Ali MU, Fitzpatrick-Lewis D, Raina P, Warren R, Kenny M, Raina P. Screening for abdominal aortic aneurysm: Updated GRADE tables. http://canadiantaskforce.ca/guidelines/published-guidelines/abdominal-aortic-aneurysm/. Updated April 2017.

Screening for Abdominal Aortic Aneurysm (AAA) in Asymptomatic Men 65 Years of age and Older Evidence Synthesis

Population: The population of interest was

asymptomatic adults aged 50 years

and older

Option: Interventions of interest were general

or targeted screening for AAA with

ultrasound.

Comparison: Varied

Main outcomes:

AAA-related mortality

All-cause mortality

AAA rupture rate

Procedures to repair an AAA

 30-day mortality following procedures to repair an AAA

Setting: Primary care settings

Background: A systematic review on screening for AAA was produced for the Canadian Task Force on Preventive Health Care by the Evidence Review and Synthesis Centre at McMaster University in 2015.^{1,2}

The aim of this systematic review was to examine the evidence on benefits and harms of screening for abdominal aortic aneurysm by ultrasound in asymptomatic adults aged 50 years and older to inform a task force guideline on this topic.

The systematic review was updated to January 2017 prior to guideline publication. Through the updated search, one additional randomized controlled trial (RCT)¹ was identified for inclusion.

Purpose: This report was produced by the Evidence Review and Synthesis Centre Team at McMaster University to provide updated evidence profiles on screening for AAA that include findings from the recently published RCT.

Evidence Set (ES) 1. Benefits of One-Time Screening

- ES Table 1.1 GRADE Evidence Profile: Benefits of one-time screening
- ES Forest Plots Figure 1.1-1.3

Evidence Set (ES) 2. Harms of One-Time Screening

- ES Table 2.1 GRADE Evidence Profile: Harms of one-time screening
- ES Forest Plots 2.1-2.6

ES Table 1.1 GRADE Evidence Profile: Benefits of one-time screening (updated-2017)

