

# THE IMPORTANCE OF DETECTION OF SAC GROWTH AFTER ENDOVASCULAR AORTIC ANEURYSM REPAIR

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**NICE**  
National Institute for  
Health and Care Excellence

# Disclosure

## Speaker Names:

*Roger Greenhalgh*

I have the following potential conflicts of interest to report:

Receipt of grants/ research support

Receipt of honoraria and travel support

Employment in industry

Shareholder in a healthcare company

Owner of a healthcare company

I do not have any potential conflict of interest

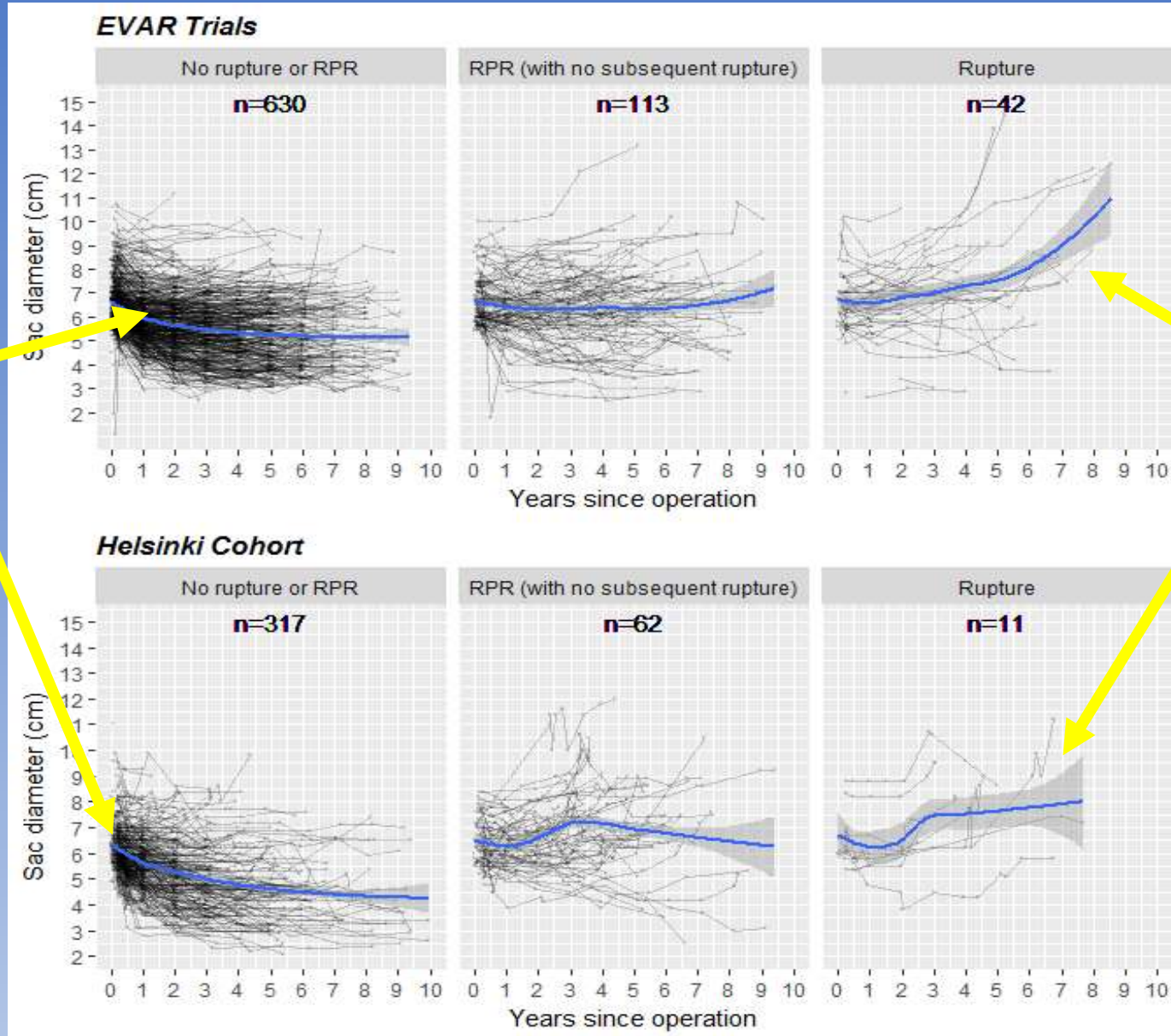
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# Department of Health Disclaimer

The views and options expressed herein are those of the authors and do not necessarily reflect those of the HTA programme, NIHR. National health Service or the Department of Health.

