

The future of AAA screening: the changing epidemiology especially persistent declining prevalence mandates changes in screening recommendations

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No disclosures

AAA-repair
 an exceptionally effective treatment

NNT < 2
 to prevent one AAA-related death

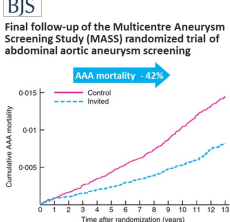


All it takes is to find it in time



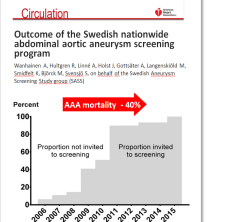
Screening men for AAA
 cost-effectively reduces AAA mortality

BJS
 Final follow-up of the Multicentre Aneurysm Screening Study (MASS) randomized trial of abdominal aortic aneurysm screening



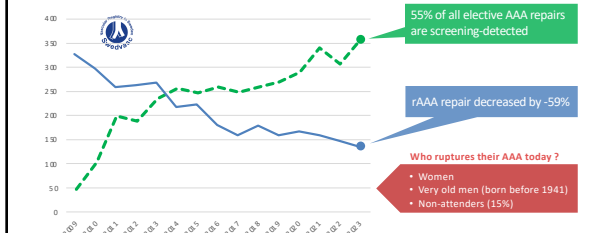
AAA mortality -42%

Circulation
 Outcome of the Swedish nationwide abdominal aortic aneurysm screening program



AAA mortality -40%

Introduction of screening associated with fewer rAAAs

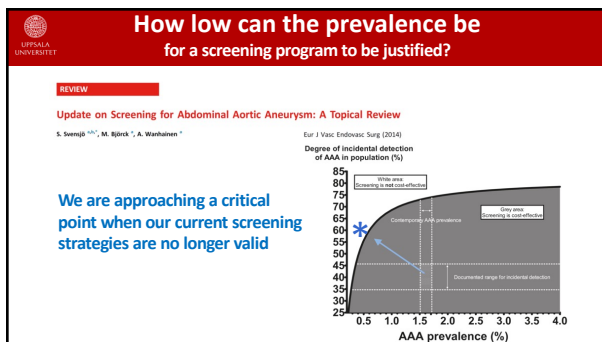
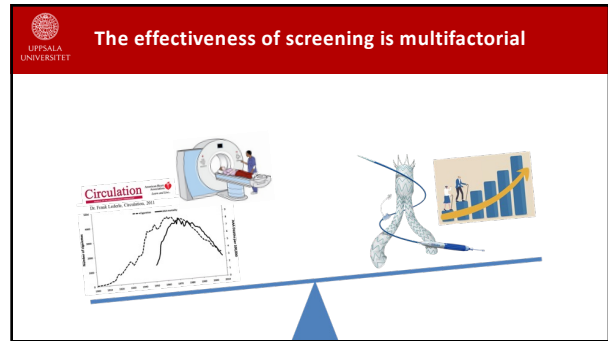
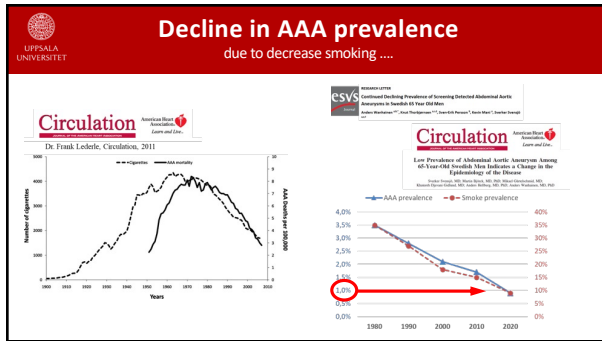


55% of all elective AAA repairs are screening-detected

rAAA repair decreased by -59%

Who ruptures their AAA today?

- Women
- Very old men (born before 1941)
- Non-attenders (15%)



Updated screening recommendation

CLINICAL PRACTICE GUIDELINE DOCUMENT

European Society for Vascular Surgery (ESVS) 2024 Clinical Practice Guidelines on the Management of Abdominal Aorto-Iliac Artery Aneurysms¹

Recommendation 11 Changed

Ultrasound screening for the early detection of abdominal aortic aneurysm is recommended in high risk populations* to reduce death from aneurysm rupture.