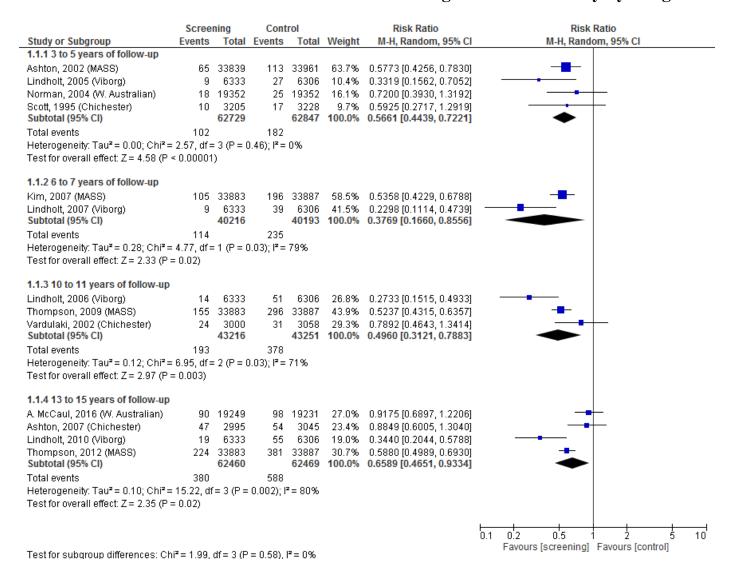
Quality	assessment						No of patients		Effect				Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Benefits of one- time screening	Control	Relative (95% CI)	Absolute per million	ARR	NNS (95% CI)		
AAA M	ortality - By	length of Fo	llow-up - 3 to 5 ye	ears of follow-up	(follow-up 3.6	to 5.0 years; asse	ssed with: Objec	tively)						
4 ³⁻⁶	randomised trials	serious ²	no serious inconsistency ³	no serious indirectness ⁴	no serious imprecision ⁵	none ⁶	102/62,729 (0.16%)	182/62,847 (0.29%)	RR 0.5661 (0.4439 to 0.7221)	1,257 fewer (from 805 fewer to 1,610 fewer)	0.13%		⊕⊕⊕O MODERATE	CRITICAL
AAA M	ortality - By	length of Fo	llow-up - 6 to 7 ye	ears of follow-up	(follow-up 5.9	to 7 years; assess	ed with: Objective	ely)			•		•	
$2^{7,8}$	randomised trials	serious ⁸	no serious inconsistency ⁹	no serious indirectness ¹⁰	no serious imprecision ¹¹		114/40,216 (0.28%)	235/40,193 (0.58%)	RR 0.3769 (0.166 to 0.8556)	3,643 fewer (from 844 fewer to 4,876 fewer)	0.36%		⊕⊕⊕O MODERATE	CRITICAL
AAA M	ortality - By	length of Fo	llow-up - 10 to 11	years of follow-	up (follow-up r	nean 10 years; as	sessed with: Obje	ectively)						
39-11	randomised trials	serious ¹³	no serious inconsistency ¹⁴	no serious indirectness ¹⁵	no serious imprecision ¹⁶	none ⁶	193/43,216 (0.45%)	378/43,251 (0.87%)	RR 0.4960 (0.3121 to 0.7883)	4,405 fewer (from 1,850 fewer to 6,012 fewer)	0.44%	227 (166 to 541)	⊕⊕⊕O MODERATE	CRITICAL
AAA M	AAA Mortality - By length of Follow-up - 13 to 15 years of follow-up (follow-up 12.8 to 15 years; assessed with: Objectively)**													
4 ¹²⁻¹⁵	randomised trials	serious ¹⁸	no serious inconsistency ¹⁹	no serious indirectness ²⁰	no serious imprecision ²¹	none ⁶	380/62460 (0.61%)	588/62469 (0.94%)	RR 0.6589 (0.4651 to 0.9334)	3211 fewer (from 627 fewer to 5035 fewer)	0.32%	311 (199 to 1595)	⊕⊕⊕O MODERATE	CRITICAL
All-caus	e Mortality -	By length o	f Follow-up - 3 to	5 years of follow	w-up (follow-up	3.6 to 5.0 years;	assessed with: O	bjectively)						
4 ³⁻⁶	randomised trials	serious ²³	no serious inconsistency ²⁴	no serious indirectness ²⁵	serious ²⁶	none ⁶	7,453/62,729 (11.9%)	7,953/62,847 (12.7%)	,RR 0.9449 (0.8758 to 1.0195)	6,973 fewer (from 15,717 fewer to 2,468 more)	NS	-	⊕⊕⊕O LOW	CRITICAL
All-caus	e Mortality -	By length o	f Follow-up - 6 to	7 years of follow	w-up (follow-up	5.9 to 7 years; as	ssessed with: Obj	ectively)						
2 ^{7,8}	randomised trials	serious ²⁸	no serious inconsistency ²⁹	no serious indirectness ³⁰	no serious imprecision ³¹		8,258/40,216 (20.5%)	8,571/40,193 (21.3%)	RR 0.9628 (0.9373 to 0.989)	7,933 fewer (from 2,346 fewer to 13,371 fewer)	0.79%		⊕⊕⊕O MODERATE	CRITICAL
All-caus	e Mortality -	By length o	f Follow-up - 10 t	o 11 years of fol	low-up (follow-	up mean 10 year	s; assessed with:	Objectively)						
$2^{9,10}$	randomised trials	serious ³²	no serious inconsistency ³³	no serious indirectness ³⁴	no serious imprecision ³⁵		12,458/ 40,216 (31%)	12,715/ 40,193 (31.6%)	RR 0.9791 (0.9593 to 0.9993)	6,612 fewer (from 221 fewer to 12,875 fewer)	0.66%		⊕⊕⊕O MODERATE	CRITICAL
All-caus	e Mortality -	By length o	f Follow-up - 13 t	o 15 years of fol	low-up (follow-	up 12.8 to 15 yea	rs; assessed with:	Objectively))**					
4 ¹²⁻¹⁵	randomised trials	serious ³⁷	no serious inconsistency ³⁸	no serious indirectness ³⁹	no serious imprecision ⁴⁰	none ⁶	28474/62460 (45.6%)	28899/62469 (46.3%)	RR 0.9868 (0.9753 to 0.9985)	6106 fewer (from 694 fewer to 11427 fewer)	0.61%	164 (88 to 1,441)	⊕⊕⊕O MODERATE	CRITICAL
	pture - By le	ngth of Foll	ow-up - 3 to 5 yea	ars of follow-up	(follow-up 3.6 t	o 5.0 years; asses	sed with: Objecti	vely)						
4 ^{3,5,6,16}	randomised	serious ⁴²	no serious	no serious	no serious	none ⁶	117/62,729	218/62,847	RR 0.5247	1,649 fewer (from	0.16%	606 (442	$\oplus \oplus \ominus O$	CRITICAL

	trials		inconsistency ⁴³	indirectness ⁴⁴	imprecision ⁴⁵		(0.19%)	(0.35%)	(0.3475 to 0.7922)	721 fewer to 2,263 fewer)		to 1,387)	MODERATE	
AAA Ru	AAA Rupture - By length of Follow-up - 6 to 7 years of follow-up (follow-up mean 7 years; assessed with: Objectively)													
11 '	randomised	no serious risk of bias ⁴⁷		no serious indirectness ⁴⁹	no serious imprecision ⁵⁰	Inone ^v	135/33,883 (0.4%)	257/33,887 (0.76%)	RR 0.5254 (0.4268 to 0.6467)	3,599 fewer (from 2,679 fewer to 4,347 fewer)	0.36%		⊕⊕⊕⊕ HIGH	CRITICAL
AAA Ru	AAA Rupture - By length of Follow-up - 10 to 11 years of follow-up (follow-up mean 10 years; assessed with: Objectively)													
,,,,,,,	randomised trials	cerionic		no serious indirectness ⁵⁴	no serious imprecision ⁵⁵	Inone [°]	207/40,216 (0.51%)	405/40,193 (1%)	RR 0.4663 (0.307 to 0.7083)	5,378 fewer (from 2,939 fewer to 6,983 fewer)	0.54%		⊕⊕⊕O MODERATE	CRITICAL
AAA Ru	AAA Rupture - By length of Follow-up - 13 to 15 years of follow-up (follow-up 12.8 to 15 years; assessed with: Objectively))**													
4 ¹²⁻¹⁵	randomised trials	serious ⁵⁷	no serious inconsistency ⁵⁸	no serious indirectness ⁵⁹	no serious imprecision ⁶⁰	Inone [°]	415/62460 (0.66%)	674/62469 (1.1%)		3781 fewer (from 1943 fewer to 5236 fewer)	0.38%		⊕⊕⊕O MODERATE	CRITICAL

