

**STONY BROOK UNIVERSITY HOSPITAL
VASCULAR CENTER
CREDENTIALING POLICY**

Per Medical Board decision March 18, 2008: These credentialing standards do NOT apply to peripheral angiography performed in the context of cardiac catheterization

I. PRIVILEGES:

A.) DIAGNOSTIC PERIPHERAL, RENAL AND VISCERAL ANGIOGRAPHY

B.) INTERVENTIONAL AND THERAPEUTIC PROCEDURES INVOLVING THE PERIPHERAL, RENAL AND VISCERAL VASCULATURE

PURPOSE:

To ensure that patients with vascular disease receive the highest quality of care, the Vascular Center in collaboration with the Chiefs of Radiology, Medicine, Neurosurgery and Surgery have established credentialing criteria, standards of practice, and Quality Assurance programs for the practice of 1) peripheral, renal and visceral angiography, and 2) interventional and therapeutic procedures involving the peripheral, renal and visceral vasculature. They are based on recommended standards suggested by the Society of Cardiovascular and Interventional Radiology, the Society for Cardiac Angiography and Interventions and the American Heart Association (1-11)**. These criteria were established to comply with standards of the Joint Commission which require medical staff members to have delineated clinical privileges, follow standards of practice and comply with Quality Assurance programs (12).

- ** The credentialing criteria, standards of practice and Quality Assurance program delineated in this document have been taken from published guidelines of the Society of Cardiovascular and Interventional Radiology, Society for Cardiac Angiography and Interventions and the American Heart Association (1-11). This document provides recommended guidelines with the aim of producing quality medical care. These guidelines are not inclusive of all proper methods of care. They will be reviewed and updated periodically as our knowledge and treatment of vascular disease advances. The ultimate judgment and decision regarding the evaluation, management and treatment of any patient must be made by the physician based on consideration of all pertinent clinical information relevant to the patient's individual clinical situation.

DEFINITIONS:

DIAGNOSTIC ANGIOGRAPHY AND INTERVENTIONAL AND THERAPEUTIC PROCEDURES ARE DEFINED AS FOLLOWS (1,5,8,9,10,11):

PERIPHERAL, RENAL AND VISCERAL ANGIOGRAPHY:

A diagnostic angiogram is defined, as the percutaneous passage of a catheter into an artery or vein under fluoroscopic guidance with subsequent injection of contrast material and imaging of the vascular distribution being evaluated to establish extent of disease for optimal treatment planning. For example, diagnostic lower extremity angiography should include imaging from the distal abdominal aorta to at least the ankles. Imaging is performed utilizing conventional film or high resolution digital imaging. Conventional cineradiography or video fluoroscopy alone is insufficient for routine documentation and recording of diagnostic and interventional vascular procedures. When needed hemodynamic measurements should be performed to fully evaluate the significance of a vascular lesion and to assess outcome of an interventional procedure.

INTERVENTIONAL AND THERAPEUTIC PROCEDURES INVOLVING THE PERIPHERAL, RENAL AND VISCERAL VASCULATURE:

Interventional procedures include percutaneous transluminal angioplasty or other interventional procedures such as atherectomy, stent placement, thrombolytic therapy, embolization, or the implantation of interventional or therapeutic devices. Interventional procedures must be preceded by angiographic assessment of the entire vascular distribution in which the intervention is being performed. It also includes angiographic and when appropriate hemodynamic documentation of the result and appropriate clinical follow-up.

II. CREDENTIALING POLICY:

A) BACKGROUND KNOWLEDGE (1,6,7,8,9,10):

Physicians applying for credentials should have documented extensive clinical training in the diagnosis and treatment of patients with vascular disease as outlined in (B) *Training*. A basic body of knowledge must include the anatomy, natural history and clinical manifestations of vascular disease; non-invasive evaluation of vascular disease; indications and

contraindications for diagnostic angiography and interventional procedures; the risks and benefits of these procedures; recognition of complications and the understanding of their treatment; alternative therapies; thrombolytic techniques; radiation physics and technical aspects and usage of x-ray equipment needed for diagnostic angiography and endovascular interventions.

B) TRAINING (1,6,7,8):

1) BASIC CLINICAL TRAINING (1,8,9,10):

- American Board of Radiology Certification/Eligibility
- American Board of Internal Medicine Certification with additional fellowship training and Certification/Eligibility in Cardiovascular Diseases/Interventional Cardiology.
- American Board of Surgery Certification/Eligibility with additional fellowship training and Certification/Eligibility in Vascular Surgery.

