Abdominal aortic aneurysm (AAA) is the third leading cause of death in men ages 60 and older. It earns its nickname – the silent killer – because the aneurysm can quietly expand over time without producing any symptoms. AAA cannot be detected during a routine physical exam and is often unobserved until it appears on a radiograph taken for an unrelated condition – or until it ruptures. After rupturing, an AAA causes death nearly 90 percent of the time.

In 2006 Congress passed legislation directing Medicare to cover the cost of ultrasound screening for AAA in at-risk individuals. The screening, however, has been a largely under-utilized benefit because individuals must request the AAA screening referral during their “Welcome to Medicare” physical and arrange for the screening within 12 months of enrollment in Medicare Part B. This narrow window of opportunity, as well as a general lack of knowledge about this Medicare benefit by physicians performing these physicals, has meant that many potential victims have not been able to benefit from this highly effective, low-cost, life-saving screening. In fact, in 2008 and 2009 only 18,000 at-risk individuals were screened.

The risk factors are simple; making physicians and the public aware of the risk and the Medicare preventive-health benefit is the challenge. Risk factors include:

- Gender (males more than females)
- Caucasian
- Smoker
- Family history of AAA
- High blood pressure
- High cholesterol
- Atherosclerosis
- Genetics (such as Marfan’s syndrome)

As the AAA grows, the risk of rupture increases from 3-15 percent for a 5.0-centimeter aneurysm to 20-50 percent for an aneurysm that is 7.0 centimeters or larger. The mortality rate following early detection and treatment is less than 1 percent. Repairing an AAA of 5.5 centimeters or larger using today’s highly advanced minimally-invasive endovascular procedures can greatly improve outcomes with fewer complications, shorter hospital stays and less pain. Rather than immediately recommending surgery for AAAs smaller than 5.5 centimeters, vascular surgeons will often take a monitor-and-reevaluate approach, unless the growth is more aggressive than the norm of 3 millimeters per year.¹

Educating at-risk patients about the availability of the simple AAA screening, which is free for Medicare patients, will help arrest this silent killer.  

Case Study: Successful Endovascular Repair of AAA

Roman Wong, M.D., Swedish Vascular Surgery

Dec. 14, 2010: GG is an 82-year-old male. He presented to his primary-care provider (PCP) with an asymptomatic pulsatile abdominal mass. GG has a history of hypertension, hypercholesterolemia and cigarette smoking – although he presently does not smoke. His current medications include enalapril, labetalol, mevacor and aspirin. Ten years ago he had bilateral knee replacement surgery. An ultrasound of his abdomen showed an abdominal aortic aneurysm of 7.8 cm in maximal diameter. His labs were normal, including a creatinine of 0.8.

GG’s PCP called the Swedish Vascular Surgery Clinic for advice. We suggested the PCP order a CT angiogram, to be followed immediately by a consult in our clinic.

Dec. 16, 2010: GG underwent CT angiography in the morning. Our vascular surgeon saw him for a consultation later the same day. The patient’s aneurysm was infrarenal and actually measured 8 cm at the maximum diameter. The aneurysm’s anatomy was deemed suitable for stent graft placement, and the patient appeared fit for endovascular repair. GG expressed a desire to wait until after the holidays, which seemed a reasonable request that we could accommodate. Additionally, knowing that a new generation of endografts – with improvements which seemed to make them superior to the existing available iterations – were due for release the first week of January 2011, we scheduled his surgery for Jan. 12, 2011.

Jan. 12, 2011: GG underwent endoluminal repair with a bifurcated modular device in slightly under two hours. Minimal blood loss was replaced with crystalloid. The patient was discharged from post-anesthesia recovery to the medical/surgical floor.

Jan. 14, 2011: GG was ready to be discharged on his first post-op day; however, due to his age and the fact that he lives alone, we held him one extra day, then discharged him to independent living.

Jan. 27, 2011: We saw GG for a two-week post-op check. He had resumed his normal activity. His incisions were healing fine and his lower extremities were well-perfused. There were no complaints.

Feb. 9, 2011: GG came in with new four-day onset of right ankle and right foot swelling. Venous ultrasound showed gross right saphenofemoral reflux and an incompetent greater saphenous vein (GSV) throughout the extremity. There was no evidence of deep or superficial thrombosis. We prescribed graduated compression stockings and asked him to return for re-evaluation in one month.

March 9, 2011: At the follow-up visit, GG’s symptoms had improved, but he commented that the swelling persisted at the end of the day. The patient was scheduled for an endovenous ablation of his right GSV.

March 24, 2011: GG underwent a right GSV ablation under local anesthesia in the office. The procedure took 35 minutes. The patient was instructed to walk two miles immediately after the procedure. At his two-week check up, GG was asymptomatic with no more swelling, and his ultrasound showed a narrowed sapheno-femoral junction and completely occluded GSV.

April 6, 2012: One year after his endovascular treatments, GG was fully functional and asymptomatic. His CT angiogram showed the graft to be in good position and free of complications. The aneurysm sac had shrunk to 7.5 cm. His venous duplex showed a wide open and competent femoral vein, with complete occlusion of the GSV.

This case study is presented for educational purposes with the consent of the patient.

The patient’s perspective:

“I was surprised when my primary-care doctor told me during my regular six-month checkup that something didn’t feel quite right in my abdomen. I felt completely normal. I’m very lucky he discovered the aneurysm and that Dr. Wong was able to repair it.” – GG

(continued on next page)
Patients presenting with symptoms that include calf or thigh discomfort while climbing stairs, walking or exercising, or numbness in their limbs or feet, should be evaluated for peripheral artery disease (PAD). Patients with PAD are at greater risk for coronary heart disease, heart attack, stroke and transient ischemic stroke.

PAD is more common in the elderly, and patients with coronary heart disease have a one in three chance of having PAD. People often consider aches and pain a normal condition of aging, which means they are less likely to admit to having symptoms that could alert their primary-care physicians to the presence of PAD.

Diagnostic testing for PAD may include ankle-brachial index, duplex ultrasound, magnetic resonance angiogram (MRA) or arteriogram. Treatment may include lifestyle changes, medications and/or endovascular or surgical procedures.

For more information about PAD screening, or to consult or refer a patient, please call Swedish Vascular Surgery at 206-215-5921.

**Risk Factors Associated with PAD**
- Smoking
- Age (one in 20 Americans over age 50 has PAD)
- Diabetes (one in three people older than 50 with diabetes has PAD)
- High blood pressure (or family history of it)
- High cholesterol (or family history of it)
- Obesity
- Coronary heart disease (or family history of it)
- Stroke (or family history of stroke)