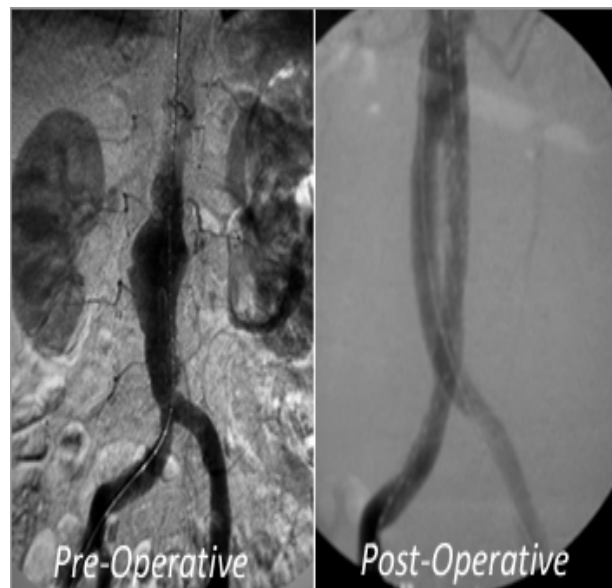


Peripheral arterial disease (PAD) is a disease in which plaque builds up in the arteries that carry blood to the head, organs, and limbs. Plaque is made up of fat, cholesterol, calcium, fibrous tissue, and other substances in the blood. When plaque builds up in the body's arteries, the condition is called atherosclerosis. A serious manifestation of PAD is an aneurysm that involves the aorta, the major artery which supplies blood to all organs and limbs. The aorta bulges at the site of the aneurysm like a weak spot on an old worn tire. The aorta is called the abdominal aorta after it has passed the diaphragm and continues down the abdomen. The abdominal aorta ends where it splits to form the two iliac arteries that go to the legs. Aortic aneurysms can develop anywhere along the length of the aorta. The majority, however, are located along the abdominal aorta (known as AAA). Most (about 90%) of abdominal aneurysms are located below the level of the renal arteries, the vessels that leave the aorta to go to the kidneys. In the United States, AAAs occur in an estimated 5%–7% of the population older than 60 years of age, often as an unrecognized disease. With a high propensity for rupture, AAAs are the 15th leading cause of death overall in the United States and the 10th leading cause of death in men older than age 55, with approximately 9,000 AAA-related deaths occurring annually.



Risk Factors:

- Smoking
- High Blood Pressure
- Diabetes
- High Cholesterol
- Family history of stroke, heart attack, or PAD
- Age (>65)
- Prior history of coronary heart disease or peripheral vascular disease
- Obesity

Repair of an abdominal aneurysm in the past involved major open surgical repair that was associated with high morbidity and mortality. Endovascular aneurysm repair (EVAR) for AAA

represents an advance in patient care, serving as an effective alternative to traditional open surgical AAA repair, and is now the most common treatment method for AAA repair in the United States. Endovascular abdominal aortic aneurysm repair is defined as treatment of an AAA through image-guided placement of a stent-graft device (endoprosthesis) within the native abdominal aorta, securing device fixation to the vascular wall proximal and distal to the diseased aneurysmal segment, thus eliminating AAA sac pressurization. EVAR stent-graft devices have three components, consisting of a delivery system for graft introduction and deployment; a high radial force, self-expanding metallic stent framework that supports the endoprosthesis and allows for vascular attachment; and graft fabric that excludes the aneurysm and serves as a new conduit for blood flow. Successful EVAR requires suitable proximal and distal landing zones for stable fixation and complete sealing of the endoprosthesis to the vascular wall.

