konda V, Lo SK, Maple JT, Murad FM. Electronic chromoendoscopy. Gastrointestinal endoscopy. 2015 Feb 1;81(2):249-61.

247. Song LM, Adler DG, Chand B, Conway JD, Croffie JM, DiSario JA, Mishkin DS, Shah RJ, Somogyi L, Tierney WM, Petersen BT. Chromoendoscopy. Gastrointestinal endoscopy. 2007 Oct 1;66(4):639-49.

248. Sharma P, Savides TJ, Canto MI, Corley DA, Falk GW, Goldblum JR, Wang KK, Wallace MB, Wolfsen HC. The American Society for Gastrointestinal Endoscopy PIVI (preservation and incorporation of valuable endoscopic innovations) on imaging in Barrett's esophagus (Long form). Retrieved from http://old.asge.org/assets/0/71542/76654/08c53485-c9ef-4e19-9275-60cd045a0870.pdf

249. Sharma P, Savides TJ, Canto MI, Corley DA, Falk GW, Goldblum JR, Wang KK, Wallace MB, Wolfsen HC. The American Society for Gastrointestinal Endoscopy PIVI (preservation and incorporation of valuable

endoscopic innovations) on imaging in Barrett's esophagus. Gastrointestinal endoscopy. 2012 Aug 1;76(2):252-4.

250. Shaheen NJ, Falk GW, Iyer PG, Gerson LB. ACG clinical guideline: diagnosis and management of Barrett's esophagus. The American journal of gastroenterology. 2016 Jan 1;111(1):30.

251. DeVault KR, Castell DO. Updated guidelines for the diagnosis and treatment of gastroesophageal reflux disease. The American journal of gastroenterology. 2005 Jan 1;100(1):190.

252. American Gastroenterological Association. (2011). American Gastroenterological Association medical position statement on the management of Barrett's esophagus. Gastroenterology, 140(3), 1084-1091.

253. Spechler SJ, Sharma P, Souza RF, Inadomi JM, Shaheen NJ. American Gastroenterological Association technical review on the management of Barrett's esophagus. Gastroenterology. 2011 Mar;140(3):e18.

254. Kahrilas PJ, Shaheen NJ, Vaezi MF. American Gastroenterological Association Medical Position Statement on the management of gastroesophageal reflux disease. Gastroenterology. 2008 Oct 31;135(4):1383-91.

255. Kahrilas, P. J., Shaheen, N. J., & Vaezi, M. F. (2008). American Gastroenterological Association Institute technical review on the management of gastroesophageal reflux disease. Gastroenterology, 135(4), 1392-1413.

256. Yang YX, Brill J, Krishnan P, Leontiadis G, Adams MA, Dorn SD, Dudley-Brown SL, Flamm SL, Gellad ZF, Gruss CB, Kosinski LR. American Gastroenterological Association Institute guideline on the role of upper gastrointestinal biopsy to evaluate dyspepsia in the adult patient in the absence of visible mucosal lesions. Gastroenterology. 2015 Oct 1;149(4):1082-7.

257. Allen JI, Katzka D, Robert M, Leontiadis GI. American Gastroenterological Association Institute technical review on the role of upper gastrointestinal biopsy to evaluate dyspepsia in the adult patient in the absence of visible mucosal lesions. Gastroenterology. 2015 Oct 1;149(4):1088-118.

258. Forgacs I, Ashton R, Allum W, Bowley T, Brown H, Coleman MP, Fitzgerald R, Glynn M, Hiom S, Jones R, Machesney M. Conference report: improving outcomes for gastrointestinal cancer in the UK. Frontline Gastroenterology. 2016 Jun 14:flgastro-2016.

259. Allum WH, Blazeby JM, Griffin SM, Cunningham D, Jankowski JA, Wong R. Guidelines for the management of oesophageal and gastric cancer. Gut. 2011 Jan 1:gut-2010.

260. National Collaborating Centre for Women's and Children's Health. UK. Gastro-Oesophageal Reflux Disease: Recognition, Diagnosis and Management in Children and Young People. London: National Institute for Health and Care Excellence (UK); 2015. https://www.ncbi.nlm.nih.gov/pubmed/25950074

261. Fitzgerald RC, di Pietro M, Ragunath K, Ang Y, Kang JY, Watson P, Trudgill N, Patel P, Kaye PV, Sanders S, O'donovan M. British Society of Gastroenterology guidelines on the diagnosis and management of Barrett's oesophagus. Gut. 2013 Oct 26:gutjnl-2013.

262. Bennett C, Vakil N, Bergman J, Harrison R, Odze R, Vieth M, Sanders S, Gay L, Pech O, Longcroft–Wheaton G, Romero Y. Consensus statements for management of Barrett's dysplasia and early-stage esophageal adenocarcinoma, based on a Delphi process. Gastroenterology. 2012 Aug 31;143(2):336-46.

263. Green J. Complications of gastrointestinal endoscopy. BSG Guidelines in Gastroenterology. 2006:1-30.

264. National Institute for Health and Care Excellence. Dyspepsia and gastro-oesophageal reflux disease in adults. Quality standard Published: 23 July 2015. http://www/nice.org.uk/guidance/qs96

265. National Institute for Health and Care Excellence. Gastro-oesophageal reflux in children and young people. Quality standard Published: Published: 28 January 2016 http://www.nice.org.uk/guidance/qs112

266. National OesophagoGastric Cancer Audit . An audit of the care received by people with Oesophago-Gastric Cancer in England and Wales 2016 Annual Report. Retrieved from http://content.digital.nhs.uk/og

267. Palser T, Cromwell D, Meulen van der J, Hardwick RH, Riley S, Greenaway K, Dean S: The National Oesophago-Gastric Cancer Audit. An audit of the care received by people with Oesophago-gastric Cancer in England and Wales. First Annual Report 2008. 2008, London: NHS Information Centre Retrieved from http://content.digital.nhs.uk/og

268. Shaheen NJ, Weinberg DS, Denberg TD, Chou R, Qaseem A, Shekelle P. Upper endoscopy for gastroesophageal reflux disease: best practice advice from the clinical guidelines committee of the American College of Physicians. Annals of internal medicine. 2012 Dec 4;157(11):808-16.

269. Recommendation AC. Upper Endoscopy for Gastroesophageal Reflux: Review of the Performance Measures by the Performance Measurement Committee of the American College of Physicians. Retrieved from, https://www.acponline.org/system/files/documents/clinical_information/performance_measurement/measures/pmc_gerd_review.pdf

270. Gilbert R, Devries-Aboud M, Winquist E, Waldron J, McQuestion M. The management of head and neck cancer in Ontario. Cancer Care Ontario; 2009 Dec 15. Retrieved from https://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=58592

271. Canadian Agency for Drugs and Technologies in Health (CADTH). Prioritization of Patients Requiring Endoscopy Procedures: Clinical Evidence and Guidelines. Rapid response report: Summary of Abstracts. Prioritization of Patients Requiring Endoscopy Procedures, 2011. Retrieved from https://cadth.ca/sites/default/files/pdf/htis/dec-2011/RB0454-000%20Endoscopy%20Prioritization.pdf

272. Hailey D. Endoscope-based treatments for gastroesophageal reflux disease. Issues in emerging health technologies. 2004 Mar(54):1-4.

273. Topfer, LA.The Cytosponge: an alternative to endoscopy in detecting Barrett esophagus. Ottawa: CADTH; 2015 Oct. (CADTH Issues in Emerging Health Technologies; Issue 144)

274. Lynn M. Brodsky. Wireless Capsule Endoscopy. Issues in Emerging Health Technologies, Issue 53 — December 2003. Retrieved from https://www.cadth.ca/wireless-capsule-endoscopy-0

275. Medical Advisory Secretariat. Wireless capsule endoscopy: an evidencebased analysis. Ontario Health Technology Assessment Series 2003;3(2).

276. Julie Tranchemontagne. Summary: Initial Staging of Esophageal Cancer: Systematic review of the performance of diagnostic methods. Extract from the report: Initial Staging of Esophageal Cancer: Systematic Review of the Performance of Diagnotic Methods. prepared for AETMIS. Retrieved from https://www.inesss.qc.ca/fileadmin/doc/AETMIS/Rapports/Cancer/2009_06_res_en.pdf

277. Lerut T, Stordeur S, Verleye L, Vlayen J, Boterberg T, De Hertogh G, De Mey J, Deprez P, Flamen P, Pattyn P, Van Laethem J-L, Peeters M. Actualisation des recommandations cliniques pour le cancer de l'œsophage et de l'estomac. Good Clinical Practice (GCP). Bruxelles: Centre Fédéral d'Expertise des Soins de Santé (KCE). 2012. KCE Report 179B. D/2012/10.273/33. Retrieved from, http://kce.fgov.be/fr/content/a-propos-du-copyright-des-rapports-kce.

278. Vlayen J, De Gendt C, Stordeur S, Schillemans V, Camberlin C, Vrijens F, Van Eyck indicators for the management of upper gastrointestinal cancer. Good Clinical Practice (GCP) Health Care Knowledge Centre (KCE). 2013. KCE Reports 200. D/2013/10.273/15. Retrieved from, http://kce.fgov.be/content/about-copyrights-for-kce-reports

279. Indication à viseé diagnostique de l'endoscopie digestive haute en pathologie œso-gastro-duodénale de l'adulte à l'exclusion de l'échoendoscopie et l'entéroscopie, Retrieved from:

280. National Collaborating Centre for Cancer (UK. Suspected cancer: recognition and referral. London: National Institute for Health and Care Excellence (UK); 2015 Jun.

281. National Collaborating Centre for Women's and Children's Health (UK. Gastro-Oesophageal Reflux Disease: Recognition, Diagnosis and Management in Children and Young People. London: National Institute for Health and Care Excellence (UK); 2015 Jan.Retrieved from, https://www.ncbi.nlm.nih.gov/pubmed/25950074

282. Liu, R., Kriz, H., Thielke, A., Vandegriff, S., & King, V. Upper Endoscopy for Gastroesophageal Reflux Disease (GERD) and Upper Gastrointestinal (GI) Symptoms. Portland, OR: Center for Evidence-based Policy, Oregon Health and Science University: 2012

283. Guidelines and Protocols Advisory committee. Gastroesophageal Reflux Disease – Clinical Approach in Adults. 2009

284. Alberta Health Services. Management of patients with early esophageal cancer, dysplastic and non-dysplastic Barrett's Esophagus. Clinical Practice guideline GI-011; Version 2: 2014, Retrieved from http://www.albertahealthservices.ca/assets/info/hp/cancer/if-hp-cancer-guide-gi011-barretts-esophagus.pdf

285. Alberta Health Services. Gastric Cancer. Clinical Practice guideline GI-008; Version 4: 2016. Retrieved from http://www.albertahealthservices.ca/assets/info/hp/cancer/if-hp-cancer-guide-gi008-gastric.pdf

286. Family Practice Oncology Network. Upper Gastrointestinal Cancer – Part 1. BC Cancer Agency Care and Research, 2016. Retrieved from http://www.bccancer.bc.ca/family-oncology-network-site/Documents/UpperGICancer-Part1-%20PublishCopy%20-%20April%202016.pdf

287. Provincial Esophageal Cancer and Gastro-esophageal junction Cancer Treatment Guidelines. Saskatchewan Cancer Agency, 2011. Retrieved from http://www.saskcancer.ca/Esophageal%20Guidelines

288. Alberta Health Services. Esophageal Cancer. Clinical Practice guideline GI-009; Version 4. Retrieved from http://www.albertahealthservices.ca/assets/info/hp/cancer/if-hp-cancer-guide-gi009-esophageal.pdf

289. Stahl M, Budach W, Meyer HJ, Cervantes A, ESMO Guidelines Working Group. Esophageal cancer: Clinical Practice Guidelines for diagnosis, treatment and follow-up. Annals of Oncology. 2010 May 1;21(suppl_5):v46-9.

290. Jacobson BC, Hirota W, Baron TH, Leighton JA, Faigel DO, Standards of Practice Committee. The role of endoscopy in the assessment and treatment of esophageal cancer. Gastrointestinal endoscopy. 2003 Jun 30;57 (7):817-22.

291. AETNA. Oral and Esophageal Brush Biopsy. Policy No.0686. Retrieved from http://www.aetna.com/cpb/medical/data/600_699/0686.html

292. AETNA. Endoscopic Ultrasonography. Policy No.0446. Retrieved from http://www.aetna.com/cpb/medical/data/400_499/0446.html

293. AETNA. Virtual Gastrointestinal Endoscopy. Policy No.0535. Retrieved from http://www.aetna.com/cpb/medical/data/500_599/0535.html

294. AETNA. Upper Gastrointestinal Endoscopy. Policy No.0738. Retrieved from http://www.aetna.com/cpb/medical/data/700_799/0738.html

295. AETNA. Capsule Endoscopy. Policy No.0588. Retrieved from http://www.aetna.com/cpb/medical/data/500_599/0588.html

296. Sturgeon CM, Diamandis EP. Use of tumor markers in liver, bladder, cervical, and gastric cancers. Laboratory medicine practice guidelines. Washington: National Academy of Clinical Biochemistry. 2010. Retrieved from https://www.aacc.org/science-and-practice/practice-guidelines/liver-tumor-markers

297. French National Agency for Accreditation and Evaluation in Healthcare. Indications for lower gastrointestinal endoscopy (excluding population screening). Clinical practice guidelines, 2004. Retrieved from https://www.has-sante.fr/portail/upload/docs/application/pdf/Endoscopy_guidelines.pdf

298. French National Agency for Accreditation and Evaluation in Healthcare. . anaesdiagnostic indications for upper gastrointestinal endoscopy in oesophageal and gastroduodenal disease in adults, excluding endoscopic ultrasonography and enteroscopy. Guidelines department, 2001. Retrieved from https://www.has-sante.fr/portail/upload/docs/application/pdf/gastro_endoscopy.pdf

299. Heidelbaugh JJ, Harrison RV, McQuillan MA, Nostrant TT. Gastroesophageal Reflux Disease (GERD). Guidelines for Clinical Care Ambulatory, Updated 2012. Retrieved from https://www.med.umich.edu/1info/FHP/practiceguides/gerd/gerd.12.pdf

300. Katz PO, Gerson LB, Vela MF. Corrigendum: guidelines for the diagnosis and management of gastroesophageal reflux disease. The American journal of gastroenterology. 2013 Oct 1;108(10):1672.

301. Whiteman DC, Appleyard M, Bahin FF, Bobryshev YV, Bourke MJ, Brown I, Chung A, Clouston A, Dickins E, Emery J, Eslick GD. Australian clinical practice guidelines for the diagnosis and management of Barrett's esophagus and early esophageal adenocarcinoma. Journal of gastroenterology and hepatology. 2015 May 1;30(5):804-20.

302. Liu R, Kriz H, Thielke A, Vandegriff S, & King V. Upper endoscopy for gastroesophagealreflux disease (GERD) and upper gastrointestinal (GI) symptoms. Olympia: Washington State Health Authority Health Technology Assessment Program, 2013. Retrieved from http://www.hta.hca.wa.gov/gerd.html

303. Bechara R, Inoue H. Recent advancement of therapeutic endoscopy in the esophageal benign diseases. World journal of gastrointestinal endoscopy. 2015 May 16;7(5):481.

304. Ladas SD, Triantafyllou K, Spada CR, Riccioni ME, Rey JF, Niv Y, Delvaux M, De Franchis R, Costamagna G. European Society of Gastrointestinal Endoscopy (ESGE): recommendations (2009) on clinical use of video capsule endoscopy to investigate small-bowel, esophageal and colonic diseases. Endoscopy. 2010 Mar;42(03):220-7.

305. Cohen J, Pike IM. Defining and measuring quality in endoscopy. Gastrointestinal endoscopy. 2015 Jan 1;81(1):1-2.

306. Paterson WG, Depew WT, Paré P, Petrunia D, Switzer C, van Zanten SJ, Daniels S, Canadian Association of Gastroenterology Wait Time Consensus Group. Canadian consensus on medically acceptable wait times for digestive health care. Canadian Journal of Gastroenterology and Hepatology. 2006;20(6):411-23.

307. Enns R, Romagnuolo J, Ponich T, Springer J, Armstrong D, Barkun AN. Canadian credentialing guidelines for flexible sigmoidoscopy. Canadian Journal of Gastroenterology and Hepatology. 2008;22(2):115-9.

308. Enns RA, Hookey L, Armstrong D, Bernstein CN, Heitman SJ, Teshima C, Leontiadis GI, Tse F, Sadowski D. Clinical Practice Guidelines for the Use of Video Capsule Endoscopy. Gastroenterology. 2017 Feb 28;152(3):497-514.

309. Devlin TB. Canadian Association of Gastroenterology practice guidelines: Antibiotic prophylaxis for gastrointestinal endoscopy. Canadian Journal of Gastroenterology and Hepatology. 1999;13(10):819-21.

310. Beaulieu D, Barkun AN, Dubé C, Tinmouth J, Hallé P, Martel M. Endoscopy reporting standards. Canadian Journal of Gastroenterology and Hepatology. 2013;27(5):286-92.

311. Borgaonkar MR, Hookey L, Hollingworth R, Kuipers EJ, Forster A, Armstrong D, Barkun A, Bridges R, Carter R, De Gara C, Dube C. Indicators of safety compromise in gastrointestinal endoscopy. Canadian Journal of Gastroenterology and Hepatology. 2012;26(2):71-8.

312. Rizk MK, Sawhney MS, Cohen J, Pike IM, Adler DG, Dominitz JA, Lieb JG, Lieberman DA, Park WG, Shaheen NJ, Wani S. Quality indicators common to all GI endoscopic procedures. Gastrointestinal endoscopy. 2015 Jan 1;81(1):3-16.

313. Park WG, Shaheen NJ, Cohen J, Pike IM, Adler DG, Inadomi JM, Laine LA, Lieb JG, Rizk MK, Sawhney MS, Wani S. Quality indicators for EGD. Gastrointestinal endoscopy. 2015 Jan 1;81(1):17-30.

314. Adler DG, Lieb JG, Cohen J, Pike IM, Park WG, Rizk MK, Sawhney MS, Scheiman JM, Shaheen NJ, Sherman S, Wani S. Quality indicators for ERCP. Gastrointestinal endoscopy. 2015 Jan 1;81(1):54-66.

315. Wani S, Wallace MB, Cohen J, Pike IM, Adler DG, Kochman ML, Lieb JG, Park WG, Rizk MK, Sawhney MS, Shaheen NJ. Quality indicators for EUS. Gastrointestinal endoscopy. 2015 Jan 1;81(1):67-80.

316. Faigel DO, Pike IM, Baron TH, Chak A, Cohen J, Deal SE, Hoffman B, Jacobson BC, Mergener K, Petersen BT, Petrini JL. Quality indicators for gastrointestinal endoscopic procedures: an introduction. Gastrointestinal endoscopy. 2006 Apr 1;63(4):S3-9.

317. Cohen J, Safdi MA, Deal SE, Baron TH, Chak A, Hoffman B, Jacobson BC, Mergener K, Petersen BT, Petrini JL, Rex DK. Quality indicators for esophagogastroduodenoscopy. Gastrointestinal endoscopy. 2006 Apr 1;63(4):S10-5.

318. Baron TH, Petersen BT, Mergener K, Chak A, Cohen J, Deal SE, Hoffman B, Jacobson BC, Petrini JL, Safdi MA, Faigel DO. Quality indicators for endoscopic retrograde cholangiopancreatography. Gastrointestinal endoscopy. 2006 Apr 1;63(4):S29-34.

319. Jacobson BC, Chak A, Hoffman B, Baron TH, Cohen J, Deal SE, Mergener K, Petersen BT, Petrini JL, Safdi MA, Faigel DO. Quality indicators for endoscopic ultrasonography. Gastrointestinal endoscopy. 2006 Apr 1;63(4):S35-8.

320. Faigel DO, Baron TH, Lewis B, Petersen B, Petrini J. Ensuring competence in endoscopy. Prepared by the ASGE taskforce on ensuring competence in endoscopy and American College of Gastroenterology executive and practice management committees. ASGE policy and procedures manual for gastrointestinal endoscopy: guidelines for training and practice on CD-ROM. ASGE. 2005;136

321. Sedlack RE, Coyle WJ, Obstein KL, Al-Haddad MA, Bakis G, Christie JA, Davila RE, DeGregorio B, DiMaio CJ, Enestvedt BK, Jorgensen J. ASGE's assessment of competency in endoscopy evaluation tools for colonoscopy and EGD. Gastrointestinal endoscopy 2014 Jan 1;79(1):1-7.

322. Murad FM, Komanduri S, Dayyeh BK, Chauhan SS, Enestvedt BK, Fujii-Lau LL, Konda V, Maple JT, Pannala R, Thosani NC, Banerjee S. Echoendoscopes. Gastrointestinal Endoscopy 2015 Aug 1;82(2):189-202.

323. Shaukat A, Wang A, Acosta RD, Bruining DH, Chandrasekhara V, Chathadi KV, Eloubeidi MA, Fanelli RD, Faulx AL, Fonkalsrud L, Gurudu SR. The role of endoscopy in dyspepsia. Gastrointestinal endoscopy. 2015 Aug 1;82(2):227-32.

324. van Vliet, E. P., Eijkemans, M. J., Kuipers, E. J., Poley, J. W., Steyerberg, E. W., and Siersema, P. D. Publication bias does not play a role in the reporting of the results of endoscopic ultrasound staging of upper gastrointestinal cancers. Endoscopy 2007; 39 (4): 325-332.

325. Yang, Dennis and Draganov, Peter V. Expanding Role of Third Space Endoscopy in the Management of Esophageal Diseases. Current treatment options in gastroenterology 2018. 16 (1) 41-57.

326. Munoz-Largacha, Juan A. and Litle, Virginia R. Endoscopic mucosal ablation and resection of Barrett's esophagus and related diseases. Journal of visualized surgery 2017. 3 () 128.

327. Mansour, Nabil M., El-Serag, Hashem B., and Anandasabapathy, Sharmila. Barrett's esophagus: best practices for treatment and post-treatment surveillance. Annals of cardiothoracic surgery 2017. 6 (2) 75-87.

328. Mendes-Filho, Antonio Moreira, Godoy, Eduardo Savio Nascimento, Alhinho, Helga Cristina Almeida Wahnon, Galvao-Neto, Manoel Dos Passos, Ramos, Almino Cardoso, Ferraz, Alvaro Antonio Bandeira, and Campos, Josemberg Marins. FUNDOPLICATION CONVERSION IN ROUX-EN-Y GASTRIC BYPASS FOR CONTROL OF OBESITY AND GASTROESOPHAGEAL REFLUX: SYSTEMATIC REVIEW. Arquivos brasileiros de cirurgia digestiva (Brazilian archives of digestive surgery) 2017. 30 (4) 279-282.

329. Bresalier, Robert S. Chemoprevention of Barrett's Esophagus and Esophageal Adenocarcinoma. Digestive diseases and sciences 2018. 63 (8) 2155-2162.

330. Spechler, Stuart J. Cardiac Metaplasia: Follow, Treat, or Ignore? Digestive diseases and sciences 2018. 63 (8) 2052-2058.

331. Clermont, Michelle and Falk, Gary W. Clinical Guidelines Update on the Diagnosis and Management of Barrett's Esophagus. Digestive diseases and sciences 2018. 63 (8) 2122-2128.

332. Akin, Hakan and Aydin, Yucel. How should we describe, diagnose and observe the Barrett's esophagus? The Turkish journal of gastroenterology 2017. 28 (Suppl 1) S26-S30.

333. Philpott, Hamish, Garg, Mayur, Tomic, Dunya, Balasubramanian, Smrithya, and Sweis, Rami. Dysphagia: Thinking outside the box. World journal of gastroenterology 2017. 23 (38) 6942-6951.

334. Amadi, Chidi and Gatenby, Piers. Barrett's oesophagus: Current controversies. World journal of gastroenterology 2017. 23 (28) 5051-5067.

335. Sjomina, Olga, Heluwaert, Frederic, Moussata, Driffa, and Leja, Marcis. Helicobacter pylori infection and nonmalignant diseases. Helicobacter 2017. 22 Suppl 1.

336. Schlottmann, Francisco and Patti, Marco G. Current Concepts in Treatment of Barrett's Esophagus With and Without Dysplasia. Journal of gastrointestinal surgery 2017. 21 (8) 1354-1360.

337. Schlottmann, Francisco, Patti, Marco G., and Shaheen, Nicholas J. From Heartburn to Barrett's Esophagus, and Beyond. World journal of surgery 2017. 41 (7) 1698-1704.

338. Nejat Pish-Kenari, F., Qujeq, D., and Maghsoudi, H. Some of the effective factors in the pathogenesis of gastro-oesophageal reflux disease. Journal of Cellular and Molecular Medicine 2018.

339. Mkarimi, M. and Mashimo, H. Advanced Imaging for Barrett's Esophagus and Early Neoplasia: Surface and Subsurface Imaging for Diagnosis and Management. Current Gastroenterology Reports 2018. 20 (12) 54.

340. Kav, T. To whom and when the upper gastrointestinal endoscopy is indicated in gastroesophageal reflux disease? What is the role of routine esophageal biopsy? Which endoscopic esophagitis classification should be used? Turkish Journal of Gastroenterology 2017. 28 (Supplement 1) S22-S25.

341. Inadomi, J., Alastal, H., Bonavina, L., Gross, S., Hunt, R. H., Mashimo, H., di, Pietro M., Rhee, H., Shah, M., Tolone, S., Wang, D. H., and Xie, S.-H. Recent advances in Barrett's esophagus. Annals of the New York Academy of Sciences 2018.

342. Otaki, F. and Iyer, P. G. Point-Counterpoint: Screening and Surveillance for Barrett's Esophagus, Is It Worthwhile? Digestive diseases and sciences 2018. 63 (8) 2081-2093.

343. Sackmann, M. Barrett's esophagus: Prevention and screening. Journal of Gastrointestinal and Liver Diseases 2018. 27 (Supplement 1) 13-14.

344. Michopoulos, S. Critical appraisal of guidelines for screening and surveillance of Barrett's esophagus. Annals of Translational Medicine 2018. 6 (13) 259.

345. Zakko, L., Visrodia, K., Leggett, C., Lutzke, L., and Wang, K. K. Screening patients for Barrett esophagus: Why, who, and how. Techniques in Gastrointestinal Endoscopy 2018. 20 (2) 55-61.

346. Savarino, E., Ottonello, A., Tolone, S., Bartolo, O., Baeg, M. K., Farjah, F., Kuribayashi, S., Shetler, K. P., Lottrup, C., and Stein, E. Novel insights into esophageal diagnostic procedures. Annals of the New York Academy of Sciences 2016. 1380 (1) 162-177.

347. Bisschops, R. Reflux and Barrett's diseaseCan we stop surveillance after 2011? Endoscopy 2012. 44 (4) 362-365.

348. Hatta, W., Tong, D., Lee, Y. Y., Ichihara, S., Uedo, N., and Gotoda, T. Different time trend and management of esophagogastric junction adenocarcinoma in three Asian countries. Digestive Endoscopy 2017. 29 (Supplement 2) 18-25.

349. Schoofs, N., Bisschops, R., and Prenen, H. Progression of barrett's esophagus toward esophageal adenocarcinoma: An overview. Annals of gastroenterology 2017. 30 (1) 1-6.

Study design: Qualitative study (n=1)

1. Freeman, M., Offman, J., Walter, F. M., Sasieni, P., and Smith, S. G. Acceptability of the Cytosponge procedure for detecting Barrett's oesophagus: A qualitative study. BMJ open 2017. 7 (3) e013901.

Study design: Single-arm cohort (non-comparative) (n=193)

1. Abdalla, Adil A., Petersen, Bret T., Ott, Beverly J., Fredericksen, Mary, Schleck, Cathy D., Zinsmeister, Alan R., Grunewald, Kassandra M. J., Zais, Teresa, and Romero, Yvonne. Impact of feedback and didactic sessions on the reporting behavior of upper endoscopic findings by physicians and nurses. Clinical gastroenterology and hepatology 2007; 5 (3): 326-330.

2. Blustein, P. K., Beck, P. L., Meddings, J. B., Van Rosendaal, G. M., Bailey, R. J., Lalor, E., Thomson, A. B., Verhoef, M. J., and Sutherland, L. R. The utility of endoscopy in the management of patients with gastroesophageal reflux symptoms. The American journal of gastroenterology 1998; 93 (12): 2508-2512.

3. Rossi, M., Barreca, M., De, Bortoli N., Renzi, C., Santi, S., Gennai, A., Bellini, M., Costa, F., Conio, M., and Marchi, S. Efficacy of Nissen fundoplication versus medical therapy in the regression of low-grade dysplasia in patients with Barrett esophagus: A prospective study. Annals of Surgery 2006; 243 (1): 58-63.

4. Melleney, E. M. A., Subhani, J. M., and Willoughby, C. P. Dysphagia referrals to a district general hospital gastroenterology unit: Hard to swallow. Dysphagia 2004; 19 (2): 78-82.

5. Saruc, Murat, Aksoy, Elif Ayanoglu, Vardereli, Eser, Karaaslan, Mehmet, Cicek, Bahattin, Ince, Umit, Oz, Ferhan, and Tozun, Nurdan Risk factors for laryngopharyngeal reflux. European archives of oto-rhino-laryngology 2012; 269 (4): 1189-1194.

6. Kauttu, Tuuli M. E., Rantanen, Tuomo K., Sihvo, Eero I., Rasanen, Jari V., Puolakkainen, Pauli, and Salo, Jarmo A. Esophageal adenocarcinoma arising after antireflux surgery: a population-based analysis. European journal of cardio-thoracic surgery 2011; 40 (6): 1450-1454.

7. Ronkainen, Jukka, Talley, Nicholas J., Storskrubb, Tom, Johansson, Sven Erik, Lind, Tore, Vieth, Michael, Agreus, Lars, and Aro, Pertti Erosive esophagitis is a risk factor for Barrett's esophagus: a community-based endoscopic follow-up study. The American journal of gastroenterology 2011; 106 (11): 1946-1952.

8. Tosato, F., Marano, S., Luongo, B., Paltrinieri, G., Mattacchione, S., and Bezzi, M. Total fundoplication without division of the short gastric vessels: functional evaluation at one year and review of literature. Minerva chirurgica 2011; 66 (2): 95-100.

9. Collen, M. J. and Strong, R. M. Comparison of omeprazole and ranitidine in treatment of refractory gastroesophageal reflux disease in patients with gastric acid hypersecretion. Digestive Diseases and Sciences 1992; 37 (6): 897-903.

10. Boreiri, M., Samadi, F., Etemadi, A., Babaei, M., Ahmadi, E., Houshang, Sharifi A., Nikmanesh, A., Houshiar, A., Pourfarzi, F., Yazdanbod, A., Alimohammadian, M., and Sotoudeh, M. Gastric cancer mortality in a high incidence area: Long- term follow-up of helicobacter pylori-related precancerous lesions in the general population. Archives of Iranian Medicine 2013; 16 (6): 343-347.

11. Malfertheiner, P., Lind, T., Willich, S., Vieth, M., Jaspersen, D., Labenz, J., Meyer-Sabellek, W., Junghard, O., and Stolte, M. Prognostic influence of Barrett's oesophagus and Helicobacter pylori infection on healing of erosive gastro-oesophageal reflux disease (GORD) and symptom resolution in non-erosive GORD: Report from the ProGORD study. Gut 2005; 54 (6): 746-751.

12. Kiesslich, R., Kanzler, S., Vieth, M., Moehler, M., Neidig, J., Thanka Nadar, B. J., Schilling, D., Burg, J., Nafe, B., Neurath, M. F., and Galle, P. R. Minimal change esophagitis: Prospective comparison of endoscopic and histological markers between patients with non-erosive reflux disease and normal controls using magnifying endoscopy. Digestive Diseases 2004; 22 (2): 221-227.

13. Kulig, M., Nocon, M., Vieth, M., Leodolter, A., Jaspersen, D., Labenz, J., Meyer-Sabellek, W., Stolte, M., Lind, T., Malfertheiner, P., and Willich, S. N. Risk factors of gastroesophageal reflux disease: Methodology and first epidemiological results of the ProGERD study. Journal of Clinical Epidemiology 2004; 57 (6): 580-589.

14. Wu, J. C. Y., Chan, F. K. L., Ching, J. Y. L., Leung, W.-K., Lee, Y.-T., and Sung, J. J. Y. Empirical treatment based on "typical" reflux symptoms is inappropriate in a population with a high prevalence of Helicobacter pylori infection. Gastrointestinal endoscopy 2002; 55 (4): 461-465.

15. Johansson, J., Johnsson, F., Walther, B., Willen, R., Von Holstein, C. S., and Zilling, T. Adenocarcinoma in the distal esophagus with and without Barrett esophagus: Differences in symptoms and survival rates. Archives of Surgery 1996; 131 (7): 708-713.

16. Collen, M. J., Johnson, D. A., and Sheridan, M. J. Basal acid output and gastric acid hypersecretion in gastroesophageal reflux disease. Correlation with ranitidine therapy. Digestive Diseases and Sciences 1994; 39 (2): 410-417.

17. Gorodner, Veronica, Buxhoeveden, Rudolf, Clemente, Gaston, Sanchez, Christian, Caro, Luis, and Grigaites, Alejandro Barrett's esophagus after Roux-en-Y gastric bypass: does regression occur? Surgical Endoscopy 2017 Apr 1;31(4):1849-54.

18. Promberger, Regina, Lenglinger, Johannes, Riedl, Otto, Seebacher, Gernot, Eilenberg, Wolf, Ott, Johannes, Riegler, Franz, Gadenstatter, Michael, and Neumayer, Christoph Gastro-oesophageal reflux disease in type 2 diabetics: symptom load and pathophysiologic aspects - a retro-pro study. BMC gastroenterology 2013; 13: 132-.

19. Ponce, Julio, Ortiz, Vicente, Maroto, Nuria, Ponce, Marta, Bustamante, Marco, and Garrigues, Vicente High prevalence of heartburn and low acid sensitivity in patients with idiopathic achalasia. Digestive Diseases and Sciences 2011; 56 (3): 773-776.

20. Sanduleanu, S., Stridsberg, M., Jonkers, D., Hameeteman, W., Biemond, I., Lundqvist, G., Lamers, C., and Stockbrugger, R. W. Serum gastrin and chromogranin A during medium- and long-term acid suppressive therapy: a case-control study. Alimentary pharmacology & therapeutics 1999; 13 (2): 145-153.

21. Topart, R., Deschamps, C., Taillefer, R., and Duranceau, A. [Scleroderma and esophageal reflux, surgical monitoring]. Annales de chirurgie 1992; 46 (9): 794-799.

22. Praveenraj, P., Gomes, R. M., Kumar, S., Senthilnathan, P., Parathasarathi, R., Rajapandian, S., and Palanivelu, C. Diagnostic yield and clinical implications of preoperative upper gastrointestinal endoscopy in morbidly obese patients undergoing bariatric surgery. Journal of Laparoendoscopic and Advanced Surgical Techniques 2015; 25 (6): 465-469.

23. Khandwalla, H. E., Graham, D. Y., Kramer, J. R., Ramsey, D. J., Duong, N., Green, L. K., and El-Serag, H. B. Barrett's Esophagus suspected at endoscopy but no specialized intestinal metaplasia on biopsy, what's next. American Journal of Gastroenterology 2014; 109 (2): 178-182.

24. Leeuwenburgh, I., Scholten, P., Calje, T. J., Vaessen, R. J., Tilanus, H. W., Hansen, B. E., and Kuipers, E. J. Barrett's esophagus and esophageal adenocarcinoma are common after treatment for achalasia. Digestive Diseases and Sciences 2013; 58 (1): 244-252.

25. Leodolter, A., Nocon, M., Vieth, M., Lind, T., Jaspersen, D., Richter, K., Willich, S., Stolte, M., Malfertheiner, P., and Labenz, J. Progression of specialized intestinal metaplasia at the cardia to macroscopically evident Barrett's esophagus: An entity of concern in the ProGERD study. Scandinavian Journal of Gastroenterology 2012; 47 (12): 1429-1435.

26. Dias, Pereira A. and Chaves, P. Columnar-lined oesophagus without intestinal metaplasia: Results from a cohort with a mean follow-up of 7 years. Alimentary Pharmacology and Therapeutics 2012; 36 (3): 282-289.

27. Malfertheiner, P., Nocon, M., Vieth, M., Stolte, M., Jaspersen, D., Koelz, H. R., Labenz, J., Leodolter, A., Lind, T., Richter, K., and Willich, S. N. Evolution of gastro-oesophageal reflux disease over 5 years under routine medical care - The ProGERD study. Alimentary Pharmacology and Therapeutics 2012; 35 (1): 154-164.

28. Rice, T. W., Goldblum, J. R., Rybicki, L. A., Rajeswaran, J., Murthy, S. C., Mason, D. P., and Blackstone, E. H. Fate of the esophagogastric anastomosis. Journal of Thoracic and Cardiovascular Surgery 2011; 141 (4): 875-.

29. Rantanen, T., Oksala, N., Honkanen, T., Rasanen, J., Sihvo, E., Mattila, J., Paimela, H., Paavonen, T., and Salo, J. The effect of fundoplication on proliferative and anti-apoptotic activity of esophageal mucosa in gastroesophageal reflux disease: 4-year follow-up study. Journal of Digestive Diseases 2011; 12 (4): 263-271.

30. Jacobson, B. C., Giovannucci, E. L., and Fuchs, C. S. Smoking and Barrett's esophagus in women who undergo upper endoscopy. Digestive Diseases and Sciences 2011; 56 (6): 1707-1717.

31. Hashemi, N., Loren, D., Dimarino, A. J., and Cohen, S. Presentation and prognosis of esophageal adenocarcinoma in patients below age 50. Digestive Diseases and Sciences 2009; 54 (8): 1708-1712.

32. Flameling, R. D., Numans, M. E., Ter, Linde J., De Wit, N. J., and Siersema, P. D. Different characteristics of patients with gastro-oesophageal reflux disease on their path through healthcare: A population follow-up study. European Journal of Gastroenterology and Hepatology 2010; 22 (5): 578-582.

33. Johansson, J., Hakansson, H.-O., Mellblom, L., Kempas, A., Kjellen, G., Brudin, L., Granath, F., Johansson, K.-E., and Nyren, O. Pancreatic acinar metaplasia in the distal oesophagus and the gastric cardia: Prevalence, predictors and relation to GORD. Journal of gastroenterology 2010; 45 (3): 291-299.

34. Yuasa, N., Abe, T., Sasaki, E., Fukaya, M., Nimura, Y., and Miyahara, R. Comparison of gastroesophageal reflux in 100 patients with or without prior gastroesophageal surgery. Journal of gastroenterology 2009; 44 (7): 650-658.

35. Jacobson, B. C., Chan, A. T., Giovannucci, E. L., and Fuchs, C. S. Body mass index and Barrett's oesophagus in women. Gut 2009; 58 (11): 1460-1466.

36. Williams, J. F., Sontag, S. J., Schnell, T., and Leya, J. Non-cardiac chest pain: The long-term natural history and comparison with gastroesophageal reflux disease. American Journal of Gastroenterology 2009; 104 (9): 2145-2152.

37. Falkenback, D., Oberg, S., Johnsson, F., and Johansson, J. Is the course of gastroesophageal reflux disease progressive? A 21-year follow-up. Scandinavian Journal of Gastroenterology 2009; 44 (11): 1277-1287.

