

What is Endovascular Aneurysm Repair (EVAR)?

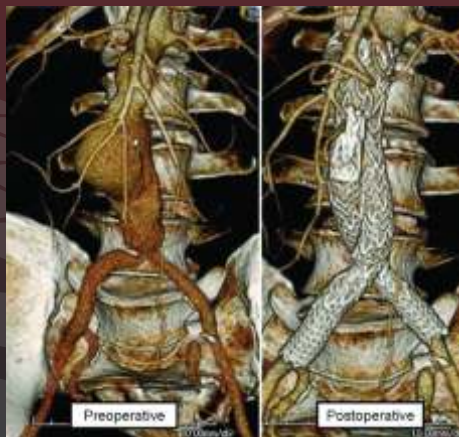
A stent-graft is inserted into the aorta through the femoral arteries (main arteries of groin), through two short incisions, one in each groin. It is then positioned and deployed across the aneurysm and seals the aneurysm at the top and bottom. This re-lines the aorta from the inside and prevents blood from flowing into the aneurysm and causing further enlargement and rupture.



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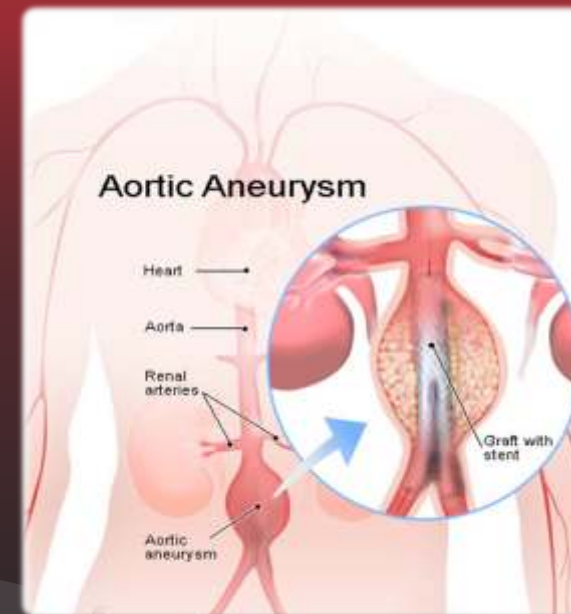
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AORTIC ANEURYSM

A "Silent Killer"



Open Surgery

EVAR

Performed under a general anesthetic.	Performed under a regional or spinal anesthetic
Requires an abdominal incision, which is much larger and more uncomfortable.	Performed through small groin incisions; Now it can be performed percutaneously.
Length of hospital stay would be approximately 10 days.	Hospital stay following EVAR is about 1-2 days.
Blood-loss in open surgical repair is generally greater and often patients require blood transfusion.	Minimal blood-loss during EVAR; usually no need for blood transfusion.

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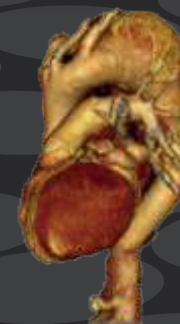
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Patient Information Leaflet by
ASIA PACIFIC VASCULAR SOCIETY



Endovascular
Repair of
Aortic
Aneurysm



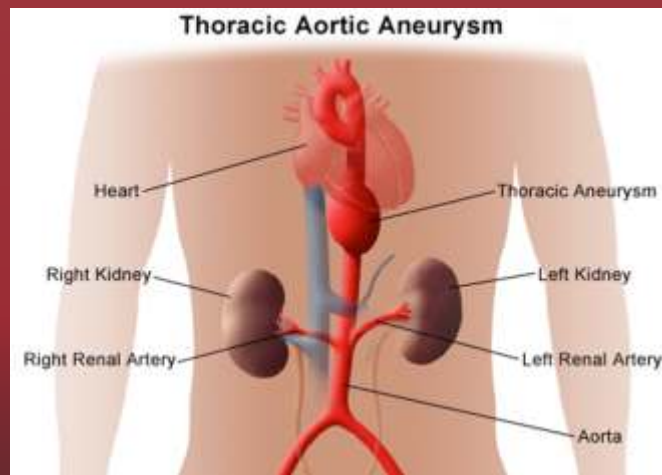
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What is an Aortic Aneurysm?