# Trajectories of aneurysm sac diameter over follow-up, by type of event



44% safe

85% unsafe

# The “Cluster” of Wyss et al 2010

Type I Endoleak		Ia	- Sac Expansion		<b>Deadly &amp; Urgent</b>
		Ib			
Type III Endoleak			- Sac Expansion		
Migration (Type Ia Endoleak)			- Sac Expansion		
Kinking (Type Ia Endoleak)			- Sac Expansion		
Type II Endoleak			- Sac Expansion		

**All associated with secondary sac rupture (67% mortality)**

*Wyss TR, Brown LC, Powell JT, Greenhalgh RM*

Rate and Predictability of Graft Rupture After Endovascular and Open Abdominal Aortic Aneurysm Repair: Data From the EVAR Trials.

*Annals of Surgery 252(5) Nov 2010*

# Discrete Event Simulation

Predictive model constructed  
to estimate incidence of  
complications, ruptures and deaths that  
**would have**  
occurred under alternative  
surveillance protocols

Patients need benefit now not after another  
15 years at high cost of repeat trial  
**ARTIFICIAL INTELLIGENCE**

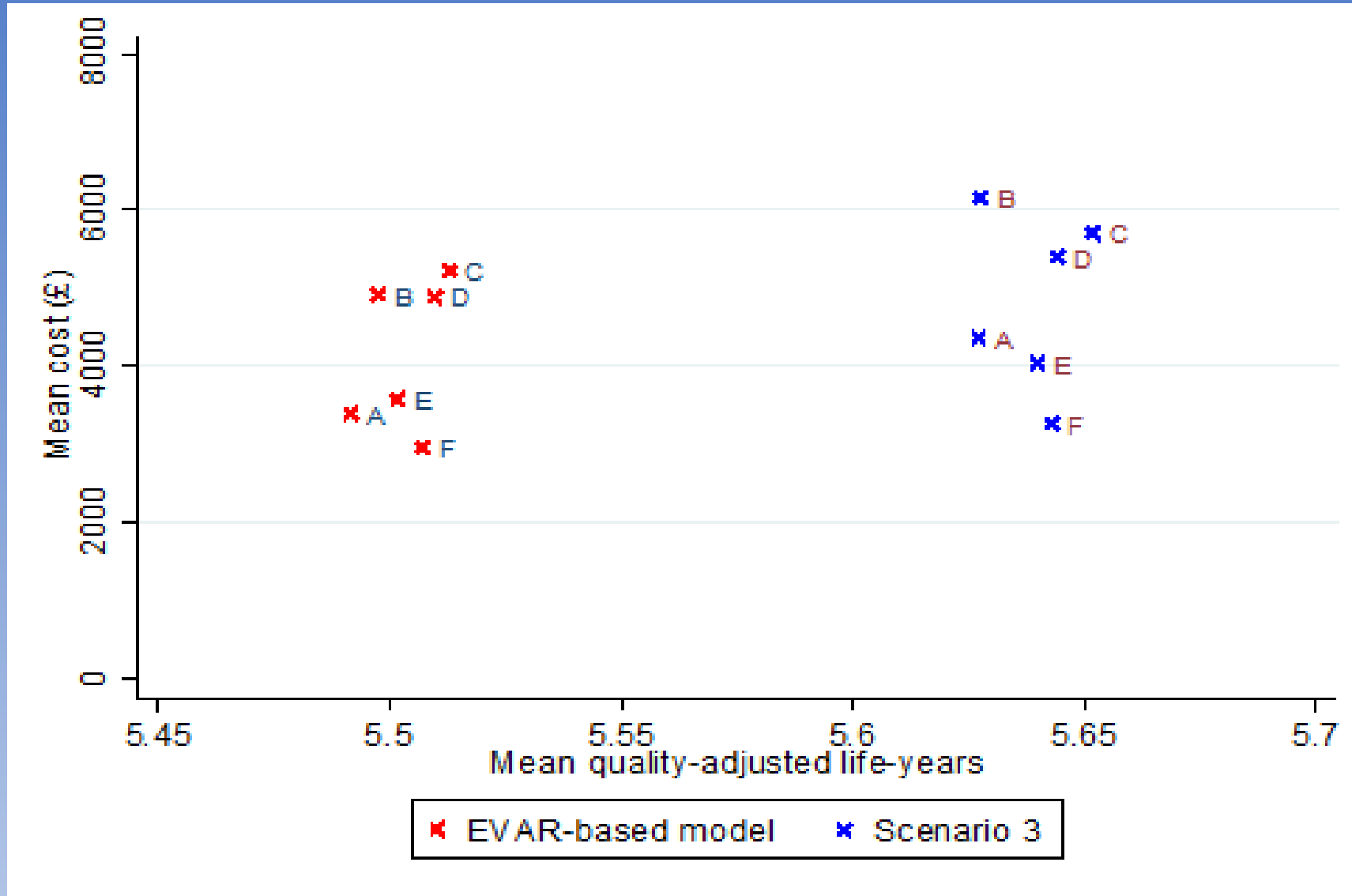
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*Annals of Surgery, Online 7<sup>th</sup> October 2019*

