



Clinical Practice Column

Society for Vascular Nursing (SVN)

2009 Clinical Practice Guideline for Patients Undergoing Endovascular Repair of Abdominal Aortic Aneurysms (AAA)

SVN Task Force for Clinical Practice Guideline

SVN TASK FORCE FOR CLINICAL PRACTICE GUIDELINE

Diane Smith Chair, MSN, APRN, GNP BC, CEN, Vascular Surgery Nurse Practitioner, Alegant Health Bergan Mercy Medical Center, Omaha, NE.

Theresa DeVeaux, MS,ACNP BC,CVN, Nurse Practitioner, Maryland Vascular Center, Baltimore Washington Medical Center, Baltimore, MD.

Cindy Dillard, MSN, APRN, ANP BC, Nurse Practitioner Vascular Surgery, Orlando Health, Orlando FL.

Melissa Dinsmore, RN, MS, CCRN, CCNS, Vascular Clinical Nurse Specialist and Interim Wound Care Clinical Nurse Specialist for Good Samaritan Hospital, Dayton, OH.

Karen Fitzgerald, MSN, FNP, CVN, Director of Nursing, The Vascular Group, Albany, NY.

Alyson Flood, RN, Vascular Surgical and Interventional Best Practice Teams Facilitator, Presbyterian Hospital, Charlotte, NC.

Debra Kohlman Trigoboff, ACNP BC, CVN, Nurse Practitioner Duke Heart and Vascular Duke University Hospital, Durham, NC.

REVIEWERS

Patricia Matula, MSN, RN, Sacred Heart Hospital, Allentown, PA
Rao Gutta, MD, Vascular Surgeon, Omaha Thoracic and Cardiovascular Surgery, Omaha, NE, and Jon Wesley, MD, Vascular Surgeon, Vascular Specialists of Central Florida, Orlando, FL.

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Abdominal Aortic Aneurysm Clinical Practice Guideline-Endovascular Repair

This evidence based clinical practice guideline was developed by the Society for Vascular Nursing (SVN) who is the authority on nursing care of patients with vascular disease. This document needs to be reviewed and revised prior to implementation at appropriate facilities based on the needs of the practice setting and the values and preferences of the patient.

The SVN Task Force for Clinical Practice Guidelines (CPG) was established as a group of experts to draft this guideline based on the latest available evidence.

Purpose and Scope

The purpose and scope of the CPG for Endovascular Repair of Abdominal Aortic Aneurysm is to:

- Improve outcomes for patients undergoing endovascular repair of abdominal aortic aneurysms
- Ensure continuity of care across this population

DEFINITION OF TERMS

Abdominal Aortic Aneurysm (AAA) Permanent localized dilation of aorta resulting in at least a 50% increase in diameter compared to the normal expected diameter at the same anatomic level; degenerative process often attributed to atherosclerosis; considered to be present when the diameter reaches 3.0cm. Other causes include infection, arteritis, trauma, inherited connective tissue disorder and anastomotic disruption. Smoking is the most strongly associated risk factor. Natural history is to gradually enlarge and eventually rupture. Women have slightly smaller normal aortic diameters than men. Prevalence is greater in men, however specific risk factors, such as smoking increase the likelihood of aneurysm disease in women.

Definitions

1. **Infrarenal neck**- length of normal caliber aorta distal to the renal arteries before the aneurysm
2. **Suprarenal AAA** - encompasses the visceral aortic segment containing the superior mesenteric and celiac arteries (type IV thoracoabdominal aneurysms if aneurysm extends upward to crus of diaphragm)
3. **Juxtarenal AAA**- infrarenal abdominal aorta adjacent to or including the lower margins of renal artery origin
4. **Endovascular**- transfemoral catheter based repair with stent graft
5. **Endoleak**- leakage of blood into the aneurysm sac following endovascular AAA repair:
 - Type I occurs at the proximal or distal anastomosis
 - Type II occurs as a result of collateral flow from branch vessels such as lumbar or mesenteric arteries
 - Type III occurs as a result of tears or defects in the graft material or between the modular components of the graft
 - Type IV leaks occur through pores in the graft fabric

6. **Endotension**- excluded sac continues to enlarge and appears to remain pressurized without evidence of endoleak
7. **Pseudoaneurysm**- pulsatile hematoma at groin access site that forms when puncture site fails to seal and arterial blood jets into the surrounding tissue, does not involve all three layers of the artery wall.
8. **Accessory renal arteries**- an extra renal artery present in up to 30% of the population. Exclusion by endograft repair may result in partial renal infarct
9. **Femoral artery diameter**- minimal 8 mm size usually required for device access and implantation.
10. **A/V fistula**- or arteriovenous fistula is an abnormal connection or passageway between an artery and a vein. It may be congenital, surgically created for hemodialysis treatments, or acquired due to pathologic process, such as trauma or erosion of an arterial aneurysm.
11. **Bruit**- an audible sound associated with turbulent blood flow created by a change in the diameter of the arterial lumen. A bruit usually signifies arterial stenosis at or proximal to the site of auscultation. A tight or nearly occluded artery may not produce a bruit.
12. **Hostile abdomen**- history of multiple abdominal surgeries or infection, resulting in scar tissue or adhesions.

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