RWJ
NEW BRUNSWICK

AORTIC CENTER

Through the Kidneys and Out of the Woods

After having surgery to replace a damaged heart valve at Robert Wood Johnson University Hospital, 61-year-old Mohsen Sadeghian was feeling better than he had in about 10 years.

Shown: Moshen Sadeghian is the recipient of a revolutionary new stent graft to repair an abdominal aortic aneurysm, one of the many options available at The Aortic Center at RWJ, where patients are offered groundbreaking minimally invasive treatment options.

Shown above: Saum Rahimi, MD, FACS, Interim Chief and Assistant Professor of Vascular Surgery at Rutgers Robert Wood Johnson Medical School and a vascular surgeon with the Aortic Center at RWJ.

Shown above: The aorta is the major blood vessel that carries blood from the heart to other parts of the body. You can develop aneurysms (bulges in the wall of the vessel) in the upper, middle or lower area of the aorta. The Aortic Center at Robert Wood Johnson University Hospital is equipped to handle them all, including the most complex cases.

But during the tests done before the procedure, doctors found that Mr. Sadeghian had two aortic aneurysms: bulges in the wall of the blood vessel (the aorta) that carries blood from the heart to other parts of the body. If an aortic aneurysm grows large and bursts, the bleeding can be deadly.

There are two types of aortic aneurysms, and Mr. Sadeghian had one of each. Abdominal aortic aneurysms, which are more common, happen in the part of the aorta running through the abdomen. Thoracic aortic aneurysms are in the chest. Both types rarely cause symptoms and often grow slowly, making it hard to find them unless tests are done for another reason. Some will never burst, but there is no way to tell which will.

While Mr. Sadeghian was recovering from heart surgery, his aortic aneurysms were growing. Saum Rahimi, MD, FACS, Interim Chief and Assistant Professor of Vascular Surgery at Rutgers Robert Wood Johnson Medical School and a vascular surgeon with the Aortic Center at Robert Wood Johnson University Hospital, easily repaired the thoracic aortic aneurysm with a standard endovascular procedure. Dr. Rahimi implanted a stent graft (a woven tube covered by metal mesh) to reinforce the weakened part of the aorta and prevent the aneurysm from bursting. He attached the graft to a thin tube (catheter) inserted through an artery in Mr. Sadeghian's leg and threaded it up into the aorta to the aneurysm. When he expanded the graft and fixed it in place, blood flow was restored.

Repairing Mr. Sadeghian's abdominal aortic aneurysm was much more challenging.

"Usually the aneurysm starts below the arteries that go to the kidney and we can put in a standard stent. In Mr. Sadeghian's case, the aneurysm started right at the kidney arteries. A standard stent would have shut down blood flow to the kidneys," said Dr. Rahimi.

Using a new fenestrated endograft device — which is available at only a few hospitals in New Jersey, and select hospitals nationwide — Dr. Rahimi was able to do an endovascular repair on Mr. Sadeghian's abdominal aortic aneurysm in June 2014. "The fenestrated endograft is a stent graft that has holes on either side so it can be put in the kidney arteries and maintain blood flow," he said.

"The next day I went home. It was amazing," says Mr. Sadeghian, who lives in Monroe Township. The alternative, had the device not been available, would have been a much riskier open surgery with up to a week in the hospital, including in the ICU, afterwards. "With Mr. Sadeghian's medical problems, we wanted to offer him a less invasive procedure," said Dr. Rahimi.

The fenestrated endograft device is just one of the new technologies available at the Aortic Center at RWJ, giving patients groundbreaking new minimally invasive treatment options available for aortic aneurysms and related conditions. "Many patients have a lot of medical problems and complex aneurysms. New technologies allow us to treat these patients and fix their aneurysms with much less risk," said Dr. Rahimi. The center's vascular and cardiothoracic surgeons are leaders in repairing the aorta, aneurysms, and dissections using endovascular and open procedures. They work together to plan and deliver the best treatment for each patient.

Through RWJ's Aortic Center, patients can also receive care for Marfan syndrome and Ehlers-Danlos syndrome, inherited diseases that increase the likelihood of developing aneurysms. RWJ is the only hospital in New Jersey designated as a coordinated clinic by the The Marfan Foundation.

About a month after his abdominal aortic aneurysm repair, Mr. Sadeghian is "95 percent of my usual self," he said. He is enjoying spending time in a neighborhood park walking and playing with his three grandchildren.

Visit www.rwjuh.edu/aorticcenter or call 1-844-RWJ-AORTA.