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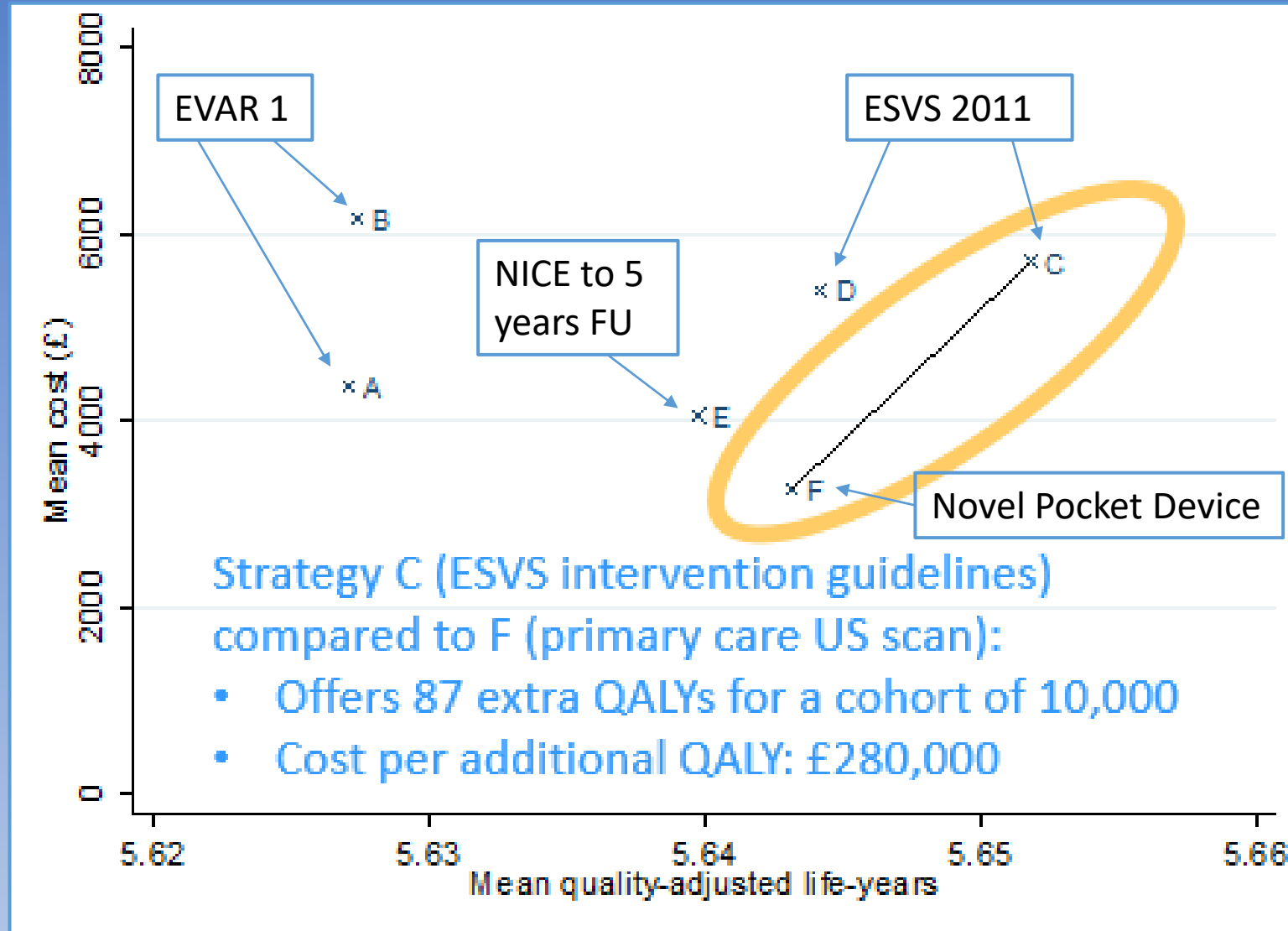
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# DETECT

Detection of EVAR sac expansion using ultrasound surveillance

Towards Primary Care EVAR surveillance

Medical Device study using novel hand-held ultrasound probe

# Co-DETECT

Detection of EVAR sac expansion using ultrasound surveillance  
Missed Abdominal Aortic Aneurysm (AAA) Before and After Operation