38. Moriyama, N., Amano, Y., Mishima, Y., Okita, K., Takahashi, Y., Yuki, T., Ishimura, N., Ishihara, S., and Kinoshita, Y. What is the clinical significance of stromal angiogenesis in Barrett's esophagus? Journal of Gastroenterology and Hepatology (Australia) 2008; 23 (SUPPL. 2): S210-S215.

39. Yamagishi, H., Koike, T., Ohara, S., Kobayashi, S., Ariizumi, K., Abe, Y., Iijima, K., Imatani, A., Inomata, Y., Kato, K., Shibuya, D., Aida, S., and Shimosegawa, T. Tongue-like Barrett's esophagus is associated with gastroesophageal reflux disease. World journal of gastroenterology 2008; 14 (26): 4196-4203.

40. Okita, K., Amano, Y., Takahashi, Y., Mishima, Y., Moriyama, N., Ishimura, N., Ishihara, S., and Kinoshita, Y. Barrett's esophagus in Japanese patients: Its prevalence, form, and elongation. Journal of gastroenterology 2008; 43 (12): 928-934.

41. Akiyama, T., Inamori, M., Akimoto, K., Iida, H., Mawatari, H., Endo, H., Nozaki, Y., Yoneda, K., Ikeda, T., Sakamoto, Y., Fujita, K., Yoneda, M., Takahashi, H., Goto, A., Hirokawa, S., Abe, Y., Kirikoshi, H., Kobayashi, N., Kubota, K., Saito, S., Rino, Y., and Nakajima, A. Gastric surgery is not a risk factor for the development or progression of Barrett's epithelium. Hepato-gastroenterology 2008; 55 (86-87): 1899-1904.

42. Bozikas, A., Marsman, W. A., Rosmolen, W. D., van Baal, J. W. P. M., Kulik, W., Ten Kate, F. J. W., Krishnadath, K. K., and Bergman, J. J. G. H. The effect of oral administration of ursodeoxycholic acid and high-dose proton pump inhibitors on the histology of Barrett's esophagus. Diseases of the Esophagus 2008; 21 (4): 346-354.

43. Ogiya, K., Kawano, T., Ito, E., Nakajima, Y., Kawada, K., Nishikage, T., and Nagai, K. Lower esophageal palisade vessels and the definition of Barrett's esophagus. Diseases of the Esophagus 2008; 21 (7): 645-649.

44. Zagari, R. M., Fuccio, L., Wallander, M.-A., Johansson, S., Fiocca, R., Casanova, S., Farahmand, B. Y., Winchester, C. C., Roda, E., and Bazzoli, F. Gastro-oesophageal reflux symptoms, oesophagitis and barrett's oesophagus in the general population: The Loiano-Monghidoro study. Gut 2008; 57 (10): 1354-1359.

45. Bax, D., Siersema, P. D., Moons, L. M. G., Dekken, H. V., Tilanus, H. W., Kusters, J. G., and Kuipers, E. J. CDX2 expression in columnar metaplasia of the remnant esophagus in patients who underwent esophagectomy. Journal of Clinical Gastroenterology 2007; 41 (4): 375-379.

46. Oh, D. S., DeMeester, S. R., Vallbohmer, D., Mori, R., Kuramochi, H., Hagen, J. A., Lipham, J., Danenberg, K. D., Danenberg, P. V., Chandrasoma, P., and DeMeester, T. R. Reduction of interleukin 8 gene expression in reflux esophagitis and Barrett's esophagus with antireflux surgery. Archives of Surgery 2007; 142 (6): 554-559.

47. Stoltey, J., Reeba, H., Ullah, N., Sabhaie, P., and Gerson, L. Does Barrett's oesophagus develop over time in patients with chronic gastro-oesophageal reflux disease?. Alimentary Pharmacology and Therapeutics 2007; 25 (1): 83-91.

48. Ward, E. M., Wolfsen, H. C., Achem, S. R., Loeb, D. S., Krishna, M., Hemminger, L. L., and DeVault, K. R. Barrett's esophagus is common in older men and women undergoing screening colonoscopy regardless of reflux symptoms. American Journal of Gastroenterology 2006; 101 (1): 12-17.

49. Seltman, A. K., Kahrilas, P. J., Chang, E. Y., Mori, M., Hunter, J. G., and Jobe, B. A. Endoscopic measurement of cardia circumference as an indicator of GERD. Gastrointestinal endoscopy 2006; 63 (1): 22-31.

50. Sontag, S. J., Sonnenberg, A., Schnell, T. G., Leya, J., and Metz, A. The long-term natural history of gastroesophageal reflux disease. Journal of Clinical Gastroenterology 2006; 40 (5): 398-404.

51. Oksala, N. K. J., Atalay, M., and Rantanen, T. K. Antireflux surgery and esophageal mucosal DNA damage. Pathophysiology 2006; 13 (1): 23-27.

52. Labenz, J., Nocon, M., Lind, T., Leodolter, A., Jaspersen, D., Meyer-Sabellek, W., Stolte, M., Vieth, M., Willich, S. N., and Malfertheiner, P. Prospective follow-up data from the ProGERD study suggest that GERD is not a categorial disease. American Journal of Gastroenterology 2006; 101 (11): 2457-2462.

53. Sundar, N., Muraleedharan, V., Pandit, J., Green, J. T., Crimmins, R., and Swift, G. L. Does endoscopy diagnose early gastrointestinal cancer in patients with uncomplicated dyspepsia?. Postgraduate Medical Journal 2006; 82 (963): 52-54.

54. Wipff, J., Allanore, Y., Soussi, F., Terris, B., Abitbol, V., Raymond, J., Chaussade, S., and Kahan, A. Prevalence of Barrett's esophagus in systemic sclerosis. Arthritis and Rheumatism 2005; 52 (9): 2882-2888.

55. Stein, D. J., El-Serag, H. B., Kuczynski, J., Kramer, J. R., and Sampliner, R. E. The association of body mass index with Barrett's oesophagus. Alimentary Pharmacology and Therapeutics 2005; 22 (10): 1005-1010.

56. Wo, J. M., Mendez, C., Harrell, S., Joubran, R., Bressoud, P. F., and McKinney, W. P. Clinical impact of upper endoscopy in the management of patients with gastroesophageal reflux disease. American Journal of Gastroenterology 2004; 99 (12): 2311-2316.

57. Labenz, J., Jaspersen, D., Kulig, M., Leodolter, A., Lind, T., Meyer-Sabellek, W., Stolte, M., Vieth, M., Willich, S., and Malfertheiner, P. Risk factors for erosive esophagitis: A multivariate analysis based on the proGERD study initiative. American Journal of Gastroenterology 2004; 99 (9): 1652-1656.

58. El-Serag, H. B., Aguirre, T., Kuebeler, M., and Sampliner, R. E. The length of newly diagnosed Barrett's oesophagus and prior use of acid suppressive therapy. Alimentary Pharmacology and Therapeutics 2004; 19 (12): 1255-1260.

59. Chak, A., Faulx, A., Kinnard, M., Brock, W., Willis, J., Wiesner, G. L., Parrado, A. R., and Goddard, K. A. B. Identification of Barrett's esophagus in relatives by endoscopic screening. American Journal of Gastroenterology 2004; 99 (11): 2107-2114.

60. Desai, K. M., Soper, N. J., Frisella, M. M., Quasebarth, M. A., Dunnegan, D. L., and Brunt, L. M. Efficacy of laparoscopic antireflux surgery in patients with Barrett's esophagus. American journal of surgery 2003; 186 (6): 652-659.

61. Dresner, S. M., Griffin, S. M., Wayman, J., Bennett, M. K., Hayes, N., and Raimes, S. A. Human model of duodenogastro-oesophageal reflux in the development of Barrett's metaplasia. British Journal of Surgery 2003; 90 (9): 1120-1128.

62. Cameron, A. J. and Arora, A. S. Barrett's esophagus and reflux esophagitis: Is there a missing link? American Journal of Gastroenterology 2002; 97 (2): 273-278.

63. Wetscher, G. J., Gadenstaetter, M., Klingler, P. J., Weiss, H., Obrist, P., Wykypiel, H., Klaus, A., and Profanter, C. Efficacy of medical therapy and antireflux surgery to prevent Barrett's metaplasia in patients with gastroesophageal reflux disease. Annals of Surgery 2001; 234 (5): 627-632.

64. Levine, D. S., Blount, P. L., Rudolph, R. E., and Reid, B. J. Safety of a systematic endoscopic biopsy protocol in patients with Barrett's esophagus. American Journal of Gastroenterology 2000; 95 (5): 1152-1157.

65. Mittal, S. K., Awad, Z. T., Tasset, M., Filipi, C. J., Dickason, T. J., Shinno, Y., Marsh, R. E., Tomonaga, T. J., and Lerner, C. The preoperative predictability of the short esophagus in patients with stricture or paraesophageal hernia. Surgical endoscopy 2000; 14 (5): 464-468.

66. Rantanen, T. K., Halme, T. V., Luostarinen, M. E., Karhumaki, L. M., Kononen, E. O., and Isolauri, J. O. The long term results of open antireflux surgery in a community-based health care center. American Journal of Gastroenterology 1999; 94 (7): 1777-1781.

67. Farrell, T. M., Smith, C. D., Metreveli, R. E., Johnson, A. B., Galloway, K. D., and Hunter, J. G. Fundoplication provides effective and durable symptom relief in patients with Barrett's esophagus. American journal of surgery 1999; 178 (1): 18-21.

68. Schenk, B. E., Kuipers, E. J., Klinkenberg-Knol, E. C., Eskes, S. A., and Meuwissen, S. G. M. Helicobacter pylori and the efficacy of omeprazole therapy for gastroesophageal reflux disease. American Journal of Gastroenterology 1999; 94 (4): 884-887.

69. Hackelsberger, A., Gunther, T., Schultze, V., Manes, G., Dominguez-Munoz, J.-E., Roessner, A., and Malfertheiner, P. Intestinal metaplasia at the gastro-oesophageal junction: Helicobacter pylori gastritis or gastro-oesophageal reflux disease? Gut 1998; 43 (1): 17-21.

70. Somppi, E., Tammela, O., Ruuska, T., Rahnasto, J., Laitinen, J., Turjanmaa, V., and Jarnberg, J. Outcome of patients operated on for esophageal atresia: 30 years' experience. Journal of Pediatric Surgery 1998; 33 (9): 1341-1346.

71. Bersentes, K., Fass, R., Padda, S., Johnson, C., and Sampliner, R. E. Prevalence of Barrett's esophagus in Hispanics is similar to Caucasians. Digestive Diseases and Sciences 1998; 43 (5): 1038-1041.

72. Kiviluoto, T., Siren, J., Farkkila, M., Luukkonen, P., Salo, J., and Kivilaakso, E. Laparoscopic nissen fundoplication: A prospective analysis of 200 consecutive patients. Surgical Laparoscopy and Endoscopy 1998; 8 (6): 429-434.

73. Newton, M., Bryan, R., Burnham, W. R., and Kamm, M. A. Evaluation of Helicobacter pylori in reflux oesophagitis and Barrett's oesophagus. Gut 1997; 40 (1): 9-13.

74. Hunter, J. G., Trus, T. L., Branum, G. D., Waring, J. P., and Wood, W. C. A physiologic approach to laparoscopic fundoplication for gastroesophageal reflux disease. Annals of Surgery 1996; 223 (6): 673-687.

75. Johnston, B. T., Carre, I. J., Thomas, P. S., and Collins, B. J. Twenty to 40 year follow up of infantile hiatal hernia. Gut 1995; 36 (6): 809-812.

76. Sontag, S. J., Schnell, T. G., Miller, T. Q., Khandelwal, S., O'Connell, S., Chejfec, G., Greenlee, H., Seidel, U. J., and Brand, L. Prevalence of oesophagitis in asthmatics. Gut 1992; 33 (7): 872-876.

77. Shimoyama, Shouji, Ogawa, Toshihisa, and Toma, Toshiyuki Trajectories of endoscopic Barrett esophagus: Chronological changes in a community-based cohort. World journal of gastroenterology 2016; 22 (35): 8060-8066.

78. Alkaddour, Ahmad, McGaw, Camille, Hritani, Rama, Palacio, Carlos, Nakshabendi, Rahman, Munoz, Juan Carlos, and Vega, Kenneth J. African American ethnicity is not associated with development of Barrett's oesophagus after erosive oesophagitis. Digestive and liver disease 2015; 47 (10): 853-856.

79. Dutta, Sudhir K., Agrawal, Kireet, Girotra, Mohit, Fleisher, A. Steven, Motevalli, Mahnaz, Mah'moud, Mitchell A., and Nair, Padmanabhan P. Barrett's esophagus and beta-carotene therapy: symptomatic improvement in GERD and enhanced HSP70 expression in esophageal mucosa. Asian Pacific journal of cancer prevention: APJCP 2012; 13 (12): 6011-6016.

80. Faintuch, Jacob Jehuda, Silva, Fernando Marcuz, Navarro-Rodriguez, Tomas, Barbuti, Ricardo Correa, Hashimoto, Claudio Lyoiti, Rossini, Alessandra Rita Asayama Lopes, Diniz, Marcio Augusto, and Eisig, Jaime Natan Endoscopic findings in uninvestigated dyspepsia. BMC gastroenterology 2014; 14: 19-.

81. Galindo, G., Vassalle, J., Marcus, S. N., and Triadafilopoulos, G. Multimodality evaluation of patients with gastroesophageal reflux disease symptoms who have failed empiric proton pump inhibitor therapy. Diseases of the esophagus 2013; 26 (5): 443-450.

82. Qureshi, Alia P., Aye, Ralph W., Buduhan, Gordon, Knight, Ariel, Orlina, Jeraldine, Farivar, Alexander S., Wagner, Oliver J., McHugh, Sean, and Louie, Brian E. The laparoscopic Nissen-Hill hybrid: pilot study of a combined antireflux procedure. Surgical endoscopy 2013; 27 (6): 1945-1952.

83. Kuo, Chia Jung, Lin, Cheng Hui, Liu, Nai Jen, Wu, Ren Chin, Tang, Jui Hsiang, and Cheng, Chi Liang Frequency and risk factors for Barrett's esophagus in Taiwanese patients: a prospective study in a tertiary referral center. Digestive Diseases and Sciences 2010; 55 (5): 1337-1343.

84. Lord, Reginald V. N., Demeester, Steven R., Peters, Jeffrey H., Hagen, Jeffrey A., Elyssnia, Dino, Sheth, Corinne T., and Demeester, Tom R. Hiatal hernia, lower esophageal sphincter incompetence, and effectiveness of Nissen fundoplication in the spectrum of gastroesophageal reflux disease. Journal of gastrointestinal surgery 2009; 13 (4): 602-610.

85. Lee, Sang Kuon and Kim, Eung Kook Laparoscopic Nissen fundoplication in Korean patients with gastroesophageal reflux disease. Yonsei medical journal 2009; 50 (1): 89-94.

86. Anandasabapathy, Sharmila, Jhamb, Jagriti, Davila, Marta, Wei, Caimiao, Morris, Jeffrey, and Bresalier, Robert Clinical and endoscopic factors predict higher pathologic grades of Barrett dysplasia. Cancer 2007; 109 (4): 668-674.

87. Mullin, J. M., Valenzano, M. C., Trembeth, S., Allegretti, P. D., Verrecchio, J. J., Schmidt, J. D., Jain, V., Meddings, J. B., Mercogliano, G., and Thornton, J. J. Transepithelial leak in Barrett's esophagus. Digestive Diseases and Sciences 2006; 51 (12): 2326-2336.

88. Frazzoni, M., Manno, M., De Micheli, E., and Savarino, V. Pathophysiological characteristics of the various forms of gastro-oesophageal reflux disease. Spectrum disease or distinct phenotypic presentations? Digestive and liver disease 2006; 38 (9): 643-648.

89. Vallbohmer, Daniel, Demeester, Steven R., Oh, Daniel S., Banki, Farzaneh, Kuramochi, Hidekazu, Shimizu, Daisuke, Hagen, Jeffrey A., Danenberg, Kathleen D., Danenberg, Peter V., Chandrasoma, Parakrama T., Peters, Jeffrey H., and Demeester, Tom R. Antireflux surgery normalizes cyclooxygenase-2 expression in squamous epithelium of the distal esophagus. The American journal of gastroenterology 2006; 101 (7): 1458-1466.

90. Hanna, Sameh, Rastogi, Amit, Weston, Allan P., Totta, Frank, Schmitz, Robert, Mathur, Sharad, McGregor, Douglas, Cherian, Rachel, and Sharma, Prateek Detection of Barrett's esophagus after endoscopic healing of erosive esophagitis. The American journal of gastroenterology 2006; 101 (7): 1416-1420.

91. Leeuwenburgh, I., Van Dekken, H., Scholten, P., Hansen, B. E., Haringsma, J., Siersema, P. D., and Kuipers, E. J. Oesophagitis is common in patients with achalasia after pneumatic dilatation. Alimentary pharmacology & therapeutics 2006; 23 (8): 1197-1203.

92. Bhat, Yasser M. and Bielefeldt, Klaus Capsaicin receptor (TRPV1) and non-erosive reflux disease. European journal of gastroenterology & hepatology 2006; 18 (3): 263-270.

93. Velanovich, Vic and Mohlberg, Nathan The split-stomach fundoplication after esophagogastrectomy. Journal of gastrointestinal surgery 2006; 10 (2): 178-5.

94. Ozmen, V., Oran, E Sen, Gorgun, E., Asoglu, O., Igci, A., Kecer, M., and Dizdaroglu, F. Histologic and clinical outcome after laparoscopic Nissen fundoplication for gastroesophageal reflux disease and Barrett's esophagus. Surgical endoscopy 2006; 20 (2): 226-229.

95. Eliakim, R., Yassin, K., Shlomi, I., Suissa, A., and Eisen, G. M. A novel diagnostic tool for detecting oesophageal pathology: the PillCam oesophageal video capsule. Alimentary pharmacology & therapeutics 2004; 20 (10): 1083-1089.

96. Lin, Edward, Swafford, Vickie, Chadalavada, Rajagopal, Ramshaw, Bruce J., and Smith, C. Daniel Disparity between symptomatic and physiologic outcomes following esophageal lengthening procedures for antireflux surgery. Journal of gastrointestinal surgery 2004; 8 (1): 31-39.

97. Papasavas, P. K., Keenan, R. J., Yeaney, W. W., Caushaj, P. F., Gagne, D. J., and Landreneau, R. J. Effectiveness of laparoscopic fundoplication in relieving the symptoms of gastroesophageal reflux disease (GERD) and eliminating antireflux medical therapy. Surgical endoscopy 2003; 17 (8): 1200-1205.

98. Kulig, M., Leodolter, A., Vieth, M., Schulte, E., Jaspersen, D., Labenz, J., Lind, T., Meyer-Sabellek, W., Malfertheiner, P., Stolte, M., and Willich, S. N. Quality of life in relation to symptoms in patients with gastro-oesophageal reflux disease-- an analysis based on the ProGERD initiative. Alimentary pharmacology & therapeutics 2003; 18 (8): 767-776.

99. Richards, William O., Houston, Hugh L., Torquati, Alfonso, Khaitan, Leena, Holzman, Michael D., and Sharp, Kenneth W. Paradigm shift in the management of gastroesophageal reflux disease. Annals of Surgery 2003; 237 (5): 638-639.

100. Nasseri-Moghaddam, Siavosh, Malekzadeh, Reza, Sotoudeh, Masoud, Tavangar, Mohammad, Azimi, Kourosh, Sohrabpour, Amir Ali, Mostadjabi, Pardis, Fathi, Hosnieh, and Minapoor, Mina Lower esophagus in dyspeptic Iranian patients: a prospective study. Journal of gastroenterology and hepatology 2003; 18 (3): 315-321.

101. Wong, W. M., Lam, S. K., Hui, W. M., Lai, K. C., Chan, C. K., Hu, W. H. C., Xia, H. H. X., Hui, C. K., Yuen, M. F., Chan, A. O. O., and Wong, B. C. Y. Long-term prospective follow-up of endoscopic oesophagitis in southern Chinese--prevalence and spectrum of the disease. Alimentary pharmacology & therapeutics 2002; 16 (12): 2037-2042.

102. Donahue, Philip E., Horgan, Santiago, Liu, Katherine J. M., and Madura, James A. Floppy Dor fundoplication after esophagocardiomyotomy for achalasia. Surgery (United Kingdom) 2002; 132 (4): 716-3.

103. Lindstrom, Dean R., Wallace, James, Loehrl, Todd A., Merati, Albert L., and Toohill, Robert J. Nissen fundoplication surgery for extraesophageal manifestations of gastroesophageal reflux (EER). The Laryngoscope 2002; 112 (10): 1762-1765.

104. Todd, J. A., Johnston, D. A., and Dillon, J. F. The changing spectrum of gastroesophageal reflux disease. European journal of cancer prevention 2002; 11 (3): 215-219.

105. Kamolz, T., Bammer, T., Granderath, F. A., and Pointner, R. Comorbidity of aerophagia in GERD patients: outcome of laparoscopic antireflux surgery. Scandinavian Journal of Gastroenterology 2002; 37 (2): 138-143.

106. Awad, Z. T., Mittal, S. K., Roth, T. A., Anderson, P. I., Jr, W. A., and Filipi, C. J. Esophageal shortening during the era of laparoscopic surgery. World Journal of Surgery 2001; 25 (5): 558-561.

107. Csendes, A., Smok, G., Flores, N., Rojas, J., Quiroz, J., and Henriquez, A. Comparison of clinical, endoscopic and functional findings in patients with intestinal metaplasia at the cardia, carditis and short-segment columnar epithelium of the distal esophagus with and without intestinal metaplasia. Diseases of the esophagus 2000; 13 (1): 61-68.

108. Braghetto, I., Csendes, A., Burdiles, P., and Korn, O. Antireflux surgery, highly selective vagotomy and duodenal switch procedure: post-operative evaluation in patients with complicated and non-complicated Barrett's esophagus. Diseases of the esophagus 2000; 13 (1): 12-17.

109. Reid, B. J., Levine, D. S., Longton, G., Blount, P. L., and Rabinovitch, P. S. Predictors of progression to cancer in Barrett's esophagus: baseline histology and flow cytometry identify low- and high-risk patient subsets. The American journal of gastroenterology 2000; 95 (7): 1669-1676.

110. Yau, P., Watson, D. I., Devitt, P. G., Game, P. A., and Jamieson, G. G. Laparoscopic antireflux surgery in the treatment of gastroesophageal reflux in patients with Barrett esophagus. Archives of surgery (Chicago, Ill.: 1960) 2000; 135 (7): 801-805.

111. Patti, M. G., Arcerito, M., Feo, C. V., Worth, S., De Pinto, M., Gibbs, V. C., Gantert, W., Tyrrell, D., Ferrell, L. F., and Way, L. W. Barrett's esophagus: a surgical disease. Journal of gastrointestinal surgery 1999; 3 (4): 397-4.

112. Shai, S. E., Chen, C. Y., Hsu, C. P., Hsia, J. Y., and Yang, S. S. Transthoracic oesophagomyotomy in the treatment of achalasia--a 15-year experience. Scandinavian cardiovascular journal: SCJ 1999; 33 (6): 333-336.

113. Horvath, K. D., Jobe, B. A., Herron, D. M., and Swanstrom, L. L. Laparoscopic Toupet fundoplication is an inadequate procedure for patients with severe reflux disease. Journal of gastrointestinal surgery 1999; 3 (6): 583-591.

114. Trastek, V. F., Deschamps, C., Allen, M. S., Miller, D. L., Pairolero, P. C., and Thompson, A. M. Uncut Collis-Nissen fundoplication: learning curve and long-term results. The Annals of thoracic surgery 1998; 66 (5): 1739-1744.

115. McDougall, N. I., Johnston, B. T., Collins, J. S., McFarland, R. J., and Love, A. H. Disease progression in gastro-oesophageal reflux disease as determined by repeat oesophageal pH monitoring and endoscopy 3 to 4.5 years after diagnosis. European journal of gastroenterology & hepatology 1997; 9 (12): 1161-1167.

116. Ritter, D. W., Vanderpool, D., and Westmoreland, M. Laparoscopic Nissen fundoplication for gastroesophageal reflux disease. American journal of surgery 1997; 174 (6): 715-718.

117. Wetscher, G. J., Profanter, C., Gadenstatter, M., Perdikis, G., Glaser, K., and Hinder, R. A. Medical treatment of gastroesophageal reflux disease does not prevent the development of Barrett's metaplasia and poor esophageal body motility. Langenbecks Archiv fur Chirurgie 1997; 382 (2): 95-99.

118. Isolauri, J., Luostarinen, M., Viljakka, M., Isolauri, E., Keyrilainen, O., and Karvonen, A. L. Long-term comparison of antireflux surgery versus conservative therapy for reflux esophagitis. Annals of Surgery 1997; 225 (3): 295-299.

119. McDougall, N. I., Johnston, B. T., Kee, F., Collins, J. S., McFarland, R. J., and Love, A. H. Natural history of reflux oesophagitis: a 10 year follow up of its effect on patient symptomatology and quality of life. Gut 1996; 38 (4): 481-486.

120. Jones, R., Canal, D. F., Inman, M. M., and Rescorla, F. J. Laparoscopic fundoplication: a three-year review. The American surgeon 1996; 62 (8): 632-636.

121. Vanamo, K., Rintala, R. J., Lindahl, H., and Louhimo, I. Long-term gastrointestinal morbidity in patients with congenital diaphragmatic defects. Journal of Pediatric Surgery 1996; 31 (4): 551-554.

122. Spechler, S. J., Zeroogian, J. M., Antonioli, D. A., Wang, H. H., and Goyal, R. K. Prevalence of metaplasia at the gastro-oesophageal junction. Lancet (London, England) 1994; 344 (8936): 1533-1536.

123. Carr, N. J., Monihan, J. M., and Sobin, L. H. Squamous cell papilloma of the esophagus: a clinicopathologic and follow-up study of 25 cases. The American journal of gastroenterology 1994; 89 (2): 245-248.

124. Jaakkola, A., Reinikainen, P., Ovaska, J., and Isolauri, J. Barrett's esophagus after cardiomyotomy for esophageal achalasia. The American journal of gastroenterology 1994; 89 (2): 165-169.

125. Luostarinen, M., Isolauri, J., Laitinen, J., Koskinen, M., Keyrilainen, O., Markkula, H., Lehtinen, E., and Uusitalo, A. Fate of Nissen fundoplication after 20 years. A clinical, endoscopical, and functional analysis. Gut 1993; 34 (8): 1015-1020.

126. Johansson, J., Johnsson, F., Joelsson, B., Floren, C. H., and Walther, B. Outcome 5 years after 360 degree fundoplication for gastro-oesophageal reflux disease. The British journal of surgery 1993; 80 (1): 46-49.

127. Hendel, L., Hage, E., Hendel, J., and Stentoft, P. Omeprazole in the long-term treatment of severe gastro-oesophageal reflux disease in patients with systemic sclerosis. Alimentary pharmacology & therapeutics 1992; 6 (5): 565-577.

128. Collen, M. J., Lewis, J. H., and Benjamin, S. B. Gastric acid hypersecretion in refractory gastroesophageal reflux disease. Gastroenterology 1990; 98 (3): 654-661.

129. Perniceni, T., Leymarios, J., Molas, G., and Fekete, F. [Does Barrett esophagus regress after total duodenal diversion?]. Gastroenterologie clinique et biologique 1988; 12 (10): 709-712.

130. Lee, F. I. and Isaacs, P. E. Barrett's ulcer: response to standard dose ranitidine, high dose ranitidine, and omeprazole. The American journal of gastroenterology 1988; 83 (9): 914-916.

131. Ransom, J. M., Patel, G. K., Clift, S. A., Womble, N. E., and Read, R. C. Extended and limited types of Barrett's esophagus in the adult. The Annals of thoracic surgery 1982; 33 (1): 19-27.

132. Mosimann, R., Walder, J., Buchheim, G., Ollyo, J. B., Loup, P., and Fasel, J. [Gastroesophageal reflux: long-term results of surgical management]. Helvetica chirurgica acta 1981; 47 (6): 749-757.

133. Pohl, H., Robertson, D., and Welch, H. G. Repeated Upper Endoscopy in the Medicare Population A Retrospective Analysis. Annals of Internal Medicine 2014; 160 (3): 154-160.

134. Nkuize, M., De, Wit S., Muls, V., Pirenne, C., and Buset, M. The role of upper gastrointestinal endoscopy in the era of modern antiretroviral therapy. European Journal of Gastroenterology and Hepatology 2015; 27 (12): 1459-1465.

135. Royston, C., Caygill, C., Charlett, A., and Bardhan, K. D. The evolution and outcome of surveillance of Barrett's oesophagus over four decades in a UK District General Hospital. European Journal of Gastroenterology and Hepatology 2016; 28(12):1365-73.

136. Braghetto, I. and Csendes, A. Prevalence of Barrett's Esophagus in Bariatric Patients Undergoing Sleeve Gastrectomy. Obesity Surgery 2016; 26 (4): 710-714.

137. Picardo, S. L., O'Brien, M. P., Feighery, R., O'Toole, D., Ravi, N., O'Farrell, N. J., O'Sullivan, J. N., and Reynolds, J. V. A Barrett's esophagus registry of over 1000 patients from a specialist center highlights greater risk of progression than population-based registries and high risk of low grade dysplasia. Diseases of the Esophagus 2015; 28 (2): 121-126.

138. Dworkin, J. P., Dowdall, J. R., Kubik, M., Thottam, P. J., and Folbe, A. The Role of the Modified Barium Swallow Study and Esophagram in Patients with Globus Sensation. Dysphagia 2015; 30 (5): 506-510.

139. Kim, A., Park, W.-Y., Shin, N., Lee, H. J., Kim, Y. K., Lee, S. J., Hwang, C.-S., Park, D. Y., Kim, G. H., Lee, B. E., and Jo, H.-J. Cardiac mucosa at the gastroesophageal junction: An Eastern perspective. World journal of gastroenterology 2015; 21 (30): 9126-9133.

140. Greene, C. L., DeMeester, S. R., Augustin, F., Worrell, S. G., Oh, D. S., Hagen, J. A., and DeMeester, T. R. Long-term quality of life and alimentary satisfaction after esophagectomy with colon interposition. Annals of Thoracic Surgery 2014; 98 (5): 1713-1719.

141. Zehetner, J., DeMeester, S. R., Ayazi, S., Kilday, P., Alicuben, E. T., and DeMeester, T. R. Laparoscopic wedge fundectomy for collis gastroplasty creation in patients with a foreshortened esophagus. Annals of Surgery 2014; 260 (6): 1030-1033.

142. Alexander, P., Ramya, S., Solomon, R., Raja, S., Priyadarshini, M., Geetha, R., Srinivasan, V., and Jayanthi, V. Effects of long-term acid suppressants with ranitidine and omeprazole on gastric mucosa. Journal of Digestive Endoscopy 2013; 4 (1): 1-5.

143. Cade, R. J., Fox, A. M., Fahy, E. T., and Hii, M. W. Prevention of Barrett's metaplasia in a human model of duodenogastro-oesophageal reflux. Gastroenterology Insights 2013; 5 (1): 12-15.

144. Becker, V., Bobardt, J., Ott, R., Rosch, T., and Meining, A. Long-Term Follow-Up in Patients with Indeterminate Barrett Esophagus. Digestion 2013; 88 (3): 161-164.

145. Zschau, N. B., Andrews, J. M., Holloway, R. H., Schoeman, M. N., Lange, K., Tam, W. C. E., and Holtmann, G. J. Gastroesophageal reflux disease after diagnostic endoscopy in the clinical setting. World journal of gastroenterology 2013; 19 (16): 2514-2520.

146. Yachimski, P. Use of narrow band imaging in a group endoscopy practice. Endoscopy International Open 2013; 1 (1): E8-E11.

147. Zhang, M., Fan, X.-S., and Zou, X.-P. The prevalence of Barrett's esophagus remains low in Eastern China: Single-center 7-year descriptive study. Saudi Medical Journal 2012; 33 (12): 1324-1329.

148. Durand, L., De, Anton R., Caracoche, M., Covian, E., Gimenez, M., Ferraina, P., and Swanstrom, L. Short esophagus: Selection of patients for surgery and long-term results. Surgical Endoscopy and Other Interventional Techniques 2012; 26 (3): 704-713.

149. Tosato, F., Marano, S., Mattacchione, S., Luongo, B., Mingarelli, V., and Campagna, G. Quality of life after nissen-rossetti fundoplication. Surgical Laparoscopy, Endoscopy and Percutaneous Techniques 2012; 22 (3): 205-209.

150. Jung, K. W., Talley, N. J., Romero, Y., Katzka, D. A., Schleck, C. D., Zinsmeister, A. R., Dunagan, K. T., Lutzke, L. S., Wu, T.-T., Wang, K. K., Frederickson, M., Geno, D. M., Locke, G. R., and Prasad, G. A. Epidemiology and natural history of intestinal metaplasia of the gastroesophageal junction and barrett's esophagus: A population-based study. American Journal of Gastroenterology 2011; 106 (8): 1447-1455.

151. Braghetto, I., Korn, O., Cardemil, G., Coddou, E., Valladares, H., and Henriquez, A. Inversed Y cardioplasty plus a truncal vagotomy-antrectomy and a Roux-en-Y gastrojejunostomy performed in patients with stricture of the esophagogastric junction after a failed cardiomyotomy or endoscopic procedure in patients with achalasia of the esophagus. Diseases of the Esophagus 2010; 23 (3): 208-215.

152. Smithers, B. M., Fahey, P. P., Corish, T., Gotley, D. C., Falk, G. L., Smith, G. S., Kiroff, G. K., Clouston, A. D., Watson, D. I., and Whiteman, D. C. Symptoms, investigations and management of patients with cancer of the oesophagus and gastro-oesophageal junction in Australia. Medical Journal of Australia 2010; 193 (10): 572-577.

153. Modiano, N. and Gerson, L. B. Risk factors for the detection of Barrett's esophagus in patients with erosive esophagitis. Gastrointestinal endoscopy 2009; 69 (6): 1014-1020.

154. Nayyar, A. K., Royston, C., and Bardhan, K. D. Oesophageal acid-peptic strictures in the histamine H2 receptor antagonist and proton pump inhibitor era. Digestive and Liver Disease 2003; 35 (3): 143-150.

155. Markus, P. M., Horstmann, O., Kley, C., Neufang, T., and Becker, H. Laparoscopic fundoplication: Is there a correlation between pH studies and the patient's quality of life? Surgical Endoscopy and Other Interventional Techniques 2002; 16 (1): 48-53.

156. Bowers, S. P., Mattar, S. G., Smith, C. D., Waring, J. P., and Hunter, J. G. Clinical and histologic follow-up after antireflux surgery for Barrett's esophagus. Journal of gastrointestinal surgery 2002; 6 (4): 532-539.

157. Huang, M.-T., Lai, I.-R., Wei, P.-L., Wu, C.-C., and Lee, W.-J. Laparoscopic nissen fundoplication for reflux esophagitis: The initial experience. Formosan Journal of Surgery 2000; 33 (2): 66-71.

158. Teodori, L., Gohde, W., Persiani, M., Ferrario, F., Danesi, D. T., Scarpignato, C., Di, Tondo U., Alo, P., and Capurso, L. DNA/protein flow cytometry as a predictive marker of malignancy in dysplasia-free barrett's esophagus: Thirteen-year follow-up study on a cohort of patients. Communications in Clinical Cytometry 1998; 34 (6): 257-263.

159. Drewitz, D. J., Sampliner, R. E., and Garewal, H. S. The incidence of adenocarcinoma in Barrett's esophagus: a prospective study of 170 patients followed 4.8 years. The American journal of gastroenterology 1997; 92 (2): 212-215.

160. Weston, A. P., Sharma, P., Mathur, S., Banerjee, S., Jafri, A. K., Cherian, R., McGregor, D., Hassanein, R. S., and Hall, M. Risk stratification of Barrett's esophagus: Updated prospective multivariate analysis. American Journal of Gastroenterology 2004; 99 (9): 1657-1666.

161. Steevens, Jessie, Schouten, Leo J., Driessen, Ann L. C., Huysentruyt, Clement J. R., Keulemans, Yolande C. A., Goldbohm, R. Alexandra, and van den Brandt, Piet A. A prospective cohort study on overweight, smoking, alcohol consumption, and risk of Barrett's esophagus. Cancer epidemiology, biomarkers & prevention: a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology 2011; 20 (2): 345-358.

162. Lamberts, R., Brunner, G., and Solcia, E. Effects of very long (up to 10 years) proton pump blockade on human gastric mucosa. Digestion 2001; 64 (4): 205-213.

163. Miholic, Johannes, Hafez, Joumanah, Lenglinger, Johannes, Wrba, Fritz, Wischin, Christiane, Schutz, Katrin, and Hudec, Marcus Hiatal hernia, Barrett's esophagus, and long-term symptom control after laparoscopic fundoplication for gastroesophageal reflux. Surgical endoscopy 2012; 26 (11): 3225-3231.

164. Tekin, Koray, Toydemir, Toygar, and Yerdel, Mehmet Ali Is laparoscopic antireflux surgery safe and effective in obese patients? Surgical endoscopy 2012; 26 (1): 86-95.

165. Nocon, Marc, Labenz, Joachim, Jaspersen, Daniel, Leodolter, Andreas, Meyer-Sabellek, Wolfgang, Stolte, Manfred, Vieth, Michael, Lind, Tore, Malfertheiner, Peter, and Willich, Stefan N. Nighttime heartburn in patients with gastroesophageal reflux disease under routine care. Digestion 2008; 77 (2): 69-72.

166. Marcotullio, Dario, Magliulo, Giuseppe, and Pezone, Tiziana Reinke's edema and risk factors: clinical and histopathologic aspects. American journal of otolaryngology 2002; 23 (2): 81-84.

167. Ye, W., Chow, W. H., Lagergren, J., Yin, L., and Nyren, O. Risk of adenocarcinomas of the esophagus and gastric cardia in patients with gastroesophageal reflux diseases and after antireflux surgery. Gastroenterology 2001; 121 (6): 1286-1293.

168. Ye, W., Chow, W. H., Lagergren, J., Boffetta, P., Boman, G., Adami, H. O., and Nyren, O. Risk of adenocarcinomas of the oesophagus and gastric cardia in patients hospitalized for asthma. British Journal of Cancer 2001; 85 (9): 1317-1321.

169. Balsiger, B. M., Murr, M. M., Mai, J., and Sarr, M. G. Gastroesophageal reflux after intact vertical banded gastroplasty: correction by conversion to Roux-en-Y gastric bypass. Journal of gastrointestinal surgery 2000; 4 (3): 276-281.

170. Di Simone, M. P., Felice, V., D'Errico, A., Bassi, F., D'Ovidio, F., Brusori, S., and Mattioli, S. Onset timing of delayed complications and criteria of follow-up after operation for esophageal achalasia. The Annals of thoracic surgery 1996; 61 (4): 1106-1.

171. Caygill, C. P., Hill, M. J., Kirkham, J. S., and Northfield, T. C. Oesophageal cancer in gastric surgery patients. The Italian journal of gastroenterology 1993; 25 (4): 168-170.

172. Moghissi, K., Sharpe, D. A., and Pender, D. Adenocarcinoma and Barrett's oesophagus. A clinico-pathological study. European journal of cardio-thoracic surgery 1993; 7 (3): 126-131.