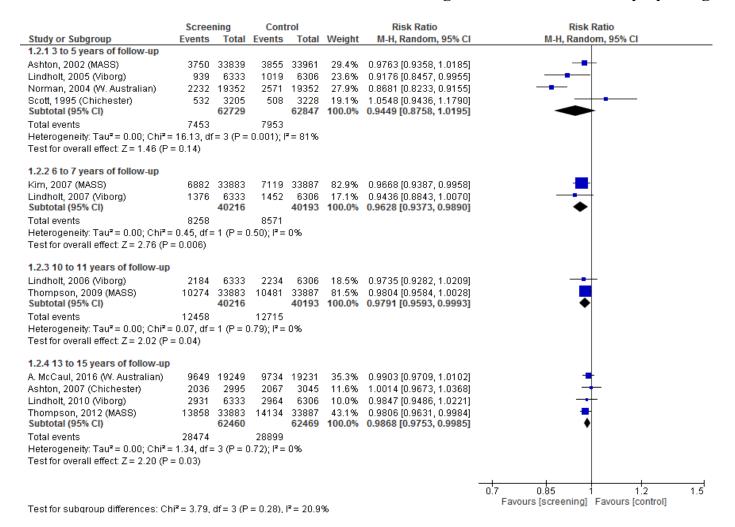
NOTE: NNH were calculated from Absolute numbers presented in GRADE tables. The GRADE tables estimate the absolute numbers per million using control group event rate and risk ratio with 95 % CI obtained from meta-analysis. NS = non-significant. The NNH were not calculated for 30-day mortality AAA operations, 30 day Mortality Elective AAA operations, 30 day Mortality Emergency AAA operations, emergency operations and emergent repairs for ruptures because either the effect was non-significant or showed a risk reduction in screening arm as compared to control arm.

^{**} Updated results based on the recently published Western Australia trial

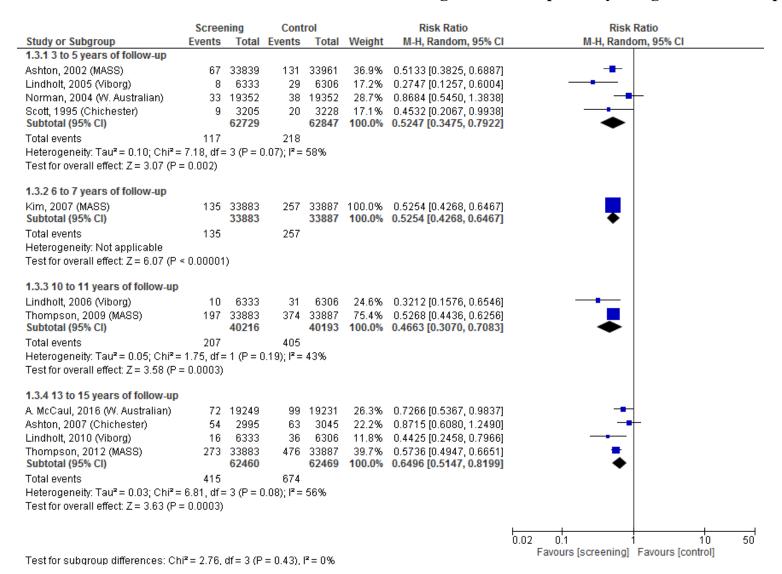
ES Forest Plot 1.1 Benefits of one-time AAA screening on AAA Mortality by Length of Follow-up



ES Forest Plot 1.2 Benefits of one-time AAA screening on All-Cause Mortality by Length of Follow-up



ES Forest Plot 1.3 Benefits of one-time AAA screening on AAA Rupture by Length of Follow-up



ES Table 2.1 GRADE Evidence Profile: Harms of one-time screening for AAA (updated -2017)

