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## Overdiagnosis Risk In Abdominal Aortic Aneurysm Screening



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It is unknown whether the benefits outweigh the risks of screening for abdominal aortic aneurysm (AAA). AAA involves the swelling of the main blood vessel that leads away from the heart and down through the abdomen. An undetected rupture in the wall of the artery is fatal in 80 percent of cases, most of which involve men older than age 65, with smoking increasing the risk.

AAA can be detected during screening procedures, and surgery can repair damage, dropping the mortality rate to just 4-5 percent. Sweden, the UK and the US have all introduced screening programs over the past 15 years. However, researchers at Scandinavian two universities argue that such screening raises AAA prevalence despite a relatively low risk of rupture. Patients who have aneurysms detected must be monitored for life.

A report in the BMJ examines the benefits and risks of AAA screening, as part of a series of articles focused on the harms experienced by patients due to overdiagnosis. As diagnostic technologies improve and the definitions of diseases expand, more people are being diagnosed with AAA and other conditions. It is estimated that 176 of every 10,000 men are overdiagnosed when they are invited to be screened.

"These men are unnecessarily turned into patients and may experience appreciable anxiety throughout their remaining lives. Moreover, 37 of these men unnecessarily have preventive surgery and 1.6 of them die as a consequence," write the authors from the University of Gothenburg in Sweden and the University of Copenhagen in Denmark.

AAA is more common among smokers. In the US, AAA screening is recommended for men between the ages of 65 and 75 if they have ever smoked. As smoking rates have dropped, so has the prevalence of AAA. "When the incidence of the condition screened for decreases, the potential benefits also decrease," the researchers say.

The benefit-to-harm ratio of AAA screening has therefore changed since the 1980s and 1990s, when four randomised controlled trials resulted in the decision to implement the screening. The authors argue that the topic of aneurysm screening for older men should be reconsidered in light of the latest research.

"Screening programmes have changed the meaning of an AAA diagnosis from a life threatening condition to a risk factor. AAA screening programmes should be revisited because of reduced benefits in modern populations and because data suggest considerable harm," they authors conclude.

They also point out that plans to reduce the threshold for AAA diagnosis from 30 mm to 25 mm will substantially increase the rate of prevalence, potentially affecting twice as many patients.

The harm of overdiagnosis is that symptomatic patients who are considered to be at risk are kept under medical surveillance for life. Some will have unnecessary preventive surgery, which is associated with additional risk. The psychosocial consequences are more difficult to measure and have not been adequately investigated, the researchers caution.

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