173. Fekete, F., Gayet, B., Deslandes, M., and Dubertret, M. [Reoperations for failure of gastroesophageal reflux surgery. Apropos of fifty reoperations]. Annales de chirurgie 1992; 46 (1): 44-50.

174. Pearson, F. G., Cooper, J. D., Patterson, G. A., Ramirez, J., and Todd, T. R. Gastroplasty and fundoplication for complex reflux problems. Long-term results. Annals of surgery 1987; 206 (4): 473-481.

175. Januszewicz, W., Kaminski, M. F., Wieszczy, P., Wronska, E., Bielasik, A., Wojciechowska, U., Didkowska, J., Orlowska, J., and Regula, J. Adenocarcinoma risk in patients registered with polish barrett's oesophagus registry. Diseases of the Esophagus 2017; 30(1):1-6.

176. Khan, A. A., Shah, S. W. H., Alam, A., Butt, A. K., and Shafqat, F. Sixteen years follow up of achalasia: A prospective study of graded dilatation using Rigiflex ballon. Diseases of the Esophagus 2005; 18 (1): 41-45.

177. Singh, P., Indaram, A., Greenberg, R., Visvalingam, V., and Bank, S. Long term omeprazole therapy for reflux esophagitis: Follow-up in serum gastrin levels, EC cell hyperplasia and neoplasia. World journal of gastroenterology 2000; 6 (6): 789-792.

178. Rebecchi, F., Allaix, M. E., Ugliono, E., Giaccone, C., Toppino, M., and Morino, M. Increased Esophageal Exposure to Weakly Acidic Reflux 5 Years After Laparoscopic Roux-en-Y Gastric Bypass. Annals of surgery 2016; 264 (5): 871-877.

179. Bradley, D. D., Louie, B. E., Chen, J., Aye, R. W., McMahon, R., and Farivar, A. S. The effect of concurrent esophageal pathology on bariatric surgical planning. Journal of gastrointestinal surgery 2015; 19 (1): 111-115.

180. Gorodner, V., Buxhoeveden, R., Clemente, G., Sanchez, C., Caro, L., and Grigaites, A. Barrett's esophagus after Roux-en-Y gastric bypass: does regression occur? Surgical endoscopy 2017; 31 (4): 1849-1854.

181. Sharma, P., Morales, T. G., Bhattacharyya, A., Garewal, H. S., and Sampliner, R. E. Dysplasia in short-segment Barrett's esophagus: a prospective 3-year follow-up. The American journal of gastroenterology 1997; 92 (11): 2012-2016.

182. Graham, D. Y., Schwartz, J. T., Cain, G. D., and Gyorkey, F. Prospective evaluation of biopsy number in the diagnosis of esophageal and gastric carcinoma. Gastroenterology 1982; 82 (2): 228-231.

183. Mortensen, M. B., Fristrup, C. W., Ainsworth, A. P., Pless, T., Nielsen, H. O., and Hovendal, C. Combined preoperative endoscopic and laparoscopic ultrasonography for prediction of R0 resection in upper gastrointestinal tract cancer. The British journal of surgery 2006; 93 (6): 720-725.

184. Mariette, C., Balon, J. M., Maunoury, V., Taillier, G., Van, Seuningen, I, and Triboulet, J. P. Value of endoscopic ultrasonography as a predictor of long-term survival in oesophageal carcinoma. The British journal of surgery 2003; 90 (11): 1367-1372.

185. Menon, K. V. and Dehn, T. C. Multiport staging laparoscopy in esophageal and cardiac carcinoma. Diseases of the esophagus 2003; 16 (4): 295-300.

186. Lin, Emery C., Holub, Jennifer, Lieberman, David, and Hur, Chin. Low Prevalence of Suspected Barrett's Esophagus in Patients with Gastroesophageal Reflux Disease Without Alarm Symptoms. Clinical gastroenterology and hepatology 2018.

187. Ahmed Osman, Heba, Aly, Sanaa S., Mahmoud, Hasan S., Ahmed, Eman H., Salah Eldin, Eman M., Abdelrahim, Eman A., El Masry, Muhammad A., Herdan, Rania A., and Hassan, Mohammed H. Effect of Acid Suppression on Peripheral T-Lymphocyte Subsets and Immunohistochemical Esophageal Mucosal Changes in Patients With Gastroesophageal Reflux Disease. Journal of clinical gastroenterology 2018.

188. Stasek, Martin, Aujesky, Rene, Vrba, Radek, Lovecek, Martin, Chudacek, Josef, Janda, Petr, Gregorik, Michal, Vomackova, Katherine, Neoral, Cestmir, and Klos, Dusan. Indications and benefits of intraoperative esophagogastroduodenoscopy. Wideochirurgia i inne techniki maloinwazyjne = Videosurgery and other miniinvasive techniques 2018. 13 (2) 164-175.

189. Stasyshyn, Andriy R. Gastroesophageal reflux disease: the results of videolaparoscopic fundoplication at five years after surgery. Wiadomosci lekarskie (Warsaw, Poland: 1960) 2017. 70 (4) 751-753.

190. Epstein, Jeremy A., Cosby, Hilary, Falk, Gary W., Khashab, Mouen A., Kiesslich, Ralf, Montgomery, Elizabeth A., Wang, Jean S., and Canto, Marcia Irene. Columnar islands in Barrett's esophagus: Do they impact Prague C&M criteria and dysplasia grade? Journal of gastroenterology and hepatology 2017. 32 (9) 1598-1603.

191. Wolter, Stefan, Dupree, Anna, Miro, Jameel, Schroeder, Cornelia, Jansen, Marie Isabelle, Schulze-Zur-Wiesch, Clarissa, Groth, Stefan, Izbicki, Jakob, Mann, Oliver, and Busch, Philipp. Upper Gastrointestinal Endoscopy prior to Bariatric Surgery-Mandatory or Expendable? An Analysis of 801 Cases. Obesity surgery 2017. 27 (8) 1938-1943.

192. Abou, Hussein B., Khammas, A., Shokr, M., Majid, M., Sandal, M., Awadhi, S. A., Mazrouei, A. A., and Badri, F. Role of routine upper endoscopy before bariatric surgery in the Middle East population: A review of 1278 patients. Endoscopy International Open 2018. 6 (10) E1171-E1176.

193. Soricelli, E., Casella, G., Baglio, G., Maselli, R., Ernesti, I., and Genco, A. Lack of correlation between gastroesophageal reflux disease symptoms and esophageal lesions after sleeve gastrectomy. Surgery for Obesity and Related Diseases 2018. 14 (6) 751-756.

Study design: Cross-sectional (including diagnostic test studies) (n=316)

1. Realdon, Stefano, Antonello, Alessandro, Arcidiacono, Diletta, Dassie, Elisa, Cavallin, Francesco, Fassan, Matteo, Nardi, Maria Teresa, Alberti, Alfredo, Rugge, Massimo, and Battaglia, Giorgio Adherence to WCRF/AICR lifestyle recommendations for cancer prevention and the risk of Barrett's esophagus onset and evolution to esophageal adenocarcinoma: results from a pilot study in a high-risk population. European journal of nutrition 2016; 55 (4): 1563-1571.

2. Menezes, A., Tierney, A., Yang, Y. X., Forde, K. A., Bewtra, M., Metz, D., Ginsberg, G. G., and Falk, G. W. Adherence to the 2011 American Gastroenterological Association medical position statement for the diagnosis and management of Barrett's esophagus. Diseases of the esophagus 2015; 28 (6): 538-546.

3. Jacobson, B. C. and Gerson, L. B. The inaccuracy of ICD-9-CM Code 530.2 for identifying patients with Barrett's esophagus. Diseases of the esophagus 2008; 21 (5): 452-456.

4. Chandrasoma, Parakrama T., Der, Roger, Ma, Yanling, Peters, Jeffrey, and Demeester, Tom Histologic classification of patients based on mapping biopsies of the gastroesophageal junction. The American journal of surgical pathology 2003; 27 (7): 929-936.

5. Rossi, Angelo, Bersani, Gianluca, Ricci, Giorgio, Defabritiis, Giovanni, Pollino, Valeria, Suzzi, Alessandra, Gorini, Beatrice, and Alvisi, Vittorio ASGE guidelines for the appropriate use of upper endoscopy: association with endoscopic findings. Gastrointestinal endoscopy 2002; 56 (5): 714-719.

6. Westbrook, J. I., McIntosh, J. H., and Duggan, J. M. Accuracy of provisional diagnoses of dyspepsia in patients undergoing first endoscopy. Gastrointestinal endoscopy 2001; 53 (3): 283-288.

7. Desilets, D. J., Nathanson, B. H., and Navab, F. Barrett's esophagus in practice: Gender and screening issues. Journal of Men's Health 2014; 11 (4): 177-182.

8. Langner, C., Wolf, E.-M., Plieschnegger, W., Geppert, M., Wigginghaus, B., Hoss, G. M., Eherer, A., Schneider, N. I., Rehak, P., and Vieth, M. Multilayered epithelium at the gastroesophageal junction is a marker of gastroesophageal reflux disease: Data from a prospective Central European multicenter study (histoGERD trial). Virchows Archiv 2014; 464 (4): 409-417.

9. Johanson, J. F., Frakes, J., and Eisen, D. Computer-assisted analysis of abrasive transepithelial brush biopsies increases the effectiveness of esophageal screening: A multicenter prospective clinical trial by the endocdx collaborative group. Digestive Diseases and Sciences 2011; 56 (3): 767-772.

10. Salem, S. B., Kushner, Y., Marcus, V., Mayrand, S., Fallone, C. A., and Barkun, A. N. The potential impact of contemporary developments in the management of patients with gastroesophageal reflux disease undergoing an initial gastroscopy. Canadian Journal of Gastroenterology 2009; 23 (2): 99-104.

11. De Jonge, P. J. F., Van Eijck, B. C., Geldof, H., Bekkering, F. C., Essink-Bot, M.-L., Polinder, S., Kuipers, E. J., and Siersema, P. D. Capsule endoscopy for the detection of oesophageal mucosal disorders: A comparison of two different ingestion protocols. Scandinavian Journal of Gastroenterology 2008; 43 (7): 870-877.

12. Arts, J., Eisendrath, P., Deviere, J., and Tack, J. Empirical therapy for symptomatic gastroesophageal reflux disease in primary care: Determinants of efficacy. Digestion 2007; 76 (3-4): 207-214.

13. Anagnostopoulos, G. K., Pick, B., Cunliffe, R., Fortun, P., Kaye, P., and Ragunath, K. Barrett's esophagus specialist clinic: What difference can it make? Diseases of the Esophagus 2006; 19 (2): 84-87.

14. Tack, J., Koek, G., Demedts, I., Sifrim, D., and Janssens, J. Gastroesophageal reflux disease poorly responsive to single-dose proton pump inhibitors in patients without Barrett's esophagus: Acid reflux, bile reflux, or both? American Journal of Gastroenterology 2004; 99 (6): 981-988.

15. Peghini, M., Rajaonarison, P., Pecarrere, J.-L., Razafindramboa, H., Andriantsoavina, H., Rakotomalala, M., and Ramarokoto, N. Madagascar: Esophago-gastro-duodenoscopy. Analysis of 12000 procedures and problems in tropical areas. Medecine Tropicale 1996; 56 (1): 89-94.

16. Chavalitdhamrong, D., Chen, G. C., Roth, B. E., Goltzer, O., Sul, J., and Jutabha, R. Esophageal capsule endoscopy for evaluation of patients with chronic gastroesophageal reflux symptoms: findings and its image quality. Diseases of the esophagus 2011; 24 (5): 295-298.

17. Ma, Xiuqiang, Xu, Qin, Zheng, Yanling, Zhao, Yanfang, Lu, Jian, Wang, Rui, Li, Zhaoshen, Zou, Duowu, and He, Jia Prevalence of esophageal eosinophilia and eosinophilic esophagitis in adults: a population-based endoscopic study in Shanghai, China. Digestive Diseases and Sciences 2015; 60 (6): 1716-1723.

18. Langner, Cord, Schneider, Nora I., Plieschnegger, Wolfgang, Schmack, Bertram, Bordel, Hartmut, Hofler, Bernd, Eherer, Andreas J., Wolf, Eva Maria, Rehak, Peter, and Vieth, Michael Cardiac mucosa at the gastro-oesophageal junction: indicator of gastro-oesophageal reflux disease? Data from a prospective central European multicentre study on histological and endoscopic diagnosis of oesophagitis (histoGERD trial). Histopathology 2014; 65 (1): 81-89.

19. Schneider, Nora I., Plieschnegger, Wolfgang, Geppert, Michael, Wigginghaus, Bernd, Hoss, Gabriele M., Eherer, Andreas, Wolf, Eva Maria, Rehak, Peter, Vieth, Michael, and Langner, Cord Pancreatic acinar cells--a normal finding at the gastroesophageal junction? Data from a prospective Central European multicenter study. Virchows Archiv: an international journal of pathology 2013; 463 (5): 643-650.

20. Ludvigsson, Jonas F., Aro, Pertti, Walker, Marjorie M., Vieth, Michael, Agreus, Lars, Talley, Nicholas J., Murray, Joseph A., and Ronkainen, Jukka Celiac disease, eosinophilic esophagitis and gastroesophageal reflux disease, an adult population-based study. Scandinavian Journal of Gastroenterology 2013; 48 (7): 808-814.

21. Galmiche, Jean Paul, Sacher-Huvelin, Sylvie, Coron, Emmanuel, Cholet, Franck, Soussan, Emmanuel Ben, Sebille, Veronique, Filoche, Bernard, d'Abrigeon, Gilles, Antonietti, Michel, Robaszkiewicz, Michel, Le Rhun, Marc, and Ducrotte, Philippe Screening for esophagitis and Barrett's esophagus with wireless esophageal capsule endoscopy: a multicenter prospective trial in patients with reflux symptoms. The American journal of gastroenterology 2008; 103 (3): 538-545.

22. Delvaux, M., Papanikolaou, I. S., Fassler, I., Pohl, H., Voderholzer, W., Rosch, T., and Gay, G. Esophageal capsule endoscopy in patients with suspected esophageal disease: double blinded comparison with esophagogastroduodenoscopy and assessment of interobserver variability. Endoscopy 2008; 40 (1): 16-22.

23. Bohmer, C. J., Niezen-de Boer, M. C., Klinkenberg-Knol, E. C., Deville, W. L., Nadorp, J. H., and Meuwissen, S. G. The prevalence of gastroesophageal reflux disease in institutionalized intellectually disabled individuals. The American journal of gastroenterology 1999; 94 (3): 804-810.

24. Kim, S. L., Wo, J. M., Hunter, J. G., Davis, L. P., and Waring, J. P. The prevalence of intestinal metaplasia in patients with and without peptic strictures. The American journal of gastroenterology 1998; 93 (1): 53-55.

25. Trudgill, N. J., Suvarna, S. K., Kapur, K. C., and Riley, S. A. Intestinal metaplasia at the squamocolumnar junction in patients attending for diagnostic gastroscopy. Gut 1997; 41 (5): 585-589.

26. Takeshita, E., Sakata, Y., Hara, M., Akutagawa, K., Sakata, N., Endo, H., Ohyama, T., Matsunaga, K., Yoshioka, T., Kawakubo, H., Tanaka, Y., Shirai, S., Ito, Y., Tsuruoka, N., Iwakiri, R., Kusano, M., and Fujimoto, K. Higher Frequency of Reflux Symptoms and Acid-Related Dyspepsia in Women than Men Regardless of Endoscopic Esophagitis: Analysis of 3,505 Japanese Subjects Undergoing Medical Health Checkups. Digestion 2016; 93 (4): 266-271.

27. Roshandel, G., Khoshnia, M., Sotoudeh, M., Merat, S., Etemadi, A., Nickmanesh, A., Norouzi, A., Pourshams, A., Poustchi, H., Semnani, S., Ghasemi-Kebria, F., Noorbakhsh, R., Abnet, C., Dawsey, S. M., and Malekzadeh, R. Endoscopic screening for precancerous lesions of the esophagus in a high risk area in northern Iran. Archives of Iranian Medicine 2014; 17 (4): 246-252.

28. Liu, N., Ando, T., Ishiguro, K., Maeda, O., Watanabe, O., Funasaka, K., Nakamura, M., Miyahara, R., Ohmiya, N., and Goto, H. Characterization of bacterial biota in the distal esophagus of Japanese patients with reflux esophagitis and Barrett's esophagus. BMC Infectious Diseases 2013; 13(1): 130

29. Siwiec, R. M., Dua, K., Surapaneni, S. N., Hafeezullah, M., Massey, B., and Shaker, R. Unsedated transnasal endoscopy with ultrathin endoscope as a screening tool for research studies. Laryngoscope 2012; 122 (8): 1719-1723.

30. Rosztoczy, A., Izbeki, F., Roka, R., Nemeth, I., Gecse, K., Vadaszi, K., Kadar, J., Vetro, E., Tiszlavicz, L., and Wittmann, T. The evaluation of oesophageal function in patients with different types of oesophageal metaplasia. Digestion 2011; 84 (4): 273-280.

31. Lin, O. S., Schembre, D. B., Mergener, K., Spaulding, W., Lomah, N., Ayub, K., Brandabur, J. J., Bredfeldt, J., Drennan, F., Gluck, M., Jiranek, G. C., McCormick, S. E., Patterson, D., and Kozarek, R. A. Blinded comparison of esophageal capsule endoscopy versus conventional endoscopy for a diagnosis of Barrett's esophagus in patients with chronic gastroesophageal reflux. Gastrointestinal endoscopy 2007; 65 (4): 577-583.

32. Eisen, G. M., Eliakim, R., Zaman, A., Schwartz, J., Faigel, D., Rondonotti, E., Villa, F., Weizman, E., Yassin, K., and deFranchis, R. The accuracy of PillCam ESO capsule endoscopy versus conventional upper endoscopy for the diagnosis of esophageal varices: A prospective three-center pilot study. Endoscopy 2006; 38 (1): 31-35.

33. Ronkainen, J., Aro, P., Storskrubb, T., Johansson, S.-E., Lind, T., Bolling-Sternevald, E., Vieth, M., Stolte, M., Talley, N. J., and Agreus, L. Prevalence of Barrett's esophagus in the general population: An endoscopic study. Gastroenterology 2005; 129 (6): 1825-1831.

34. Bolling-Sternevald, E., Carlsson, R., Aalykke, C., Wilson, B. V. L., Junghard, O., Glise, H., and Lauritsen, K. Self-administered symptom questionnaires in patients with dyspepsia and their yield in discriminating between endoscopic diagnoses. Digestive Diseases 2002; 20 (2): 191-198.

35. Van Sandick, J. W., Van Lanschot, J. J. B., Van, Felius L., Haringsma, J., Tytgat, G. N. J., Dekker, W., Drillenburg, P., Offerhaus, G. J. A., and Ten Kate, F. J. W. Intestinal metaplasia of the esophagus or esophagogastric junction: Evidence of distinct clinical, pathologic, and histochemical staining features. American Journal of Clinical Pathology 2002; 117 (1): 117-125.

36. Smythe, A., Bird, N. C., Troy, G. P., Globe, J., and Johnson, A. G. Effect of cisapride on oesophageal motility and duodenogastro-oesophageal reflux in patients with Barrett's oesophagus. European Journal of Gastroenterology and Hepatology 1997; 9 (12): 1149-1153.

37. Chernin, M. M., Amberg, J. R., and Kogan, F. J. Efficacy of radiologic studies in the detection of Barrett's esophagus. American Journal of Roentgenology 1986; 147 (2): 257-260.

38. Cui, R., Zhang, H., Zhou, L., Lu, J., Xue, Y., Wang, Y., Yan, X., Lin, L., and Lin, S. Diagnostic value of dilated intercellular space and histopathologic scores in gastroesophageal reflux disease. Diseases of the esophagus 2015; 28 (6): 530-537.

39. Nguyen, Theresa H., Thrift, Aaron P., Ramsey, David, Green, Linda, Shaib, Yasser H., Graham, David Y., and El-Serag, Hashem B. Risk factors for Barrett's esophagus compared between African Americans and non-Hispanic Whites. The American journal of gastroenterology 2014; 109 (12): 1870-1880.

40. Murray, Iain A., Palmer, Joanne, Waters, Carolyn, and Dalton, Harry R. Predictive value of symptoms and demographics in diagnosing malignancy or peptic stricture. World journal of gastroenterology 2012; 18 (32): 4357-4362.

41. Mazzadi, Sergio Angel, Garcia, Alfredo Omar, Salis, Graciela Beatriz, and Chiocca, Juan Carlos Peptic esophageal stricture: a report from Argentina. Diseases of the esophagus 2004; 17 (1): 63-66.

42. Vieth, M., Masoud, B., Meining, A., and Stolte, M. Helicobacter pylori infection: protection against Barrett's mucosa and neoplasia? Digestion 2000; 62 (4): 225-231.

43. Teriaky, A., Alnasser, A., Mclean, C., Gregor, J., and Yan, B. The Utility of Endoscopic Biopsies in Patients with Normal Upper Endoscopy. Canadian Journal of Gastroenterology and Hepatology 2016.

44. Dore, M. P., Pes, G. M., Bassotti, G., Farina, M. A., Marras, G., and Graham, D. Y. Risk factors for erosive and non-erosive gastroesophageal reflux disease and Barrett's esophagus in Nothern Sardinia. Scandinavian Journal of Gastroenterology 2016;51(11):1281-7.

45. Bhatt, A., Parsi, M. A., Stevens, T., Gabbard, S., Kumaravel, A., Jang, S., Grove, D., Lopez, R., Murthy, S., Vargo, J. J., and Dweik, R. Volatile organic compounds in plasma for the diagnosis of esophageal adenocarcinoma: A pilot study. Gastrointestinal endoscopy 2016; 84(4): 597-603.

46. Shiota, S., El-Serag, H. B., and Thrift, A. P. Premature Birth and Large for Gestational Age Are Associated with Risk of Barrett's Esophagus in Adults. Digestive Diseases and Sciences 2016; 61 (4): 1139-1147.

47. Gyedu, A. and Yorke, J. Upper gastrointestinal endoscopy in the patient population of Kumasi, Ghana: Indications and findings. Pan African Medical Journal 2014; 18: 327

48. Olmez, S., Aslan, M., Erten, R., Sayar, S., and Bayram, I. The prevalence of gastric intestinal metaplasia and distribution of helicobacter pylori infection, atrophy, dysplasia, and cancer in its subtypes. Gastroenterology Research and Practice 2015.

49. Gado, A., Ebeid, B., Abdelmohsen, A., and Axon, A. Prevalence of reflux esophagitis among patients undergoing endoscopy in a secondary referral hospital in Giza, Egypt. Alexandria Journal of Medicine 2015; 51 (2): 89-94.

50. Pascarenco, O. D., Boeriu, A., Mocan, S., Pascarenco, G., Drasoveanu, S., Galeanu, M., and Dobru, D. Barrett's esophagus and intestinal metaplasia of gastric cardia: Prevalence, clinical, endoscopic and histological features. Journal of Gastrointestinal and Liver Diseases 2014; 23 (1): 19-25.

51. Vela, M. F., Kramer, J. R., Richardson, P. A., Dodge, R., and El-Serag, H. B. Poor sleep quality and obstructive sleep apnea in patients with GERD and Barrett's esophagus. Neurogastroenterology and Motility 2014; 26 (3): 346-352.

52. Rubenstein, J. H., Morgenstern, H., Appelman, H., Scheiman, J., Schoenfeld, P., McMahon, L. F., Metko, V., Near, E., Kellenberg, J., Kalish, T., and Inadomi, J. M. Prediction of barrett's esophagus among men. American Journal of Gastroenterology 2013; 108 (3): 353-362.

53. Keyashian, K., Hua, V., Narsinh, K., Kline, M., Chandrasoma, P. T., and Kim, J. J. Barrett's esophagus in Latinos undergoing endoscopy for gastroesophageal reflux disease symptoms. Diseases of the Esophagus 2013; 26 (1): 44-49.

54. Khamechian, T., Alizargar, J., and Mazoochi, T. The prevalence of Barrett's esophagus in outpatients with dyspepsia in Shaheed Beheshti Hospital of Kashan. Iranian Journal of Medical Sciences 2013; 38 (3): 263-266.

55. Mussetto, A., Manno, M., Fuccio, L., and Conigliaro, R. Screening for Barrett's oesophagus with oesophageal capsule endoscopy in first-degree relatives of patients affected by Barrett's oesophagus: Results of a pilot study. Arab Journal of Gastroenterology 2013; 14 (2): 51-54.

56. Coban, S., Ormeci, N., Savas, B., Ekiz, F., Ensari, A., Kuzu, I., and Palabiyikoglu, M. Evaluation of Barrett's esophagus with CK7, CK20, p53, Ki67, and COX2 expressions using chromoendoscopical examination. Diseases of the Esophagus 2013; 26 (2): 189-196.

57. Balasubramanian, G., Gupta, N., Giacchino, M., Singh, M., Kanakadandi, V., Gaddam, S., Wani, S. B., Higbee, A. D., Rastogi, A., Bansal, A., and Sharma, P. Cigarette smoking is a modifiable risk factor for Barrett's oesophagus. United European Gastroenterology Journal 2013; 1 (6): 430-437.

58. Balasubramanian, G., Singh, M., Gupta, N., Gaddam, S., Giacchino, M., Wani, S. B., Moloney, B., Higbee, A. D., Rastogi, A., Bansal, A., and Sharma, P. Prevalence and predictors of columnar lined esophagus in Gastroesophageal Reflux Disease (GERD) patients undergoing upper endoscopy. American Journal of Gastroenterology 2012; 107 (11): 1655-1661.

59. Mathew, P., Joshi, A. S., Shukla, A., and Bhatia, S. J. Risk factors for Barrett's esophagus in Indian patients with gastroesophageal reflux disease. Journal of Gastroenterology and Hepatology (Australia) 2011; 26 (7): 1151-1156.

60. Nakos, A., Kouklakis, G., Pitiakoudis, M., Zezos, P., Efraimidou, E., Giatromanolaki, A., Polychronidis, A., Liratzopoulos, N., Sivridis, E., and Simopoulos, K. The histological and immunohistochemical aspects of bile reflux in patients with gastroesophageal reflux disease. Gastroenterology Research and Practice 2011.

61. Bamanikar, A. A., Diwan, A. G., Benoj, D. E., and Bamanikar, S. A. Barrett's metaplasia in indian obese male patients with gastroesophageal reflux disease. Journal of the Indian Medical Association 2011; 109 (7): 483-484.

62. Savarino, E., Gemignani, L., Pohl, D., Zentilin, P., Dulbecco, P., Assandri, L., Marabotto, E., Bonfanti, D., Inferrera, S., Fazio, V., Malesci, A., Tutuian, R., and Savarino, V. Oesophageal motility and bolus transit abnormalities increase in parallel with the severity of gastro-oesophageal reflux disease. Alimentary Pharmacology and Therapeutics 2011; 34 (4): 476-486.

63. Menon, S., Jayasena, H., Nightingale, P., and Trudgill, N. J. Influence of age and sex on endoscopic findings of gastrooesophageal reflux disease: An endoscopy database study. European Journal of Gastroenterology and Hepatology 2011; 23 (5): 389-395.

64. Chen, Z., Thompson, S. K., Jamieson, G. G., Devitt, P. G., and Watson, D. I. Effect of sex on symptoms associated with gastroesophageal reflux. Archives of Surgery 2011; 146 (10): 1164-1169.

65. Navarathne, N. M. M., Abeysuriya, V., Ileperuma, A., and Thoufeek, U. L. Endoscopic observations around the gastroesophageal junction in patients with symptomatic gastroesophageal reflux disease in South Asia. Indian Journal of Gastroenterology 2010; 29 (5): 184-186.

66. Alvaro-Villegas, J. C., Sobrino-Cossio, S., Hernandez-Guerrero, A., Alonso-Larraga, J. O., de-la-Mora-Levy, J. G., Molina-Cruz, A., Dominguez-Malagon, H. R., and Herrera-Esquivel, J. J. Dilated intercellular spaces in subtypes of gastroesophagic reflux disease. Revista Espanola de Enfermedades Digestivas 2010; 102 (5): 302-307.

67. Berndt, U., Philipsen, L., Bartsch, S., Hu, Y., Rocken, C., Bertram, W., Hammerle, M., Rosch, T., and Sturm, A. Comparative Multi-Epitope-Ligand-Cartography reveals essential immunological alterations in Barrett's metaplasia and esophageal adenocarcinoma. Molecular Cancer 2010; 9(1): 177

68. Park, J.-J., Kim, H. J., Chung, M. G., Park, S. M., Baik, G. H., Nah, B. K., Nam, S. Y., Seo, K. S., Ko, B. S., Jang, J.-Y., Kim, B. G., Kim, J. W., Choi, Y. S., Joo, M. K., Kim, J. I., Cho, M.-Y., Kim, N., Park, S.-H., Jung, H. C., and Chung, I.-S. The prevalence of and risk factors for barrett's esophagus in a Korean population: A nationwide multicenter prospective study. Journal of Clinical Gastroenterology 2009; 43 (10): 907-914.

69. Glickman, J. N., Spechler, S. J., Souza, R. F., Lunsford, T., Lee, E., and Odze, R. D. Multilayered epithelium in mucosal biopsy specimens from the gastroesophageal junction region is a histologic marker of gastroesophageal reflux disease. American Journal of Surgical Pathology 2009; 33 (6): 818-825.

70. Chang, C.-Y., Lee, Y.-C., Lee, C.-T., Tu, C.-H., Hwang, J.-C., Chiang, H., Tai, C.-M., Chiang, T.-H., Wu, M.-S., and Lin, J.-T. The application of prague C and M criteria in the diagnosis of barrett's esophagus in an ethnic chinese population. American Journal of Gastroenterology 2009; 104 (1): 13-20.

71. Fouad, Y. M., Makhlouf, M. M., Tawfik, H. M., El, Amin H., Ghany, W. A., and El-Khayat, H. R. Barrett's esophagus: Prevalence and risk factors in patients with chronic GERD in Upper Egypt. World journal of gastroenterology 2009; 15 (28): 3511-3515.

72. Dickman, R., Levi, Z., Vilkin, A., Zvidi, I., and Niv, Y. Predictors of specialized intestinal metaplasia in patients with an incidental irregular Z line. European Journal of Gastroenterology and Hepatology 2010; 22 (2): 135-138.

73. Rubenstein, J. H., Mattek, N., and Eisen, G. Age- and sex-specific yield of Barrett's esophagus by endoscopy indication. Gastrointestinal endoscopy 2010; 71 (1): 21-27.

74. Chang, Y., Liu, B., Liu, G.-S., Wang, T., and Gong, J. Short-segment Barrett's esophagus and cardia intestinal metaplasia: A comparative analysis. World journal of gastroenterology 2010; 16 (48): 6151-6154.

75. Binato, M., Fagundes, R., Gurski, R., Meurer, L., and Edelweiss, M. I. Immunohistochemical overexpression of the p53 protein and Ki-67 (MIB-1) antigen in patients with GERD and chronic esophagitis. Applied Immunohistochemistry and Molecular Morphology 2010; 18 (3): 236-243.

76. Vega, K. J., Chisolm, S., and Jamal, M. M. Comparison of reflux esophagitis and its complications between African Americans and non-Hispanic whites. World journal of gastroenterology 2009; 15 (23): 2878-2881.

77. Gerson, L. B. and Banerjee, S. Screening for Barrett's esophagus in asymptomatic women. Gastrointestinal endoscopy 2009; 70 (5): 867-873.

78. Allameh, A., Rasmi, Y., Nasseri-Moghaddam, S., Tavangar, S. M., Sharifi, R., and Sadreddini, M. Immunohistochemical analysis of selected molecular markers in esophagus precancerous, adenocarcinoma and squamous cell carcinoma in Iranian subjects. Cancer Epidemiology 2009; 33 (1): 79-84.

79. Akagi, T., Ito, T., Kato, M., Jin, Z., Cheng, Y., Kan, T., Yamamoto, G., Olaru, A., Kawamata, N., Boult, J., Soukiasian, H. J., Miller, C. W., Ogawa, S., Meltzer, S. J., and Koeffler, H. P. Chromosomal abnormalities and novel disease-related regions in progression from Barrett's esophagus to esophageal adenocarcinoma. International Journal of Cancer 2009; 125 (10): 2349-2359.

80. El-Serag, H. B., Fitzgerald, S., and Richardson, P. The extent and determinants of prescribing and adherence with acid-reducing medications: A national claims database study. American Journal of Gastroenterology 2009; 104 (9): 2161-2167.

81. Boghratian, A. H., Hashemi, M. H., and Kabir, A. Gender-related differences in upper gastrointestinal endoscopic findings: An assessment of 4,700 cases from Iran. Journal of Gastrointestinal Cancer 2009; 40 (3-4): 83-90.

82. Breton, J., Gage, M. C., Hay, A. W., Keen, J. N., Wild, C. P., Donnellan, C., Findlay, J. B. C., and Hardie, L. J. Proteomic screening of a cell line model of esophageal carcinogenesis identifies cathepsin D and aldo-keto reductase 1C2 and 1B10 dysregulation in barrett's esophagus and esophageal adenocarcinoma. Journal of Proteome Research 2008; 7 (5): 1953-1962.

83. Hui, Y. Z., Zhang, X., Chen, X., Thomas, D., Hormi-Carver, K., Elder, F., Spechler, S. J., and Souza, R. F. Differences in activity and phosphorylation of MAPK enzymes in esophageal squamous cells of GERD patients with and without Barrett's esophagus. American Journal of Physiology - Gastrointestinal and Liver Physiology 2008; 295 (3): G470-G478.

84. Stairs, D. B., Nakagawa, H., Klein-Szanto, A., Mitchell, S. D., Silberg, D. G., Tobias, J. W., Lynch, J. P., and Rustgi, A. K. Cdx1 and c-Myc foster the initiation of transdifferentiation of the normal esophageal squamous epithelium toward Barrett's esophagus. PloS one 2008; 3 (10): e3534.

85. Gutschow, C. A., Bludau, M., Vallbohmer, D., Schroder, W., Bollschweiler, E., and Holscher, A. H. NERD, GERD, and Barrett's esophagus: Role of acid and non-acid reflux revisited with combined pH-impedance monitoring. Digestive Diseases and Sciences 2008; 53 (12): 3076-3081.

86. Akiyama, T., Inamori, M., Iida, H., Mawatari, H., Endo, H., Hosono, K., Yoneda, K., Fujita, K., Yoneda, M., Takahashi, H., Goto, A., Abe, Y., Kobayashi, N., Kubota, K., Saito, S., and Nakajima, A. Alcohol consumption is associated with an increased risk of erosive esophagitis and Barrett's epithelium in Japanese men. BMC Gastroenterology 2008; 8 (1):58

87. Tseng, P.-H., Lee, Y.-C., Chiu, H.-M., Huang, S.-P., Liao, W.-C., Chen, C.-C., Wang, H.-P., Wu, M.-S., and Lin, J.-T. Prevalence and clinical characteristics of Barrett's esophagus in a Chinese general population. Journal of Clinical Gastroenterology 2008; 42 (10): 1074-1079.

88. Kerkhof, M., Steyerberg, E. W., Kusters, J. G., Kulpers, E. J., and Slersema, P. D. Predicting presence of intestinal metaplasia and dysplasia in columnar-lined esophagus: A multivariate analysis. Endoscopy 2007; 39 (9): 772-778.

89. Sollano, J. D., Wong, S. N., Andal-Gamutan, T., Chan, M. M., Carpio, R. E., Tady, C. S., Ismael, A. E., Judan-Ruiz, E. A., Ang, V. N., Go, J. T., Lim, V. Y., Perez, J. Y., and Alvarez, S. Z. Erosive esophagitis in the Philippines: A comparison between two time periods. Journal of Gastroenterology and Hepatology (Australia) 2007; 22 (10): 1650-1655.

90. Agnese, V., Cabibi, D., Calcara, D., Terrasi, M., Pantuso, G., Fiorentino, E., Intrivici, C., Colucci, G., Aragona, F., Gebbia, N., Bazan, V., and Russo, A. Aurora-A overexpression as an early marker of reflux-related columnar mucosa and Barrett's oesophagus. Annals of Oncology 2007; 18 (SUPPL. 6): vi110-vi115.

91. Yuksel, I., Uskudar, O., Koklu, S., Basar, O., Gultuna, S., Unverdi, S., Ozturk, Z. A., Sengul, D., Turker, Arikok A., Yuksel, O., and Coban, S. Inlet patch: Associations with endoscopic findings in the upper gastrointestinal system. Scandinavian Journal of Gastroenterology 2008; 43 (8): 910-914.

92. Brillantino, A., Monaco, L., Schettino, M., Torelli, F., Izzo, G., Cosenza, A., Marano, L., and Di, Martino N. Prevalence of pathological duodenogastric reflux and the relationship between duodenogastric and duodenogastrooesophageal reflux in chronic gastrooesophageal reflux disease. European Journal of Gastroenterology and Hepatology 2008; 20 (12): 1136-1143.

93. Ruigomez, A., Rodriguez, L. A. G., Wallander, M.-A., Johansson, S., and Dent, J. Endoscopic findings in a cohort of newly diagnosed gastroesophageal reflux disease patients registered in a UK primary care database. Diseases of the Esophagus 2008; 21 (3): 251-256.

94. Sharma, P., Wani, S., Rastogi, A., Bansal, A., Higbee, A., Mathur, S., Esquivel, R., Camargo, L., and Sampliner, R. E. The diagnostic accuracy of esophageal capsule endoscopy in patients with gastroesophageal reflux disease and Barrett's esophagus: A blinded, prospective study. American Journal of Gastroenterology 2008; 103 (3): 525-532.

95. Pech, O., Petrone, M. C., Manner, H., Rabenstein, T., May, A., Pohl, J., and Ell, C. One-step chromoendoscopy and structure enhancement using balsamic vinegar for screening of Barrett's esophagus. Acta Gastro-Enterologica Belgica 2008; 71 (2): 243-245.

96. White, N., Gabril, M., Ejeckam, G., Mathews, M., Fardy, J., Kamel, F., Dore, J., and Yousef, G. M. Barrett's esophagus and cardiac intestinal metaplasia: Two conditions within the same spectrum. Canadian Journal of Gastroenterology 2008; 22 (4): 369-375.

97. Gilani, N., Gerkin, R. D., Ramirez, F. C., Hakim, S., and Randolph, A. C. Prevalence of Barrett's esophagus in patients with moderate to severe erosive esophagitis. World journal of gastroenterology 2008; 14 (22): 3518-3522.

98. Murray, L. J., Tully, O., Rudolph, D. S., Whitby, M., Valenzano, M. C., Mercogliano, G., Thornton, J. J., and Mullin, J. M. Absence of Na+/sugar cotransport activity in Barrett's metaplasia. World journal of gastroenterology 2008; 14 (9): 1365-1369.

99. Bayrakci, B., Kasap, E., Kitapcioglu, G., and Bor, S. Low prevalence of erosive esophagitis and Barrett esophagus in a tertiary referral center in Turkey. Turkish Journal of Gastroenterology 2008; 19 (3): 145-151.

100. Lao-Sirieix, P., Corovic, A., Jankowski, J., Lowe, A., Triadafilopoulos, G., and Fitzgerald, R. C. Physiological and molecular analysis of acid loading mechanisms in squamous and columnar-lined esophagus. Diseases of the Esophagus 2008; 21 (6): 529-538.