			Quality asses	ssment			No of p	oatients		Effect			Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Harms of	Control	Relative (95% CI)	Absolute per million	ARI	NNH (95% CI)		
	Iortality, A	AA operations -	By length of Follo	ow-up - 3 to 5 ye	ars of follow-up	(follow-up 3.6	to 5 years; a	ssessed wit	h: Objective	ely)				
3 ^{3,5,6}	randomised trials	serious ²	no serious inconsistency ³	no serious indirectness ⁴	no serious imprecision ⁵	none ⁶	29/501 (5.8%)	41/221 (18.6%)	RR 0.3086 (0.1967 to 0.4841)	128,269 fewer (from 95,710 fewer to 149,029 fewer)	I	_	⊕⊕⊕O MODERATE	CRITICAL
30 day M	Iortality, A	AA operations -	By length of Follo	ow-up - 6 to 7 ye	ars of follow-up	(follow-up mea	an 7 years; a	ssessed wit	h: Objective	ely)				
17	randomised trials	no serious risk of bias ⁸	no serious inconsistency ⁹	no serious indirectness ¹⁰	no serious imprecision ¹¹	none ⁶	31/495 (6.3%)	53/267 (19.9%)	RR 0.3155 (0.2078 to 0.4789)	135,875 fewer (from 103,439 fewer to 157,253 fewer)	ı	_	⊕⊕⊕⊕ HIGH	CRITICAL
	Iortality, A	AA operations -	By length of Follo	ow-up - 10 to 11	years of follow-	up (follow-up n	nean 10 year	s; assessed	with: Object	ctively)				
29,10	randomised trials	serious ¹³	no serious inconsistency ¹⁴	no serious indirectness ¹⁵	no serious imprecision ¹⁶	none ⁶	48/703 (6.8%)	86/436 (19.7%)	RR 0.3539 (0.2537 to 0.4937)	127,442 fewer (from 99,867 fewer to 147,206 fewer)	-	_	⊕⊕⊕O MODERATE	CRITICAL
	Iortality, A	AA operations -	By length of Foll	ow-up - 13 to 15	years of follow-	up (follow-up 1	2.8 to 15 year	ars; assesse	d with: Obje	ectively) **				
3 ¹³⁻¹⁵	randomised trials	serious ¹⁸	no serious inconsistency ¹⁹	no serious indirectness ²⁰	no serious imprecision ²¹	none ⁶	92/1299 (7.1%)	119/941 (12.6%)	RR 0.5546 (0.3856 to 0.7977)	56,326 fewer (from 25,583 fewer to 77,698 fewer)	-	_	⊕⊕⊕O MODERATE	CRITICAL
30 day M	Iortality, El	ective AAA ope	rations - By lengt	h of Follow-up -	3 to 5 years of f	collow-up (follow	v-up 3.6 to 5	years; ass	essed with:	Objectively)		<u> </u>	.	
4 ³⁻⁶	randomised trials	serious ²³	no serious inconsistency ²⁴	no serious indirectness ²⁵	no serious imprecision ²⁶	none ⁶	21/505 (4.2%)	13/162 (8%)	RR 0.5102 (0.2618 to 0.9944)	39,305 fewer (from 449 fewer to 59,238 fewer)	-	_	⊕⊕⊕O MODERATE	CRITICAL
30 day M	Iortality, El	ective AAA ope	rations - By lengt	h of Follow-up -		follow-up (follow	v-up mean 7	years; ass	essed with: (Objectively)				
	trials	no serious risk of bias ²⁸	no serious inconsistency ⁹	no serious indirectness ²⁹	serious ³⁰	none ⁶	18/450 (4%)	12/156 (7.7%)	RR 0.5200 (0.2563 to 1.0549)	36,923 fewer (from 57,208 fewer to 4,223 more)	-	_	⊕⊕⊕O MODERATE	CRITICAL
	Iortality, El		rations - By lengt	h of Follow-up -	10 to 11 years o	of follow-up (fol	low-up mea	n 10 years;	assessed wit	th: Objectively)				
39-11	randomised trials	serious ³²	no serious inconsistency ³³	no serious indirectness ³⁴	serious ³⁵	none ⁶	24/664 (3.6%)	14/272 (5.1%)	RR 0.6927 (0.3634 to 1.3204)	15,817 fewer (from 32,766 fewer to 16,491 more)	_	_	⊕⊕OO LOW	CRITICAL
30 day M	Iortality, El	ective AAA ope	rations - By lengt	h of Follow-up -	13 to 15 years o	of follow-up (fol	low-up 12.8	to 15 years	; assessed w	ith: Objectively) *	*			