Class	Level	References	ToE
I	A	Lederle et al. (2000), ¹¹⁹ Wanhainen et al. (2016), ¹¹⁹ Scott et al. (1995), ¹²⁷ Ashton et al. (2002), ¹²⁸ Thompson et al. (2009), ¹²⁹ Lindholt et al. (2005), ¹³⁰ Norman et al. (2004), ¹³⁴ Conford and Lend (2007), ¹³⁵ Guirguis-Riske et al. (2014) ¹³⁶	

* What can be considered a high risk group varies based on local conditions, such as disease prevalence, life expectancy, and healthcare structure; see Table 6.

Target population for AAA screening

CLINICAL PRACTICE GUIDELINE DOCUMENT

European Society for Vascular Surgery (ESVS) 2024 Clinical Practice Guidelines on the Management of Abdominal Aorto-Iliac Artery Aneurysms¹

Table 6. Potential for abdominal aortic aneurysm screening in different risk populations.

Risk group	Potential for screening	
	Men	Women
65 year old	++	—
65 year old former or current smoker	+++	—
Non-white ethnicity	—	—
First degree relative with abdominal aortic aneurysm	+++	+++
Other peripheral aneurysms	+++	+++
Cardiovascular disease	—	—
Organ transplanted	++	++

Suitable target population for AAA screening

Cost-effectiveness of targeted screening for abdominal aortic aneurysm in siblings

R. Hakola^{1,2}, A. Tahvanainen^{1,2,3} and E. Suominen^{1,2,3,4}

British Journal of Surgery 2008; 95: 371–375

Risk of new aneurysms after surgery for popliteal artery aneurysm

H. Bawa^{1,2}, A. Wanhainen^{1,2} and M. Björck^{1,2}

British Journal of Surgery 2008; 95: 371–375

Table 6. Potential for abdominal aortic aneurysm screening in different risk populations.

Risk group	Potential for screening	
	Men	Women
65 year old	+	—
65 year old former or current smoker	++	—
Non-white ethnicity	—	—
First degree relative with abdominal aortic aneurysm	+++	+++
Other peripheral aneurysms	+++	+++
Cardiovascular disease	—	—
Organ transplanted	++	++

Suitable target population for AAA screening

Table 6. Potential for abdominal aortic aneurysm screening in different risk populations.

Risk group	Potential for screening	
	Men	Women
65 year old	+	+
65 year old former or current smoker	++	++
Non-white ethnicity	++	++
First degree relative with abdominal aortic aneurysm	+++	+++
Other peripheral aneurysms	+++	+++
Cardiovascular disease	++	++
Organ transplanted	++	++

Not suitable for AAA screening

Table 6. Potential for abdominal aortic aneurysm screening in different risk populations.

Risk group	Potential for screening	
	Men	Women
65 year old	+	+
65 year old former or current smoker	++	++
Non-white ethnicity	++	++
First degree relative with abdominal aortic aneurysm	+++	+++
Other peripheral aneurysms	+++	+++
Cardiovascular disease	++	++
Organ transplanted	++	++

Sub-aneurysm (25-29 mm)

Long Term Outcome of Screen Detected Sub-Aneurysmal Aortas in 65 Year Old Men: a Single Scan After Five Years Identifies Those at Risk of Needing AAA Repair

50% reach threshold for repair (50mm) within 10 years

Sub-aneurysm (25-29 mm)

CLINICAL PRACTICE GUIDELINE DOCUMENT

European Society for Vascular Surgery (ESVS) 2024 Clinical Practice Guidelines on the Management of Abdominal Aorto-Iliac Artery Aneurysms

Recommendation 13 Changed

Men should be considered for imaging surveillance using ultrasound, every five years for a sub-aneurysmal aorta 25 – 29 mm in diameter; every three years for abdominal aortic aneurysms 30 – 39 mm in diameter, annually for aneurysms 40 – 49 mm, and every six months for aneurysms ≥ 50 mm, taking into account life expectancy, suitability for future repair, and patient preferences.

Class	Level	References	ToU
IIa	B	Prendes et al. (2023), ¹⁷⁴ Brown et al. (2013), ¹⁷⁵ Svensjö et al. (2014), ¹⁷⁶ Thompson et al. (2012), ¹⁷⁴ Oliver-Williams et al. (2018), ¹⁷⁵ Wild et al. (2013), ¹⁷⁵ Thorbjørnsen et al. (2021), ¹⁷⁷ Hamed et al. (2018), ¹⁷⁴ Sjøgaard et al. (2012), ¹⁷⁹ Rockley et al. (2020) ¹⁸⁰	

Conclusion

A typical vascular surgeon on-call vs. A Swedish vascular surgeon on-call