101. Nozu, T. and Komiyama, H. Clinical characteristics of asymptomatic esophagitis. Journal of gastroenterology 2008; 43 (1): 27-31.

102. Dickman, R., Mattek, N., Holub, J., Peters, D., and Fass, R. Prevalence of upper gastrointestinal tract findings in patients with noncardiac chest pain versus those with gastroesophageal reflux disease (GERD)-related symptoms: Results from a National Endoscopic Database. American Journal of Gastroenterology 2007; 102 (6): 1173-1179.

103. Johansson, J., Hakansson, H.-O., Mellblom, L., Kempas, A., Granath, F., Johansson, K.-E., and Nyren, O. Diagnosing Barrett's oesophagus: Factors related to agreement between endoscopy and histology. European Journal of Gastroenterology and Hepatology 2007; 19 (10): 870-877.

104. Chatzopoulos, D., Kyrgidis, A., Kountouras, J., Zavos, C., Molyvas, E., and Venizelos, I. Bax upregulation may provide a rationale for the low incidence of esophageal adenocarcinoma in a Greek cohort of patients with Barrett's esophagus. Hepato-gastroenterology 2007; 54 (75): 705-709.

105. Rezailashkajani, M., Roshandel, D., Shafaee, S., and Zali, M. R. High prevalence of reflux oesophagitis among upper endoscopies of Iranian patients. European Journal of Gastroenterology and Hepatology 2007; 19 (6): 499-506.

106. Halum, S. L., Postma, G. N., Bates, D. D., and Koufman, J. A. Incongruence between histologic and endoscopic diagnoses of Barrett's esophagus using transnasal esophagoscopy. Laryngoscope 2006; 116 (2): 303-306.

107. Vasavi, M., Ponnala, S., Gujjari, K., Boddu, P., Bharatula, R. S., Prasad, R., Ahuja, Y. R., and Hasan, Q. DNA methylation in esophageal diseases including cancer: Special reference to hMLH1 GENE promoter status. Tumori 2006; 92 (2): 155-162.

108. Lenglinger, J., Eisler, M., Ringhofer, C., Sedivy, R., Wrba, F., Zacherl, J., Cosentini, E. P., Prager, G., Haefuer, M., and Riegler, M. Video-endoscopy for evaluation of columnar lined esophagus in patients with gastroesophageal reflux disease. European Surgery - Acta Chirurgica Austriaca 2006; 38 (4): 293-301.

109. Lastraioli, E., Taddei, A., Messerini, L., Comin, C. E., Festini, M., Giannelli, M., Tomezzoli, A., Paglierani, M., Mugnai, G., De, Manzoni G., Bechi, P., and Arcangeli, A. hERG1 channels in human esophagus: Evidence for their aberrant expression in the malignant progression of Barrett's esophagus. Journal of Cellular Physiology 2006; 209 (2): 398-404.

110. Ali, I., Rafiee, P., Hogan, W. J., Jacob, H. J., Komorowski, R. A., Haasler, G. B., and Shaker, R. Dickkopf homologs in squamous mucosa of esophagitis patients are overexpressed compared with Barrett's patients and healthy controls. American Journal of Gastroenterology 2006; 101 (7): 1437-1448.

111. Grassi, A., Giannarelli, D., Iacopini, F., Paoluzi, P., Iannetti, A., Giovannelli, L., Efrati, C., Barberani, F., Giovannone, M., and Tosoni, M. Prevalence of intestinal metaplasia in the distal esophagus in patients endoscopically suspected for short Barrett's esophagus. Journal of Experimental and Clinical Cancer Research 2006; 25 (3): 297-302.

112. Pilotto, A., Franceschi, M., Leandro, G., Scarcelli, C., D'Ambrosio, L. P., Seripa, D., Perri, F., Niro, V., Paris, F., Andriulli, A., and Di, Mario F. Clinical features of reflux esophagitis in older people: A study of 840 consecutive patients. Journal of the American Geriatrics Society 2006; 54 (10): 1537-1542.

113. Kim, G. H., Kang, D. H., Song, G. A., Kim, T. O., Heo, J., Cho, M., Kim, J. S., Lee, B. J., and Wang, S. G. Gastroesophageal flap valve is associated with gastroesophageal and gastropharyngeal reflux. Journal of gastroenterology 2006; 41 (7): 654-661.

114. Shapiro, M., Green, C., Faybush, E. M., Esquivel, R. F., and Fass, R. The extent of oesophageal acid exposure overlap among the different gastro-oesophageal reflux disease groups. Alimentary Pharmacology and Therapeutics 2006; 23 (2): 321-329.

115. van Oijen, M. G. H., Josemanders, D. F. G. M., Laheij, R. J. F., van Rossum, L. G. M., Tan, A. C. I. T., and Jansen, J. B. M. J. Gastrointestinal disorders and symptoms: Does body mass index matter? Netherlands Journal of Medicine 2006; 64 (2): 45-49.

116. Marie, I., Ducrotte, P., Denis, P., Hellot, M. F., and Levesque, H. Oesophageal mucosal involvement in patients with systemic sclerosis receiving proton pump inhibitor therapy. Alimentary Pharmacology and Therapeutics 2006; 24 (11-12): 1593-1601.

117. Ang, T.-L., Fock, K.-M., Ng, T.-M., Teo, E.-K., Chua, T.-S., and Tan, J. A comparison of the clinical, demographic and psychiatric profiles among patients with erosive and non-erosive reflux disease in a multi-ethnic Asian country. World journal of gastroenterology 2005; 11 (23): 3558-3561.

118. Bretagne, J. F., Rey, J.-F., Caekaert, A., and Barthelemy, P. Routine management of gastro-oesophageal reflux disease by gastroenterologists in France: A prospective observational study. Digestive and Liver Disease 2005; 37 (8): 566-570.

119. Voutilainen, M., Mantynen, T., Mauranen, K., Kunnamo, I., and Juhola, M. Is it possible to reduce endoscopy workload using age, alarm symptoms and H. pylori as predictors of peptic ulcer and oesophagogastric cancers? Digestive and Liver Disease 2005; 37 (7): 526-532.

120. Cantu, P., Savojardo, D., Carmagnola, S., and Penagini, R. Impact of referral for gastro-oesophageal reflux disease on the workload of an academic Gastroenterology Unit. Digestive and Liver Disease 2005; 37 (10): 735-740.

121. Bafandeh, Y., Esmaili, H., and Aharizad, S. Endoscopic and histologic findings in Iranian patients with heartburn. Indian Journal of Gastroenterology 2005; 24 (6): 236-238.

122. Westhoff, B., Brotze, S., Weston, A., McElhinney, C., Cherian, R., Mayo, M. S., Smith, H. J., and Sharma, P. The frequency of Barrett's esophagus in high-risk patients with chronic GERD. Gastrointestinal endoscopy 2005; 61 (2): 226-231.

123. Postma, G. N., Cohen, J. T., Belafsky, P. C., Halum, S. L., Gupta, S. K., Bach, K. K., and Koufman, J. A. Transnasal esophagoscopy: Revisited (over 700 consecutive cases). Laryngoscope 2005; 115 (2): 321-323.

124. Takubo, K., Honma, N., Aryal, G., Sawabe, M., Arai, T., Tanaka, Y., Mafune, K.-I., and Iwakiri, K. Is there a set of histologic changes that are invariably reflux associated? Archives of Pathology and Laboratory Medicine 2005; 129 (2): 159-163.

125. Olvera, M., Wickramasinghe, K., Brynes, R., Bu, X., Ma, Y., and Chandrasoma, P. Ki67 expression in different epithelial types in columnar lined oesophagus indicates varying levels of expanded and aberrant proliferative patterns. Histopathology 2005; 47 (2): 132-140.

126. Shen, B., Porter, E. M., Reynoso, E., Shen, C., Ghosh, D., Connor, J. T., Drazba, J., Rho, H. K., Gramlich, T. L., Li, R., Ormsby, A. H., Sy, M.-S., Ganz, T., and Bevins, C. L. Human defensin 5 expression in intestinal metaplasia of the upper gastrointestinal tract. Journal of Clinical Pathology 2005; 58 (7): 687-694.

127. Gulmann, C., Rathore, O., Grace, A., Hegarty, H., O'Grady, A., Leader, M., Patchett, S., and Kay, E. 'Cardiac-type' (mucinous) mucosa and carditis are both associated with Helicobacter pylori-related gastritis. European Journal of Gastroenterology and Hepatology 2004; 16 (1): 69-74.

128. Toruner M, Soykan I, Ensari A, Kuzu I, Yurdaydin C, Ozden A. Barrett's esophagus: Prevalence and its relationship with dyspeptic symptoms. Journal of Gastroenterology and Hepatology (Australia) 2004; 19 (5): 535-540.

129. Balaji NS, DeMeester SR, Wickramasinghe KS, Hagen JA, Peters JH, DeMeester TR. Etiology of intestinal metaplasia at the gastroesophageal junction: Reflux, H. pylori infection, or both? Surgical Endoscopy and Other Interventional Techniques 2003; 17 (1): 43-48.

130. El-Serag, H. B., Petersen, N. J., Carter, J., Graham, D. Y., Richardson, P., Genta, R. M., and Rabeneck, L. Gastroesophageal reflux among different racial groups in the United States. Gastroenterology 2004; 126 (7): 1692-1699.

131. Zhang, J., Chen, X.-L., Wang, K.-M., Guo, X.-D., Zuo, A.-L., and Gong, J. Barrett's esophagus and its correlation with gastroesophageal reflux in Chinese. World journal of gastroenterology 2004; 10 (7): 1065-1068.

132. Rajendra, S., Kutty, K., and Karim, N. Ethnic differences in the prevalence of endoscopic esophagitis and Barrett's esophagus: The long and short of it all. Digestive Diseases and Sciences 2004; 49 (2): 237-242.

133. Wildi, S. M., Glenn, T. F., Woolson, R. F., Wang, W., Hawes, R. H., and Wallace, M. B. Is esophagoscopy alone sufficient for patients with reflux symptoms? Gastrointestinal endoscopy 2004; 59 (3): 349-354.

134. Loffeld, R. J. L. F. and van der Putten, A. B. M. M. Helicobacter pylori and gastro-oesophageal reflux disease: A cross-sectional epidemiological study. Netherlands Journal of Medicine 2004; 62 (6): 188-191.

135. Panter, S. J., O'Flanagan, H., Bramble, M. G., and Hungin, A. P. S. Empirical use of antisecretory drug therapy delays diagnosis of upper gastrointestinal adenocarcinoma but does not effect outcome. Alimentary Pharmacology and Therapeutics 2004; 19 (9): 981-988.

136. Lin, M., Gerson, L. B., Lascar, R., Davila, M., and Triadafilopoulos, G. Features of gastroesophageal reflux disease in women. American Journal of Gastroenterology 2004; 99 (8): 1442-1447.

137. Van, Blankenstein M., Bohmer, C. J. M., and Hop, W. C. J. The incidence of adenocarcinoma in Barrett's esophagus in an institutionalized population. European Journal of Gastroenterology and Hepatology 2004; 16 (9): 903-909.

138. Rosaida, M. S. and Goh, K.-L. Gastro-oesophageal reflux disease, reflux oesophagitis and non-erosive reflux disease in a multiracial Asian population: A prospective, endoscopy based study. European Journal of Gastroenterology and Hepatology 2004; 16 (5): 495-501.

139. Eda, A., Osawa, H., Satoh, K., Yanaka, I., Kihira, K., Ishino, Y., Mutoh, H., and Sugano, K. Aberrant expression of CDX2 in Barrett's epithelium and inflammatory esophageal mucosa. Journal of gastroenterology 2003; 38 (1): 14-22.

140. Lee, J. I., Park, H., Jung, H.-Y., Rhee, P.-L., Song, C. W., and Choi, M. G. Prevalence of Barrett's esophagus in an urban Korean population: A multicenter study. Journal of gastroenterology 2003; 38 (1): 23-27.

141. Dietz, J., Meurer, L., Maffazzoni, D. R., Furtado, A. D., and Prolla, J. C. Intestinal metaplasia in the distal esophagus and correlation with symptoms of gastroesphageal reflux disease. Diseases of the Esophagus 2003; 16 (1): 29-32.

142. Csendes, A., Smok, G., Burdiles, P., Korn, O., Gradiz, M., Rojas, J., and Recio, M. Prevalence of intestinal metaplasia according to the length of the specialized columnar epithelium lining the distal esophagus in patients with gastroesophageal reflux. Diseases of the Esophagus 2003; 16 (1): 24-28.

143. Khalaf, A. S. The efficacy of endoscopy: Analysis of its use in the evaluation of dyspeptic patients in Qatar. Emirates Medical Journal 2003; 21 (2): 134-138.

144. Fujiwara, Y., Higuchi, K., Shiba, M., Watanabe, T., Tominaga, K., Oshitani, N., Matsumoto, T., and Arakawa, T. Association between gastroesophageal flap valve, reflux esophagitis, Barrett's epithelium, and atrophic gastritis assessed by endoscopy in Japanese patients. Journal of gastroenterology 2003; 38 (6): 533-539.

145. Ackermark, P., Kuipers, E. J., Wolf, C., Breumelhof, R., Seldenrijk, C. A., Timmer, R., Segeren, K. C. A., Kusters, J. G., and Smout, A. J. P. M. Colonization with cagA-positive Helicobacter pylori strains in intestinal metaplasia of the esophagus and the esophagogastric junction. American Journal of Gastroenterology 2003; 98 (8): 1719-1724.

146. Fitzgerald, R. C., Onwuegbusi, B. A., Bajaj-Elliott, M., Saeed, I. T., Burnham, W. R., and Farthing, M. J. G. Diversity in the oesophageal phenotypic response to gastro-oesophageal reflux: Immunological determinants. Gut 2002; 50 (4): 451-459.

147. Mantynen, T., Farkkila, M., Kunnamo, I., Mecklin, J.-P., Juhola, M., and Voutilainen, M. The impact of upper GI endoscopy referral volume on the diagnosis of gastroesophageal reflux disease and its complications: A 1-year cross-sectional study in a referral area with 260,000 inhabitants. American Journal of Gastroenterology 2002; 97 (10): 2524-2529.

148. Jones, T. F., Sharma, P., Daaboul, B., Cherian, R., Mayo, M., Topalovski, M., and Weston, A. P. Yield of intestinal metaplasia in patients with suspected short-segment Barrett's esophagus (SSBE) on repeat endoscopy. Digestive Diseases and Sciences 2002; 47 (9): 2108-2111.

149. Loffeld, R. J. L. F. Young patients with Barrett's oesophagus experience less reflux complaints. Digestion 2001; 64 (3): 151-154.

150. Kongara, K., Varilek, G., and Soffer, E. E. Salivary growth factors and cytokines are not deficient in patients with gastroesophageal reflux disease or Barrett's esophagus. Digestive Diseases and Sciences 2001; 46 (3): 606-609.

151. Schowengerdt, C. G. Standard acid reflux testing revisited. Digestive Diseases and Sciences 2001; 46 (3): 603-605.

152. Gerson, L. B., Edson, R., Lavori, P. W., and Triadafilopoulos, G. Use of a simple symptom questionnaire to predict Barrett's esophagus in patients with symptoms of gastroesophageal reflux. American Journal of Gastroenterology 2001; 96 (7): 2005-2012.

153. Fireman, Z., Wagner, G., Weissman, J., Kopelman, Y., Wagner, Y., Groissman, G., and Sternberg, A. Prevalence of short-segment Barrett's epithelium. Digestive and Liver Disease 2001; 33 (4): 322-325.

154. Couvelard, A., Cauvin, J.-M., Goldfain, D., Rotenberg, A., Robaszkiewicz, M., Flejou, J.-F., Croue, A., Volant, A., Diebold, M.-D., Vissuzaine, C., Sagan, C., Boyer, J., Cadiot, G., Mignon, M., Aparicio, T., Galmiche, J.-P., and Rhun, M. L. Cytokeratin immunoreactivity of intestinal metaplasia at normal oesophagogastric junction indicates its aetiology. Gut 2001; 49 (6): 761-766.

155. Sabel, M. S., Pastore, K., Toon, H., and Smith, J. L. Adenocarcinoma of the esophagus with and without Barrett mucosa. Archives of Surgery 2000; 135 (7): 831-835.

156. Voutilainen, M., Farkkila, M., Mecklin, J.-P., Juhola, M., and Sipponen, P. Classical Barrett esophagus contrasted with Barrett-type epithelium at normal-appearing esophagogastric junction: Comparison of demographic, endoscopic, and histologic features. Scandinavian Journal of Gastroenterology 2000; 35 (1): 2-9.

157. Wallner, B., Sylvan, A., Stenling, R., and Janunger, K.-G. The esophageal Z-line appearance correlates to the prevalence of intestinal metaplasia. Scandinavian Journal of Gastroenterology 2000; 35 (1): 17-22.

158. Tack, J. and Sifrim, D. New techniques for the detection of gastro-oesophageal reflux. Digestive and Liver Disease 2000; 32 (SUPPL. 3): S245-S248.

159. Shah, N. H., Shah, M. S., Khan, I., and Hameed, K. An audit of diagnostic upper GI endoscopy and comparison of booked versus open access cases. Journal of the College of Physicians and Surgeons Pakistan 1999; 9 (4): 174-176.

160. Parrilla, P., Liron, R., Martinez de Haro, L. F., Ortiz, A., Molina, J., and De, Andres B. Gastric surgery does not increase the risk of developing Barrett's esophagus. American Journal of Gastroenterology 1997; 92 (6): 960-963.

161. Triadafilopoulos, G. and Sharma, R. Features of symptomatic gastroesophageal reflux disease in elderly patients. American Journal of Gastroenterology 1997; 92 (11): 2007-2011.

162. Triadafilopoulos, G., Kaczynska, M., and Iwane, M. Esophageal mucosal eicosanoids in gastroesophageal reflux disease and Barrett's esophagus. American Journal of Gastroenterology 1996; 91 (1): 65-74.

163. Katsinelos, P., Lazaraki, G., Kountouras, J., Chatzimavroudis, G., Zavos, C., Terzoudis, S., Tsiaousi, E., Gkagkalis, S., Trakatelli, C., Bellou, A., and Vasiliadis, T. Prevalence of Barrett's esophagus in Northern Greece: A Prospective Study (Barrett's esophagus). Hippokratia 2013; 17 (1): 27-33.

164. Livovsky, Dan M., Pappo, Orit, Skarzhinsky, Galina, Peretz, Asaf, Turvall, Elliot, and Ackerman, Zvi Gastric Polyp Growth during Endoscopic Surveillance for Esophageal Varices or Barrett's Esophagus. The Israel Medical Association journal 2016; 18 (5): 267-271.

165. Mohiuddin, Mohammed Khaliq, Chowdavaram, Suman, Bogadi, Varun, Prabhakar, Boddu, Rao, Kondadasula Pandu Ranga, Devi, Suneetha, and Mohan, Vasavi Epidemic Trends of Upper Gastrointestinal Tract Abnormalities: Hospital-based study on Endoscopic Data Evaluation. Asian Pacific journal of cancer prevention 2015; 16 (14): 5741-5747.

166. Lee, Hyun Jik, Kim, Bun, Kim, Dong Wook, Park, Jun Chul, Shin, Sung Kwan, Lee, Yong Chan, and Lee, Sang Kil Does Sedation Affect Examination of Esophagogastric Junction during Upper Endoscopy? Yonsei medical journal 2015; 56 (6): 1566-1571.

167. Iijima, Katsunori, Koike, Tomoyuki, Abe, Yasuhiko, Ohara, Shuichi, Nakaya, Naoki, and Shimosegawa, Tooru Time series analysis of gastric acid secretion over a 20-year period in normal Japanese men. Journal of gastroenterology 2015; 50 (8): 853-861.

168. Arif, Tasleem, Masood, Qazi, Singh, Jaswinder, and Hassan, Iffat Assessment of esophageal involvement in systemic sclerosis and morphea (localized scleroderma) by clinical, endoscopic, manometric and pH metric features: a prospective comparative hospital based study. BMC gastroenterology 2015; 15: 24-.

169. Gibbs, John F., Rajput, Ashwani, Chadha, Krishdeep S., Douglas, Wade G., Hill, Hank, Nwogu, Chukwumere, Nava, Hector R., and Sabel, Michael S. The changing profile of esophageal cancer presentation and its implication for diagnosis. Journal of the National Medical Association 2007; 99 (6): 620-626.

170. Watari, Jiro, Hori, Kazutoshi, Toyoshima, Fumihiko, Kamiya, Noriko, Yamasaki, Takahisa, Okugawa, Takuya, Asano, Haruki, Li, Zhao Liang, Kondo, Takashi, Ikehara, Hisatomo, Sakurai, Jun, Tomita, Toshihiko, Oshima, Tadayuki, Fukui, Hirokazu, and Miwa, Hiroto Association between obesity and Barrett's esophagus in a Japanese population: a hospital-based, cross-sectional study. BMC gastroenterology 2013; 13: 143-.

171. Nason, Katie S., Murphy, Thomas, Schindler, Joshua, Schipper, Paul H., Hoppo, Toshitaka, Diggs, Brian S., Sauer, David A., Shaheen, Nicholas J., Morris, Cynthia D., Jobe, Blair A., and Barrett's Esophagus Risk Consortium (BERC) A cross-sectional analysis of the prevalence of Barrett esophagus in otolaryngology patients with laryngeal symptoms. Journal of Clinical Gastroenterology 2013; 47 (9): 762-768.

172. Savarino, Edoardo, Corbo, Marina, Dulbecco, Pietro, Gemignani, Lorenzo, Giambruno, Elisa, Mastracci, Luca, Grillo, Federica, and Savarino, Vincenzo Narrow-band imaging with magnifying endoscopy is accurate for detecting gastric intestinal metaplasia. World journal of gastroenterology 2013; 19 (17): 2668-2675.

173. Niu, Chun Yan, Zhou, Yong Li, Yan, Rong, Mu, Ni La, Gao, Bao Hua, Wu, Fang Xiong, and Luo, Jin Yan Incidence of gastroesophageal reflux disease in Uygur and Han Chinese adults in Urumqi. World journal of gastroenterology 2012; 18 (48): 7333-7340.

174. Cardin, Fabrizio, Andreotti, Alessandra, Zorzi, Manuel, Terranova, Claudio, Martella, Bruno, Amato, Bruno, and Militello, Carmelo Usefulness of a fast track list for anxious patients in a upper GI endoscopy. BMC surgery 2012; 12 Suppl 1: S11-.

175. Gerson, L. B., McLaughlin, T., Balu, S., Jackson, J., and Lunacsek, O. Variation of health-care resource utilization according to GERD-associated complications. Diseases of the esophagus 2012; 25 (8): 694-701.

176. Kidambi, Trilokesh, Toto, Erin, Ho, Nancy, Taft, Tiffany, and Hirano, Ikuo Temporal trends in the relative prevalence of dysphagia etiologies from 1999-2009. World journal of gastroenterology 2012; 18 (32): 4335-4341.

177. Erichsen, Rune, Robertson, Douglas, Farkas, Dora K., Pedersen, Lars, Pohl, Heiko, Baron, John A., and Sorensen, Henrik T. Erosive reflux disease increases risk for esophageal adenocarcinoma, compared with nonerosive reflux. Clinical gastroenterology and hepatology 2012; 10 (5): 475-480.

178. Khoury, Joe E., Chisholm, Sian, Jamal, M. Mazen, Palacio, Carlos, Pudhota, Sunitha, and Vega, Kenneth J. African Americans with Barrett's esophagus are less likely to have dysplasia at biopsy. Digestive Diseases and Sciences 2012; 57 (2): 419-423.

179. Fletcher, Kenneth C., Goutte, Marion, Slaughter, James C., Garrett, C. Gaelyn, and Vaezi, Michael F. Significance and degree of reflux in patients with primary extraesophageal symptoms. The Laryngoscope 2011; 121 (12): 2561-2565.

180. Irvanloo, Giti, Fallahi, Behnaz, Ensani, Fereshte, Azmi, Mehrdad, and Morteza, Afsaneh Endoscopic versus histological diagnosis of Barrett's esophagus: a cross-sectional survey. Polish journal of pathology 2011; 62 (3): 152-156.

181. Juhasz, Arpad, Sundaram, Abhishek, Hoshino, Masato, Lee, Tommy H., Filipi, Charles J., and Mittal, Sumeet K. Endoscopic assessment of failed fundoplication: a case for standardization. Surgical endoscopy 2011; 25 (12): 3761-3766.

182. Roorda, Andrew K., Marcus, Samuel N., and Triadafilopoulos, George Algorithmic approach to patients presenting with heartburn and epigastric pain refractory to empiric proton pump inhibitor therapy. Digestive Diseases and Sciences 2011; 56 (10): 2871-2878.

183. Gaddam, Srinivas, Maddur, Haripriya, Wani, Sachin, Gupta, Neil, Singh, Mandeep, Singh, Vikas, Moloney, Brian, Puli, Srinivas R., Rastogi, Amit, Bansal, Ajay, and Sharma, Prateek Risk factors for nocturnal reflux in a large GERD cohort. Journal of Clinical Gastroenterology 2011; 45 (9): 764-768.

184. Nason, Katie S., Wichienkuer, Promporn Paula, Awais, Omar, Schuchert, Matthew J., Luketich, James D., O'Rourke, Robert W., Hunter, John G., Morris, Cynthia D., and Jobe, Blair A. Gastroesophageal reflux disease symptom severity, proton pump inhibitor use, and esophageal carcinogenesis. Archives of surgery (Chicago, Ill.: 1960) 2011; 146 (7): 851-858.

185. Masci, Enzo, Viaggi, Paolo, Mangiavillano, Benedetto, Di Pietro, Salvatore, Micheletto, Giancarlo, Di Prisco, Franco, Paganelli, Michele, Pontiroli, Antonio Ettore, Pontiroli, Ettore Antonio, Laneri, Marco, Testoni, Sabrina, and Testoni, Pier Alberto No increase in prevalence of Barrett's oesophagus in a surgical series of obese patients referred for laparoscopic gastric banding. Digestive and liver disease 2011; 43 (8): 613-615.

186. Chandrasoma, Parakrama, Wijetunge, Sulochana, Demeester, Steven R., Hagen, Jeffrey, and Demeester, Tom R. The histologic squamo-oxyntic gap: an accurate and reproducible diagnostic marker of gastroesophageal reflux disease. The American journal of surgical pathology 2010; 34 (11): 1574-1581.

187. Chen, M. J., Lee, Y. C., Chiu, H. M., Wu, M. S., Wang, H. P., and Lin, J. T. Time trends of endoscopic and pathological diagnoses related to gastroesophageal reflux disease in a Chinese population: eight years single institution experience. Diseases of the esophagus 2010; 23 (3): 201-207.

188. Xiong, Li Shou, Cui, Yi, Wang, Jin Ping, Wang, Jin Hui, Xue, Ling, Hu, Pin Jin, and Chen, Min Hu Prevalence and risk factors of Barrett's esophagus in patients undergoing endoscopy for upper gastrointestinal symptoms. Journal of Digestive Diseases 2010; 11 (2): 83-87.

189. Beech, T. J., Trotter, M. I., McDermott, A. L., Mandal, W., and Batch, A. J. Is there a role for flexible oesophagogastroscopy in upper aerodigestive tract squamous cell carcinoma? The Journal of laryngology and otology 2010; 124 (4): 417-419.

190. Zagari, Rocco Maurizio, Law, Graham Richard, Fuccio, Lorenzo, Pozzato, Paolo, Forman, David, and Bazzoli, Franco Dyspeptic symptoms and endoscopic findings in the community: the Loiano-Monghidoro study. The American journal of gastroenterology 2010; 105 (3): 565-571.

191. Odemis, B., Cicek, B., Zengin, N. I., Arhan, M., Kacar, S., Cengiz, C., and Yuksel, O. Barrett's esophagus and endoscopically assessed esophagogastric junction integrity in 1000 consecutive Turkish patients undergoing endoscopy: a prospective study. Diseases of the esophagus 2009; 22 (8): 649-655.

192. Binato, M., Gurski, R. R., Fagundes, R. B., Meurer, L., and Edelweiss, M. I. P53 and Ki-67 overexpression in gastroesophageal reflux disease--Barrett's esophagus and adenocarcinoma sequence. Diseases of the esophagus 2009; 22 (7): 588-595.

193. Vakil, Nimish, Talley, Nicholas, van Zanten, Sander Veldhuyzen, Flook, Nigel, Persson, Tore, Bjorck, Ewa, Lind, Tore, Bolling-Sternevald, Elisabeth, and STARS, I. Study Group Cost of detecting malignant lesions by endoscopy in 2741 primary care dyspeptic patients without alarm symptoms. Clinical gastroenterology and hepatology 2009; 7 (7): 756-761.

194. Smith, Jeanette G., Li, Wenjie, and Rosson, Robert S. Prevalence, clinical and endoscopic predictors of Helicobacter pylori infection in an urban population. Connecticut medicine 2009; 73 (3): 133-137.

195. Quispel, R., van Boxel, O. S., Schipper, M. E., Sigurdsson, V., Canninga-van Dijk, M. R., Kerckhoffs, A., Smout, A. J., Samsom, M., and Schwartz, M. P. High prevalence of esophageal involvement in lichen planus: a study using magnification chromoendoscopy. Endoscopy 2009; 41 (3): 187-193.

196. Perry, Kyle A., Enestvedt, C. Kristian, Lorenzo, Cedric S. F., Schipper, Paul, Schindler, Joshua, Morris, Cynthia D., Nason, Katie, Luketich, James D., Hunter, John G., and Jobe, Blair A. The integrity of esophagogastric junction anatomy in patients with isolated laryngopharyngeal reflux symptoms. Journal of gastrointestinal surgery 2008; 12 (11): 1880-1887.

197. Lee, Jun Haeng, Kim, Nayoung, Chung, Il Kwun, Jo, Yun Ju, Seo, Geom Seog, Kim, Sang Wook, Im, Eui Hyeog, Kim, Hye Rang, Park, Soo Hyun, Lee, So Young, Cha, Hyun Min, Lee, Kyoung Soo, Hyun, Dong Hyo, Kim, Hyun Young, Kim, Sun Mi, Shin, Jeong Eun, Park, Soo Heon, Chung, Hyun Chae, Chung, In Sik, and .pylori and GERD Study Group of Korean College of Helicobacter and Upper Gastrointestinal Research Clinical significance of minimal change lesions of the esophagus in a healthy Korean population: a nationwide multi-center prospective study. Journal of gastroenterology and hepatology 2008; 23 (7 Pt 1): 1153-1157.

198. Martinek, Jan, Benes, Marek, Hucl, Tomas, Drastich, Pavel, Stirand, Petr, and Spicak, Julius Non-erosive and erosive gastroesophageal reflux diseases: No difference with regard to reflux pattern and motility abnormalities. Scandinavian Journal of Gastroenterology 2008; 43 (7): 794-800.

199. Ramirez, Francisco C., Akins, Rodney, and Shaukat, Masud Screening of Barrett's esophagus with string-capsule endoscopy: a prospective blinded study of 100 consecutive patients using histology as the criterion standard. Gastrointestinal endoscopy 2008; 68 (1): 25-31.

200. Abrams, Julian A., Fields, Sydney, Lightdale, Charles J., and Neugut, Alfred I. Racial and ethnic disparities in the prevalence of Barrett's esophagus among patients who undergo upper endoscopy. Clinical gastroenterology and hepatology 2008; 6 (1): 30-34.

201. Francois, F., Roper, J., Goodman, A. J., Pei, Z., Ghumman, M., Mourad, M., de Perez, A. Z. O., Perez-Perez, G. I., Tseng, C. H., and Blaser, M. J. The association of gastric leptin with oesophageal inflammation and metaplasia. Gut 2008; 57 (1): 16-24.

202. Diarra, M., Konate, A., Traore, C. B., Drabo, M., Soukho, A. espouse Diarra, Kalle, A., Dembele, M., Traore, H. A., and Maiga, M. Y. [Gastritis associated with duodeno-gastric reflux]. Le Mali medical 2007; 22 (4): 47-51.

203. Reichel, O. and Issing, W. J. Should patients with pH-documented laryngopharyngeal reflux routinely undergo oesophagogastroduodenoscopy? A retrospective analysis. The Journal of laryngology and otology 2007; 121 (12): 1165-1169.

204. Kim, Jeong Hwan, Rhee, Poong Lyul, Lee, Jun Haeng, Lee, Hyuk, Choi, Yong Sung, Son, Hee Jung, Kim, Jae J., and Rhee, Jong Chul Prevalence and risk factors of Barrett's esophagus in Korea. Journal of gastroenterology and hepatology 2007; 22 (6): 908-912.

205. Evans, John A., Bouma, Brett E., Bressner, Jason, Shishkov, Milen, Lauwers, Gregory Y., Mino-Kenudson, Mari, Nishioka, Norman S., and Tearney, Guillermo J. Identifying intestinal metaplasia at the squamocolumnar junction by using optical coherence tomography. Gastrointestinal endoscopy 2007; 65 (1): 50-56.

206. Punia, R. S., Arya, Savita, Mohan, H., Duseja, A., and Bal, A. Spectrum of clinico-pathological changes in Barrett oesophagus. The Journal of the Association of Physicians of India 2006; 54 (): 187-189.

207. Lassen, Annmarie, Hallas, Jesper, and de Muckadell, Ove B. S. Esophagitis: incidence and risk of esophageal adenocarcinoma--a population-based cohort study. The American journal of gastroenterology 2006; 101 (6): 1193-1199.

208. Veldhuyzen van Zanten, S. J. O., Thomson, A. B. R., Barkun, A. N., Armstrong, D., Chiba, N., White, R. J., Escobedo, S., and Sinclair, P. The prevalence of Barrett's oesophagus in a cohort of 1040 Canadian primary care patients with uninvestigated dyspepsia undergoing prompt endoscopy. Alimentary pharmacology & therapeutics 2006; 23 (5): 595-599.

209. Alonso, Oscar, Hernandez, Diego, Moreno, Enrique, Manrique, Alejandro, Moreno, Almudena, Garcia-Sesma, Alvaro, and Calvo, Jorge The real value of lower esophageal sphincter measurement for predicting acid gastroesophageal reflux or Barrett's esophagus. Journal of gastrointestinal surgery 2005; 9 (7): 973-979.

210. Rouev, Petar, Chakarski, Ivan, Doskov, Dosjo, Dimov, Gospodin, and Staykova, Elena Laryngopharyngeal symptoms and gastroesophageal reflux disease. Journal of voice 2005; 19 (3): 476-480.

211. Andrus, Jennifer G., Dolan, Robert W., and Anderson, Timothy D. Transnasal esophagoscopy: a high-yield diagnostic tool. The Laryngoscope 2005; 115 (6): 993-996.

212. Wilkins, Thad and Gillies, Ralph A. Office-based unsedated ultrathin esophagoscopy in a primary care setting. Annals of family medicine 2005; 3 (2): 126-130.

213. Kanthan, R., Torkian, B., and Kanthan, S. C. Pathological validity of esophageal endoscopy. How real is what we see? Myth or reality?. Diseases of the esophagus 2004; 17 (4): 304-306.

214. Brandt, Michael G., Darling, Gail E., and Miller, Linda Symptoms, acid exposure and motility in patients with Barrett's esophagus. Canadian journal of surgery. Journal canadien de chirurgie 2004; 47 (1): 47-51.

215. Loffeld, R. J. L. F. and van der Putten, A. B. M. M. Rising incidence of reflux oesophagitis in patients undergoing upper gastrointestinal endoscopy. Digestion 2003; 68 (2-3): 141-144.

216. Mokhashi, Mahesh S., Wildi, Stephan M., Glenn, Tammy F., Wallace, Michael B., Jost, Christian, Gumustop, Bora, Kim, Christopher Y., Cotton, Peter B., and Hawes, Robert H. A prospective, blinded study of diagnostic esophagoscopy with a superthin, stand-alone, battery-powered esophagoscope. The American journal of gastroenterology 2003; 98 (11): 2383-2389.

217. Koufman, James A., Belafsky, Peter C., Bach, Kevin K., Daniel, Elena, and Postma, Gregory N. Prevalence of esophagitis in patients with pH-documented laryngopharyngeal reflux. The Laryngoscope 2002; 112 (9): 1606-1609.

218. El-Serag, Hashem B., Bailey, Nadine R., Gilger, Mark, and Rabeneck, Linda Endoscopic manifestations of gastroesophageal reflux disease in patients between 18 months and 25 years without neurological deficits. The American journal of gastroenterology 2002; 97 (7): 1635-1639.

219. Laheij, R. J. F., van Rossum, L. G. M., De Boer, W. A., and Jansen, J. B. M. J. Corpus gastritis in patients with endoscopic diagnosis of reflux oesophagitis and Barrett's oesophagus. Alimentary pharmacology & therapeutics 2002; 16 (5): 887-891.

220. Eloubeidi, M. A. and Provenzale, D. Clinical and demographic predictors of Barrett's esophagus among patients with gastroesophageal reflux disease: a multivariable analysis in veterans. Journal of Clinical Gastroenterology 2001; 33 (4): 306-309.

221. Dhawan, P. S., Alvares, J. F., Vora, I. M., Joseph, T. K., Bhatia, S. J., Amarapurkar, A. D., Parikh, S. S., Kulkarni, S. G., and Kalro, R. H. Prevalence of short segments of specialized columnar epithelium in distal esophagus: association with gastroesophageal reflux. Indian journal of gastroenterology 2001; 20 (4): 144-147.

222. Lanzafame, S., Torrisi, A., Favara, C., Russo, V., and Emmanuele, C. Correlation between intestinal metaplasia of the gastric cardia and gastroesophageal reflux disease. Hepato-gastroenterology 2001; 48 (40): 1007-1010.

223. Fass, R., Hell, R. W., Garewal, H. S., Martinez, P., Pulliam, G., Wendel, C., and Sampliner, R. E. Correlation of oesophageal acid exposure with Barrett's oesophagus length. Gut 2001; 48 (3): 310-313.

224. Vieth, M. and Stolte, M. Barrett's mucosa, Barrett's dysplasia and Barrett's carcinoma: diagnostic endoscopy without biopsy-taking does not suffice. Diseases of the esophagus 2000; 13 (1): 23-27.

225. Voutilainen, M., Sipponen, P., Mecklin, J. P., Juhola, M., and Farkkila, M. Gastroesophageal reflux disease: prevalence, clinical, endoscopic and histopathological findings in 1,128 consecutive patients referred for endoscopy due to dyspeptic and reflux symptoms. Digestion 2000; 61 (1): 6-13.

226. Carton, E., Caldwell, M. T., McDonald, G., Rama, D., Tanner, W. A., and Reynolds, J. V. Specialized intestinal metaplasia in patients with gastro-oesophageal reflux disease. The British journal of surgery 2000; 87 (1): 116-121.

227. Oberg, S., Peters, J. H., Nigro, J. J., Theisen, J., Hagen, J. A., DeMeester, S. R., Bremner, C. G., and DeMeester, T. R. Helicobacter pylori is not associated with the manifestations of gastroesophageal reflux disease. Archives of surgery (Chicago, Ill.: 1960) 1999; 134 (7): 722-726.

228. El-Serag, H. B., Sonnenberg, A., Jamal, M. M., Kunkel, D., Crooks, L., and Feddersen, R. M. Characteristics of intestinal metaplasia in the gastric cardia. The American journal of gastroenterology 1999; 94 (3): 622-627.