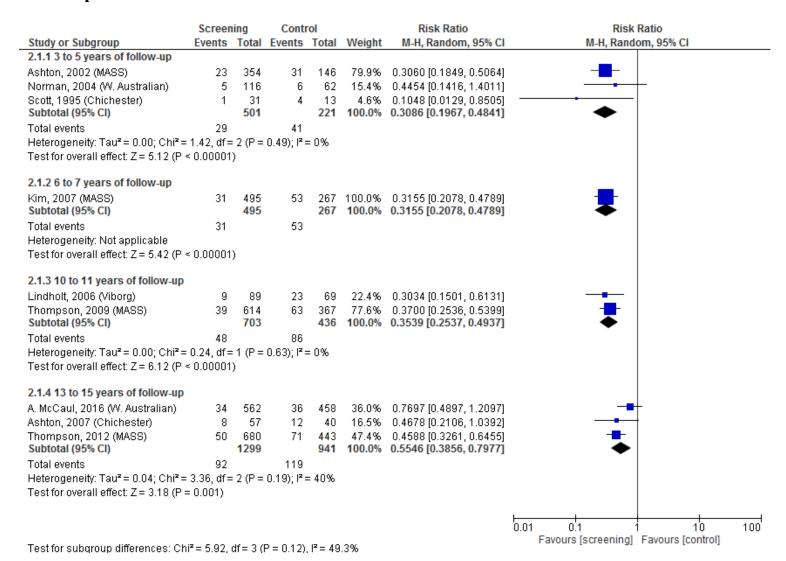
3 ^{10,14,15}	randomised trials	serious ³⁷	no serious inconsistency ³⁸	no serious indirectness ³⁹	serious ⁴⁰	none ⁶	44/1212 (3.6%)	32/720 (4.4%)	RR 0.7997 (0.5100 to 1.2540)	8,902 fewer (from 21,778 fewer to 11,289 more)	-	_	⊕⊕OO LOW	CRITICAL
	Aortality, E		operations - By le	ength of Follow-u		of follow-up (fo	ollow-up 3.6	to 5 years;	assessed wit	th: Objectively)				
3 ^{3,5,6}	randomised trials	serious ⁴²	no serious inconsistency ⁴³	no serious indirectness ⁴⁴	serious ⁴⁵	none ⁶	10/39 (25.6%)	29/70 (41.4%)	RR 0.6678 (0.3686 to 1.2098)	137,626 fewer (from 261,580 fewer to 86,917 more)	_		⊕⊕OO LOW	CRITICAL
30 day N	Mortality, E	nergency AAA	operations - By le	ength of Follow-u	ip - 6 to 7 years	of follow-up (fo	ollow-up me	an 7 years;	assessed wit	th: Objectively)				
17	randomised trials	no serious risk of bias ⁴⁷	no serious inconsistency ⁹	no serious indirectness ⁴⁸	serious ⁴⁹	none ⁶	13/45 (28.9%)	41/111 (36.9%)	RR 0.7821 (0.4655 to 1.314)	80,486 fewer (from 197,428 fewer to 115,982 more)	_	_	⊕⊕⊕O MODERATE	CRITICAL
30 day N	Mortality, E	nergency AAA	operations - By le	ength of Follow-u	ip - 10 to 11 year	rs of follow-up	(follow-up r	nean 10 yea	rs; assessed	with: Objectively))			
29,10	randomised trials	serious ⁵¹	no serious inconsistency ⁵²	no serious indirectness ⁵³	serious ⁵⁴	none ⁶	24/75 (32%)	72/181 (39.8%)	RR 0.8252 (0.5705 to 1.1938)	69,534 fewer (from 170,851 fewer to 77,092 more)	_		⊕⊕OO LOW	CRITICAL
30 day N	Mortality, En		operations - By le	ength of Follow-u	ıp - 13 to 15 year	rs of follow-up	(follow-up 1	2.8 to 15 ye	ars; assesse	d with: Objectively	y) **			
3 ¹³⁻¹⁵	randomised trials	serious ⁵⁶	no serious inconsistency ⁵⁷	no serious indirectness ⁵⁸	serious ⁵⁹	none ⁶	51/122 (41.8%)	88/231 (38.1%)	RR 1.0878 (0.8288 to 1.4278)	33,448 more (from 65,219 fewer to 162,971 more)	_	-	⊕⊕OO LOW	CRITICAL
AAA op	erations - B	v length of Follo	ow-up - 3 to 5 year	rs of follow-up (1	follow-up 3.6 to 5	5 vears; assesse	d with: Obj	ectively)			I.			
4 ³⁻⁶	randomised trials	serious ⁶¹	no serious inconsistency ⁶²	no serious indirectness ⁶³	no serious imprecision ⁶⁴	none ⁶	554/62,729 (0.88%)		RR 2.1600 (1.8179 to 2.5663)	4,651 more (from 3,280 more to 6,280 more)	0.47%	215 (159 to 305)	⊕⊕⊕O MODERATE	CRITICAL
AAA op	erations - By	y length of Follo	ow-up - 6 to 7 year	rs of follow-up (1	follow-up mean '	7 years; assesse	d with: Obj	ectively)						
17	randomised trials	no serious risk of bias ⁶⁶	no serious inconsistency ⁹	no serious indirectness ⁶⁷	no serious imprecision ⁶⁸	none ⁶	495/33,883 (1.5%)	267/33,887 (0.79%)	RR 1.8542 (1.5990 to 2.1500)	6,730 more (from 4,720 more to 9,061 more)	0.67%	149 (110 to 212)	⊕⊕⊕⊕ HIGH	CRITICAL
	erations - By		ow-up - 10 to 11 ye	ears of follow-up	(follow-up mea	n 10 years; ass								
39-11	randomised trials	serious ⁷⁰	no serious inconsistency ⁷¹	no serious indirectness ⁷²	no serious imprecision ⁷³	none ⁶	752/43,216 (1.7%)	469/43,251 (1.1%)	RR 1.5700 (1.3502 to 1.8255)	6,181 more (from 3,797 more to 8,951 more)	0.62%	162 (112 to 263)	⊕⊕⊕O MODERATE	CRITICAL
	erations - By	, 0	ow-up - 13 to 15 ye	ears of follow-up	(follow-up 12.8	to 15 years; as								
4 ¹²⁻¹⁵	randomised trials	serious ⁷⁵	no serious inconsistency ⁷⁶	no serious indirectness ⁷⁷	no serious imprecision ⁷⁸	none ⁶	1408/62460 (2.3%)	1029/62469 (1.6%)	RR 1.3549 (1.1696 to 1.5695)	5,846 more (from 2,794 more to 9,381 more)	0.58%	171 (107 to 358)	⊕⊕⊕O MODERATE	CRITICAL

