

Even high-risk patients can benefit from aortic aneurysm repair

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Minimally invasive surgery can prevent a fatal rupture of an abdominal aortic aneurysm.

And now a new study has found the procedure can extend lives even in [patients](#) who are at high risk for surgery due to such risk factors such as advanced age, diabetes, smoking and [kidney disease](#).

However, not all high-risk patients - especially those undergoing cancer treatment—benefit, the study found. The decision on whether to perform the procedure "should be individualized, depending on the number and severity of risk factors," reported corresponding author Pegge Halandras, MD, and colleagues from Loyola University Medical Center.

The study is published in the *Journal of Vascular Surgery*.

An [abdominal aortic aneurysm](#) (AAA) is a bulge in the aorta, the major blood vessel that extends down to the abdomen. A large aneurysm is life threatening. At any time, it could suddenly burst, causing massive and fatal internal bleeding.

The minimally invasive procedure is called an endovascular aneurysm repair (EVAR). The surgeon uses a wire and catheter to deploy a stent graft (a tube supported by metal webbing). Once deployed, the stent graft expands outward to the walls of the artery. Blood subsequently flows safely through the tubelike stent, rather than through the bulging

aneurysm. An EVAR procedure is much less invasive than traditional open surgery to repair an aneurysm.

The study included 247 patients who had AAAs located below their kidneys and underwent the EVAR procedure at Loyola University Medical Center and its affiliated Edward Hines, Jr. VA Hospital; 172 patients were rated as normal risk for surgery and 75 patients were rated high risk. None of the high-risk patients and 1.2 percent of the normal-risk patients died within four weeks of surgery. Eighty-five percent of high-risk patients were alive at one year, and 65 percent were alive at four years. While this is worse than the 93 percent four-year survival of normal-risk patients, it compares favorably to the 36 percent four-year survival reported in an earlier trial called EVAR-2. EVAR-2 was a prospective, randomized trial that compared EVAR to medical management in high-risk patients.

The Loyola study found, for the first time, that following an EVAR [procedure](#), the greatest risk predictor of mortality was treatment for cancer. This was followed, in order, by home oxygen dependency, advanced age, advanced (stage 4 or 5) kidney disease and congestive heart failure.

The study suggests EVAR should not be offered to patients with four or more risk factors. In patients with two or three risk factors, individualized decisions should be made, balancing the risks of EVAR against the risks of non-operative therapy. For patients with one risk factor or no [risk factors](#), EVAR may be offered with excellent anticipated outcomes.

"The results of this study could potentially be used as a guide to assist clinicians in their selection of patients to ensure the benefits and durability of EVAR," researchers concluded.

Provided by Loyola University Health System

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