229. Gadour, M. O. and Ayoola, E. A. Barrett's oesophagus and oesophageal cancer in Saudi Arabia. Tropical gastroenterology 1999; 20 (3): 111-115.

230. Aste, H., Bonelli, L., Ferraris, R., Conio, M., and Lapertosa, G. Gastroesophageal reflux disease: relationship between clinical and histological features. GOSPE. Gruppo Operativo per lo Studio delle Precancerosi dell'Esofago. Digestive Diseases and Sciences 1999; 44 (12): 2412-2418.

231. Loughney, T., Maydonovitch, C. L., and Wong, R. K. Esophageal manometry and ambulatory 24-hour pH monitoring in patients with short and long segment Barrett's esophagus. The American journal of gastroenterology 1998; 93 (6): 916-919.

232. Ellis, K. K., Oehlke, M., Helfand, M., and Lieberman, D. Management of symptoms of gastroesophageal reflux disease: does endoscopy influence medical management?. The American journal of gastroenterology 1997; 92 (9): 1472-1474.

233. Lieberman, D. A., Oehlke, M., and Helfand, M. Risk factors for Barrett's esophagus in community-based practice. GORGE consortium. Gastroenterology Outcomes Research Group in Endoscopy. The American journal of gastroenterology 1997; 92 (8): 1293-1297.

234. Weston, A. P., Krmpotich, P. T., Cherian, R., Dixon, A., and Topalovski, M. Prospective evaluation of intestinal metaplasia and dysplasia within the cardia of patients with Barrett's esophagus. Digestive Diseases and Sciences 1997; 42 (3): 597-602.

235. Morales, T. G., Sampliner, R. E., and Bhattacharyya, A. Intestinal metaplasia of the gastric cardia. The American journal of gastroenterology 1997; 92 (3): 414-418.

236. Johnston, M. H., Hammond, A. S., Laskin, W., and Jones, D. M. The prevalence and clinical characteristics of short segments of specialized intestinal metaplasia in the distal esophagus on routine endoscopy. The American journal of gastroenterology 1996; 91 (8): 1507-1511.

237. Weston, A. P., Krmpotich, P., Makdisi, W. F., Cherian, R., Dixon, A., McGregor, D. H., and Banerjee, S. K. Short segment Barrett's esophagus: clinical and histological features, associated endoscopic findings, and association with gastric intestinal metaplasia. The American journal of gastroenterology 1996; 91 (5): 981-986.

238. Collen, M. J., Abdulian, J. D., and Chen, Y. K. Gastroesophageal reflux disease in the elderly: more severe disease that requires aggressive therapy. The American journal of gastroenterology 1995; 90 (7): 1053-1057.

239. Borhan-Manesh, F. and Farnum, J. B. Incidence of heterotopic gastric mucosa in the upper oesophagus. Gut 1991; 32 (9): 968-972.

240. Chobanian, S. J., Cattau, E. L. J., Winters, C. Jr, Johnson, D. A., Van Ness, M. M., Miremadi, A., Horwitz, S. L., and Colcher, H. In vivo staining with toluidine blue as an adjunct to the endoscopic detection of Barrett's esophagus. Gastrointestinal endoscopy 1987; 33 (2): 99-101.

241. Savarino, E., Tolone, S., Caccaro, R., Bartolo, O., Galeazzi, F., Nicoletti, L., Morbin, T., Zanatta, L., Salvador, R., and Costantini, M. Clinical, endoscopic, histological and radiological characteristics of Italian patients with eosinophilic oesophagitis. Digestive and Liver Disease 2015; 47 (12): 1033-1038.

242. Carabotti, M., Avallone, M., Cereatti, F., Paganini, A., Greco, F., Scirocco, A., Severi, C., and Silecchia, G. Usefulness of Upper Gastrointestinal Symptoms as a Driver to Prescribe Gastroscopy in Obese Patients Candidate to Bariatric Surgery. A Prospective Study. Obesity Surgery 2016; 26 (5): 1075-1080.

243. Ayana, S. M., Swai, B., Maro, V. P., and Kibiki, G. S. Upper gastrointestinal endoscopic findings and prevalence of helicobacter pylori infection among adult patients with dyspepsia in northern Tanzania. Tanzania Journal of Health Research 2014; 16 (1): no-.

244. Cao, H.-L., Song, S.-L., Yang, B.-L., Zhang, Z.-H., Zhang, H., Qu, R., and Wang, B.-M. Typical endoscopic appearance accurately predicts sporadic fundic gland polyps: A retrospective study of 47 771 endoscopies. Chinese Medical Journal 2013; 126 (15): 2984-2986.

245. Jeje, E., Olajide, T., and Akande, B. Upper gastrointestinal endoscopy - Our findings, our experience in Lagoon hospital, Lagos, Nigeria. Macedonian Journal of Medical Sciences 2013; 6 (2).

246. Lim, S. W., Lee, J. H., Kim, J.-H., Kim, J. H., Kim, H. U., and Jeon, S. W. Management of asymptomatic erosive esophagitis: An E-mail survey of physician's opinions. Gut and liver 2013; 7 (3): 290-294.

247. Kao, S.-S., Chen, W.-C., Hsu, P.-I., Chuah, S.-K., Lu, C.-L., Lai, K.-H., Tsai, F.-W., Chang, C.-C., and Tai, W.-C. The frequencies of gastroesophageal and extragastroesophageal symptoms in patients with mild erosive esophagitis, severe erosive esophagitis, and barrett's esophagus in Taiwan. Gastroenterology Research and Practice 2013.

248. Khan, O. U. and Rasheed, A. Frequency of Barrett esophagus in patients with symptoms of gastroesophageal reflux disease. Rawal Medical Journal 2008; 33 (2): 205-207.

249. Khalid, K., Al-Salamah, S. M., Al-Teimi, I., and Al-Dossary, N. F. Gastrointestinal tract bleeding in intellectually disabled adults. Southern Medical Journal 2008; 101 (1): 29-34.

250. Takwoingi, Y. M., Kale U.S., and Morgan, D. W. Rigid endoscopy in globus pharyngeus: How valuable is it? Journal of Laryngology and Otology 2006; 120 (1): 42-46.

251. Banki, F., DeMeester, S. R., Mason, R. J., Campos, G., Hagen, J. A., Peters, J. H., Bremner, C. G., and DeMeester, T. R. Barrett's esophagus in females: A comparative analysis of risk factors in females and males. American Journal of Gastroenterology 2005; 100 (3): 560-567.

252. Kiltz, U., Pfaffenbach, B., Schmidt, W. E., and Adamek, R. J. The lack of influence of CagA positive Helicobacter pylori strains on gastro-oesophageal reflux disease. European Journal of Gastroenterology and Hepatology 2002; 14 (9): 979-984.

253. Wallner, B., Sylvan, A., Stenling, R., and Janunger, K.-G. A postfundoplication study on Z-line appearance and intestinal metaplasia in the gastroesophageal junction. Surgical Laparoscopy, Endoscopy and Percutaneous Techniques 2001; 11 (4): 235-241.

254. Campos, G. M. R., DeMeester, S. R., Peters, J. H., Oberg, S., Crookes, P. F., Hagen, J. A., Bremner, C. G., Sillin III, L. F., Mason, R. J., and DeMeester, T. R. Predictive factors of Barrett esophagus: Multivariate analysis of 502 patients with gastroesophageal reflux disease. Archives of Surgery 2001; 136 (11): 1267-1273.

255. Peck-Radosavljevic, M., Puspok, A., Potzi, R., and Oberhuber, G. Histological findings after routine biopsy at the gastro-oesophagealjunction. European Journal of Gastroenterology and Hepatology 1999; 11 (11): 1265-1270.

256. Conio, M., Bonelli, L., Munizzi, F., Carbone, A., Volpe, R., and Aste, H. Prevalence of Barrett's esophagus in patients with gastroesophageal reflux disease. Acta Endoscopica 1988; 18 (5): 339-346.

257. Bohmer, C. J., Klinkenberg-Knol, E. C., Niezen-de Boer, R. C., and Meuwissen, S. G. The age-related incidences of oesophageal carcinoma in intellectually disabled individuals in institutes in The Netherlands. European journal of gastroenterology & hepatology 1997; 9 (6): 589-592.

258. Wang, A., Mattek, N. C., Holub, J. L., Lieberman, D. A., and Eisen, G. M. Prevalence of complicated gastroesophageal reflux disease and Barrett's esophagus among racial groups in a multi-center consortium. Digestive diseases and sciences 2009; 54 (5): 964-971.

259. Gerson, L. B., Ullah, N., Fass, R., Green, C., Shetler, K., and Singh, G. Does body mass index differ between patients with Barrett's oesophagus and patients with chronic gastro-oesophageal reflux disease? Alimentary Pharmacology and Therapeutics 2007; 25 (9): 1079-1086.

260. Savarino, V., Mela, G. S., Zentilin, P., Mele, M. R., Mansi, C., Remagnino, A. C., Vigneri, S., Malesci, A., Belicchi, M., Lapertosa, G., and Celle, G. Time pattern of gastric acidity in Barrett's esophagus. Digestive diseases and sciences 1996; 41 (7): 1379-1383.

261. Nishimura, K., Tanaka, T., Tsubuku, T., Matono, S., Nagano, T., Murata, K., Aoyama, Y., Yanagawa, T., Shirouzu, K., and Fujita, H. Reflux esophagitis after esophagectomy: impact of duodenogastroesophageal reflux. Diseases of the esophagus 2012; 25 (5): 381-385.

262. Lee, In Seok, Choi, Suck Chei, Shim, Ki Nam, Jee, Sam Ryong, Huh, Kyu Chan, Lee, Jun Haeng, Lee, Kwang Jae, Park, Hyung Seok, Lee, Yong Chan, Jung, Hoon Yong, and Park, Hyo Jin Prevalence of Barrett's esophagus remains low in the Korean population: nationwide cross-sectional prospective multicenter study. Digestive diseases and sciences 2010; 55 (7): 1932-1939.

263. Wickramasinghe, Kumari S., Chandrasoma, Parakrama T., and Chandraratna, P. Anthony Detection of Barrett's epithelium by acoustic microscopy. Ultrasound in medicine & biology 2002; 28 (2): 203-207.

264. Eloubeidi, M. A. and Provenzale, D. Health-related quality of life and severity of symptoms in patients with Barrett's esophagus and gastroesophageal reflux disease patients without Barrett's esophagus. The American journal of gastroenterology 2000; 95 (8): 1881-1887.

265. O'Connor, H. J. and Cunnane, K. Helicobacter pylori and gastro-oesophageal reflux disease--a prospective study. Irish journal of medical science 1994; 163 (8): 369-373.

266. Katzka, D. A., Reynolds, J. C., Saul, S. H., Plotkin, A., Lang, C. A., Ouyang, A., Jimenez, S., and Cohen, S. Barrett's metaplasia and adenocarcinoma of the esophagus in scleroderma. The American journal of medicine 1987; 82 (1): 46-52.

267. Roberts, I. M., Curtis, R. L., and Madara, J. L. Gastroesophageal reflux and Barrett's esophagus in developmentally disabled patients. The American journal of gastroenterology 1986; 81 (7): 519-523.

268. Messian, R. A., Hermos, J. A., Robbins, A. H., Friedlander, D. M., and Schimmel, E. M. Barrett's esophagus. Clinical review of 26 cases. The American journal of gastroenterology 1978; 69 (4): 458-466.

269. Barros, R., Pereira, D., Calle, C., Camilo, V., Cunha, A. I., David, L., Almeida, R., Dias-Pereira, A., and Chaves, P. Dynamics of SOX2 and CDX2 Expression in Barrett's Mucosa. Disease Markers 2016.

270. Ho, K.-Y., Tay, H.-H., and Kang, J.-Y. A prospective study of the clinical features, manometric findings, incidence and prevalence of achalasia in Singapore. Journal of Gastroenterology and Hepatology (Australia) 1999; 14 (8): 791-795.

271. Zaidi, A. H., Gopalakrishnan, V., Kasi, P. M., Zeng, X., Malhotra, U., Balasubramanian, J., Visweswaran, S., Sun, M., Flint, M. S., Davison, J. M., Hood, B. L., Conrads, T. P., Bergman, J. J., Bigbee, W. L., and Jobe, B. A. Evaluation of a 4-protein serum biomarker panel-biglycan, annexin-A6, myeloperoxidase, and protein S100-A9 (B-AMP)-for the detection of esophageal adenocarcinoma. Cancer 15-12-2014; 120 (24): 3902-3913.

272. Langner, C., Schneider, N. I., Plieschnegger, W., Schmack, B., Bordel, H., Hofler, B., Eherer, A. J., Wolf, E. M., Rehak, P., and Vieth, M. Cardiac mucosa at the gastro-oesophageal junction: indicator of gastro-oesophageal reflux disease? Data from a prospective central European multicentre study on histological and endoscopic diagnosis of oesophagitis (histoGERD trial). Histopathology 2014; 65 (1): 81-89.

273. Wang, W., Uedo, N., Yang, Y., Peng, L., Bai, D., Lu, Z., Fan, K., Wang, J., Wang, X., Zhao, Y., and Yu, Z. Autofluorescence imaging endoscopy for predicting acid reflux in patients with gastroesophageal reflux disease. Journal of gastroenterology and hepatology 2014; 29 (7): 1442-1448.

274. The NHS Information Centre. An audit of the care received by people with Oesophago-Gastric Cancer in England and Wales Second Annual Report. 2009, Document reference: IC23090209. Retrieved from https://digital.nhs.uk/catalogue/PUB02752

275. A Diagnostic Study of the Advanced Endoscopy to Detect Early Esophageal Cancer. Last updated: July 7, 2014 ClinicalTrials.gov Identifier: NCT02182804

276. Prueksapanich P, Pittayanon R, Rerknimitr R, Wisedopas N, Kullavanijaya P. Value of probe-based confocal laser endomicroscopy (pCLE) and dual focus narrow-band imaging (dNBI) in diagnosing early squamous cell neoplasms in esophageal Lugol's voiding lesions. Endoscopy international open. 2015 Aug;3(04):E281-8.

277. Chadwick G, Groene O, Hoare J, Hardwick RH, Riley S, Crosby TD, Hanna GB, Cromwell DA. A population-based, retrospective, cohort study of esophageal cancer missed at endoscopy. Endoscopy. 2014 Jul;46(07):553-60.

278. Lieberman, D. A., Oehlke, M., and Helfand, M. Risk factors for Barrett's esophagus in community-based practice. GORGE consortium. Gastroenterology Outcomes Research Group in Endoscopy. The American journal of gastroenterology 1997; 92 (8): 1293-1297.

279. Hardwick, R. H., Morgan, R. J., Warren, B. F., Lott, M., and Alderson, D. Brush cytology in the diagnosis of neoplasia in Barrett's esophagus. Diseases of the esophagus 1997; 10 (4): 233-237.

280. Caygill, C. P., Reed, P. I., Johnston, B. J., Hill, M. J., Ali, M. H., and Levi, S. A single centre's 20 years' experience of columnar-lined (Barrett's) oesophagus diagnosis. European journal of gastroenterology & hepatology 1999; 11 (12): 1355-1358.

281. Nandurkar, S., Talley, N. J., Martin, C. J., Ng, T. H., and Adams, S. Short segment Barrett's oesophagus: prevalence, diagnosis and associations. Gut 1997; 40 (6): 710-715.

282. May, A., Gunter, E., Roth, F., Gossner, L., Stolte, M., Vieth, M., and Ell, C. Accuracy of staging in early oesophageal cancer using high resolution endoscopy and high resolution endosonography: a comparative, prospective, and blinded trial. Gut 2004; 53 (5): 634-640.

283. Cameron, A. J. and Lomboy, C. T. Barrett's esophagus: age, prevalence, and extent of columnar epithelium. Gastroenterology 1992; 103 (4): 1241-1245.

284. Shakhatreh MH, Duan Z, Avila N, Naik A, Kramer JR, Hinojosa-Lindsey M, Chen J, El-Serag HB. Risk of Upper Gastrointestinal Cancers in Patients with Gastroesophageal Reflux Disease After a Negative Screening Endoscopy. *Clinical Gastroenterology and Hepatology* 2015; 13:280-286.

285. Lopez-Colombo, A., Jimenez-Toxqui, M., Gogeascoechea-Guillen, P. D., Melendez-Mena, D., Morales-Hernandez, E. R., Montiel-Jarquin, A. J., and Amaro-Balderas, E. Prevalence of esophageal inlet patch and clinical characteristics of the patients. Revista de gastroenterologia de Mexico 2018.

286. Wasielica-Berger, Justyna, Kemona, Andrzej, Kisluk, Joanna, Swidnicka-Siergiejko, Agnieszka, Rogalski, Pawel, Chwiesko, Adam, Kostrzewska, Maja, and Dabrowski, Andrzej. The added value of magnifying endoscopy in diagnosing patients with certain gastroesophageal reflux disease. Advances in medical sciences 2018. 63 (2) 359-366.

287. Smadi, Y., Deb, C., Bornstein, J., Safder, S., Horvath, K., and Mehta, D. Blind esophageal brushing offers a safe and accurate method to monitor inflammation in children and young adults with eosinophilic esophagitis. Diseases of the esophagus 2018.

288. Herrera Elizondo, J. L., Monreal Robles, R., Garcia Compean, D., Gonzalez Moreno, E. I., Borjas Almaguer, O. D., Maldonado Garza, H. J., and Gonzalez Gonzalez, J. A. Prevalence of Barrett's esophagus: An observational study from a gastroenterology clinic. Revista de gastroenterologia de Mexico 2017. 82 (4) 296-300.

289. Nwokediuko, Sylvester Chuks, Ijoma, Uchenna, and Okafor, Okechukwu. Esophageal Intraepithelial Neutrophil Infiltration is Common in Nigerian Patients With Non-Erosive Reflux Disease. Gastroenterology research 2011. 4 (1) 20-25.

290. Hutopila, Ionut, Constantin, A., and Copaescu, Catalin. Gastroesophageal Reflux Before Metabolic Surgery. Chirurgia (Bucharest, Romania: 1990) 2018. 113 (1) 101-107.

291. Heimgartner, Benjamin, Herzig, Marcus, Borbely, Yves, Kroll, Dino, Nett, Philipp, and Tutuian, Radu. Symptoms, endoscopic findings and reflux monitoring results in candidates for bariatric surgery. Digestive and liver disease 2017. 49 (7) 750-756.

292. Weijenborg, P. W., Smout, A. J. P. M., Krishnadath, K. K., Bergman, J. G. H. M., Verheij, J., and Bredenoord, A. J. Esophageal sensitivity to acid in patients with Barrett's esophagus is not related to preserved esophageal mucosal integrity. Neurogastroenterology and motility 2017. 29 (7).

293. Sekiguchi, Masau, Terauchi, Takashi, Kakugawa, Yasuo, Shimada, Naoki, Saito, Yutaka, and Matsuda, Takahisa. Performance of 18-fluoro-2-deoxyglucose positron emission tomography for esophageal cancer screening. World journal of gastroenterology 2017. 23 (15) 2743-2749.

294. Royston, Christine and Bardhan, Karna D. Adam, Eve and the reflux enigma: age and sex differences across the gastro-oesophageal reflux spectrum. European journal of gastroenterology & hepatology 2017. 29 (6) 634-639.

295. Woodland, Philip, Shen Ooi, Joanne Li, Grassi, Federica, Nikaki, Kornilia, Lee, Chung, Evans, James A., Koukias, Nikolaos, Triantos, Christos, McDonald, Stuart A., Peiris, Madusha, Aktar, Rubina, Blackshaw, L. Ashley, and Sifrim, Daniel. Superficial Esophageal Mucosal Afferent Nerves May Contribute to Reflux Hypersensitivity in Nonerosive Reflux Disease. Gastroenterology 2017. 153 (5) 1230-1239.

296. Tan, Mimi C., Murrey-Ittmann, Jackson, Nguyen, Theresa, Ketwaroo, Gyanprakash A., El-Serag, Hashem B., and Thrift, Aaron P. Risk Profiles for Barrett's Esophagus Differ between New and Prevalent, and Long- and Short-Segment Cases. PloS one 2016. 11 (12) e0169250.

297. Alkaddour, A., McGaw, C., Hritani, R., Palacio, C., Munoz, J. C., and Vega, K. J. Protective Propensity of Race or Environmental Features in the Development of Barrett's Esophagus in African Americans - A Single Center Pilot Study. Journal of the National Medical Association 2018.

298. Stephens, J. A., Fisher, J. L., Krok-Schoen, J. L., Baltic, R. D., Sobotka, H. L., and Paskett, E. D. Esophageal Adenocarcinoma: Opportunities for Targeted Prevention in Ohio. Clinical Medicine Insights: Gastroenterology 2018. 11.

299. Deng, P., Min, M., Dong, T., Bi, Y., Tang, A., and Liu, Y. Linked color imaging improves detection of minimal change esophagitis in non-erosive reflux esophagitis patients. Endoscopy International Open 2018. 6 (10) E1177-E1183.

300. Takeuchi, M., Goda, K., Oyama, T., Fujisaki, J., Ishihara, R., Takahashi, A., Takaki, Y., Hirasawa, D., Momma, K., Amano, Y., Yagi, K., Watanabe, G., and Ohkura, Y. The Japan esophageal society classification system to identify superficial neoplasms in Barrett's esophagus using magnifying endoscopy. Gastrointestinal endoscopy 2018. 87 (6 Supplement 1) AB277-AB278.

301. Lind, A., Siersema, P. D., Kusters, J. G., Konijn, T., Mebius, R. E., and Koenderman, L. The microenvironment in Barrett's esophagus tissue is characterized by high FOXP3 and RALDH2 levels. Frontiers in Immunology 2018. 9 (JUN) 1375.

302. Saarinen, T., Kettunen, U., Pietilainen, K. H., and Juuti, A. Is preoperative gastroscopy necessary before sleeve gastrectomy and Roux-en-Y gastric bypass? Surgery for Obesity and Related Diseases 2018. 14 (6) 757-762.

303. Cal, P., Deluca, L., Jakob, T., Lonardi, D., and Fernandez, E. Presurgical gerd evaluation of the bariatric patient. a cross sectional study. Surgical Endoscopy and Other Interventional Techniques 2018. 32 (1 Supplement 1) S313.

304. Quach, D. T., Nguyen, T. T., and Hiyama, T. Abnormal gastroesophageal flap valve is associated with high gastresophageal reflux disease questionnaire score and the severity of gastroesophageal reflux disease in vietnamese patients with upper gastrointestinal symptoms. Journal of neurogastroenterology and motility 2018. 24 (2) 226-232.

305. Nucci, D., Arcidiacono, D., Fassan, M., Antonello, A., Rugge, M., Morbin, T., Nardi, M., Maddalo, G., Agostini, M., Farinati, F., Alberti, A., and Realdon, S. Is the adherence to WCRF/AICR recommendations

involved in barrett's esophagus onset and its progression to EAC? A retrospective analysis in a high-risk population. Digestive and Liver Disease 2018. 50 (2 Supplement 1) e103.

306. Lenoci, N., Amato, A., Andrealli, A., Paggi, S., Mandelli, G., Terreni, N., Mogavero, G., Rondonotti, E., Spinzi, G., Imperiali, G., and Radaelli, F. Olga-based staging and dysplasia relevance in 50-75 year old patients in open access endoscopy. Digestive and Liver Disease 2018. 50 (2 Supplement 1) e79.

307. Anuk, T., Kahramanca, S., and Kaya, O. Predictive parameters for barrett's esophagus: Percent body fat (PBF) and Visceral fat area (VFA) are more valuable than body mass index (BMI). Kuwait Medical Journal 2018. 50 (1) 72-76.

308. Barros, R., Pereira, D., Calle, C., Camilo, V., Cunha, A. I., David, L., Almeida, R., Dias-Pereira, A., and Chaves, P. Dynamics of SOX2 and CDX2 Expression in Barrett's Mucosa. Disease Markers 2016. 2016 () 1532791.

309. Offman, J. and Fitzgerald, R. C. Alternatives to Traditional Per-Oral Endoscopy for Screening. Gastrointestinal Endoscopy Clinics of North America 2017. 27 (3) 379-396.

310. Ojuka, D., Dindi, K., and Awori, M. Prevalence of esophageal adenocarcinoma. Annals of African Surgery 2017. 14 (2).

311. Schlottmann, F., Sadava, E. E., Reino, R., Galvarini, M., and Buxhoeveden, R. Preoperative endoscopy in bariatric patients may change surgical strategy. Acta Gastroenterologica Latinoamericana 2017. 47 (2) 117-121.

312. Paterson, A. L., Lao-Sirieix, P., O'Donovan, M., Debiram-Beecham, I., di, Pietro M., Miremadi, A., Attwood, S. E., Walter, F. M., Sasieni, P. D., and Fitzgerald, R. C. Range of pathologies diagnosed using a minimally invasive capsule sponge to evaluate patients with reflux symptoms. Histopathology 2017. 70 (2) 203-210.

313. Buas, M. F., Gu, H., Djukovic, D., Zhu, J., Onstad, L., Reid, B. J., Raftery, D., and Vaughan, T. L. Candidate serum metabolite biomarkers for differentiating gastroesophageal reflux disease, Barrett's esophagus, and high-grade dysplasia/esophageal adenocarcinoma. Metabolomics 2017. 13 (3) 23.

314. Kaplan, M., Tanoglu, A., Sakin, Y. S., Akyol, T., Oncu, K., Kara, M., and Yazgan, Y. Landmark reading alterations in patients with gastro-oesophageal reflux symptoms undergoing diagnostic gastroscopy. Arab Journal of Gastroenterology 2016. 17 (4) 176-180.

315. Soucy, G., Onstad, L., Vaughan, T. L., and Odze, R. D. Histologic Features Associated With Columnar-lined Esophagus in Distal Esophageal and Gastroesophageal Junction (GEJ) Biopsies From GERD Patients: A Community-based Population Study. The American journal of surgical pathology 2016. 40 (6) 827-835.

316. Makanga, W. and Nyaoncha, A. Upper gastrointestinal disease in Nairobi and Nakuru counties, Kenya; a two year comparative endoscopy study. Annals of African Surgery 2014. 11 (2) 35-39.

Study design: Case-series/case report (n=9)

1. Shaheen, N. and Ransohoff, D. F. Gastroesophageal reflux, Barrett esophagus, and esophageal cancer: Clinical applications. Journal of the American Medical Association 2002; 287 (15): 1982-1986.

2. Fan, X., Nath, S., Gomez, G., and Raju, G. S. Fellows' corner. Practical Gastroenterology 2007; 31 (4): 103-.

3. El-Serag, H. B. Temporal trends in new and recurrent esophageal strictures in Department of Veterans Affairs. American Journal of Gastroenterology 2006; 101 (8): 1727-1733.

4. Clark, G. W., Smyrk, T. C., Burdiles, P., Hoeft, S. F., Peters, J. H., Kiyabu, M., Hinder, R. A., Bremner, C. G., and DeMeester, T. R. Is Barrett's metaplasia the source of adenocarcinomas of the cardia? Archives of surgery (Chicago, Ill.: 1960) 1994; 129 (6): 609-614.

5. Diop, P. S., Ndoye, J. M., Ndiaye, D., Ka, I., Dangou, J. M., and Fall, B. Oesophagus cancer in Senegal: Review of a series of 72 cases. Journal Africain d'Hepato-Gastroenterologie 2009; 3 (4): 190-194.

6. Peitz, U., Vieth, M., Ebert, M., Kahl, S., Schulz, H.-U., Roessner, A., and Malfertheiner, P. Small-bowel metaplasia arising in the remnant esophagus after esophagogastrostomy - A prospective study in patients with a history of total gastrectomy. American Journal of Gastroenterology 2005; 100 (9): 2062-2070.

7. Agha, F. P. and Keren, D. F. Barrett's esophagus complicating achalasia after esophagomyotomy. A clinical, radiologic, and pathologic study of 70 patients with achalasia and related motor disorders. Journal of clinical gastroenterology 1987; 9 (2): 232-237.

8. Vergouwe, Floor Wt, Gottrand, Madeleine, Wijnhoven, Bas Pl, IJsselstijn, Hanneke, Piessen, Guillaume, Bruno, Marco J., Wijnen, Rene Mh, and Spaander, Manon Cw. Four cancer cases after esophageal atresia repair: Time to start screening the upper gastrointestinal tract. World journal of gastroenterology 2018. 24 (9) 1056-1062.

9. Gamaletsou, Maria N. and Denning, David W. Gastroesophageal Reflux Disease and Pulmonary Diseases Associated with Aspergillosis: Is There a Connection? Mycopathologia 2017. 182 (11-12) 1125-1129.

Study design: Cost-effectiveness/Markov model (n=12)

1. Gerson, L. B., Groeneveld, P. W., and Triadafilopoulos, G. Cost-effectiveness model of endoscopic screening and surveillance in patients with gastroesophageal reflux disease. Clinical Gastroenterology and Hepatology 2004; 2 (10): 868-879.

2. Inadomi, J. M., Sampliner, R., Lagergren, J., Lieberman, D., Fendrick, A. M., and Vakil, N. Screening and surveillance for Barrett esophagus in high-risk groups: A cost-utility analysis. Annals of Internal Medicine 2003; 138 (3): 176-186.

3. Stern, M. A., Fendrick, A. M., McDonnell, W. M., Gunaratnam, N., Moseley, R., and Chey, W. D. Screening for high-grade dysplasia in gastroesophageal reflux disease: Is it cost-effective? American Journal of Gastroenterology 2000; 95 (8): 2086-2093.

4. Benaglia, Tatiana, Sharples, Linda D., Fitzgerald, Rebecca C., and Lyratzopoulos, Georgios Health benefits and cost effectiveness of endoscopic and nonendoscopic cytosponge screening for Barrett's esophagus. Gastroenterology 2013; 144 (1): 62-73.

5. Raman, Anoop, Sternbach, Joel, Babajide, Azeesat, Sheth, Ketan, and Schwaitzberg, Steven D. When does testing for GERD become cost effective in an integrated health network? Surgical endoscopy 2010; 24 (6): 1245-1249.

6. Gerson, Lauren and Lin, Otto S. Cost-benefit analysis of capsule endoscopy compared with standard upper endoscopy for the detection of Barrett's esophagus. Clinical gastroenterology and hepatology 2007; 5 (3): 319-325.

7. Rubenstein, Joel H., Inadomi, John M., Brill, Joel V., and Eisen, Glenn M. Cost utility of screening for Barrett's esophagus with esophageal capsule endoscopy versus conventional upper endoscopy. Clinical gastroenterology and hepatology 2007; 5 (3): 312-318.

8. Esfandyari, Tuba, Potter, Jon W., and Vaezi, Michael F. Dysphagia: a cost analysis of the diagnostic approach. The American journal of gastroenterology 2002; 97 (11): 2733-2737.

9. Rubenstein, J. H. and Inadomi, J. M. Defining a clinically significant adverse impact of diagnosing Barrett's esophagus. Journal of Clinical Gastroenterology 2006; 40 (2): 109-115.

10. Ende, A. R., Higa, J. T., Singla, A., Choi, A. Y., Lee, A. B., Whang, S. G., Gravelle, K., D'Andrea, S., Bang, S. J., Schmidt, R. A., Yeh, M. M., and Hwang, J. H. Gastric intestinal metaplasia, dysplasia, and gastric cancer in a U.S. tertiary care population-who's at risk?. Gastrointestinal endoscopy 2016; 83 (5 SUPPL. 1): AB459-.

11. Nietert, P. J., Silverstein, M. D., Mokhashi, M. S., Kim, C. Y., Glenn, T. F., Marsi, V. A., Hawes, R. H., and Wallace, M. B. Cost effectiveness of screening a population with chronic gastroesophageal reflux. Gastrointestinal endoscopy 2003; 57 (3): 311-.

12. Heberle, Curtis R., Omidvari, Amir Houshang, Ali, Ayman, Kroep, Sonja, Kong, Chung Yin, Inadomi, John M., Rubenstein, Joel H., Tramontano, Angela C., Dowling, Emily C., Hazelton, William D., Luebeck, E Georg, Lansdorp-Vogelaar, Iris, and Hur, Chin. Cost Effectiveness of Screening Patients With Gastroesophageal Reflux Disease for Barrett's Esophagus With a Minimally Invasive Cell Sampling Device. Clinical gastroenterology and hepatology 2017. 15 (9) 1397-1404.

Study design: Other (e.g., editorial, commentary, notes, letters, opinions) (n=102)

1. Danis, P. and Chumley, H. Clinical inquiries. Which patients with gastroesophageal reflux disease (GERD) should have esophagogastroduoudenoscopy (EGD)? The Journal of family practice 2001; 50 (8): 658-659.
2. Spechler, S. J. Guidelines for managing short-segment Barrett's esophagus. The American journal of managed care 2000; 6 (16 Suppl): S891-S894.
3. Falk, G. W. Updated guidelines for diagnosing and managing Barrett Esophagus. Gastroenterology and Hepatology 2016; 12 (7): 449-451.
4. Chan, C. and Chen, H. Barrett's oesophagus Does it matter? Medicine Today 2015; 16 (10): 49-51.
5. Talley, N. J. and Napthali, K. E. Endoscopy in symptomatic gastroesophageal reflux disease: Scoping out whomto target. JAMA Internal Medicine 2014; 174 (3): 465-466.
6. Rubenstein, J. H. Clinical prediction and screening for Barrett esophagus. Gastroenterology and Hepatology 2014; 10 (3): 187-189.
7. Armstrong, C. ACP publishes recommendations on upper endoscopy for gastroesophageal reflux disease. American family physician 2013; 88 (12): 865-.
8. Fitzgerald, R. C. and Rubenstein, J. H. Oracular guidance on clinical management of early neoplastic barrett's esophagus. Gastroenterology 2012; 143 (2): 282-284.
9. Raju, G. S. Advances in GERD: Esophageal perforations. Gastroenterology and Hepatology 2012; 8 (8): 548-551.
10. Klibansky, D. A., Gordon, S. R., and Gardner, T. B. Overutilization of endoscopic surveillance in nondysplastic Barrett's: Too much of a good thing? Gastroenterology 2012; 142 (7): 1614-1616.
11. Gerson, L. B. Are we ready for gender-based guidelines for Barrett's esophagus screening?. Gastroenterology 2011; 141 (6): 2271-2273.
12. Shaheen, N. J. Editorial: Should women with heartburn undergo screening upper endoscopy for prevention of cancer. American Journal of Gastroenterology 2011; 106 (2): 261-263.
13. Fass, R. Challenges associated with the treatment of patients with gastroparesis and GERD. Gastroenterology and Hepatology 2009; 5 (10): 7-8.
14. SSAT patient care guidelines: Management of Barrett's esophagus. Journal of Gastrointestinal Surgery 2007; 11 (9): 1213-1215.
15. Inadomi, J. M. Fear of Loss, Not Promise of Gain, Drives Practice Patterns in Barrett's Esophagus. Gastroenterology 2008; 134 (4): 1258-1260.
16. Spechler, S. J. A balancing view: To screen or not to screen: Scoping out the issues. American Journal of Gastroenterology 2004; 99 (12): 2295-2296.
17. Sampliner, R. E. Should patients with GERD be screened once at least for Barrett's epithelium? PRO: The need to screen GERD patients for Barrett's esophagus - A greater yield than surveillance. American Journal of Gastroenterology 2004; 99 (12): 2291-2293.
18. Moayyedi, P. Should patients with GERD be screened once at least for Barrett's epithelium? CON: Patients with GERD should be screened once at least for Barrett's esophagus - Medicine or magic?. American Journal of Gastroenterology 2004; 99 (12): 2293-2295.
19. Vij, R. and Triadafilopoulos, G. GERD: Could your patient be at risk for esophageal cancer? Journal of Respiratory Diseases 2003; 24 (1): 6-8.
20. Armstrong, D. Motion - All patients with GERD should be offered once in a lifetime endoscopy: Arguments for the motion. Canadian Journal of Gastroenterology 2002; 16 (8): 549-551.
21. Gastroesophageal reflux disease: Diagnostic and management approaches. Consultant 1999; 39 (11): 3122-3124.

22. Howden, C. W. Summary and recommendations. Gastroenterology International 1997; 10 (3): 131-132.

23. Ishaq, S. and Jankowski, J. A. Barrett's metaplasia: clinical implications. World journal of gastroenterology 2001; 7 (4): 563-565.

24. Sharma, P. and Katz, P. Endoscopic therapies for gastroesophageal reflux disease: Back in the game?. Gastroenterology 2015; 148 (2): 280-285.

25. Kim, G. H. Columnar-lined esophagus: Its prevalence and predictors in patients with gastroesophageal reflux disease. Journal of Neurogastroenterology and Motility 2013; 19 (2): 261-263.

26. Miller, M. Barrett's esophagus: Major issues uncertain and unsolved. Journal of the National Cancer Institute 2001; 93 (9): 674-675.

27. Prescott, L. M. Highlights of digestive disease week 2000. P and T 2000; 25 (8): 401-409.

28. Cuomo, R. Diagnosing gastro-oesophageal reflux: Endoscopy, pH-metry or empirical trial? Digestive and Liver Disease 2000; 32 (SUPPL. 3): S239-S241.

29. Cooper, G. S., Kou, T. D., and Chak, A. Receipt of previous diagnoses and endoscopy and outcome from esophageal adenocarcinoma: A population-based study with temporal trends. American Journal of Gastroenterology 2009; 104 (6): 1356-1362.

30. Gerson, L. B. Unsedated endoscopy: Ready for prime time? Commentary. Evidence-Based Gastroenterology 2007; 8 (3): 51-53.

31. Katz, P. O. Esophageal cancer in GERD patients. Reviews in gastroenterological disorders 2002; 2 (2): 87-89.

32. Odze, R. Cytokeratin 7/20 immunostaining: Barrett's oesophagus or gastric intestinal metaplasia? Lancet 2002; 359 (9319): 1711-1713.

33. Sampliner, R. E. Definitional confusion: When Barrett's esophagus is not Barrett's and not Barrett's is Barrett's. Prevalence of metaplasia at the gastro-oesophageal junction. American Journal of Gastroenterology 1995; 90 (7): 1181-1182.

34. Caldwell, M. T. P., Lawlor, P., Byrne, P. J., Walsh, T. N., and Hennessy, T. P. J. Ambulatory oesophageal bile reflux monitoring in Barrett's oesophagus. British Journal of Surgery 1995; 82 (5): 657-660.

35. Fardoun, T., Peyronnet, B., Pery, C., Sulpice, L., Boudjema, K., and Meunier, B. Gastrointestinal stromal tumor of the esophagus. Diseases of the esophagus 2013; 26 (3): 336-337.

36. Bresalier, Robert Management of Barrett's esophagus: cases and questions. Seminars in oncology 2005; 32 (6 Suppl 9): S2-S5.

37. Cooper, Gregory S., Yuan, Zhong, Chak, Amitabh, and Rimm, Alfred A. Association of prediagnosis endoscopy with stage and survival in adenocarcinoma of the esophagus and gastric cardia. Cancer 2002; 95 (1): 32-38.

38. Bapaye, A., Dubale, N., Pujari, R., Kulkarni, A., Jajoo, Naval R., Vyas, V., and Mahadik, M. Peroral endoscopic pyloromyotomy for delayed postoperative gastroparesis. Endoscopy 2015; 47 (): E581-E582.