Elective	operations -	By length of Fo	ollow-up - 3 to 5 y	ears of follow-up	o (follow-up 3.6	to 5 years; asse	ssed with: (Objectively)						
4 ³⁻⁶	randomised trials	serious ⁸⁰	no serious inconsistency ⁸¹	no serious indirectness ⁸²	no serious imprecision ⁸³	none ⁶	505/62,729 (0.81%)	162/62,847 (0.26%)	RR 3.2535 (2.1341 to 4.9603)	5,809 more (from 2,923 more to 10,208 more)	0.58%	172 (98 to 342)	⊕⊕⊕O MODERATE	CRITICAL
Elective	operations -	· By length of Fo	ollow-up - 6 to 7 y	ears of follow-u	o (follow-up mea	ın 7 vears; asse	ssed with: (Objectively)	, 000)	10,200 111010)		3.2)		
17	randomised trials	no serious risk of bias ⁸⁵	no serious inconsistency ⁹	no serious indirectness ⁸⁶	no serious imprecision ⁸⁷	none ⁶	450/33,883 (1.3%)	156/33,887 (0.46%)	RR 2.8850 (2.4062 to 3.4590)	8,678 more (from 6,473 more to 11,320 more)	0.87%	115 (88 to 154)	⊕⊕⊕⊕ HIGH	CRITICAL
Elective	operations -	By length of Fo	ollow-up - 10 to 11	years of follow-	-up (follow-up n	nean 10 years;	assessed wit	h: Objective	ely)	,			<u> </u>	
39-11	randomised trials		no serious inconsistency ⁹⁰	no serious indirectness ⁹¹	no serious imprecision ⁹²	none ⁶	(1.5%)	(0.63%)	(2.1221 to 2.8106)	9,070 more (from 7,057 more to 11,387 more)	0.91%	110 (88 to 142)	⊕⊕⊕O MODERATE	CRITICAL
	-		ollow-up - 13 to 15	5 years of follow-	-up (follow-up 1				• /					
4 ¹²⁻¹⁵	randomised trials	serious ⁹⁴	no serious inconsistency ⁹⁵	no serious indirectness ⁹⁶	no serious imprecision ⁹⁷	none ⁶	1266/62460 (2%)	754/62469 (1.2%)	RR 1.8314 (1.2946 to 2.5909)	10,035 more (from 3,556 more to 19,202 more)	1.00%	100 (52 to 281)	⊕⊕⊕O MODERATE	CRITICAL
Emerger	ncy operatio	ns - By length o	f Follow-up - 3 to	5 years of follow	v-up (follow-up	3.6 to 5 years; a	ssessed wit	h: Objective	ely)					
4 ³⁻⁶	randomised trials	serious ⁹⁹	no serious inconsistency ¹⁰⁰	no serious indirectness ¹⁰¹	no serious imprecision ¹⁰²	none ⁶	44/62,729 (0.07%)	90/62,847 (0.14%)	RR 0.4971 (0.2875 to 0.8595)	720 fewer (from 201 fewer to 1,020 fewer)	-	-	⊕⊕⊕O MODERATE	CRITICAL
Emerger	ncy operatio	ns - By length o	f Follow-up - 6 to	7 years of follow	v-up (follow-up	mean 7 years; a	ssessed wit	h: Objective	ely)					
17	randomised trials	no serious risk of bias ¹⁰⁴	no serious inconsistency ⁹	no serious indirectness ¹⁰⁵	no serious imprecision ¹⁰⁶	none ⁶	45/33,883 (0.13%)	111/33,887 (0.33%)	RR 0.4055 (0.2869 to 0.5731)	1,947 fewer (from 1,398 fewer to 2,336 fewer)	1	-	⊕⊕⊕⊕ HIGH	CRITICAL
	ncy operatio	• 0	f Follow-up - 10 t	o 11 years of foll	ow-up (follow-u	p mean 10 year	rs; assessed	with: Objec	ctively)					
39-11	randomised trials	serious ¹⁰⁷	no serious inconsistency ¹⁰⁸	no serious indirectness ¹⁰⁹	no serious imprecision ¹¹⁰	none ⁶	81/43,216 (0.19%)	194/43,251 (0.45%)	RR 0.4192 (0.3234 to 0.5433)	2,605 fewer (from 2,049 fewer to 3,035 fewer)	_	_	⊕⊕⊕O MODERATE	CRITICAL
-	ncy operatio	, ,	f Follow-up – 13 t	to 15 years of fol	low-up (follow-u	ıp 12.8 to 15 ye	ars; assesse	d with: Obj	ectively) **					
4 ¹²⁻¹⁵	randomised trials	serious ¹¹²	no serious inconsistency ¹¹³	no serious indirectness ¹¹⁴	no serious imprecision ¹¹⁵	none ⁶	142/62460 (0.23%)	275/62469 (0.44%)	RR 0.5183 (0.4232 to 0.6348)	2,121 fewer (from 1,608 fewer to 2,539 fewer)	_	_	⊕⊕⊕O MODERATE	CRITICAL

