When the aortic wall expands dangerously, left, a rupture can quickly drain a life. Endovascular repair places a stent to bridge the damaged aorta. Researchers at the School of Medicine are perfecting such surgical techniques, as well as exploring therapies to prevent the occurrence of aortic aneurysms.

Consequences of aortic aneurysm
Normal aortic tissue (left) at low and high magnification; stain reveals multiple layers of elastic fibers. On the right, aneurysmal tissue shows extensive elastin fragmentation and areas of elastin absence characteristic of aortic aneurysm disease.

Dramatically different approaches
The long scar of a traditional surgical repair (green) denotes a hospital stay and a long recovery. An endovascular procedure leaves two small entry marks in the groin (yellow), and the patient soon returns home. Promising drug therapies (light blue) may improve surgical outcomes and could even limit the development of aneurysms.