39. Zalar, A., Haddouche, B., Antonietti, M., Alhameedi, R., Iwanicki-Caron, I., Lecleire, S., and Ducrotte, P. Lack of correlation between morbid obesity and severe gastroesophageal reflux disease in candidates for bariatric surgery: Results of a large prospective study. Obesity Surgery 2013; 23 (11): 1939-1941.

40. Mergener, K. The impact of the Affordable Care Act on the future of endoscopy practice. Gastroenterology and Hepatology 2013; 9 (11): 749-751.

41. Triadifilopoulos, G. Cytosponge for Barrett's esophagus screening: When smart science matches simplicity. Gastroenterology 2011; 141 (2): 766-768.

42. Kuipers, E. J. Barrett Esophagus and life expectancy: Implications for screening? Gastroenterology and Hepatology 2011; 7 (10): 689-691.

43. Triadafilopoulos, G., Lombard, C. M., and Jobe, B. A. "War and peace" with Barrett's esophagus. Digestive Diseases and Sciences 2011; 56 (4): 988-992.

44. Wong, R. K. H. and Altekruse, S. F. Editorial: Where are you and how do we find you the dilemma of identifying Barrett's epithelium before adenocarcinoma of the esophagus. American Journal of Gastroenterology 2009; 104 (6): 1363-1365.

45. Atkinson, M. and Chak, A. Unsedated small-caliber endoscopy - A new screening and surveillance tool for Barrett's esophagus? Commentary. Nature Clinical Practice Gastroenterology and Hepatology 2007; 4 (8): 426-427.

46. Gerson, L. B., Groeneveld, P. W., Triadafilopoulos, G., and Inadomi, J. M. Barrett esophagus: More questions than answers. Evidence-Based Gastroenterology 2005; 6 (1): 4-6.

47. Wetscher, G. J. Selected Commentary to: "Ineffective oesophageal motility does not affect the clinical outcome of open Nissen fundoplication" (Munitiz V, Ortiz A, Martinez de Haro LF, Molina J, Parrilla P; Br J Surg 91: 1010-1014, 2004). European Surgery - Acta Chirurgica Austriaca 2004; 36 (6): 388-390.

48. Adami, H.-O. and Trichopoulos, D. Obesity and mortality from cancer. New England Journal of Medicine 2003; 348 (17): 1623-1624.

49. Wei, J. T., Shaheen, N. J., Inadomi, J., and Vakil, N. Dollars and sense in preventing esophageal cancer. Gastroenterology 2003; 125 (4): 1268-1270.

50. Mui, A. C. W. Barrett's oesophagus. Hong Kong Practitioner 2002; 24 (12): 594-603.

51. Oberg, S. and Mason, R. J. Is there a surgical nirvana for Barett's esophagus? American Journal of Gastroenterology 1996; 91 (12): 2630-2631.

52. Al Dulaimi, David Recent advances in oesophageal diseases. Gastroenterology and hepatology from bed to bench 2014; 7 (3): 186-189.

53. Buscaglia, J. M. Issue Highlights. Clinical Gastroenterology and Hepatology 2015; 13 (13): 2205-2208.

54. Jo, Y. New consensus on the management of Barrett's dysplasia and early stage esophageal adenocarcinoma: Limited evidence, but best available guidance. Journal of neurogastroenterology and motility 2012; 18 (4): 455-456.

55. Fock, K. M. GERD, NERD and Barrett's esophagus. Digestion 2009; 79 (3 SUPPL. 1): 59-.

56. Greenberger, N. J. and Sharma, P. Update in gastroenterology and hepatology. Annals of internal medicine 2006; 145 (4): 294-298.

57. Freston, J., Orlando, R., Galmiche, J. P., Scheiman, J., Asaka, M., and Chan, F. Discussion. Drugs 2006; 66 (SUPPL. 1): 29-33.

58. Marchal, F. ORL. Medecine et Hygiene 2004; 62 (2465): 121-128.

59. Henteleff, H. J. A., Darling, G., and McKenzie, M. Canadian Association of General Surgeons Evidence Based Reviews in Surgery. 6. "GERD" as a risk factor for esophageal cancer. Canadian Journal of Surgery 2003; 46 (3): 208-210.

60. Vakil, N., Talley, N., Malfertheiner, P., Fass, R., Tytgat, G. N. J., Laine, L. A., Jones, R., Hawkey, C. J., Armstrong, D., Lagergren, J., Dent, J., Lundell, L., and Kahrilas, P. J. Session 4: Long-term medical management. European Journal of Gastroenterology and Hepatology 2001; 13 (SUPPL. 3): S67-S89.

61. De Jonge, P. J. F. and Hvid-Jensen, F. Barrett's oesophagus: Size does matter. Gut 2016; 65 (2): 189-190.

62. Corley, D. Current surveillance and therapeutic options for barrett esophagus. Gastroenterology and Hepatology 2008; 4 (3): 183-186.

63. The role of endoscopy in the management of GERD. Gastrointestinal endoscopy 1999; 49 (6): 834-835.

64. Lagergren, J. Oesophageal cancer in 2014: Advances in curatively intended treatment. Nature Reviews Gastroenterology and Hepatology 2015; 12 (2): 74-75.

65. Jankowski, J. A. and Satsangi, J. Barrett's esophagus: Evolutionary insights from genomics. Gastroenterology 2013; 144 (4): 667-669.

66. Cadiot, G. On-demand therapy for gastroesophageal reflux disease: Cons. Hepato-Gastro 2003; 10 (5): 388-391.

67. Lord, R. V., Bowrey, D. J., and Blom, D. Barrett's esophagus: a surgical disease? The American journal of gastroenterology 2000; 95 (11): 3302-3305.

68. Odze, Robert D. Unraveling the mystery of the gastroesophageal junction: a pathologist's perspective. The American journal of gastroenterology 2005; 100 (8): 1853-1867.

69. Schaffner, J. A., Litin, S. C., and Bundrick, J. B. Clinical pearls in gastroenterology (2013). Disease-a-Month 2014; 60 (7): 345-353.

70. Aro, P. and Ronkainen, J. Evolution of GERD over 5 years. Alimentary Pharmacology and Therapeutics 2012; 35 (3): 393-394.

71. Pope, C. E. Ruminations. Gullet 1992; 2 (4): 171-172.

72. The Canadian Association of Gastroenterology (CAG) and the Canadian Digestive Health Foundation (CDHF) Annual Scientific Conference: Canadian Digestive Diseases Week (CDDW) February 27 – March 1, 2004 Banff, Alberta. Retrieved from https://www.cag-acg.org/images/news/capsule_endoscopy_cddw_2004.pdf

73. Capsule Endoscopy. Retrieved from https://www.cag-acg.org/images/news/march_21_2006_capsule_endoscopy_medical_post.pdf

74. Letter from the canadian association of gastroenterology. Retrieved from https://www.cag-acg.org/images/news/compus_gerd_feedback_17april2006.pdf

75. Updates in Cancer screening. Retrieved from https://www.cag-acg.org/images/news/june_2006_updates_in_cancer_screening_medical_post.pdf

76. David Hodges. CDDW: Rural FP able to provide endoscopic services. The Medical Post, March 2007. Retrieved from https://www.cag-acg.org/images/news/march_13_2007_rural_fp_endoscopic_services_medical_post.pdf

77. David Hodges. CDDW: Rural general surgeons' endoscopy burden points to training disconnec Endoscopy-Medical post. Retrieved from https://www.cag-acg.org/images/news/march_13_2007_rural_general_surgeons_endoscopy_disconnect_medical_post.pdf

78. Armstrong D. Promoting access and quality in endoscopic services. Qmentum Quarterly 2011; 3(4):24-8.

79. Bhat YM, Dayyeh BK, Chauhan SS, Gottlieb KT, Hwang JH, Komanduri S, Konda V, Lo SK, Manfredi MA, Maple JT, Murad FM. High-definition and high-magnification endoscopes. Gastrointestinal endoscopy. 2014 Dec 1;80(6):919-27.

80. American Society for Gastrointestinal Endoscopy. Endoscopic techniques offer hope for throat cancer patients . December 2015. Retrieved from https://medicalxpress.com/news/2015-12-endoscopic-techniques-throat-cancer-patients.html

81. American Society for Gastrointestinal Endoscopy. Radiofrequency ablation and complete endoscopic resection equally effective for dysplastic barrett's esophagus. 21 May, 2014. Retrieved from https://www.eurekalert.org/pub_releases/2014-05/asfg-raa052114.php

82. American Society for Gastrointestinal Endoscopy. Screening for esophageal disease with unsedated transnasal endoscopy is safe and feasible.10 May, 2012. Retrieved from https://www.eurekalert.org/pub_releases/2012-05/asfg-sfe051012.php

83. American Society for Gastrointestinal Endoscopy. Study compares narrow band imaging to chromoendoscopy for the detection of dysplasia in IBD patients. October 12, 2011. Retrieved from https://www.sciencedaily.com/releases/2011/10/111012161304.htm

84. Adam Harris. Guidance on the indications for diagnostic upper gi endoscopy, flexible sigmoidoscopy and colonoscopy. British Society of Gastroenterology, 2013. Retrieved from http://www.bsg.org.uk/clinical-guidance/endoscopy/guidance-on-the-indications-for-diagnostic-upper-gi-endoscopy-flexible-sigmoidoscopy-and-colonoscopy.html

85. British Society of Gastroenterology.Tables for the bsg commissioning Guide. Retrieved from http://www.bsg.org.uk/clinical/general/commissioning-report.html

86. British Society of Gastroenterology. IV Barrets Oesophagus.

87. Shaheen NJ, Weinberg DS. Upper endoscopy for gastroesophageal reflux disease. Annals of Internal Medicine. 2013 Mar 19;158(6):503-4.

88. Recommendation AC. Upper Endoscopy for Gastroesophageal Reflux: Review of the Performance Measures by the Performance Measurement Committee of the American College of Physicians.

89. Canadian Cancer Society, Esophageal Cancer. Understanding your diagnosis. Retrieved from http://www.cancer.ca/en/support-and-services/resources/publications/?region=on

90. Canadian Agency for Drugs and Technologies in Health (CADTH). Endoscopic Ultrasound for the Diagnosis of Disease and Staging of Cancers in Adult Patients with Gastroenterological or Oncological Disease: Guidelines. 26 February, 2014. Retrieved from https://www.cadth.ca/media/pdf/htis/mar-2014/RB0653%20Endoscopic%20Ultrasound%20Final.pdf

91. Hailey D. Endoscope-based treatments for gastroesophageal reflux disease. Issues in emerging health technologies. 2004 Mar; (54):1-4.

92. MSAC, Medical Services Advisory Committee. Endoscopic Ultrasound for Evaluating Pancreatic, Gastric, Esophageal and Hepatobiliary Neoplasms. MSAC 1072 Assessment report. ISBN 1-74186-199-3. Issue 2008-048. Retrieved from http://www.msac.gov.au/internet/msac/publishing.nsf/Content/DAFBB85D163DAB7ACA25801000123B51/$File/1072-Assessment-Report.pdf

93. HAS, French National Authority for Health (Haute Autorité de Santé-HAS) . Assessment of real-time optical endomicroscopy performed during mapping of Barrett's esophagus (BE) (for diagnosis of BE-associated early neoplasia). ISBN number: 978-2-11-138124-7. Retrieved from http://www.has-sante.fr/portail/jcms/c_1731777/fr/evaluationde-l-endomicroscopie-optique-realisee-lors-de-la-cartographie-d-un-endo-brachy-oesophage-aide-au-diagnosticprecoce-du-cancer-superficiel-de-l-oesophage-rapport-d-evaluation

94. Saskatchewan Cancer Agency. Provincial Esophageal Cancer and Gastro-esophageal junction Cancer Treatment Guidelines. March 12, 2011. Retrieved from https://www.cma.ca/En/Pages/clinical-practice-guidelines.aspx

95. Stahl M, Oliveira J. Esophageal cancer: ESMO clinical recommendations for diagnosis, treatment and follow-up. Annals of oncology. 2008 May 1; 19(suppl_2):ii21-2.

96. Vakil N. Endoscopy in GERD: Boondoggle, diagnostic test, or risk management tool? The American journal of gastroenterology. 2008 Feb 1; 103(2):276.

97. Canadian Associaton of Gastroenterology. Five Things Physicians and Patients Should Question. Choosing Wisely Canada. Retrieved from: https://choosingwiselycanada.org/wp-content/uploads/2017/02/Gastroenterology.pdf

98. Dubé C. Use of the endoscopy global Rating scale by endoscopy services in Canada. Canadian Journal of Gastroenterology and Hepatology 2013; 27(12):684-5.

99. Hollingworth R, Dubé C. The canadian association of gastroenterology endoscopy Quality Initiative: Leading the wave. Canadian Journal of Gastroenterology and Hepatology. 2009;23(7):506-7.

100. Canadian Digestive Helath Foundation. Understanding Barrett's Esophagus. Retrieved from http://cdhf.ca/bank/document_en/3understanding-barretts-esophagus-.pdf#zoom=100

101. Bjorkman DJ, Popp Jr JW. Measuring the quality of endoscopy. The American journal of gastroenterology. 2006 Apr 1;101(4):864.

102. American Society for Gastrointestinal Endoscopy, American College of Gastroenterology and the American Gastroenterological Association. Statement- Universal adoption of capnography for moderate sedation in adults undergoing upper endoscopy and colonoscopy has not been shown to improve patient safety or clinical

outcomes and significantly increases costs for moderate sedation. Retrieved from https://www.asge.org/docs/default-source/education/practice_guidelines/doc-90dc9b63-593d-48a9-bec1-9f0ab3ce946a.pdf?sfvrsn=6

Does not evaluate a screening modality/technique of interest (n=13)

1. Orbelo, Diana M., Enders, Felicity T., Romero, Yvonne, Francis, Dawn L., Achem, Sami R., Dabade, Tushar S., Crowell, Michael D., Geno, Debra M., DeJesus, Ramona S., Namasivayam, Vikneswaran, Adamson, Steven C., Arora, Amindra S., Majka, Andrew J., Alexander, Jeffrey A., Murray, Joseph A., Lohse, Matthew, Diehl, Nancy N., Fredericksen, Mary, Jung, Kee Wook, Houston, Margaret S., O'Neil, Angela E., and Katzka, David A. Once-daily omeprazole/sodium bicarbonate heals severe refractory reflux esophagitis with morning or nighttime dosing. Digestive Diseases and Sciences 2015; 60 (1): 146-162.
2. Pilger, Diogo Andre, Lopez, Patricia Luciana da Costa, Segal, Fabio, and Leistner-Segal, Sandra Analysis of R213R and 13494 g--> a polymorphisms of the p53 gene in individuals with esophagitis, intestinal metaplasia of the cardia and Barrett's Esophagus compared with a control group. Genomic medicine 2007; 1 (1-2): 57-63.
3. Drahos, J., Ricker, W., Pfiffer, R. M., Warren, J. L., and Cook, M. B. Metabolic syndrome is associated with an increased risk of Barrett's esophagus in those without symptomatic reflux. Cancer Research 2013; 73 (8 SUPPL. 1): no-.
4. Stein, H. J., Hoeft, S., DeMeester, T. R., and Mathisen, D. G. Functional foregut abnormalities in Barrett's esophagus. Journal of Thoracic and Cardiovascular Surgery 1993; 105 (1): 107-111.
5. Sugimoto, M., Nishino, M., Kodaira, C., Yamade, M., Ikuma, M., Tanaka, T., Sugimura, H., Hishida, A., and Furuta, T. Esophageal mucosal injury with low-dose aspirin and its prevention by rabeprazole. J Clin Pharmacol 2010; 50 (3): 320-330.
6. Russell IT, Edwards RT, Gliddon AE, Ingledew DK, Russell D, Whitaker R, Yeo ST, Attwood SE, Barr H, Nanthakumaran S, Park KG. cancer of oesophagus or gastricus–new assessment of technology of endosonography (cognate): report of pragmatic randomised trial.
7. Ireland, C. J., Fielder, A. L., Thompson, S. K., Laws, T. A., Watson, D. I., and Esterman, A. Development of a risk prediction model for Barrett's esophagus in an Australian population. Diseases of the esophagus 2017. 30 (11): 1-8.
8. Ness-Jensen, Eivind, Gottlieb-Vedi, Eivind, Wahlin, Karl, and Lagergren, Jesper. All-cause and cancer-specific mortality in GORD in a population-based cohort study (the HUNT study). Gut 2018. 67 (2) 209-215.
9. Maret-Ouda, J., Wahlin, K., Artama, M., Brusselaers, N., Farkkila, M., Lynge, E., Mattsson, F., Pukkala, E., Romundstad, P., Tryggvadottir, L., Von Euler-Chelpin, M., and Lagergren, J. Risk of Esophageal Adenocarcinoma after Antireflux Surgery in Patients with Gastroesophageal Reflux Disease in the Nordic Countries. JAMA Oncology 2018.
10. Filiberti, R. A., Fontana, V., De, Ceglie A., Blanchi, S., Grossi, E., Della, Casa D., Lacchin, T., De, Matthaeis M., Ignomirelli, O., Cappiello, R., Rosa, A., Foti, M., Laterza, F., D'Onofrio, V., Iaquinto, G., and Conio, M. Alcohol consumption pattern and risk of Barrett's oesophagus and erosive oesophagitis: An Italian case-control study. British Journal of Nutrition 2017. 117 (8) 1151-1161.
11. Thrift, A. P., Vaughan, T., Anderson, L. A., Whiteman, D., and El-Serag, H. B. External validation of the Michigan Barrett's esophagus prediction tool (M-BERET). Gastroenterology 2017. 152 (5 Supplement 1) S453.
12. Winzer, B. M., Paratz, J. D., Whitehead, J. P., Whiteman, D. C., and Reeves, M. M. The feasibility of an exercise intervention in males at risk of oesophageal adenocarcinoma: a randomized controlled trial. PloS one 2015. 10 (2) e0117922.
13. Prevalence and Predictors of Gastroesophageal Reflux Complications in Community Subjects. Digestive diseases and sciences. (pp 1-8), 2016.Date of publication: 10.aug 2016. 2016.

Evaluates molecular (e.g., cells, genes) and other biomarkers (e.g., blood, stool, urine) (n=12)

1. Bansal, A., Hong, X., Lee, I.-H., Krishnadath, K. K., Mathur, S. C., Gunewardena, S., Rastogi, A., Sharma, P., and Christenson, L. K. MicroRNA expression can be a promising strategy for the detection of barrett's esophagus: A pilot study. Clinical and Translational Gastroenterology 2014: 5(12):e65.
2. Nancarrow, D. J., Clouston, A. D., Smithers, B. M., Gotley, D. C., Drew, P. A., Watson, D. I., Tyagi, S., Hayward, N. K., and Whiteman, D. C. Whole genome expression array profiling highlights differences in mucosal defense genes in barrett's esophagus and esophageal adenocarcinoma. PloS One 2011; 6 (7): e22513.
3. Cabibi, D., Fiorentino, E., Pantuso, G., Mastrosimone, A., Callari, C., Cacciatore, M., Campione, M., and Aragona, F. Keratin 7 expression as an early marker of reflux-related columnar mucosa without intestinal metaplasia in the esophagus. Medical Science Monitor 2009; 15 (5): CR203-CR210.
4. Chang, C.-L., Lao-Sirieix, P., Save, V., Mendez, G. D. L. C., Laskey, R., and Fitzgerald, R. C. Retinoic acid-induced glandular differentiation of the oesophagus. Gut 2007; 56 (7): 906-917.
5. Liu, G.-S., Gong, J., Cheng, P., Zhang, J., Chang, Y., and Qiang, L. Distinction between short-segment Barrett's esophageal and cardiac intestinal metaplasia. World journal of gastroenterology 2005; 11 (40): 6360-6365.
6. Salo, J. A., Kivilaakso, E. O., Klviluoto, T. A., and Virtanen, I. O. Cytokeratin profile suggests metaplastic epithelial transformation in Barrett's oesophagus. Annals of Medicine 1996; 28 (4): 305-309.
7. Buas, Matthew F., Onstad, Lynn, Levine, David M., Risch, Harvey A., Chow, Wong Ho, Liu, Geoffrey, Fitzgerald, Rebecca C., Bernstein, Leslie, Ye, Weimin, Bird, Nigel C., Romero, Yvonne, Casson, Alan G., Corley, Douglas A., Shaheen, Nicholas J., Wu, Anna H., Gammon, Marilie D., Reid, Brian J., Hardie, Laura J., Peters, Ulrike, Whiteman, David C., and Vaughan, Thomas L. MiRNA-Related SNPs and Risk of Esophageal Adenocarcinoma and Barrett's Esophagus: Post Genome-Wide Association Analysis in the BEACON Consortium. PloS one 2015; 10 (6): e0128617-.
8. Gaj, Pawel, Mikula, Michal, Wyrwicz, Lucjan S., Regula, Jaroslaw, and Ostrowski, Jerzy Barrett's esophagus associates with a variant of IL23R gene. Acta biochimica Polonica 2008; 55 (2): 365-369.
9. Maddalo, Gemma, Fassan, Matteo, Cardin, Romilda, Piciocchi, Marika, Marafatto, Filippo, Rugge, Massimo, Zaninotto, Giovanni, Pozzan, Caterina, Castoro, Carlo, Ruol, Alberto, Biasiolo, Alessandra, and Farinati, Fabio. Squamous Cellular Carcinoma Antigen Serum Determination as a Biomarker of Barrett Esophagus and Esophageal Cancer: A Phase III Study. Journal of clinical gastroenterology 2018. 52 (5) 401-406.
10. Rafat, M. N., Younus, H. A. E., EL-Shorpagy, M. S., Hemida, M. H., EL Shahawy, M. S., and El Sayed Atiia, A. A. E. A. Adiponectin level changes among Egyptians with gastroesophageal reflux disease. JGH Open 2018. 2 (1) 21-27.
11. Petrick, J. L., Falk, R. T., Hyland, P. L., Caron, P., Pfeiffer, R. M., Wood, S. N., Dawsey, S. M., Abnet, C. C., Taylor, P. R., Guillemette, C., Murray, L. J., Anderson, L. A., and Cook, M. B. Association between circulating levels of sex steroid hormones and esophageal adenocarcinoma in the FINBAR Study. PloS one 2018. 13 (1) e0190325.
12. Kauttu, T., Mustonen, H., Vainionp+. Disintegrin and metalloproteinases (ADAMs) expression in gastroesophageal reflux disease and in esophageal adenocarcinoma. Clinical & translational oncology 2017. 19 (1) 58G.

Does not evaluate of comparator of interest (n=6)

1. Fang, C., Huang, Q., Lu, L., Shi, J., Sun, Q., Xu, G. F., Gold, J., Mashimo, H., and Zou, X. P. Risk factors of early proximal gastric carcinoma in Chinese diagnosed using WHO criteria. Journal of Digestive Diseases 2015; 16 (6): 327-336.
2. Khalaf, N., Nguyen, T., Ramsey, D., and El-Serag, H. B. Nonsteroidal Anti-inflammatory Drugs and the Risk of Barrett's Esophagus. Clinical Gastroenterology and Hepatology 2014; 12 (11): 1832-1839.
3. Iyer, P. G., Borah, B. J., Heien, H. C., Das, A., Cooper, G. S., and Chak, A. Association of Barrett's Esophagus With Type II Diabetes Mellitus: Results From a Large Population-based Case-Control Study. Clinical Gastroenterology and Hepatology 2013; 11 (9): 1108-1114.

4. Emken, Birgitte Elise, Lundell, Lars R., Wallin, Lene, Myrvold, Helge E., Engstrom, Cecilia, Montgomery, Madeleine, Malm, Anders R., Lind, Tore, Hatlebakk, Jan G., and SOPRAN Study Group. Effects of omeprazole or anti-reflux surgery on lower oesophageal sphincter characteristics and oesophageal acid exposure over 10 years. Scandinavian Journal of Gastroenterology 2016: 1-7.

5. Haider, Syed H., Kwon, Sophia, Lam, Rachel, Lee, Audrey K., Caraher, Erin J., Crowley, George, Zhang, Liqun, Schwartz, Theresa M., Zeig-Owens, Rachel, Liu, Mengling, Prezant, David J., and Nolan, Anna. Predictive Biomarkers of Gastroesophageal Reflux Disease and Barrett's Esophagus in World Trade Center Exposed Firefighters: a 15 Year Longitudinal Study. Scientific reports 2018. 8 (1) 3106.

6. Guerrero Garcia Hall, Mats, Wenner, Jorgen, and Oberg, Stefan. The normal squamocolumnar junction is circumferentially even and minimal irregularities are manifestations of gastroesophageal acid reflux. Scandinavian journal of gastroenterology 2017. 52 (3) 270-275.

No comparator (e.g., all participants received the same test/number/interval) (n=96)

1. Leggett, Cadman L., Gorospe, Emmanuel C., Calvin, Andrew D., Harmsen, William S., Zinsmeister, Alan R., Caples, Sean, Somers, Virend K., Dunagan, Kelly, Lutzke, Lori, Wang, Kenneth K., and Iyer, Prasad G. Obstructive sleep apnea is a risk factor for Barrett's esophagus. Clinical gastroenterology and hepatology 2014; 12 (4): 583-588.

2. Rubenstein, Joel H., Inadomi, John M., Scheiman, James, Schoenfeld, Philip, Appelman, Henry, Zhang, Min, Metko, Val, and Kao, John Y. Association between Helicobacter pylori and Barrett's esophagus, erosive esophagitis, and gastroesophageal reflux symptoms. Clinical gastroenterology and hepatology 2014; 12 (2): 239-245.

3. McIntire, Maria G., Soucy, Genevieve, Vaughan, Thomas L., Shahsafaei, Aliakbar, and Odze, Robert D. MUC2 is a highly specific marker of goblet cell metaplasia in the distal esophagus and gastroesophageal junction. The American journal of surgical pathology 2011; 35 (7): 1007-1013.

4. Tsimogiannis, Konstantinos E., Pappas-Gogos, George K., Benetatos, Nikolaos, Tsironis, Demitrios, Farantos, Charalampos, and Tsimoyiannis, Evangelos C. Laparoscopic Nissen fundoplication combined with posterior gastropexy in surgical treatment of GERD. Surgical endoscopy 2010; 24 (6): 1303-1309.

5. Csendes, A., Burdiles, P., Korn, O., Braghetto, I., Huertas, C., and Rojas, J. Late results of a randomized clinical trial comparing total fundoplication versus calibration of the cardia with posterior gastropexy. The British journal of surgery 2000; 87 (3): 289-297.

6. Csendes, A., Smok, G., Burdiles, P., Sagastume, H., Rojas, J., Puente, G., Quezada, F., and Korn, O. 'Carditis': an objective histological marker for pathologic gastroesophageal reflux disease. Diseases of the esophagus 1998; 11 (2): 101-105.

7. Filiberti, R., Blanchi, S., Ravelli, P., Conio, M., Munizzi, F., Aste, H., Giacosa, A., Ferraris, R., Fracchia, M., Pera, A., Marchi, S., Costa, F., Rivelli, P., Missale, G., Cestari, R., Lapertosa, G., Fiocca, R., D'Onofrio, V., Iaquinto, G., Sablich, R., Lacchin, T., Benedetti, G., and Gusmaroli, R. Risk factors for Barrett's esophagus: A case-control study. International Journal of Cancer 2002; 97 (2): 225-229.

8. Kim, S. L., Waring, J. P., Spechler, S. J., Sampliner, R. E., Doos, W. G., Krol, W. F., and Williford, W. O. Diagnostic inconsistencies in Barrett's esophagus. Gastroenterology 1994; 107 (4): 945-949.

9. Tseng, Ping Huei, Yang, Wei Shiung, Liou, Jyh Ming, Lee, Yi Chia, Wang, Hsiu Po, Lin, Jaw Town, and Wu, Ming Shiang Associations of Circulating Gut Hormone and Adipocytokine Levels with the Spectrum of Gastroesophageal Reflux Disease. PloS one 2015; 10 (10): e0141410-.

10. Khalaf, N., Ramsey, D., Kramer, J. R., and El-Serag, H. B. Personal and family history of cancer and the risk of Barrett's esophagus in men. Diseases of the esophagus 2015; 28 (3): 283-290.

11. Goldberg, Aaron, Gerkin, Richard D., and Young, Michele Medical Prevention of Barrett's Esophagus: Effects of Statins, Aspirin, Non-aspirin NSAIDs, Calcium, and Multivitamins. Digestive Diseases and Sciences 2015; 60 (7): 2058-2062.

12. Shinkai, Hirohiko, Iijima, Katsunori, Koike, Tomoyuki, Abe, Yasuhiko, Dairaku, Naohiro, Inomata, Yoshifumi, Kayaba, Syoichi, Ishiyama, Fumitake, Oikawa, Tomoyuki, Ohyauchi, Motoki, Ito, Hirotaka, Asonuma, Sho, Hoshi, Tatsuya, Kato, Katsuaki, Ohara, Shuichi, and Shimosegawa, Tooru Association between the body mass index and the risk of Barrett's esophagus in Japan. Digestion 2014; 90 (1): 1-9.

13. Rubenstein, Joel H., Morgenstern, Hal, McConell, Daniel, Scheiman, James M., Schoenfeld, Philip, Appelman, Henry, McMahon, Laurence F. J., Kao, John Y., Metko, Val, Zhang, Min, and Inadomi, John M. Associations of diabetes mellitus, insulin, leptin, and ghrelin with gastroesophageal reflux and Barrett's esophagus. Gastroenterology 2013; 145 (6): 1237-5.

14. Lin, Derek, Kramer, Jennifer R., Ramsey, David, Alsarraj, Abeer, Verstovsek, Gordana, Rugge, Massimo, Parente, Paola, Graham, David Y., and El-Serag, Hashem B. Oral bisphosphonates and the risk of Barrett's esophagus: case-control analysis of US veterans. The American journal of gastroenterology 2013; 108 (10): 1576-1583.

15. Cummings, Linda C., Shah, Ninad, Maimone, Santo, Salah, Wajeeh, Khiani, Vijay, and Chak, Amitabh Barrett's esophagus and the risk of obstructive sleep apnea: a case-control study. BMC gastroenterology 2013; 13: 82-.

16. Kramer, Jennifer R., Fischbach, Lori A., Richardson, Peter, Alsarraj, Abeer, Fitzgerald, Stephanie, Shaib, Yasser, Abraham, Neena S., Velez, Maria, Cole, Rhonda, Anand, Bhupinderjit, Verstovsek, Gordana, Rugge, Massimo, Parente, Paola, Graham, David Y., and El-Serag

17. Hashem B. Waist-to-hip ratio, but not body mass index, is associated with an increased risk of Barrett's esophagus in white men. Clinical gastroenterology and hepatology 2013; 11 (4): 373-381.

18. Omer, Zehra B., Ananthakrishnan, Ashwin N., Nattinger, Kevin J., Cole, Elisabeth B., Lin, Jesse J., Kong, Chung Yin, and Hur, Chin Aspirin protects against Barrett's esophagus in a multivariate logistic regression analysis. Clinical gastroenterology and hepatology 2012; 10 (7): 722-727.

19. Fisichella, P. Marco, Davis, Christopher S., Gagermeier, James, Dilling, Daniel, Alex, Charles G., Dorfmeister, Jennifer A., Kovacs, Elizabeth J., Love, Robert B., and Gamelli, Richard L. Laparoscopic antireflux surgery for gastroesophageal reflux disease after lung transplantation. The Journal of surgical research 2011; 170 (2): e279-e286.

20. Matsuzaki, Juntaro, Suzuki, Hidekazu, Asakura, Keiko, Saito, Yoshimasa, Hirata, Kenro, Takebayashi, Toru, and Hibi, Toshifumi Etiological difference between ultrashort- and short-segment Barrett's esophagus. Journal of gastroenterology 2011; 46 (3): 332-338.

21. Akiyama, Tomoyuki, Inamori, Masahiko, Akimoto, Keiko, Iida, Hiroshi, Endo, Hiroki, Hosono, Kunihiro, Ikeda, Tamon, Sakamoto, Yasunari, Fujita, Koji, Yoneda, Masato, Koide, Tomoko, Takahashi, Hirokazu, Tokoro, Chikako, Goto, Ayumu, Abe, Yasunobu, Kobayashi, Noritoshi, Kubota, Kensuke, Saito, Satoru, Moriya, Akihiko, Rino, Yasushi, Imada, Toshio, and Nakajima, Atsushi Gastric surgery is not a risk factor for erosive esophagitis or Barrett's esophagus. Scandinavian Journal of Gastroenterology 2010; 45 (4): 403-408.

22. Abdul-Razzak, Khalid K. and Bani-Hani, Kamal E. Increased prevalence of Helicobacter pylori infection in gastric cardia of patients with reflux esophagitis: a study from Jordan. Journal of Digestive Diseases 2007; 8 (4): 203-206.

23. Nason, Katie S., Farrow, Diana C., Haigh, Geoffrey, Lee, Sum P., Bronner, Mary P., Rosen, Sheldon N., and Vaughan, Thomas L. Gastric fluid bile concentrations and risk of Barrett's esophagus. Interactive cardiovascular and thoracic surgery 2007; 6 (3): 304-307.

24. Miwa, H., Minoo, T., Hojo, M., Yaginuma, R., Nagahara, A., Kawabe, M., Ohkawa, A., Asaoka, D., Kurosawa, A., Ohkusa, T., and Sato, N. Oesophageal hypersensitivity in Japanese patients with non-erosive gastro-oesophageal reflux diseases. Alimentary pharmacology & therapeutics 2004; 20 Suppl 1: 112-117.

25. Mitre, Marcia C., Katzka, David A., Brensinger, Colleen M., Lewis, James D., Mitre, Ricardo J., and Ginsberg, Gregory G. Schatzki ring and Barrett's esophagus: do they occur together? Digestive Diseases and Sciences 2004; 49 (5): 770-773.

26. Avidan, Benjamin, Sonnenberg, Amnon, Schnell, Thomas G., and Sontag, Stephen J. Hiatal hernia and acid reflux frequency predict presence and length of Barrett's esophagus. Digestive Diseases and Sciences 2002; 47 (2): 256-264.

27. Vaezi, M. F., Falk, G. W., Peek, R. M., Vicari, J. J., Goldblum, J. R., Perez-Perez, G. I., Rice, T. W., Blaser, M. J., and Richter, J. E. CagA-positive strains of Helicobacter pylori may protect against Barrett's esophagus. The American journal of gastroenterology 2000; 95 (9): 2206-2211.

28. Lord, R. V., Frommer, D. J., Inder, S., Tran, D., and Ward, R. L. Prevalence of Helicobacter pylori infection in 160 patients with Barrett's oesophagus or Barrett's adenocarcinoma. The Australian and New Zealand journal of surgery 2000; 70 (1): 26-33.

29. Hackelsberger, A., Schultze, V., Gunther, T., von Arnim, U., Manes, G., and Malfertheiner, P. The prevalence of Helicobacter pylori gastritis in patients with reflux oesophagitis: a case-control study. European journal of gastroenterology & hepatology 1998; 10 (6): 465-468.

30. Eisen, G. M., Sandler, R. S., Murray, S., and Gottfried, M. The relationship between gastroesophageal reflux disease and its complications with Barrett's esophagus. The American journal of gastroenterology 1997; 92 (1): 27-31.

31. Grande, L., Monforte, R., Ros, E., Toledo-Pimentel, V., Estruch, R., Lacima, G., Urbano-Marquez, A., and Pera, C. High amplitude contractions in the middle third of the oesophagus: a manometric marker of chronic alcoholism?. Gut 1996; 38 (5): 655-662.

32. Hilal, J., El-Serag, H. B., Ramsey, D., Ngyuen, T., and Kramer, J. R. Physical activity and the risk of Barrett's esophagus. Diseases of the Esophagus 2016; 29 (3): 248-254.

33. Krawczyk, M., Scierski, W., Ryszkiel, I., Namyslowski, G., Grzegorzek, S., and Misiolek, M. Endoscopic evidence of reflux disease in the larynx. Acta Oto-Laryngologica 2014; 134 (8): 831-837.

34. Thrift, A. P., Kramer, J. R., Qureshi, Z., Richardson, P. A., and El-Serag, H. B. Age at onset of GERD symptoms predicts risk of barrett's esophagus. American Journal of Gastroenterology 2013; 108 (6): 915-922.

35. Lv, J., Liu, D., Ma, S.-Y., and Zhang, J. Investigation of relationships among gastroesophageal reflux disease subtypes using narrow band imaging magnifying endoscopy. World journal of gastroenterology 2013; 19 (45): 8391-8397.

36. Sonnenberg, A. and Genta, R. M. Barrett's metaplasia and colonic neoplasms: A significant association in a 203,534-patient study. Digestive Diseases and Sciences 2013; 58 (7): 2046-2051.

37. Jiao, L., Kramer, J. R., Rugge, M., Parente, P., Verstovsek, G., Alsarraj, A., and El-Serag, H. B. Dietary intake of vegetables, folate, and antioxidants and the risk of Barrett's esophagus. Cancer Causes and Control 2013; 24 (5): 1005-1014.

38. Rosztoczy, A., Izbeki, F., Nemeth, I. B., Dulic, S., Vadaszi, K., Roka, R., Gecse, K., Gyokeres, T., Lazar, G., Tiszlavicz, L., and Wittmann, T. Detailed esophageal function and morphological analysis shows high prevalence of gastroesophageal reflux disease and Barrett's esophagus in patients with cervical inlet patch. Diseases of the Esophagus 2012; 25 (6): 498-504.

39. Mesteri, I., Lenglinger, J., Beller, L., Fischer-See, S., Schoppmann, S. F., Wrba, F., Riegler, F. M., and Zacherl, J. Assessment of columnar-lined esophagus in controls and patients with gastroesophageal reflux disease with and without proton-pump inhibitor therapy. European Surgery - Acta Chirurgica Austriaca 2012; 44 (5): 304-313.

40. Sistonen, S. J., Koivusalo, A., Nieminen, U., Lindahl, H., Lohi, J., Kero, M., Karkkainen, P. A., Farkkila, M. A., Sarna, S., Rintala, R. J., and Pakarinen, M. P. Esophageal morbidity and function in adults with repaired esophageal atresia with tracheoesophageal fistula: A population-based long-term follow-up. Annals of Surgery 2010; 251 (6): 1167-1173.

41. Ghanem, Y., Al-Rabeei, N. A., and Dallak, A. Gastro-oesophageal reflux disease among patients attending an endoscopic clinic in Yemen. Arab Journal of Gastroenterology 2009; 10 (3): 109-111.

42. Hahn, H. P., Blount, P. L., Ayub, K., Das, K. M., Souza, R., Spechler, S., and Odze, R. D. Intestinal differentiation in metaplastic, nongoblet columnar epithelium in the esophagus. American Journal of Surgical Pathology 2009; 33 (7): 1006-1015.

43. Smith, K. J., O'Brien, S. M., Green, A. C., Webb, P. M., and Whiteman, D. C. Current and Past Smoking Significantly Increase Risk for Barrett's Esophagus. Clinical Gastroenterology and Hepatology 2009; 7 (8): 840-848.

44. Lippmann, Q. K., Crockett, S. D., Dellon, E. S., and Shaheen, N. J. Quality of life in GERD and Barrett's esophagus is related to gender and manifestation of disease. American Journal of Gastroenterology 2009; 104 (11): 2695-2703.