An aneurysm is a swelling of an artery. The wall of the artery becomes thin and weak by the loss of its elastic tissue, causing the artery to dilate. The most common artery to be affected is the aorta.

The aorta is the main artery in the body. It runs from the heart, through the chest and abdomen and supplies branches to all the major organs. An aortic aneurysm is a bulge or dilatation of the aorta.

The larger the aneurysm is, the greater the chance that it might rupture (burst) and if an aneurysm ruptures it is usually fatal.



- Pain is the most common symptom - may be located in the abdomen, chest, lower back, or groin area. The occurrence of pain is associated with the imminent rupture of the aneurysm.
- Acute, sudden onset of severe pain in the back and/or abdomen may represent rupture and is a life threatening medical emergency.
- May cause a pulsating sensation, similar to a heartbeat, in the abdomen.

How is an Aneurysm diagnosed?

- Abdominal ultrasound: Ultrasounds help your doctor know if your aneurysm is growing.
- Computed Tomography (CT) and Magnetic Resonance Angiogram (MRA): Gives information about the aneurysm's relation to the blood vessels of the kidney or other organs. CT is used to watch the growth of a thoracic aortic aneurysm.
- Echocardiogram: A transthoracic echocardiogram (TTE) may be done to diagnose thoracic aortic aneurysm.
- Angiogram: An angiogram can help determine the size of the aneurysm and the presence of aortic dissections, blood clots, or other blood vessel involvement.

Treatment for abdominal aortic aneurysms

Small aneurysms can be followed up with regular scans (ultrasound) to monitor their size. Once an aortic aneurysm reaches a certain size, the risk of it rupturing becomes more likely and so the relative risk of repairing the aneurysm reduces.

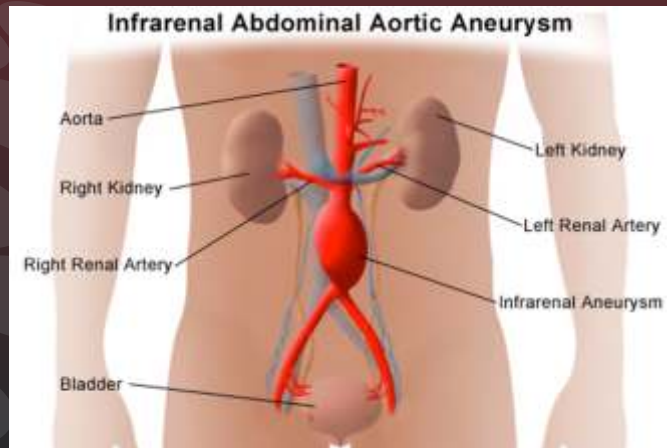
It is much safer to repair an aneurysm before it ruptures. Elective repair can be carried out either by open abdominal surgery, which is the traditional method, or by endovascular aneurysm repair (EVAR) using a stent-graft.

What causes an abdominal aortic aneurysm to form?

- Caused by multiple factors that result in the breaking down of the well-organized structural components (proteins) of the aortic wall that provide support and stabilize the wall. Atherosclerosis has an important role in aneurysmal disease. Risk factors associated with atherosclerosis are:
 - Age (greater than 60)
 - Male gender (5-6 times more common than in females)
 - Family history, genetic factors
 - High cholesterol
 - Hypertension
 - Diabetes
 - Smoking

What are the symptoms of abdominal aortic aneurysms?

About three of every four abdominal aortic aneurysms are asymptomatic - it is referred to as the "silent killer" because it may rupture before being diagnosed.



AAA (Abdominal Aortic Aneurysm): The most common location of arterial aneurysm formation is the abdominal aorta, specifically, the segment of the abdominal aorta below the kidneys. An abdominal aneurysm located below the kidneys is called an infrarenal aneurysm.

The thoracic aorta can be divided into segments: ascending aorta, aortic arch, and descending aorta. An aneurysm may be located in one of these areas.

Thoracoabdominal aneurysm involves a thoracic aortic aneurysm extending down to the abdominal aorta.