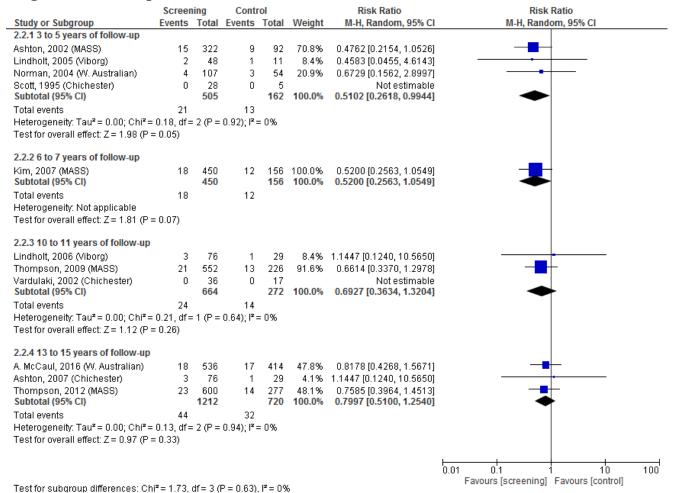
NOTE: NNH were calculated from Absolute numbers presented in GRADE tables. The GRADE tables estimate the absolute numbers per million using control group event rate and risk ratio with 95 % CI obtained from meta-analysis. NS = non-significant. The NNH were not calculated for 30-day mortality AAA operations, 30 day Mortality Emergency AAA operations, emergency operations and emergent repairs for ruptures because either the effect was non-significant or showed a risk reduction in screening arm as compared to control arm.

^{**} Updated results based on the recently published Western Australia trial

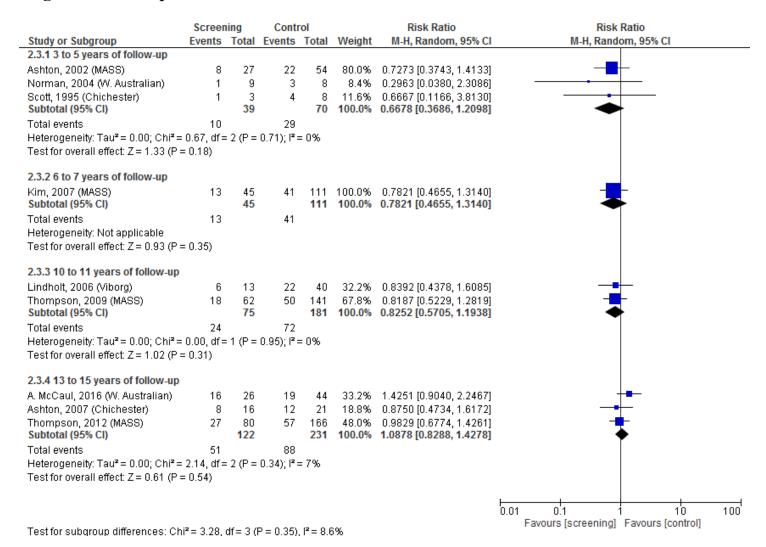
ES Forest Plot 2.1: Harms of one-time AAA screening: 30 day Mortality, AAA operations – By length of follow-up



ES Forest Plot 2.2: Harms of one-time AAA screening: 30 day Mortality, elective AAA operations – By length of follow-up



ES Forest Plot 2.3: Harms of one-time AAA screening: 30 day Mortality, emergency AAA operations – By length of follow-up



ES Forest Plot 2.4: Harms of one-time AAA screening: AAA operations – By length of follow-up

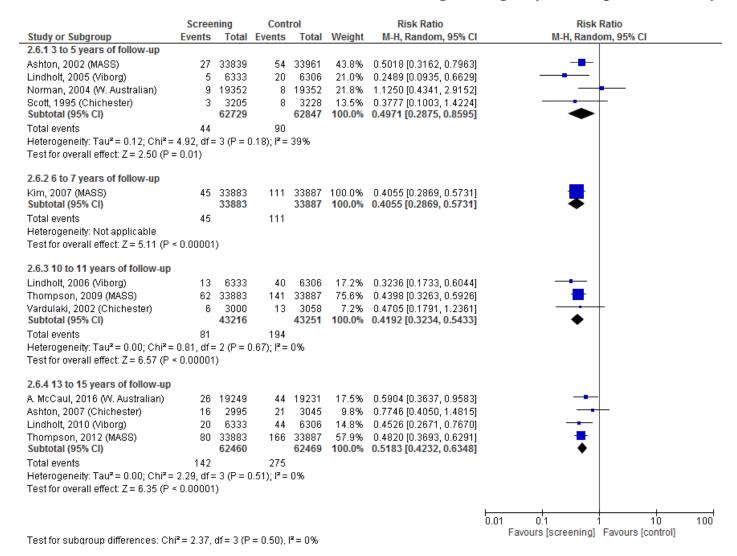
	Scree	ning	Cont	rol		Risk Ratio	Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
2.4.1 3 to 5 years of follow-up							
Ashton, 2002 (MASS)	354	33839	146	33961	53.2%	2.4334 [2.0079, 2.9490]	■
Lindholt, 2005 (Viborg)	53	6333	31	6306	13.9%	1.7024 [1.0944, 2.6481]	
Norman, 2004 (W. Australian)	116	19352	62	19352	26.1%	1.8710 [1.3754, 2.5451]	-
Scott, 1995 (Chichester) Subtotal (95% CI)	31	3205 62729	13	3228 62847		2.4017 [1.2591, 4.5812] 2.1600 [1.8179, 2.5663]	•
Total events	554		252				
Heterogeneity: Tau² = 0.00; Chi² = Test for overall effect: Z = 8.76 (P).32); l² =	14%			
2.4.2 6 to 7 years of follow-up							
Kim, 2007 (MASS) Subtotal (95% CI)	495	33883 33883	267			1.8542 [1.5990, 2.1500] 1.8542 [1.5990, 2.1500]	.
Total events	495		267				
Heterogeneity: Not applicable							
Test for overall effect; Z = 8.17 (P	< 0.00001)					
2.4.3 10 to 11 years of follow-up							
Lindholt, 2006 (Viborg)	89	6333	69	6306	20.0%	1.2844 [0.9397, 1.7554]	-
Thompson, 2009 (MASS)	614	33883	367	33887		1.6732 [1.4715, 1.9025]	
Vardulaki, 2002 (Chichester) Subtotal (95% CI)	49	3000 43216	33	3058 43251		1.5136 [0.9763, 2.3465] 1.5700 [1.3502, 1.8255]	<u>↓</u>
Total events	752		469				
Heterogeneity: Tau² = 0.00; Chi² =			0.30); l² =	18%			
Test for overall effect: Z = 5.86 (P	< 0.00001)					
2.4.4 13 to 15 years of follow-up							
A. McCaul, 2016 (W. Australian)	562	19249	458	19231	35.8%	1.2259 [1.0854, 1.3847]	■
Ashton, 2007 (Chichester)	57	2995	40	3045	10.5%	1.4488 [0.9701, 2.1637]	 •
Lindholt, 2010 (Viborg)	109	6333	88	6306	17.5%	1.2334 [0.9334, 1.6298]	 •
Thompson, 2012 (MASS)	680	33883	443	33887		1.5352 [1.3633, 1.7287]	• • • • • • • • • •
Subtotal (95% CI)		62460		62469	100.0%	1.3549 [1.1696, 1.5695]	♦
Total events Heterogeneity: Tau ² = 0.01; Chi ² = Test for overall effect: Z = 4.05 (P			1029 0.06); l² =	59%			
·	·						
							0.01 0.1 1 10 100
To alife when the supplier of			D 0.00				Favours [screening] Favours [control]
Test for subaroup differences: Ch	บร์ = 18 88	0.01 = 3.6	$P = 11 \Pi \Pi \Pi$	B) F = 8	(4.1%)		