45. Corley, D. A., Kubo, A., Levin, T. R., Habel, L., Zhao, W., Leighton, P., Rumore, G., Quesenberry, C., Buffler, P., and Block, G. Iron intake and body iron stores as risk factors for Barrett's esophagus: A community-based study. American Journal of Gastroenterology 2008; 103 (12): 2997-3004.

46. Ramus, J. R., Gatenby, P. A. C., Caygill, C. P. J., and Watson, A. Helicobacter pylori infection and severity of reflux-induced esophageal disease in a cohort of patients with columnar-lined esophagus. Digestive Diseases and Sciences 2007; 52 (10): 2821-2825.

47. Rajendra, S., Ackroyd, R., Robertson, I. K., Ho, J. J., Karim, N., and Kutty, K. M. Helicobacter pylori, ethnicity, and the gastroesophageal reflux disease spectrum: A study from the East. Helicobacter 2007; 12 (2): 177-183.

48. Corley, D. A., Kubo, A., Levin, T. R., Block, G., Habel, L., Zhao, W., Leighton, P., Quesenberry, C., Rumore, G. J., and Buffler, P. A. Abdominal Obesity and Body Mass Index as Risk Factors for Barrett's Esophagus. Gastroenterology 2007; 133 (1): 34-41.

49. Johansson, J., Hakansson, H.-O., Mellblom, L., Kempas, A., Johansson, K.-E., Granath, F., and Nyren, O. Risk factors for Barrett's oesophagus: A population-based approach. Scandinavian Journal of Gastroenterology 2007; 42 (2): 148-156.

50. Maieron, R., Elli, L., Marino, M., Floriani, I., Minerva, F., Avellini, C., Falconieri, G., Pizzolitto, S., and Zilli, M. Celiac disease and intestinal metaplasia of the esophagus (Barrett's esophagus). Digestive Diseases and Sciences 2005; 50 (1): 126-129.

51. Rajendra, S., Ackroyd, R., Murad, S., Mohan, C., Ho, J. J., Goh, K. L., Azrena, A., and Too, C. L. Human leucocyte antigen determinants of susceptibility to Barrett's oesophagus in Asians - A preliminary study. Alimentary Pharmacology and Therapeutics 2005; 21 (11): 1377-1383.

52. Felix, V. N. and Viebig, R. G. Simultaneous bilimetry and pHmetry in GERD and Barrett's patients. Hepato-gastroenterology 2005; 52 (65): 1452-1455.

53. Poelmans, J., Feenstra, L., Demedts, I., Rutgeerts, P., and Tack, J. The yield of upper gastrointestinal endoscopy in patients with suspected reflux-related chronic ear, nose, and throat symptoms. American Journal of Gastroenterology 2004; 99 (8): 1419-1426.

54. Chrysos, E., Prokopakis, G., Athanasakis, E., Pechlivanides, G., Tsiaoussis, J., Mantides, A., and Xynos, E. Factors affecting esophageal motility in gastroesophageal reflux disease. Archives of Surgery 2003; 138 (3): 241-246.

55. Romero, Y., Cameron, A. J., Schaid, D. J., McDonnell, S. K., Burgart, L. J., Hardtke, C. L., Murray, J. A., and Locke III, G. R. Barrett's esophagus: Prevalence in symptomatic relatives. American Journal of Gastroenterology 2002; 97 (5): 1127-1132.

56. Zaninotto, G., Portale, G., Parenti, A., Lanza, C., Costantini, M., Molena, D., Ruol, A., Battaglia, G., Costantino, M., Epifani, M., and Nicoletti, L. Role of acid and bile reflux in development of specialised intestinal metaplasia in distal oesophagus. Digestive and Liver Disease 2002; 34 (4): 251-257.

57. Zentilin, P., Conio, M., Mele, M. R., Mansi, C., Pandolfo, N., Dulbecco, P., Gambaro, C., Tessieri, L., Iiritano, E., Bilardi, C., Biagini, R., Vigneri, S., and Savarino, V. Comparison of the main oesophageal pathophysiological characteristics between short- and long-segment Barrett's oesophagus. Alimentary Pharmacology and Therapeutics 2002; 16 (5): 893-898.

58. Csendes, A., Smok, G., Burdiles, P., Quesada, F., Huertas, C., Rojas, J., and Korn, O. Prevalence of Barrett's esophagus by endoscopy and histologic studies: A prospective evaluation of 306 control subjects and 376 patients with symptoms of gastroesophageal reflux. Diseases of the Esophagus 2000; 13 (1): 5-11.

59. Incarbone, R., Bonavina, L., Szachnowicz, S., Saino, G., and Peracchia, A. Rising incidence of esophageal adenocarcinoma in Western countries: Is it possible to identify a population at risk? Diseases of the Esophagus 2000; 13 (4): 275-278.

60. Coenraad, M., Masclee, A. A. M., Straathof, J. W. A., Ganesh, S., Griffioen, G., and Lamers, C. B. H. W. Is Barrett's esophagus characterized by more pronounced acid reflux than severe esophagitis. American Journal of Gastroenterology 1998; 93 (7): 1068-1072.

61. Goldblum, J. R., Vicari, J. J., Falk, G. W., Rice, T. W., Peek, R. M., Easley, K., and Richter, J. E. Inflammation and intestinal metaplasia of the gastric cardia: The role of gastroesophageal reflux and H. pylori infection. Gastroenterology 1998; 114 (4 I): 633-639.

62. Champion, G., Richter, J. E., Vaezi, M. F., Singh, S., and Alexander, R. Duodenogastroesophageal reflux: Relationship to pH and importance in Barrett's esophagus. Gastroenterology 1994; 107 (3): 747-754.

63. Gotley, D. C., Morgan, A. P., Ball, D., Owen, R. W., and Cooper, M. J. Composition of gastro-oesophageal refluxate. Gut 1991; 32 (10): 1093-1099.

64. Pohl, Heiko, Wrobel, Katharina, Bojarski, Christian, Voderholzer, Winfried, Sonnenberg, Amnon, Rosch, Thomas, and Baumgart, Daniel C. Risk factors in the development of esophageal adenocarcinoma. The American journal of gastroenterology 2013; 108 (2): 200-207.

65. Takahashi, Yoshiko, Amano, Yuji, Yuki, Takafumi, Mishima, Yuko, Tamagawa, Yuji, Uno, Goichi, Ishimura, Norihisa, Sato, Shuichi, Ishihara, Shunji, and Kinoshita, Yoshikazu Impact of the composition of gastric reflux bile acids on Barrett's oesophagus. Digestive and liver disease 2011; 43 (9): 692-697.

66. Groome, Maximillian, Lindsay, Jamie, Ross, Peter E., Cotton, James P., Hupp, Ted R., and Dillon, John F. Use of oesophageal stress response proteins as potential biomarkers in the screening for Barrett's oesophagus. European journal of gastroenterology & hepatology 2008; 20 (10): 961-965.

67. Sgouros, Spiros N., Mpakos, Dimitrios, Rodias, Miltiadis, Vassiliades, Kostas, Karakoidas, Christos, Andrikopoulos, Evangelos, Stefanidis, Gerasimos, and Mantides, Apostolos Prevalence and axial length of hiatus hernia in patients, with nonerosive reflux disease: a prospective study. Journal of Clinical Gastroenterology 2007; 41 (9): 814-818.

68. Lurje, Georg, Vallbohmer, Daniel, Collet, Peter H., Xi, Huan, Baldus, Stephan E., Brabender, Jan, Metzger, Ralf, Heitmann, Michaela, Neiss, Susanne, Drebber, Ute, Holscher, Arnulf H., and Schneider, Paul M. COX-2 mRNA expression is significantly increased in acid-exposed compared to nonexposed squamous epithelium in gastroesophageal reflux disease. Journal of gastrointestinal surgery 2007; 11 (9): 1105-1111.

69. Wolfgarten, Eva, Putz, Benito, Holscher, Arnulf H., and Bollschweiler, Elfriede Duodeno-gastric-esophageal reflux--what is pathologic? Comparison of patients with Barrett's esophagus and age-matched volunteers. Journal of gastrointestinal surgery 2007; 11 (4): 479-486.

70. Pereira, A. D., Suspiro, A., Chaves, P., Saraiva, A., Gloria, L., de Almeida, J. C., Leitao, C. N., Soares, J., and Mira, F. C. Short segments of Barrett's epithelium and intestinal metaplasia in normal appearing oesophagogastric junctions: the same or two different entities? Gut 1998; 42 (5): 659-662.

71. Csendes, A., Maluenda, F., Braghetto, I., Csendes, P., Henriquez, A., and Quesada, M. S. Location of the lower oesophageal sphincter and the squamous columnar mucosal junction in 109 healthy controls and 778 patients with different degrees of endoscopic oesophagitis. Gut 1993; 34 (1): 21-27.

72. Winters, C. Jr, Spurling, T. J., Chobanian, S. J., Curtis, D. J., Esposito, R. L., Hacker, J. F., Johnson, D. A., Cruess, D. F., Cotelingam, J. D., and Gurney, M. S. Barrett's esophagus. A prevalent, occult complication of gastroesophageal reflux disease. Gastroenterology 1987; 92 (1): 118-124.

73. Vardar, R., Vardar, E., and Bor, S. Is the prevalence of intestinal metaplasia at the squamocolumnar junction different in patients with progressive sytemic sclerosis? Turkish Journal of Gastroenterology 2010; 21 (3): 251-256.

74. Moriichi, K., Watari, J., Das, K. M., Tanabe, H., Fujiya, M., Nata, T., Nomura, Y., Ueno, N., Ishikawa, C., Inaba, Y., Ito, T., Sato, R., Okamoto, K., Mizukami, Y., and Kohgo, Y. Effects of helicobacter pylori infection on aberrant CpG Island methylation status and cellular phenotype in columnar-lined esophagus in a Japanese population. Gastroenterology 2009; 136 (5 SUPPL. 1): A599-.

75. Cook, M. B., Drahos, J., Wood, S., Enewold, L., Parsons, R., Freedman, N. D., Taylor, P. R., Ricker, W., and Abnet, C. C. Pathogenesis and progression of oesophageal adenocarcinoma varies by prior diagnosis of Barrett's oesophagus. Br J Cancer 22-11-2016; 115 (11): 1383-1390.

76. Gatalica, Z., Chen, M., Snyder, C., Mittal, S., and Lynch, H. T. Barrett's esophagus in the patients with familial adenomatous polyposis. Fam Cancer 2014; 13 (2): 213-217.

77. Goldberg, A., Gerkin, R. D., and Young, M. Medical Prevention of Barrett's Esophagus: Effects of Statins, Aspirin, Non-aspirin NSAIDs, Calcium, and Multivitamins. Digestive diseases and sciences 2015; 60 (7): 2058-2062.

78. Conio, M., Filiberti, R., Blanchi, S., Ferraris, R., Marchi, S., Ravelli, P., Lapertosa, G., Iaquinto, G., Sablich, R., Gusmaroli, R., Aste, H., and Giacosa, A. Risk factors for Barrett's esophagus: a case-control study. International journal of cancer. Journal international du cancer 10-1-2002; 97 (2): 225-229.

79. Alicuben, Evan T., Tatum, James M., Bildzukewicz, Nikolai, Samakar, Kamran, Samaan, Jamil S., Silverstein, Einav N., Sandhu, Kulmeet, Houghton, Caitlin C., and Lipham, John C. Regression of intestinal metaplasia following magnetic sphincter augmentation device placement. Surgical endoscopy 2018.

80. Sonnenberg, A., Turner, K. O., and Genta, R. M. Decreased risk for microscopic colitis and inflammatory bowel disease among patients with reflux disease. Colorectal disease 2018. 20 (9) 813-820.

81. Bazin, Camille, Benezech, Alban, Alessandrini, Marine, Grimaud, Jean Charles, and Vitton, Veronique. Esophageal Motor Disorders Are a Strong and Independant Associated Factor of Barrett's Esophagus. Journal of neurogastroenterology and motility 2018. 24 (2) 216-225.

82. Vergouwe, Floor W. T., IJsselstijn, Hanneke, Biermann, Katharina, Erler, Nicole S., Wijnen, Rene M. H., Bruno, Marco J., and Spaander, Manon C. W. High Prevalence of Barrett's Esophagus and Esophageal Squamous Cell Carcinoma After Repair of Esophageal Atresia. Clinical gastroenterology and hepatology 2018. 16 (4) 513-521.

83. Triadafilopoulos, George, Tandon, Apurva, Shetler, Katerina P., and Clarke, John. Clinical and pH study characteristics in reflux patients with and without ineffective oesophageal motility (IEM). BMJ open gastroenterology 2016. 3 (1) e000126.

84. Schlottmann, Francisco, Andolfi, Ciro, Herbella, Fernando A., Rebecchi, Fabrizio, Allaix, Marco E., and Patti, Marco G. GERD: Presence and Size of Hiatal Hernia Influence Clinical Presentation, Esophageal Function, Reflux Profile, and Degree of Mucosal Injury. The American surgeon 2018. 84 (6) 978-982.

85. Itskoviz, David, Levi, Zohar, Boltin, Doron, Vilkin, Alex, Snir, Yifat, Gingold-Belfer, Rachel, Niv, Yaron, Dotan, Iris, and Dickman, Ram. Risk of Neoplastic Progression Among Patients with an Irregular Z Line on Long-Term Follow-Up. Digestive diseases and sciences 2018. 63 (6) 1513-1517.

86. Baik, D., Sheng, J., Schlaffer, K., Friedenberg, F. K., Smith, M. S., and Ehrlich, A. C. Abdominal diameter index is a stronger predictor of prevalent Barrett's esophagus than BMI or waist-to-hip ratio. Diseases of the esophagus 2017. 30 (9) 1-6.

87. Benjamin, Tanmayee, Zackria, Shamiq, Lopez, Rocio, Richter, Joel, and Thota, Prashanthi N. Upper esophageal sphincter abnormalities and high-resolution esophageal manometry findings in patients with laryngopharyngeal reflux. Scandinavian journal of gastroenterology 2017. 52 (8) 816-821.

88. Koivusalo, Antti I., Sistonen, Saara J., Lindahl, Harry G., Rintala, Risto J., and Pakarinen, Mikko P. Long-term outcomes of oesophageal atresia without or with proximal tracheooesophageal fistula - Gross types A and B. Journal of pediatric surgery 2017. 52 (10) 1571-1575.

89. Genco, Alfredo, Soricelli, Emanuele, Casella, Giovanni, Maselli, Roberta, Castagneto-Gissey, Lidia, Di Lorenzo, Nicola, and Basso, Nicola. Gastroesophageal reflux disease and Barrett's esophagus after laparoscopic

sleeve gastrectomy: a possible, underestimated long-term complication. Surgery for obesity and related diseases 2017. 13 (4) 568-574.

90. Matsueda, K., Manabe, N., Toshikuni, N., Sato, Y., Watanabe, T., Yamamoto, H., and Haruma, K. Clinical characteristics and associated factors of Japanese patients with adenocarcinoma of the esophagogastric junction: a multicenter clinicoepidemiological study. Diseases of the esophagus 2017. 30 (6) 1-6.
91. Sharma, N., Hui, T., Wong, H. C., Srivastava, S., Teh, M., Yeoh, K. G., and Ho, K. Y. Risk stratifying the screening of Barrett's esophagus: An Asian perspective. JGH Open 2017. 1 (2) 68-73.
92. Rangan, V., Chan, W., Lo, W.-K., and Feldman, N. Postreflux swallow- induced peristaltic wave index and mean nocturnal baseline impedance are decreased in GERD patients with Barrett ' s esophagus. Neurogastroenterology and Motility 2018. 30 (Supplement 1).
93. Yan, J., Strong, A. T., Sharma, G., Gabbard, S., Thota, P., Rodriguez, J., and Kroh, M. Surgical management of gastroesophageal reflux disease in patients with systemic sclerosis. Surgical Endoscopy and Other Interventional Techniques 2018. 32 (9) 3855-3860.
94. Royston, C., Caygill, C., Charlett, A., and Bardhan, K. D. The evolution and outcome of surveillance of Barrett's oesophagus over four decades in a UK District General Hospital. European Journal of Gastroenterology and Hepatology 2016. 28 (12) 1365-1373.
95. Chang, C.-Y., Lee, L. J. H., Wang, J.-D., Lee, C.-T., Tai, C.-M., Tang, T.-Q., and Lin, J.-T. Health-related quality of life in patients with Barrett's esophagus. Health and Quality of Life Outcomes 2016. 14 (1) 158.
96. Teixeira, A. C., Herbella, F. A., Bonadiman, A., Farah, J. F., and Del Grande, J. C. Predictive factors for short gastric vessels division during laparoscopic total fundoplication. Revista do Colegio Brasileiro de Cirurgioes 2015. 42 (3) 154-158.

Participants did not have chronic GERD (n=1)

1. Cammarota, G., Galli, J., Agostino, S., De, Corso E., Rigante, M., Cianci, R., Cesaro, P., Nista, E. C., Candelli, M., Gasbarrini, A., and Gasbarrini, G. Accuracy of laryngeal examination during upper gastrointestinal endoscopy for premalignancy screening: Prospective study in patients with and without reflux symptoms. Endoscopy 2006; 38 (4): 376-381.

Participants had alarm symptoms of EAC or are diagnosed with other gastroesophageal conditions or pre-existing disease (n=4)

1. Sami SS, Dunagan KT, Johnson ML, Schleck CD, Shah ND, Zinsmeister AR, Wongkeesong LM, Wang KK, Katzka DA, Ragunath K, Iyer PG. A randomized comparative effectiveness trial of novel endoscopic techniques and approaches for Barrett's esophagus screening in the community. The American journal of gastroenterology. 2015 Jan;110(1):148.
2. Yang S, Wu S, Huang Y, Shao Y, Chen XY, Xian L, Zheng J, Wen Y, Chen X, Li H, Yang C. Screening for oesophageal cancer. Cochrane Database of Systematic Reviews 2012, Issue 12. Art. No.: CD007883. DOI: 10.1002/14651858.CD007883.pub2
3. Ragunath, K., Krasner, N., Raman, V. S., Haqqani, M. T., and Cheung, W. Y. A randomized, prospective cross-over trial comparing methylene blue-directed biopsy and conventional random biopsy for detecting intestinal metaplasia and dysplasia in Barrett's esophagus. Endoscopy 2003; 35 (12): 998-1003.
4. Sharriff MK, Varghese S, O'Donovan M, Abdullahi Z, Liu X, Fitzgeral RC, Di Pietro M. Pilot randomized crossover study comparing the efficacy of transnasal disposable endosheath with standard endoscopy to detect Barrett's esophagus. *Endoscopy* 2016; 48:110-116.

Companion paper with no relevant results (n=1)

1. Crews NR, Johnson ML, Schleck CD, Enders FT, Wongkeesong L-M, Wang KK, Katzka DA, Iyer PG. Prevalence and Predictors of Gastroesophageal Reflux Complications in Community Subjects. *Dig Dis Sci* 2016; 61:3221-3228.

Includes adenocarcinoma of the esophagus or gastric gardia combined (n=1)

1. Kearney DJ, Crump C, Maynard C, Boyko EJ. A case-control study of endoscopy and mortality from adenocarcinoma of the esophagus or gastric cardia in persons with GERD. *Gastrointestinal Endoscopy* 2003; 57(7):823-829.

Comparison based on timing (intervals) of endoscopy (n=1)

1. van Soest EM, Dieleman JP, Sturkenboom MCJM, Siersema PD, Kuipers EJ. Gastro-oesophageal reflux, medical resource utilization and upper gastrointestinal endoscopy in patients at risk of oesophageal adenocarcinoma. *Aliment Pharmacol Ther* 2008; 28:137-143.

Evaluates prevalence of BE on repeat exam (n=1)

1. Rodriguez S, Mattek N, Lieberman D, Fennerty B, Eisen G. Barrett's Esophagus on Repeat Endoscopy: Should We Look More Than Once? *Am J Gastroenterol* 2008; 103:1892-1897.

Appendix 8: KQ1 List of potentially relevant ongoing studies

Trial Identifier	Title	Estimated Study Completion Date
NCT02883621	Comparison Between Standard Endoscopy and Cap Assisted Endoscopy for Diagnostic Yield in Esophagus	May 2017
NCT02729948	Use of a Tethered Capsule Endoscope in Screening for Barrett's Esophagus	August 2017
NCT02852161	The Accuracy and Acceptability of Magnet Assisted Capsule Endoscopy in the Diagnosis of Esophageal Pathology: a Pilot Study	October 2017
NCT03009383	A Bedside Portable Endoscopy for the Esophageal Foreign Body	December 2017
NCT01438385	Endoscopic Retrograde Cholangiopancreatography, Endoscopic Ultrasound and Interventional Endoscopy in Pancreatico-biliary, Gastrointestinal and Esophageal Disorders	December 2017
NCT02395471	Assessment of a Minimally Invasive Esophageal Cytology Collection System in Patients With Barrett's Esophagus or GERD Symptoms	June 2018
NCT02685150	The Role of Endoscopic Tri-Modal Imaging in Distinguishing Functional Dyspepsia From Reflux Disease	June 2018
NCT02445014	Pilot Study for Imaging of Barrett's Esophagus Using an Spectrally Encoded Confocal Microscopy Tethered Endoscopic Capsule	December 2018
NCT01585103	Cytosponge Protocol	September 2019
ISRCTN68382401	Barrett's ESophagus Trial 3 (BEST3): Cluster randomised controlled trial comparing the Cytosponge-TFF3 test with usual care to facilitate the diagnosis of oesophageal pre-cancer in primary care.	September 2019
ISRCTN76017289	Quality of life measures in Barrett's Oesophagus care pathways	October 2019
NCT02560623	Minimally-Invasive Detection of Barrett's Esophagus and Barrett's Esophagus Related Dysplasia/Carcinoma by a Sponge on String Device	December 2019
ISRCTN54190466	Randomised controlled trial of surveillance and no surveillance for patients with Barrett's oesophagus: BOSS (Barrett's Oesophagus Surveillance Study)	June 2022
NCT00987857	Endoscopy Every 2 Years or Only as Needed in Monitoring Patients With Barrett Esophagus	May 2022
NCT03596476	Diagnostic Yield of Post PRandial Esophageal High Resolution Impedance Manometry in Patients With Gastro-Esophageal Reflux Disease Symptoms Resistant to Proton Pump Inhibitor Therapy (PRIMER)	January 2022
NCT03596411	The Detection of Barrett's Esophagus by Gastrointestinal Endoscopy Prevents Esophageal Carcinoma in Morbid Obese After Sleeve Gastrectomy (Refleeve)	November 2023
NCT01688908	Efficacy of Endoscopy Screening on Esophageal Cancer in a High Risk Region of Rural China: a Randomized Controlled Trial	December 2027
NCT00903136	Tethered Capsule Endoscope in Screening Participants for Barrett Esophagus	Unknown
NCT00341523	Early Detection of Esophageal Cancer	Unknown

Appendix 9. KQ2 PRISMA checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	

Section/topic	#	Checklist item	Reported on page #
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

Appendix 10: KQ2 PICOS table

	Inclusion	Exclusion
Population	Adults (≥18 years old) with chronic GERD with or without other risk factors‡ for EAC who have been offered, received, or allocated to receive screening, depending on the design of the study Studies addressing both adults and children, if data provided for adults are reported separately ‡ Risk factors will be as deemed so by included studies.	Experiencing alarm symptoms for EAC: dysphagia, recurrent vomiting, anorexia, weight loss, gastrointestinal bleeding or other symptoms identified by authors as 'alarm' Diagnosed with other gastro-esophageal conditions (e.g., gastric cancer, esophageal atresia, other life threatening esophageal conditions) or pre-existing disease (BE, dysplasia, or EAC)
Interventions	Screening for EAC and other precancerous lesions with any screening modality	Any follow-up diagnostic tests, such 24 hour esophageal pH test or any test for staging purposes, such as CT and MRI
Comparators	Depending on study design, comparators may be: - No screening* - Different screening modality - Different screening intervals - Different lengths/duration of screening - Offered screening but did not receive screening - No comparison *Although we will consider comparative studies that include a no screening arm, we understand that the outcomes of interest do not apply to people who do not receive or have not been offered screening. For such studies, we will only consider data for those who receive or are offered screening.	
Outcomes	- How patients weigh the benefits and harms of screening (e.g., ranking/rating of benefits and harms outcomes) - Willingness to be screened - Uptake of screening - Factors considered in decision to be screened: what components/outcomes of screening do patients place more value on when deciding whether to be screened or not (e.g. potential complications resulting from screening) - Intrusiveness of the screening modality	

	Inclusion	Exclusion
Timing	No limits	
Settings	Primary care or other settings generalizable to primary care	
Study designs	Randomized controlled trials If insufficient data exists: Controlled clinical trials, controlled before-after, case-controls, cohort, interrupted time series (ITS), and cross-sectional (e.g., surveys) If insufficient data exists for the above: Qualitative studies and mixed-methods studies	Commentaries, opinion, editorials, and reviews
Language	No language restrictions in the search. English and French articles will be included at full-text.	
Databases	Medline, Embase, CINAHL, Cochrane	

Appendix 11. KQ2 Search strategy

Database: Embase Classic+Embase <1947 to 2018 October 26>, Ovid MEDLINE(R) ALL <1946 to October 25, 2018>
Search Strategy:
---

1 exp Gastroesophageal Reflux/ (84749)
2 ((esophageal or gastric* or gastro-esophageal or gastro-oesophageal or gastroesophageal or gastrooesophageal or supraesophageal or supra-esophageal or supraoesophageal or supra-oesophageal) adj2 reflux*).tw,kw. (60380)
3 GERD.tw,kw. (23254)
4 GORD.tw,kw. (2189)
5 SEGR.tw,kw. (14)
6 (gastric adj2 regurgitat*).tw,kw. (524)
7 or/1-6 [GERD] (101149)
8 Esophageal Neoplasms/ (54194)
9 exp Esophagus/ and exp Neoplasms/ (37262)
10 ((esophag* or oesophag* or pharynx-esophag*) adj3 (neoplas* or cancer* or tumour* or tumor* or carcinoma* or malignan* or metasta* or oncolog* or adenoma* or adenocarcinoma* or adeno-carcinoma* or carcinosarcoma* or carcino-sarcoma*)).tw,kw. (115398)
11 Barrett Esophagus/ (23026)
12 (Barrett* adj1 (esophag* or oesophag* or epitheli* or metaplasi* or syndrome?)).tw,kw. (22711)
13 (dysplasia* or dysplastic* or precancer* or pre-cancer* or premalignan* or pre-malignan*).tw,kw. (237615)
14 or/8-13 [ESOPHAGEAL CANCER] (381903)
15 7 and 14 [GERD AND ESOPHAGEAL CANCER] (14039)
16 exp Infant/ not (exp Adult/ and exp Infant/) (1653036)
17 exp Child/ not (exp Adult/ and exp Child/) (3188154)
18 15 not (16 or 17) [CHILD-ONLY REMOVED] (13587)
19 exp Animals/ not (exp Animals/ and Humans/) (16928885)
20 18 not 19 [ANIMAL-ONLY REMOVED] (9917)
21 (comment or editorial or news).pt. (1829540)
22 (letter not (letter and randomized controlled trial)).pt. (2039050)
23 20 not (21 or 22) [OPINION PIECES REMOVED] (9328)
24 exp Gastroesophageal Reflux/px (414)
25 Esophageal Neoplasms/px (212)
26 Barrett Esophagus/px (30)
27 Mass Screening/px (2080)
28 Early Detection of Cancer/px (915)
29 Diagnostic Tests, Routine/px (87)
30 Endoscopy/px (71)
31 Endoscopy, Gastrointestinal/px (80)
32 Esophagoscopy/px (17)
33 Gastroscopy/px (66)
34 or/24-33 [PSYCHOLOGICAL ASPECTS RE: DISEASE AND SCREENING TECHNIQUES] (3775)
35 exp Adaptation, Psychological/ (175170)
36 Attitude/ (105292)
37 Attitude to Death/ (25924)

38 exp Attitude to Health/ (482770)
39 Choice Behavior/ (207942)
40 Consumer Advocacy/ (6368)
41 *Consumer Behavior/ (10238)
42 exp Consumer Participation/ (85545)
43 Cooperative Behavior/ (75296)
44 Decision Making/ (290020)
45 Focus Groups/ (209410)
46 Health Care Surveys/ (39038)
47 Health Services Accessibility/ (198940)
48 Interviews as Topic/ (183260)
49 Life Change Events/ (46828)
50 Narration/ (20684)
51 Patient Acceptance of Health Care/ (93677)
52 Patient Advocacy/ (44216)
53 exp Patient-Centered Care/ (748675)
54 exp Patient Education as Topic/ (186333)
55 Patient Participation/ (47277)
56 Patient Preference/ (21341)
57 Patient Satisfaction/ (197656)
58 exp Patients/px (15527)
59 Personal Autonomy/ (28669)
60 *"Power (Psychology)"/ (66398)
61 Questionnaires/ (882190)
62 Quality of Life/px (22058)
63 exp Self Concept/ (289574)
64 Self Efficacy/ (66626)
65 exp Self-Help Groups/ (23022)
66 Social Values/ (96087)
67 ((accept* or anxiet* or anxious* or attitud* or consider* or choice? or choos* or chose? or concern* or decid* or decis* or dissatisf* or expect* or experienc* or fear* or feel* or felt or input* or opinion* or participat* or perceiv* or percepti* or perspective? or prefer* or respons* or satisf* or unsatisf* or value? or valuing or view* or worrie? or worry*) adj3 (citizen? or client? or consumer? or female? or male? or men or patient? or public or stake?holder* or user? or wom#n)).tw,kf. (1783010)
68 (advoca* adj3 (client? or consumer? or patient?)).tw,kf. (12512)
69 ((analys#s or valuation? or value? or valuing) adj3 (conjoint or contingent)).tw,kf. (3208)
70 (autonom* adj3 (personal* or self)).tw,kf. (4900)
71 (choice? adj1 (discrete or experiment*)).tw,kf. (6157)
72 ((client? or consumer? or patient?) adj (centered or centred or focus*)).tw,kf. (52284)
73 ((client? or consumer? or patient? or personal) adj narrati*).tw,kf. (2210)
74 empower*.tw,kf. (49166)
75 (focus group? or interview* or questionnaire? or survey*).tw,kf. (2689332)
76 (freedom? or libert*).tw,kf. (100795)
77 gambl*.tw,kf. (19958)
78 ((health or death) adj3 (anxiet* or anxious* or attitud* or concern* or fear* or feel? or feeling* or felt or perception* or perspective? or prefer* or view* or worrie? or worry*)).tw,kf. (161154)
79 health utilit*.tw,kf. (4626)
80 informed choice?.tw,kf. (5052)

81 (life adj3 (event? or experience?)).tw,kf. (63360)
82 (multi?attribute or multi?criteria).tw,kf. (2095)
83 (preference? adj1 (elicit* or scor* or stated)).tw,kf. (3368)
84 prospect theor*.tw,kf. (513)
85 (self adj2 (conceiv* or concept* or percepti* or perceiv*)).tw,kf. (45854)
86 (self adj (determin* or efficac* or help or manag* or support*)).tw,kf. (110203)
87 (social* adj1 valu*).tw,kf. (4014)
88 trade?off?.tw,kf. (11989)
89 (willing* adj2 pay*).tw,kf. (13209)
90 or/35-89 [COMBINED MeSH & TEXT WORDS FOR PATIENT PREFERENCES & VALUES] (6578882)
91 exp Communication/ (870722)
92 ((time$2 or timeliness) adj2 (communica* or info*)).tw,kf. (16287)
93 (miscommunicat* or mis-communicat*).tw,kf. (1807)
94 (misunderstand* or mis-understand*).tw,kf. (11841)
95 (misinform* or mis-inform*).tw,kf. (5330)
96 ((involv* or participat*) adj3 (client? or consumer? or patient?)).tw,kf. (212048)
97 exp Informed Consent/ (135722)
98 (informed adj (choice* or choos* or consent* or decision*)).tw,kf. (120770)
99 (choice? adj2 behavio?r*).tw,kf. (5292)
100 ((client? or consumer? or patient? or personal) adj3 consent*).tw,kf. (38447)
101 ((make or making or makes or made or shar* or support*) adj2 (choice? or choos* or decision*)).tw,kf. (364434)
102 Patient Reported Outcome Measures/ (11401)
103 patient reported outcome?.tw,kf. (34484)
104 (PROM or PROMs or ePREM or ePREMs).tw,kf. (8161)
105 or/91-104 [PATIENT COMMUNICATION / MISCOMMUNICATION / CONSENT / SUPPORT] (1646152)
106 90 or 105 (7475595)
107 34 or 106 [ALL PATIENT PREFERENCES & VALUES SETS] (7476065)
108 23 and 107 [GERD/ESOPHAGEAL CANCER - PATIENT PREFERENCES & VALUES] (1577)
109 108 use medall [MEDLINE RECORDS] (636)
110 gastroesophageal reflux/ (76189)
111 ((esophageal or gastric* or gastro-esophageal or gastro-oesophageal or gastroesophageal or gastrooesophageal or supraesophageal or supra-esophageal or supraoesophageal or supra-oesophageal) adj2 reflux*).tw,kw. (60380)
112 GERD.tw,kw. (23254)
113 GORD.tw,kw. (2189)
114 SEGR.tw,kw. (14)
115 (gastric adj2 regurgitat*).tw,kw. (524)
116 or/110-115 (94213)
117 exp esophagus tumor/ (77710)
118 exp esophagus/ and exp neoplasm/ (37262)
119 ((esophag* or oesophag* or pharynx-esophag*) adj3 (neoplas* or cancer* or tumour* or tumor* or carcinoma* or malignan* or metasta* or oncolog* or adenoma* or adenocarcinoma* or adeno-carcinoma* or carcinosarcoma* or carcino-sarcoma*)).tw,kw. (115398)
120 Barrett Esophagus/ (23026)
121 (Barrett* adj1 (esophag* or oesophag* or epitheli* or metaplasi* or syndrome?)).tw,kw. (22711)

122 (dysplasia* or dysplastic* or precancer* or pre-cancer* or premalignan* or pre-malignan*).tw,kw. (237615)
123 or/117-122 (388236)
124 116 and 123 [GERD AND ESOPHAGEAL CANCER] (13204)
125 exp juvenile/ not (exp juvenile/ and exp adult/) (2337309)
126 exp Infant/ not (exp Adult/ and exp Infant/) (1653036)
127 exp Child/ not (exp Adult/ and exp Child/) (3188154)
128 or/125-127 (3908908)
129 124 not 128 [CHILD, 17 AND UNDER, REMOVED] (12752)
130 exp animal experimentation/ or exp models animal/ or exp animal experiment/ or nonhuman/ or exp vertebrate/ (47785712)
131 exp human/ or exp human experimentation/ or exp human experiment/ (37610583)
132 130 not 131 (10176834)
133 129 not 132 [ANIMAL-ONLY REMOVED] (12412)
134 editorial.pt. (1053946)
135 letter.pt. not (letter.pt. and randomized controlled trial/) (2034134)
136 133 not (134 or 135) [OPINION PIECES REMOVED] (11719)
137 adaptive behavior/ (142109)
138 attitude/ (105292)
139 attitude to death/ (25924)
140 attitude to disability/ (316)
141 attitude to health/ (184789)
142 attitude to illness/ (4863)
143 attitude to life/ (642)
144 consumer advocacy/ (6368)
145 consumer attitude/ (3823)
146 cooperation/ (40714)
147 decision making/ (290020)
148 health care survey/ (44378)
149 exp interview/ (267434)
150 life event/ (27394)
151 patient advocacy/ (44216)
152 exp patient attitude/ (358813)
153 patient decision making/ (8997)
154 exp patient education/ (186333)
155 personal autonomy/ (28669)
156 psychological aspect/ (478485)
157 exp questionnaire/ (1538806)
158 exp self concept/ (289574)
159 self help/ (13262)
160 exp social psychology/ (924332)
161 ((accept* or anxiet* or anxious* or attitud* or consider* or choice? or choos* or chose? or concern* or decid* or decis* or dissatisf* or expect* or experienc* or fear* or feel* or felt or input* or opinion* or participat* or perceiv* or percepti* or perspective? or prefer* or respons* or satisf* or unsatisf* or value? or valuing or view* or worrie? or worry*) adj3 (citizen? or client? or consumer? or female? or male? or men or patient? or public or stake?holder* or user? or wom#n)).tw,kf. (1783010)
162 (advoca* adj3 (client? or consumer? or patient?)).tw,kf. (12512)
163 ((analys#s or valuation? or value? or valuing) adj3 (conjoint or contingent)).tw,kf. (3208)

164 (autonom* adj3 (personal* or self)).tw,kf. (4900)
165 (choice? adj1 (discrete or experiment*)).tw,kf. (6157)
166 ((client? or consumer? or patient?) adj (centered or centred or focus*)).tw,kf. (52284)
167 ((client? or consumer? or patient? or personal) adj narrati*).tw,kf. (2210)
168 empower*.tw,kf. (49166)
169 (focus group? or interview* or questionnaire? or survey*).tw,kf. (2689332)
170 (freedom? or libert*).tw,kf. (100795)
171 gambl*.tw,kf. (19958)
172 ((health or death) adj3 (anxiet* or anxious* or attitud* or concern* or fear* or feel? or feeling* or felt or perception* or perspective? or prefer* or view* or worrie? or worry*)).tw,kf. (161154)
173 health utilit*.tw,kf. (4626)
174 informed choice?.tw,kf. (5052)
175 (life adj3 (event? or experience?)).tw,kf. (63360)
176 (multi?attribute or multi?criteria).tw,kf. (2095)
177 (preference? adj1 (elicit* or scor* or stated)).tw,kf. (3368)
178 prospect theor*.tw,kf. (513)
179 (self adj2 (conceiv* or concept* or percepti* or perceiv*)).tw,kf. (45854)
180 (self adj (determin* or efficac* or help or manag* or support*)).tw,kf. (110203)
181 (social* adj1 valu*).tw,kf. (4014)
182 trade?off?.tw,kf. (11989)
183 (willing* adj2 pay*).tw,kf. (13209)
184 or/137-183 [Combined MeSH & text words for patient preferences & values] (6727797)
185 communication/ (197407)
186 exp verbal communication/ (291543)
187 ((time$2 or timeliness) adj2 (communica* or info*)).tw,kf. (16287)
188 (miscommunicat* or mis-communicat*).tw,kf. (1807)
189 (misunderstand* or mis-understand*).tw,kf. (11841)
190 (misinform* or mis-inform*).tw,kf. (5330)
191 ((involv* or participat*) adj3 (client? or consumer? or patient?)).tw,kf. (212048)
192 informed consent/ (131281)
193 (informed adj (choice* or choos* or consent* or decision*)).tw,kf. (120770)
194 (choice? adj2 behavio?r*).tw,kf. (5292)
195 ((client? or consumer? or patient? or personal) adj3 consent*).tw,kf. (38447)
196 ((make or making or makes or made or shar* or support*) adj2 (choice? or choos* or decision*)).tw,kf. (364434)
197 patient reported outcome?.tw,kf. (34484)
198 (PROM or PROMs or ePREM or ePREMs).tw,kf. (8161)
199 or/185-198 [Additional patient preference terms] (1271333)
200 184 or 199 [ALL PATIENT PREFERENCES & VALUES SETS] (7412212)
201 136 and 200 [GERD/ESOPHAGEAL CANCER - PATIENT PREFERENCES & VALUES] (2198)
202 201 use emczd [EMBASE RECORDS] (1377)
203 109 or 202 [BOTH DATABASES] (2013)
204 (2017 04* or 2017 05* or 2017 06* or 2017 07* or 2017 08* or 2017 09* or 2017 10* or 2017 11* or 2017 12* or 2018*).dt. (1988203)
205 109 and 204 [MEDLINE UPDATE RECORDS] (34)
206 (201704* or 201705* or 201706* or 201707* or 201708* or 201709* or 201710* or 201711* or 201712* or 2018*).dc. (2921967)
207 202 and 206 [EMBASE UPDATE RECORDS] (150)

