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Guideline on screening for esophageal adenocarcinoma in patients with chronic gastroesophageal reflux disease – Clinician Summary

POPULATION

This guideline on screening for esophageal adenocarcinoma (EAC), Barrett esophagus or dysplasia (precursor conditions) applies to adults aged 18 years and older who have been diagnosed with chronic gastroesophageal reflux disease (GERD).

This recommendation does not apply to people with GERD exhibiting alarm symptoms (e.g. dysphagia, odynophagia, recurrent vomiting, unexplained weight loss, anemia, loss of appetite, or gastrointestinal bleeding), or to those diagnosed with BE (with or without dysplasia).

BURDEN OF ILLNESS

In 2019, an estimated 6 new cases of esophageal cancer were diagnosed per 100,000 Canadians. The 5-year net survival rate, estimated at 15%, is among the poorest of all cancer prognoses. Males have a higher incidence than females with an estimated 10 cases versus 2 cases per 100,000, respectively. Esophageal adenocarcinoma (EAC) is Canada's most common esophageal cancer type, followed by squamous cell carcinoma. Incidence has shifted, over the past 40 years, with rates of adenocarcinoma increasing and squamous cell carcinoma falling. This change may result from increases in adenocarcinoma-related risk factors (e.g., gastroesophageal reflux, obesity) and decreases in risk factors linked to squamous cell carcinoma (e.g., smoking).

The most important risk factors for EAC are precancerous conditions (e.g. Barrett esophagus, dysplasia), older age (≥50 years), GERD, male sex, family history, white race or ethnicity, abdominal obesity, and smoking. The natural history of EAC is believed to follow a sequential progression from GERD to BE to low grade dysplasia then high-grade dysplasia.

The prevalence of GERD with weekly symptoms in North America and Europe is estimated at 10 to 20% of the population. Approximately 5% to 15% of GERD patients develop BE versus 1% to 2% of the general population. Risk of developing EAC from BE increases from an estimated 0.3% per year without dysplasia to 0.5% with low grade dysplasia and 6% with high grade dysplasia. GERD is associated with a 5- to 7- times increased likelihood of developing EAC (35 with GERD versus 7 without GERD, EAC cases per 100 000 men at age 60), and 60% of patients with this cancer report a history of GERD.

RECOMMENDATION

- *We recommend not screening adults (≥18 years) with chronic GERD, for EAC or precursor conditions (Barrett esophagus, dysplasia) (strong recommendation; very low-certainty evidence).*

This recommendation does not apply to people exhibiting alarm symptoms or to those diagnosed with Barrett esophagus (with or without dysplasia).

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BASIS OF RECOMMENDATIONS

Although risk factors such as age (≥50 years), male sex, family history, white race or ethnicity, abdominal obesity, and smoking may increase the risk for EAC, relevant trials and cohort studies did not include sufficient data within each category to support modifying our screening recommendation based on these factors, either alone or in combination.

Overall certainty was very low for direct evidence on screening for EAC (i.e. comparing screening versus no screening). One retrospective cohort study reported that, although patients with a prior esophagogastroduodenoscopy (EGD) were statistically more likely to have a lower stage of EAC, there were no statistically significant survival differences (i.e., no benefit). One serious adverse event requiring hospitalization was reported following transnasal endoscopy (very low-certainty).

Some patients indicated a moderate willingness to be screened based on their judgement of the benefits and harms). However, actual participation in screening trials was low. Additionally, screening all adults with chronic GERD would require substantial health care system-wide resources.

Given the limited availability of direct evidence on screening effectiveness, the task force also examined indirect evidence on the effectiveness of treatment for BE, dysplasia or stage 1 EAC. An overview of systematic reviews showed that some endoscopic treatments may eradicate dysplasia but the evidence ranged from very low to low-certainty.

Because there were no meaningful differences in survival or other patient important outcomes, the task force recommends against screening for EAC and its precursor conditions. The recommendation is strong because, in its evidence- to- decision framework, the task force placed a high value on the system-wide resources required to screen all chronic GERD patients without evidence of benefit.

CONSIDERATIONS FOR IMPLEMENTATION

Clinicians should be aware of alarm symptoms (e.g., dysphagia, odynophagia, recurrent vomiting, unexplained weight loss, anemia, loss of appetite or gastrointestinal bleeding) for EAC and evaluate, refer, and manage patients accordingly. They should also apply clinical judgement for the investigation and management of those unresponsive to GERD treatment or with symptoms suggestive of other upper gastrointestinal disorders (e.g. dyspepsia).

EAC Clinician FAQ links:
English: https://canadiantaskforce.ca/esophageal-adenocarcinoma-clinician-faq
French: https://canadiantaskforce.ca/adenocarcinome-oesophagien-faq-pour-cliniciens/?lang=fr

EAC Patient FAQ links:
English: https://canadiantaskforce.ca/esophageal-adenocarcinoma-patient-faq
French: https://canadiantaskforce.ca/adenocarcinome-oesophagien-faq-pour-patients/?lang=fr