ES Forest Plot 2.5: Harms of one-time AAA screening: elective AAA operations – By length of follow-up

	Scree	ning	Cont	rol		Risk Ratio	Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
2.5.1 3 to 5 years of follow-up							
Ashton, 2002 (MASS)	322	33839	92	33961	35.0%	3.5126 [2.7875, 4.4263]	★
Lindholt, 2005 (Viborg)	48	6333	11	6306	20.2%		
Norman, 2004 (W. Australian)	107	19352	54	19352	31.7%	1.9815 [1.4294, 2.7467]	-
Scott, 1995 (Chichester)	28	3205	5	3228	13.1%	5.6402 [2.1806, 14.5885]	
Subtotal (95% CI)		62729		62847	100.0%	3.2535 [2.1341, 4.9603]	•
Total events	505		162				
Heterogeneity: Tau ² = 0.12; Chi ² = 1	10.92, df	= 3 (P =	0.01); I^2 :	= 73%			
Test for overall effect: Z = 5.48 (P <	0.00001)					
2.5.2 6 to 7 years of follow-up							
Kim, 2007 (MASS)	450	33883	156		100.0%	2.8850 [2.4062, 3.4590]	
Subtotal (95% CI)		33883		33887	100.0%	2.8850 [2.4062, 3.4590]	◆
Total events	450		156				
Heterogeneity: Not applicable							
Test for overall effect: Z = 11.44 (P	< 0.0000	11)					
2.5.3 10 to 11 years of follow-up							
Lindholt, 2006 (Viborg)	76	6333	29	6306	10.9%	2.6095 [1.7037, 3.9970]	=
Thompson, 2009 (MASS)		33883	226	33887	83.2%	2.4428 [2.0940, 2.8496]	
Vardulaki, 2002 (Chichester)	36	3000	17	3058	6.0%	2.1586 [1.2152, 3.8345]	
Subtotal (95% CI)		43216		43251	100.0%	2.4422 [2.1221, 2.8106]	•
Total events	664		272				
Heterogeneity: Tau² = 0.00; Chi² = 1			0.87); I²=	0%			
Test for overall effect: Z = 12.46 (P	< 0.0000	11)					
05.440.45							
2.5.4 13 to 15 years of follow-up							<u>-</u>
A. McCaul, 2016 (W. Australian)		19249		19231	29.7%	1.2935 [1.1396, 1.4682]	•
Ashton, 2007 (Chichester)	41	2995	19	3045	17.6%	2.1939 [1.2765, 3.7708]	
Lindholt, 2010 (Viborg)	89	6333	44	6306	23.2%	2.0141 [1.4059, 2.8855]	-
Thompson, 2012 (MASS)	600	33883	277	33887	29.4%	2.1663 [1.8803, 2.4958]	
Subtotal (95% CI)		62460		02409	100.0%	1.8314 [1.2946, 2.5909]	-
Total events	1266		754		.,		
Heterogeneity: Tau ^z = 0.10; Chi ^z = 3			0.00001); I*= 90'	%		
Test for overall effect: Z = 3.42 (P =	: U.UUU6)						
							0.02 0.1 1 10 50
				²= 56 6º			Favours [screening] Favours [control]

Test for subgroup differences: $Chi^2 = 6.92$, df = 3 (P = 0.07), $I^2 = 56.6\%$

ES Forest Plot 2.6: Harms of one-time AAA screening: emergency AAA operations – By length of follow-up



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