208 205 or 207 [BOTH DATABASES - UPDATE PERIOD] (184)
209 remove duplicates from 208 (158)
210 209 use medall [MEDLINE UNIQUE UPDATE RECORDS] (33)
211 209 use emczd [EMBASE UNIQUE UPDATE RECORDS] (125)

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Cochrane

https://www.cochranelibrary.com/advanced-search/search-manager?search=2220026

Search Name: CTFPHC - Esophageal Cancer - GERD - Patient Preferences - No Screening Filters - Update
Date Run: 30/10/2018 02:50:02
Comment: CTFPHC (OHRI) - 2018 Oct 29 - Update from April 2017

ID Search Hits
#1 MeSH descriptor: ["Gastroesophageal Reflux"] explode all trees 1740
#2 ((esophageal or gastric* or (gastro next esophageal) or (gastro next oesophageal) or supraesophageal or (supra next esophageal) or supraoesophageal or (supra next oesophageal)) near/2 reflux*):ti,ab,kw 1064
#3 GERD:ti,ab,kw 1185
#4 GORD:ti,ab,kw 148
#5 SEGR:ti,ab,kw 1
#6 (gastric near/2 regurgitat*):ti,ab,kw 67
#7 {or #1-#6} 2862
#8 MeSH descriptor: ["Esophageal Neoplasms"] explode all trees 1308
#9 MeSH descriptor: [Esophagus] explode all trees 267
#10 ((esophag* or oesophag* or (pharynx next esophag*)) near/3 (neoplas* or cancer* or tumour* or tumor* or carcinoma* or malignan* or metasta* or oncolog* or adenoma* or adenocarcinoma* or (adeno next carcinoma*) or carcinosarcoma* or (carcino next sarcoma*))):ti,ab,kw 3387
#11 MeSH descriptor: ["Barrett Esophagus"] explode all trees 207
#12 (Barrett* near/1 (esophag* or oesophag* or epitheli* or metaplasi* or syndrome*)):ti,ab,kw 471
#13 (dysplasia* or dysplastic* or precancer* or (pre next cancer*) or premalignan* or (pre next malignan*)):ti,ab,kw 3694
#14 {or #8-#13} 7045
#15 #7 and #14 133
#16 MeSH descriptor: [Infant] explode all trees 14928
#17 MeSH descriptor: [Child] explode all trees 1356
#18 MeSH descriptor: [Juvenile] explode all trees 0
#19 #15 not (#16 or #17 or #18) 131
#20 MeSH descriptor: ["Gastroesophageal Reflux"] explode all trees and with qualifier(s): [PX - PX] 37
#21 MeSH descriptor: ["Esophageal Neoplasms"] explode all trees and with qualifier(s): [PX - PX] 18
#22 MeSH descriptor: ["Barrett Esophagus"] explode all trees and with qualifier(s): [PX - PX] 1
#23 MeSH descriptor: ["Mass Screening"] explode all trees and with qualifier(s): [PX - PX] 178
#24 MeSH descriptor: ["Early Detection of Cancer"] explode all trees and with qualifier(s): [PX - PX] 95

#25 MeSH descriptor: ["Diagnostic Tests, Routine"] explode all trees and with qualifier(s): [PX - PX] 2
#26 MeSH descriptor: [Endoscopy] explode all trees and with qualifier(s): [PX - PX] 190
#27 MeSH descriptor: ["Endoscopy, Gastrointestinal"] explode all trees and with qualifier(s): [PX - PX] 97
#28 MeSH descriptor: [Esophagoscopy] explode all trees and with qualifier(s): [PX - PX] 0
#29 MeSH descriptor: [Gastroscopy] explode all trees and with qualifier(s): [PX - PX] 10
#30 {or #20-#29} 478
#31 MeSH descriptor: ["Adaptation, Psychological"] explode all trees 4942
#32 MeSH descriptor: [Attitude] explode all trees 1009
#33 MeSH descriptor: ["Attitude to Death"] explode all trees 148
#34 MeSH descriptor: ["Attitude to Health"] explode all trees 32342
#35 MeSH descriptor: ["Choice Behavior"] explode all trees 1335
#36 MeSH descriptor: ["Consumer Advocacy"] explode all trees 14
#37 MeSH descriptor: ["Consumer Behavior"] explode all trees 56
#38 MeSH descriptor: ["Consumer Participation"] explode all trees 1402
#39 MeSH descriptor: ["Cooperative Behavior"] explode all trees 929
#40 MeSH descriptor: ["Decision Making"] explode all trees 2001
#41 MeSH descriptor: ["Focus Groups"] explode all trees 522
#42 MeSH descriptor: ["Health Care Surveys"] explode all trees 547
#43 MeSH descriptor: ["Health Services Accessibility"] explode all trees 606
#44 MeSH descriptor: ["Interviews as Topic"] explode all trees 1733
#45 MeSH descriptor: ["Life Change Events"] explode all trees 449
#46 MeSH descriptor: [Narration] explode all trees 171
#47 MeSH descriptor: ["Patient Acceptance of Health Care"] explode all trees 2601
#48 MeSH descriptor: ["Patient Advocacy"] explode all trees 72
#49 MeSH descriptor: ["Patient-Centered Care"] explode all trees 557
#50 MeSH descriptor: ["Patient Education as Topic"] explode all trees 8048
#51 MeSH descriptor: ["Patient Participation"] explode all trees 1156
#52 MeSH descriptor: ["Patient Preference"] explode all trees 637
#53 MeSH descriptor: ["Patient Satisfaction"] explode all trees 11067
#54 MeSH descriptor: [Patients] explode all trees and with qualifier(s): [PX - PX] 540
#55 MeSH descriptor: ["Personal Autonomy"] explode all trees 196
#56 MeSH descriptor: ["Power (Psychology)"] explode all trees 21
#57 Any MeSH descriptor 49716
#58 MeSH descriptor: ["Quality of Life"] explode all trees and with qualifier(s): [PX - PX] 1852
#59 MeSH descriptor: ["Self Concept"] explode all trees 6343
#60 MeSH descriptor: ["Self Efficacy"] explode all trees 2661
#61 MeSH descriptor: ["Self-Help Groups"] explode all trees 725
#62 MeSH descriptor: ["Social Values"] explode all trees 154
#63 ((accept* or anxiet* or anxious* or attitud* or consider* or choice* or choos* or chose* or concern* or decid* or decis* or dissatisf* or expect* or experienc* or fear* or feel* or felt or input* or opinion* or participat* or perceiv* or percepti* or perspective* or prefer* or respons* or satisf* or unsatisf* or value* or valuing or view* or worrie* or worry*) near/3 (citizen* or client* or consumer* or female* or male* or men or patient* or public or stake*holder* or user* or woman or women)):ti,ab,kw 116467
#64 (advoca* near/3 (client* or consumer* or patient*)):ti,ab,kw 339
#65 ((analys* or valuation* or value* or valuing) near/3 (conjoint or contingent)):ti,ab,kw 90

#66 (autonom* near/3 (personal* or self)):ti,ab,kw 358
#67 (choice* near/1 (discrete or experiment*)):ti,ab,kw 165
#68 ((client* or consumer* or patient*) next (centered or centred or focus*)):ti,ab,kw 2741
#69 ((client* or consumer* or patient* or personal) next narrati*):ti,ab,kw 55
#70 empower*:ti,ab,kw 1960
#71 ("focus group" or "focus groups" or interview* or questionnaire* or survey*):ti,ab,kw 109696
#72 (freedom* or libert*):ti,ab,kw 3073
#73 gambl*:ti,ab,kw672
#74 ((health or death) near/3 (anxiet* or anxious* or attitud* or concern* or fear* or feel or feels or feeling* or felt or perception* or perspective* or prefer* or view* or worrie* or worry*)):ti,ab,kw 14714
#75 (health next utilit*):ti,ab,kw 431
#76 (informed next choice*):ti,ab,kw 248
#77 (life near/3 (event* or experience*)):ti,ab,kw 2140
#78 (multi*attribute or multi*criteria):ti,ab,kw 87
#79 (preference* near/1 (elicit* or scor* or stated)):ti,ab,kw 165
#80 (prospect next theor*):ti,ab,kw 27
#81 (self near/2 (conceiv* or concept* or percepti* or perceiv*)):ti,ab,kw 6382
#82 (self next (determin* or efficac* or help or manag* or support*)):ti,ab,kw 14580
#83 (social* near/1 valu*):ti,ab,kw 195
#84 trade*off*:ti,ab,kw 636
#85 (willing* near/2 pay*):ti,ab,kw 960
#86 MeSH descriptor: [Communication] explode all trees 8033
#87 (time* near/2 (communica* or info*)):ti,ab,kw 516
#88 mis*communicat*:ti,ab,kw 41
#89 mis*understand*:ti,ab,kw 129
#90 mis*inform*:ti,ab,kw 76
#91 ((involv* or participat*) near/3 (client* or consumer* or patient*)):ti,ab,kw 16155
#92 MeSH descriptor: ["Informed Consent"] explode all trees 657
#93 (informed next (choice* or choos* or consent* or decision*)):ti,ab,kw 13770
#94 (choice* near/2 behavio*):ti,ab,kw 1334
#95 ((client* or consumer* or patient* or personal) near/3 consent*):ti,ab,kw 5869
#96 ((make or making or makes or made or shar* or support*) near/2 (choice* or choos* or decision*)):ti,ab,kw 12710
#97 MeSH descriptor: ["Patient Reported Outcome Measures"] explode all trees 210
#98 ("patient reported" next outcome*):ti,ab,kw 4219
#99 (PROM or PROMS or ePREM or ePREMs):ti,ab,kw 565
#100 {or #31-#99} 275595
#101 #30 or #100 275631
#102 #19 and #101 with Cochrane Library publication date Between Apr 2017 and Oct 2018 9

CENTRAL – 9

Appendix 12: KQ2 Screening forms

Title and Abstract screening form

1. Does this study discuss any of the following:
   - patients choosing to/choosing not to undergo screening for EAC (or BE, dysplasia); OR
   - how they weighted the benefits and harms of screening; OR
   - what factors contributed to these preferences and to their decision to undergo/not undergo screening

   ❍ Yes/unclear
   ❍ No

Full-text screening form

1. **Full text not available:**
   ❒ Yes

2. **Language:**

   ❍ English/French
   ❍ Other

3. **Is the study design a commentary, opinion, editorial or review?**

   ❍ Yes
   ❍ No
   ❍ Abstract or protocol

4. **Are included participants adults (≥18 years old)?**

   ❍ Yes
   ❍ No
   ❍ Unclear

5. **Have participants been diagnosed with other gastro-esophageal conditions (e.g., gastric cancer, esophageal atresia, other life threatening esophageal conditions) or pre-existing disease (BE, dyplasia, or EAC) or did they have alarm symptoms (e.g., vomiting, dysphagia)?**

   ❍ Yes
   ❍ No
   ❍ Unclear (enter why it is unclear)

6. **Do participants have "chronic GERD"?**
   defined as: (1) symptoms for ≥12 months, with no specific frequency; and/or (2) proton pump inhibitor (PPI) (or other pharmacotherapy) use for GERD for ≥12 months)

❍ Yes
❍ No
❍ Unclear (enter GERD definition)

7. Does this article include an intervention of interest (any screening modality for EAC and other precancerous lesions)

❍ Yes
❍ No
❍ Unclear (describe)

8. Does this article have a comparator of interest?

- no screening - among those offered
- different screening modality
- different screening intervals
- different lengths
- duration of screening
- offered screening but did not receive screening
- no comparison

❍ Yes
❍ No
❍ Unclear

Comments:

Appendix 13: KQ2 List of excluded studies at full text

Full text not available (n=9)

1. Craig A, Shoeman M, Dent J. A comparison of narrow bore transnasal and transoral endoscopy in usedated patients [abstract]. Gastrointest Endosc 1998;47:AB28.
2. Mulcahy HE, Alstead EM, McKenzie C, Riches A, Kiely M, Farthing MJG, Fairclough PD.A randomized trial of a 5.5 mm vs 9.5 mm diameter videogastroscope in unsedated upper GI endoscopy [abstract]. Gastrointest Endosc 1997;45:AB54
3. Mulcahy HE, Kelly P, Banks M, Farthing MJG, Fairclough PD, Kumar P. Factors associated with tolerance to unsedated upper gastrointestinal endoscopy [abstract]. Gastrointest Endosc 1998;47:AB56.
4. Lewis, Liane, Marcu, Afrodita, Whitaker, Katriina, and Maguire, Roma. Patient factors influencing symptom appraisal and subsequent adjustment to oesophageal cancer: A qualitative interview study. European journal of cancer care 2018; 27 (1).
5. Stasyshyn, Andriy. Diagnosis and treatment of gastroesophageal reflux disease complicated by Barrett's esophagus. Polski przeglad chirurgiczny 2017; 89 (4) 29-32.
6. Gehlot, V., Mahant, S., Das, K., and Das, R. Risk or lifestyle factors associated with Gastroesophageal Reflux Disease (GERD) in north India. Helicobacter 2016; 21 (Supplement 1) 164.
7. Sakin, Y. S., Vardar, R., Sezgin, B., Cetin, Z. E., Alev, Y., Yildirim, E., Kirazli, T., and Bor, S. The diagnostic value of 24-hour ambulatory intraesophageal PH-impedance in patients with laryngopharyngeal reflux symptoms compared to those with typical symptoms. United European Gastroenterology Journal 2016; 4 (5 Supplement 1) A684-A685.
8. Jovani, M., Cao, Y., Feskanich, D., Hur, C., Jacobson, B. C., and Chan, A. T. Aspirin use is associated with lower risk of Barrett's esophagus in women. Gastroenterology 2017; 152 (5 Supplement 1) S105.
9. Ward, M. A., Dunst, C. M., Robinson, B., Teitelbaum, E. N., Sharata, A. M., DeMeester, S. R., Reavis, K. M., and Swanstrom, L. L. 20 Year outcomes: Laparoscopic heller myotomy stands the test of time. Surgical Endoscopy and Other Interventional Techniques 2017; 31 (Supplement 1) S234.

Other language (n=1)

1. Dohmen W, Fuchs W. Rapidity of pain relief, medication requirement and patient satisfaction with reflux treatment in the physician's office. *MMW-Fortschritte der Medizin* 2005; 147(9): 39-. [German]

Study design (i.e., commentary, opinion, editorial, review, abstract or protocol) (n=35)

1. Munoz-Largacha JA, Fernando HC, Litle VR. Optimizing the diagnosis and therapy of Barrett's esophagus. *Journal of Thoracic Disease* 2017; 9: S146-S153.
2. Parker CE, Spada C, Mcalindon M, Davison C, Panter S. Capsule endoscopy-not just for the small bowel: A review. *Expert Review of Gastroenterology and Hepatology* 2014; 9(1): 79-89.
3. Estores D, Velanovich V. Barrett esophagus: Epidemiology, pathogenesis, diagnosis, and management. *Current Problems in Surgery* 2013; 50(5): 192-226.
4. Farnbacher MJ, Keles M, Meier M, Hagel A, Schneider T. Capsule endoscopy in a network cooperation: Assessment of the experience in 822 patients. *Scandinavian Journal of Gastroenterology* 2013; 48(9): 1088-1094.
5. Shaheen N. Barrett esophagus: Disease management and patient perceptions. *Gastroenterology and Hepatology* 2006; 2(7): 468-470.
6. Barr H. Endoscopic surveillance of patients with Barrett's oesophagus. *Gut* 2002; 51(3): 313-314.
7. Kamolz T, Velanovich V. Psychological and emotional aspects of gastroesophageal reflux disease. *Diseases of the Esophagus* 2002; 15(3): 199-203.

8. Tierney M, Bevan R, Rees CJ, Trebble TM. What do patients want from their endoscopy experience? The importance of measuring and understanding patient attitudes to their care. *Frontline Gastroenterol* 2016; 7(3): 191-198.
9. Ofman JJ, Rabeneck L. The effectiveness of endoscopy in the management of dyspepsia: a qualitative systematic review. *American Journal of Medicine* 1999; 106(3): 335-346.
10. Hinojosa-Lindsey M, Arney J, Heberlig S, Kramer JR, Street RL Jr, El-Serag HB, Naik AD. Patients' intuitive judgments about surveillance endoscopy in Barrett's esophagus: a review and application to models of decision-making. *Dis Esophagus* 2013; 26(7): 682-689.
11. Sorbi D, Chak A. Unsedated EGD. *Gastrointest Endosc* 2003; 58:102-10
12. Atkinson M, Chak A. Unsedated small-caliber endoscopyda new screening and surveillance tool for Barrett's esophagus. *Gastroenterology & Hepatology* 2017 Aug; 4(8):426-427.
13. Eisen GM, Baron TH, Dominitz JA, Faigel DO, Goldstein JL, Johanson JF, Mallery JS, Raddawi HM, Vargo JJ II, Waring JP, Fanelli RD, Wheeler-Harbough J. Complications of upper GI endoscopy. *Gastrointest Endosc* 2002; 55: 784-793.
14. Ross WA. Premedication for upper gastrointestinal endoscopy. *Gastrointest Endosc* 1989; 35(2):120-126.
15. Saeian K. Unsedated transnasal endoscopy: a safe and less costly alternative. *Curr Gastroenterol Rep* 2002; 4:213-7.
16. Waterman M, Gralnek IM. Capsule endoscopy of the esophagus. *J Clin Gastroenterol* 2009; 43:605-12.
17. Waye JD. Worldwide use of sedation and analgesia for upper intestinal endoscopy. *Gastrointest Endosc* 1999; 50:888-91.
18. Kramer JR, Arney J, Chen J, Richardson P, Duan Z, Street RLJ, Hinojosa-Lindsey M, Naik AD, El-Serag HB. Patient-centered, comparative effectiveness of esophageal cancer screening: protocol for a comparative effectiveness research study to inform guidelines for evidence-based approach to screening and surveillance endoscopy. *BMC Health Services Research* 2012; 12: 288-.
19. Tan G, Gandhi M. Outcomes of open access endoscopy in dyspepsia/GERD patients without alarm features in a community medical center. *American Journal of Gastroenterology* 2015; 110: S641-S642.
20. Nason K, Romero Y, Shaheen N, Vaughan T, Switzer G, Chang J, Zickmund S, Luketich J. Lack of symptom reporting and self-medication are prevalent and modifiable barriers to early diagnosis in esophageal cancer. *Diseases of the Esophagus* 2014; 27: 61A-
21. Crews NR, Dunagan KT, Johnson ML, Devanna S, Wong Kee Song LM, Katzka DA, Iyer PG. Prevalence and characteristics of esophagitis and barrett's esophagus in population subjects without gastroesophageal reflux symptoms: Results from a large randomized controlled study. *Gastroenterology* 2014; 146(5 SUPPL. 1): S28-S29.
22. Alashkar B, Faulx AL, Isenberg GA, Greer KB, Pulice R, Hepner A, Falck-Ytter Y, Chak A. Comparative acceptance of transnasal esophagoscopy vs. Esophageal capsule endoscopy for barrett's esophagus screening. *Gastroenterology* 2013; 144(5 SUPPL. 1): S689-S690.
23. Egginton J, Dunagan KT, Shah ND, Blevins C, Ragunathan K, Leggett CL, Iyer PG. Patient preferences for endoscopic assessment of gastroesophageal reflux and barrett's esophagus. *Gastroenterology* 2013; 144(5 SUPPL. 1): S689-.
24. Hinojosa-Lindsey M, El-Serag H, Arney J, Kramer JR, Street RL, Naik AD. Patients' and gastroenterologists' perspectives on adherence to surveillance endoscopy for barrett's esophagus. *Gastroenterology* 2012; 142(5 SUPPL. 1): S399-S400.
25. Dominitz JA, Seibel EJ. Mo1526 Tethered Capsule Endoscope (TCE) Versus Standard EGD for Screening for Barrett's Esophagus (BE): Preliminary Results From a Blinded Pilot Study. *Gastrointestinal Endoscopy* 2011; 73(4): AB375-.

26. Elfant AB, Scheider DM, Bourke MJ, Alhalel R, Peikin SR, Haber GB, et al. Prospective controlled trial of transnasal endoscopy (T-EGD) vs per-oral endoscopy (P-EGD) [abstract]. *Gastrointest Endosc* 1996;43: 311.

27. Jackson FW. Office endoscopy without sedation [Abstract]. *Gastrointest Endosc* 1981; 27(2):123.

28. Rey JF, Duforest D, Marek TA. The feasibility of upper GI endoscopy performed through the nose using thin videoendoscope [abstract]. *Gastrointest Endosc* 1996;43: 302.

29. Iqbal, Umair, Siddique, Osama, Ovalle, Anais, Anwar, Hafsa, and Moss, Steven F. Safety and efficacy of a minimally invasive cell sampling device ('Cytosponge') in the diagnosis of esophageal pathology: a systematic review. European journal of gastroenterology & hepatology 2018. 30 (11) 1261-1269.

30. Munoz-Largacha, Juan A., Fernando, Hiran C., and Litle, Virginia R. Optimizing the diagnosis and therapy of Barrett's esophagus. Journal of thoracic disease 2017. 9 (Suppl 2) S146-S153.

31. Britton, James, Keld, Richard, Prasad, Neeraj, Hamdy, Shaheen, McLaughlin, John, and Ang, Yeng. Effect of diagnosis, surveillance, and treatment of Barrett's oesophagus on health-related quality of life. The lancet. Gastroenterology & hepatology 2018. 3 (1) 57-65.

32. Wani, Sachin, Muthusamy, V. Raman, Shaheen, Nicholas J., Yadlapati, Rena, Wilson, Robert, Abrams, Julian A., Bergman, Jacques, Chak, Amitabh, Chang, Kenneth, Das, Ananya, Dumot, John, Edmundowicz, Steven A., Eisen, Glenn, Falk, Gary W., Fennerty, M. Brian, Gerson, Lauren, Ginsberg, Gregory G., Grande, David, Hall, Matt, Harnke, Ben, Inadomi, John, Jankowski, Janusz, Lightdale, Charles J., Makker, Jitin, Odze, Robert D., Pech, Oliver, Sampliner, Richard E., Spechler, Stuart, Triadafilopoulos, George, Wallace, Michael B., Wang, Kenneth, Waxman, Irving, and Komanduri, Srinadh. Development of quality indicators for endoscopic eradication therapies in Barrett's esophagus: the TREAT-BE (Treatment with Resection and Endoscopic Ablation Techniques for Barrett's Esophagus) Consortium. Gastrointestinal endoscopy 2017. 86 (1) 1-17.

33. Zakko, L., Visrodia, K., Leggett, C., Lutzke, L., and Wang, K. K. Screening patients for Barrett esophagus: Why, who, and how. Techniques in Gastrointestinal Endoscopy 2018. 20 (2) 55-61.

34. Schlottmann, F. and Patti, M. G. Current Concepts in Treatment of Barrett's Esophagus With and Without Dysplasia. Journal of gastrointestinal surgery 2017. 21 (8) 1354-1360.

35. Offman, J., Muldrew, B., O'Donovan, M., Debiram-Beecham, I., Pesola, F., Kaimi, I., Smith, S. G., Wilson, A., Khan, Z., Lao-Sirieix, P., Aigret, B., Walter, F. M., Rubin, G., Morris, S., Jackson, C., Sasieni, P., and Fitzgerald, R. C. Barrett's oESophagus trial 3 (BEST3): Study protocol for a randomised controlled trial comparing the Cytosponge-TFF3 test with usual care to facilitate the diagnosis of oesophageal pre-cancer in primary care patients with chronic acid reflux. BMC Cancer 2018. 18 (1) 784.

Not adult population (n=3)

1. Freeman M, Offman J, Walter FM, Sasieni P, Smith SG. Acceptability of the Cytosponge procedure for detecting Barrett's oesophagus: a qualitative study. *BMJ* open 2017; 7(3): e013901-.

2. Summaries for patients. Upper endoscopy for gastroesophageal reflux disease. *Annals of Internal Medicine* 2012; 157(11): I-28.

3. Muszynski J, Kotarski P, Ehrmann-Josko A. Summary of the results of an educational research program on gastroesophageal reflux disease. *Gastroenterologia Polska* 2012; 19(4): 149-156.

No comparator of interest (n=2)

1. Rubenstein, Joel H., Pohl, Heiko, Adams, Megan A., Kerr, Eve, Holleman, Robert, Vijan, Sandeep, Dominitz, Jason A., Inadomi, John M., Provenzale, Dawn, Francis, Joseph, and Saini, Sameer D. Overuse of Repeat Upper Endoscopy in the Veterans Health Administration: A Retrospective Analysis. The American journal of gastroenterology 2017. 112 (11) 1678-1685.

2. Genco, A., Soricelli, E., Casella, G., Maselli, R., Castagneto-Gissey, L., Di, Lorenzo N., and Basso, N. Gastroesophageal reflux disease and Barrett's esophagus after laparoscopic sleeve gastrectomy: a possible, underestimated long-term complication. Surgery for Obesity and Related Diseases 2017. 13 (4) 568-574.

Diagnosed with other GI conditions (e.g., gastric cancer, esophageal atresia, other life threatening esophageal conditions) or pre-existing disease (BE, dyplasia, or EAC) or did they have alarm symptoms (e.g., vomiting, dysphagia) (n=9)

1. Dickman R, Kim JL, Camargo L, Green SB, Sampliner RE, Garewal HS, Fass R. Correlation of gastroesophageal reflux disease symptoms characteristics with long-segment Barrett's esophagus. *Diseases of the Esophagus* 2006; 19(5): 360-365.
2. Walker B, Smith MJ. Upper gastrointestinal endoscopy- a survey of patients' impressions. *Postgrad Med J* 1978; 54 (630): 253-256.
3. Atkinson M, Das A, Faulx A, Kinnard M, Falck-Ytter Y, Chak A. Ultrathin Esophagoscopy in Screening for Barrett's Esophagus at a Veterans Administration Hospital: Easy Access Does Not Lead to Referrals. *Am J Gastroenterol* 2008; 103:92-97.
4. Mokhashi MS, Wildi SM, Glenn TF, Wallace MB, Jost C, Gumustop B, Kim CY, Cotton PB, Hawes RH. A prospective, blinded study of diagnostic esophagoscopy with a superthin, stand-alone, batterypowered esophagoscope. *Am J Gastroenterol* 2003; 98(11): 2383-2389.
5. Mayinger B, Strenkert M, Hochberger J, Martus P, Kunz B, Hahn EG. Disposable-sheath, flexible gastroscope system versus standard gastroscopes: a prospective, randomized trial. *Gastrointest Endosc* 1999; 50: 461-467.
6. Wildi SM, Wallace MB, Glenn TF, Mokhashi MS, Kim CY, Hawes RH. Accuracy of esophagoscopy performed by a non-physician endoscopist with a 4-mm diameter battery-powered endoscope. *Gastrointest Endosc* 2003; 57: 305-310.
7. Dumortier J, Ponchon T, Scoazec J-Y, Moulinier B, Zarka F, Paliard P, Lambert R. Prospective evaluation of transnasal esophagogastroduodenoscopy: feasibility and study on performance and tolerance. *Gastrointest Endosc* 999;49:285-291.
8. Bonelli L. Barrett's esophagus: Results of a multicentric survey. *Endoscopy* 1993; 25(9): 652-654.
9. Sharriff MK, Varghese S, O'Donovan M, Abdullahi Z, Liu X, Fitzgeral RC, Di Pietro M. Pilot randomized crossover study comparing the efficacy of transnasal disposable endosheath with standard endoscopy to detect Barrett's esophagus. *Endoscopy* 2016; 48:110-116.

Participants do not have chronic GERD (n=23)

1. Tan CC, Freeman JG. Throat spray for upper gastrointestinal endoscopy is quite acceptable to patients. *Endoscopy* 1996; 28:277-82.
2. Pound DC, O'Connor KW, Brown ED, Weddle R, mcHenry R, Crabb D, Brunelle R, Lehman GA. Oral medications for upper gastrointestinal endoscopy using a small diameter endoscope. *Gastrointest Endosc* 1988; 34:327-331.
3. Beavis AK, LaBrooy S, Misiewicz JJ. Evaluation of one-visit endoscopic clinic for patients with dyspepsia. *BMJ* 1979; 1:1387-9.
4. DeGregorio BT, Poorman JC, Katon RM. Peroral ultrathin endoscopy in adult patients. *Gastrointest Endosc* 1996; 45:303-6.
5. Thompson DG, Evans SJ, Murray RS, Lennard-Jones JE, Cowan RE, Wright JT. Patients appreciate premedication for endoscopy. *Lancet* 1980;2:469-70.
6. Rey JF, Duforest D, Marek TA. Prospective comparison of nasal versus oral insertion of a thin video endoscope in healthy volunteers. *Endoscopy* 1996;28:422-4.
7. Hoare AM, Hawkins CF. Upper gastrointestinal endoscopy with and without sedation: patients' opinion. *BMJ* 1976 Jul: 20.
8. Catanzaro A, Faulx A, Isenberg GA, Wong RCK, Cooper G, Sivak M, Chak A. Prospective evaluation of 4-mm diameter endoscopes for esophagoscopy in sedated and unsedated patients. *Gastrointest Endosc* 2003; 57: 300-304.

9. Catanzaro A, Faulx A, Pfau PR, Cooper G, Isenberg G, Wong RCK, Sivak MV, Chak A. Accuracy of a narrow-diameter battery-powered endoscope in sedated and unsedated patients. *Gastrointest Endosc* 2002; 55: 484-487.

10. Peery AF, Hoppo T, Garman KS, Dellon ES, Daugherty N, Bream S, Sanz AF, Davison J, Spacek M, Connors D, Faulx AL, Chak A, Luketish JD, Shaheen NJ, Jobe BA. Feasibility, safety, acceptability, and yield of office-based, screening transnasal esophagoscopy (with video). *Gastrointest Endosc* 2012; 75: 945-953.

11. Sorbi D, Gostout CJ, Henry J, Lindor KD. Unsedated small-caliber esophagogastroduodenoscopy (EGD) versus conventional EGD: a comparative study. *Gastroenterology* 1999; 117: 1301-1307.

12. Al-Atrakchi HA. Upper gastrointestinal endoscopy without sedation: a prospective study of 2000 examinations, *Gastrointest Endosc* 1989; 35:79-81.

13. Gora MJ, Sauk JS, Carruth RW, Lu W, Carlton DT, Soomro A, Rosenberg M, Nishioka NS, Tearney GJ. Imaging the upper gastrointestinal tract in unsedated patients using tethered capsule endomicroscopy. *Gastroenterology* 2013; 145: 723-725.

14. Hedenbro JL, Ekelund M, Aberg T, Lindblom A. Oral sedation for diagnostic upper endoscopy. *Endoscopy* 1991; 23:8-10.

15. Rex DK, Cummings OW, Shaw M, et al. Screening for Barrett's Esophagus in Colonoscopy Patients With and Without Heartburn. *Gastroenterol* 2003; 125:1670-1677.

16. Fischer NC, Bailey S, Gibson JA.A prospective, randomized controlled trial of sedation vs. no sedation in outpatient diagnostic upper gastrointestinal endoscopy. *Endoscopy* 1998; 30:21-24.

17. Froehlich F, Schwizer W, Thorens J, Kohler M, Gonvers J-J, Fried M. Conscious sedation for gastroscopy: patient tolerance and cardiorespiratory parameters. *Gastroenterology* 1995;108:697-704.

18. Daneshmend TK, Bell GD, Logan RFA. Sedation for upper gastrointestinal endoscopy: results of a nationwide survey. Gut 1991;32:12-15.

19. Saeian K, Townshend W, Rochling F, Bardan E, Dua K, Phadnis S, et al. Unsedated transnasal EGD: an alternative approach to conventional esophagogastroduodenoscopy for documenting Helicobacter pylori eradication. Gastrointest Endosc 1999;49:297-301.

20. Craig A, Hanlon J, Dent J, Schoeman M. A comparison of transnasal and transoral endoscopy with small-diameter endoscopes in unsedated patients. Gastrointest Endosc 1999; 49:292-6.

21. Hedenboro JL, Lindblom A. Patients Attitudes to Sedation for Diagnostic Upper Endoscopy. *Scand J Gastroenterol* 1991; 26:1115-1120.

22. Faulx AL, Catanzaro A, Zyzanski S, Cooper GS, Pfau PR, Isenberg G, Wong RCK, Sivak MV, Chak A. Patient tolerance and acceptance of unsedated ultrathin esophagoscopy. *Gastrointest Endosc* 2002; 55:620-623.

23. Raibrown, Anisha, Giblin, Lori J., Boyd, Linda D., and Perry, Kristen. Gastroesophageal Reflux Disease Symptom Screening in a Dental Setting. Journal of dental hygiene: JDH 2017. 91 (1) 44-48.

Intervention not of interest (n=2)

1. Choi KS, Kwak MS, Lee HY, Jun JK, Hahm MI, Park EC. Screening for gastric cancer in Korea: population-based preferences for endoscopy versus upper gastrointestinal series. *Cancer Epidemiol Biomarkers Prev* 2009; 18(5): 1390-1398.

2. Felley C, Perneger TV, Goulet I, Rouillard C, Azar-Pey N, Dorta G, Hadengue A, Frossard JL. Combined written and oral information prior to gastrointestinal endoscopy compared with oral information alone: a randomized trial. BMC. *Gastroenterol* 2008; 8: 22-.

Outcome not of interest (n=16)

1. Varia A, Patel MK, Tanikella R, Machicao VI, Fallon MB, Lukens FJ. Gender preference for the endoscopist among Hispanics: the results of a prospective study. *J Immigr Minor Health* 2014; 16(5): 990-993.

2. Lahat A, Assouline-Dayan Y, Katz LH, Fidder HH. The preference for an endoscopist specific sex: a link between ethnic origin, religious belief, socioeconomic status, and procedure type. *Patient Prefer Adherence* 2013; 7: 897-903.

3. Ramirez FC, Akins R, Shaukat M. Screening of Barrett's esophagus with string-capsule endoscopy: a prospective blinded study of 100 consecutive patients using histology as the criterion standard. *Gastrointestinal Endoscopy* 2008; 68(1): 25-31.

4. Essink-Bot ML, Kruijshaar ME, Bac DJ, Wismans PJ, ter Borg F, Steyerberg EW, Siersema PD. Different perceptions of the burden of upper GI endoscopy: an empirical study in three patient groups. *Quality of life research: an international journal of quality of life aspects of treatment, care and rehabilitation* 2007; 16(8): 1309-1318.

5. Jobe BA, Hunter JG, Chang EY, Kim CY, Eisen GM, Robinson JD, Diggs BS, O'Rourke RW, Rader AE, Schipper P, Sauer DA, Peters JH, Lieberman DA, Morris CD. Office-based unsedated small-caliber endoscopy is equivalent to conventional sedated endoscopy in screening and surveillance for Barrett's esophagus: a randomized and blinded comparison. *The American Journal of Gastroenterology* 2006; 101(12): 2693-2703.

6. Wilkins T, Gillies RA. Office-based unsedated ultrathin esophagoscopy in a primary care setting. *Annals of Family Medicine* 2005; 3(2): 126-130.

7. Chang JY, Talley NJ, Locke III GR, Katzka DA, Schleck CD, Zinsmeister AR, Dunagan KT, Wu TT, Wang KK, Prasad GA. Population screening for barrett esophagus: A prospective randomized pilot study. *Mayo Clinic Proceedings* 2011; 86(12): 1174-1180.

8. Alexandridis E, Inglis S, McAvoy NC, Falconer E, Graham C, Hayes PC, Plevris JN. Randomised clinical study: comparison of acceptability, patient tolerance, cardiac stress and endoscopic views in transnasal and transoral endoscopy under local anaesthetic. *Alimentary Pharmacology and Therapeutics* 2014; 40(5): 467-476.

9. Jolleys JC, Barnes RJ, Gear MW. A follow-up survey of patients with dyspepsia in one general practice. *J R Coll Gen Pract* 1978; 28(197): 747-751.

10. Shariff MK, Bird-Lieberman EL, O'Donovan M, Abdullahi Z, Liu X, Blazeby J, Fitzgerald R. Randomized crossover study comparing efficacy of transnasal endoscopy with that of standard endoscopy to detect Barrett's esophagus. *Gastrointest Endosc* 2012; 75(5): 954-961.

11. Stevenson GW, Norman G, Frost R, Somers S. Barium meal or endoscopy? A prospective randomized study of patient preference and physician decision making. *Clinical Radiology* 1991; 44(5): 317-321.

12. Dumortier J, Napoleon B, Hedelius F, Pellissier PE, Leprince E, Pujol B, Ponchon T. Unsedated transnasal EGD in daily practice: results with 1100 consecutive patients. *Gastrointest Endosc* 2003; 57(2): 198-204.

13. Dean R, Dua K, Massey B, Berger W, Hogan WJ, Shaker R. A comparative study of unsedated transnasal esophagogastroduodenoscopy and conventional EGD. *Gastrointest Endosc* 1996; 44(4): 422-424.

14. Hacker JF III, Chobanian SJ, Johnson DA, Winters C Jr, Cattau EL Jr. Patient preference in upper gastrointestinal studies: roentgenography versus endoscopy. *South Med J* 1987; 80(9): 1091-1093.

15. Preiss C, Charton JP, Schumacher B, Neuhaus H. A randomized trial of unsedated transnasal small-caliber esophagogastroduodenoscopy (EGD) versus peroral small-caliber EGD versus conventional EGD. *Endoscopy* 2003; 35(8): 641-646.

16. Birkner B, Fritz N, Schatke W, Hasford J. A prospective randomized comparison of unsedated ultrathin versus standard esophagogastroduodenoscopy in routine outpatient gastroenterology practice: does it work better through the nose? *Endoscopy* 2003; 35(8): 647-651.

Appendix 14: KQ2 List of potentially relevant ongoing studies

Trial Identifier	Title	Estimated Study Completion Date
ISRCTN35624133	Walk in nasal endoscopy (WINES) study: a pilot evaluation of the safety and feasibility, and cost savings of introducing a radically new approach to upper gastrointestinal (GI) endoscopy	December 2004
NCT02852161	The Accuracy and Acceptability of Magnet Assisted Capsule Endoscopy in the Diagnosis of Esophageal Pathology: a Pilot Study (MACE)	October 2017
NCT02729948	Use of a Tethered Capsule Endoscope in Screening for Barrett's Esophagus	August 2017
NCT02395471	Assessment of a Minimally Invasive Esophageal Cytology Collection System in Patients With Barrett's Esophagus or GERD Symptoms	June 2018
ISRCTN68382401	Barrett's Esophagus Trial 3 (BEST3): Cluster randomised controlled trial comparing the Cytosponge-TFF3 test with usual care to facilitate the diagnosis of oesophageal pre-cancer in primary care.	September 2019
NCT02445014	Pilot Study for Imaging of Barrett's Esophagus Using an Spectrally Encoded Confocal Microscopy Tethered Endoscopic Capsule	December 2018