

EVAR in management of Infra renal **Abdominal Aortic Aneurysm**

Essay

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By

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List of Abbreviations

AAA	Abdominal Aortic Aneurysm	FBN1	fibrillin 1
ACTA2	muscle alpha actin 2	HRQL	health-related quality of life
AUI	aorta uni iliac	IMA	inferior mesenteric artery
AXR	Plain Abdominal X-Ray	IVUS	intravascular ultra sound
CAD	Coronary artery disease	MMPs	matrix metalloproteinases
CEUS	contrast enhanced ultra sound	MRA	magnetic resonance angiography
C F L / CLL	central flow line/ central luminal line	MYH11	smooth muscle myosin heavy chain 11
CIN	contrast induced nephropathy	OSR	open surgical repair
COPD	chronic obstructive pulmonary disease	PTFE	polytetrafluoroethylene
DUS	duplex ultra sound	SCI	spinal chord ischemia
EDS	ehlar danlos syndrome	SMA	superior mesenteric artery
EVAR	endovascular abdominal aortic aneurysm repair	TEVAR	thoracic endovascular aneurysm repair

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INTRODUCTION

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Abdominal Aortic Aneurysms had always been one of the most serious causes of mortality in the past decades until recently. Thanks to the modern advances in medicine and the technological revolution in Imaging and endograft Industry, Treatment of Abdominal Aortic Aneurysms no longer imposes that high mortality risk it previously had. (**Jackson RS, et al 2012**)¹

Four randomised controlled trials have now been published comparing EVAR with open surgical repair (OSR); the UK EVAR 1 Trial (**Greenhalgh et al. 2004**)², the Dutch DREAM Trial (**Prinssen et al. 2004**)³, the US OVER Trial (**Lederle et al. 2009**)⁴ and the French ACE Trial .(**Becquemin et al. 2011**)⁵

Patients at greatest risk for Abdominal Aortic Aneurysm (AAA) are men who are older than 65 years and have peripheral atherosclerotic vascular disease. A history of smoking often is elicited. Accordingly, in 2005, the US Preventive Services Task Force (USPSTF) recommended ultrasonography screening in men aged 65-75 years who had ever smoked. As of June 2014, these recommendations were being updated on the basis of evidence from a 2014 study. **(Guirguis B, et.al 2014)**⁶

Not all patients with an AAA are suitable for endovascular repair. The most common reasons to reject a patient based on anatomical configurations include Visceral and renal supply, Diameter of the proximal neck, angulation and conical nature of the proximal neck as well as calcification and mural thrombosis in it. **(Sternbergh WC III, et al 2002)**⁷

EVAR (Endovascular Abdominal Aortic Aneurysm Repair) is now a commonly available option for a growing population of patients requiring treatment for AAAs. Some advantages of EVAR over traditional open surgery include shorter hospital stays, fewer postoperative complications, and greatly reduced recovery time; the treatment technique may also result in less operative blood loss. **(Jackson RS, et al 2012)**¹

New devices with fenestrations and branches have increased the number of patients who are good candidates for EVAR, reducing the population of individuals who would otherwise be resigned to “watchful waiting” for their aneurysms. Recent research now demonstrates that EVAR offers reduced mortality rates compared with open repair. (**Jackson RS, et al 2012**)¹

Historical Perspective