



# Stent Grafts

*Reduce Complications of  
Aneurysm Repair*

By Andrew Shanley

Until recently, patients admitted to the hospital for repair of abdominal or thoracic aortic aneurysms could expect a hospital stay of five to ten days, and a recovery period of six to eight weeks. Today, thanks to endovascular stent grafts, many patients return home the day after their surgery and are back to work within a few weeks.

According to Dr. Mark Hirko, the risk of complications is much lower with endovascular stent grafting than with traditional surgery.

According to Mark Hirko, MD, chief of Vascular Surgery for the Baystate Heart & Vascular Program, there are other significant benefits to this minimally invasive approach as well. “The risk of complications, such as bleeding, kidney failure, or pneumonia is much lower than with traditional surgery,” he says. “In addition, there is less stress placed on the heart and lungs. Because the incisions are so small, patients recover faster, with less pain and reduced risk of infection.”

## The Procedure

The minimally invasive stent graft procedure requires only small incisions in the groin, as opposed to the much larger incisions in the abdomen or chest that are required with the traditional surgical approach. Through these small incisions, the vascular surgeon inserts a catheter into the femoral artery, and threads it up to the location of the aneurysm using x-rays and contrast dye for guidance.

The stent graft excludes the aneurysm from flow. Because the graft is stronger than the weakened artery, it allows blood to flow without putting pressure on the already weakened aneurysmal artery.

With the traditional approach, many patients who had an aneurysm weren't candidates due to their risks for the complications. Using the stent grafts, says Dr. Hirko, 60-80 percent of patients can now be helped.

Endovascular stent grafting is most commonly performed to treat abdominal aortic aneurysms, but may also be used to treat thoracic aortic aneurysms, and less commonly, aneurysms in other locations. The procedure is also used at Baystate in emergent situations when an aneurysm has ruptured.

## Best Candidates

When determining those patients who are the best candidates for endovascular stent grafting, surgeons look at a number of anatomic factors. In addition, there must be a long enough section of normal artery that is not severely angled so the stent graft can be attached securely. Patients with extremely tortuous arteries, and those involving aneurysms at the level of the suprarenal aorta, are less likely to be candidates for this procedure. However, technology is improving and clinical trials are currently underway treating these types of patients.

“There are still those patients who require traditional surgery,” says Dr. Hirko. “Whether a stent graft is the right choice depends on a number of factors. We discuss this with our patients and together we determine what procedure is best for their particular situation.”

When the stent graft procedure was still in its infancy, there were concerns that the results might not be as long lasting as the more invasive surgical approach. However, according to Dr. Hirko, much evidence now shows that stent grafts are quite durable.

“In the future,” he says, “as our knowledge and technologies further advance, even more of our patients will be able to benefit from this minimally invasive approach.”

## Refer a Patient

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