2) PROCEDURAL TRAINING AND EXPERIENCE (1,6,7,8,9,10):

Extensive training or experience in diagnostic angiography and endovascular interventional vascular procedures of the peripheral, renal and visceral vasculature is required and may be obtained through one of the following routes:

a) Qualification by training:

A physician may qualify by completing a fellowship-training program, which includes extensive experience in diagnostic peripheral, renal and visceral angiography and interventional procedures of peripheral, renal and visceral vessels. At a minimum this experience must include performance of 100 diagnostic peripheral, renal and visceral angiograms and 50 renal and/or peripheral arterial percutaneous angioplasties. In addition, the applicant should have training and experience in the use of thrombolytic therapy in those vascular territories. These requirements would normally be met during a formal subspecialty-training program of at least 1-year duration performed after completion of basic specialty training. Complete and detailed documentation of procedural training in the form of a verifiable Case Log[#] should be available and included with the credentialing application.

[#] *A Case Log should include for each procedure: facility name, patient name, identification number and /or date of birth, examination date, the procedure undertaken, method of anesthesia, specific balloons and stents used and immediate complications.*

b) Qualification by experience:

A physician may qualify for privileges by having extensive or previous experience in peripheral, renal and visceral angiography as well as percutaneous interventions involving these vessels. This experience must include at a minimum 100 diagnostic peripheral, renal and visceral angiograms and 50 endovascular interventions within these vascular territories performed under the direct supervision of a physician who meets these criteria. The applicant must have been the Primary Operator^{##} for at least 50% of these cases and must demonstrate acceptable complication and success rates. The applicant must also have experience in the use of thrombolytic therapy in those vascular territories. Documentation in the form of Case Log of results and complications must be presented and the data confirmed by the institution where the experience was obtained. The applicant must also demonstrate attendance at postgraduate courses for a total of at least 50 category I continuing medical education credits in diagnostic peripheral, renal and visceral angiography and endovascular interventions.

^{##} *Primary Operator means the trainee is handling the catheter, guidewire, EPD, and stent under direct supervision of a credentialed operator. Only one Trainee can be considered the Primary Operator on any one procedure. Supervised experience means that the trainee is scrubbed alongside an experienced credentialed operator.*

C) PROVISIONAL PRIVILEGES:

In the initial credentialing period the practitioner will first be granted: **Provisional Privileges:**

During the provisional period the practitioner's first five (5) angiographic and stent/endovascular procedures will be monitored by a credentialed member of the Vascular Center designated by the Director or the Q/A committee. Pending assessment of the outcome of the provisional period by the Q/A committee and Director, full privileges or additional training and monitoring will be recommended.

D) MAINTENANCE OF PRIVILEGES (1,6,7,8,9,10):

Maintenance of privileges requires continuous experience. All cases must be performed in compliance with accepted practice standards published by the physician's sub-specialty with clearly documented procedural indications, successes and complication rates and submitted to the Director and the Q/A committee of the Vascular Center biannually. A Case Log of a minimum of 20 consecutive endovascular interventions in which the physician is the Primary Operator must be submitted to the Vascular Committee every two years at the time of Medical Staff reappointment.

Continuing Education Requirements; To maintain privileges attendance at postgraduate continuing education courses involving diagnostic angiography and interventional procedures must be documented. A minimum of 20 hours of category I credit is required biannually. All credentialed physicians must attend 75% of the multi-specialty Vascular Center Morbidity and Mortality (M&M) Conferences annually. At the M&M Conferences, recent therapeutic cases will be reviewed including (1) the indication for stent placement; (2) surgical evaluation; (3) outcome, and (4) any complications.

Credentialing and re-credentialing of physicians to perform peripheral, renal and visceral angiography and interventions will be recommended by the respective Chiefs of Radiology, Neurosurgery, Medicine and Surgery upon the recommendation of the Vascular Center Committee. Physicians applying for privileges must be members of the medical staff.

REFERENCES

1. Clinical Practice Guidelines. Society of Cardiovascular and Interventional Radiology. SCVIR, 1997.
2. Guidelines for Establishing a Quality Assurance Program in Vascular and Interventional Radiology. Standards of Practice Committee. Society of Cardiovascular and Interventional Radiology. SCVIR, 1989.
3. Spies JB, Bakal CW, Burke DR et al. Guidelines of Percutaneous Transluminal Angioplasty. Society of Cardiovascular and Interventional Radiology. Standards of Practice Committee. SCVIR, 1990; JVIR; 4:5-15.
4. Spies JB, Bakal CW, Burke DR et al. Angioplasty Standard of Practice. Society of Cardiovascular and Interventional Radiology. Standard of Practice Committee. SCVIR, 1993; JVIR 1993; 4:385-395.
5. Spies JB, Bakal CR, Burke DR et al. Diagnostic Arteriography in Adults. Society of Cardiovascular and Interventional Radiology. Standard of Practice Committee. SCVIR 1993; JVIR 1993; 4:385-95.
6. Credentialing Criteria No. 1: Peripheral, Renal and Visceral Percutaneous Transluminal Angioplasty. Society of Cardiovascular and Interventional Radiology. SCVIR, 1989; JVIR, 1991; 2:59-65.
7. Credentialing Criteria No. 3: Peripheral and Visceral Arteriography. Society of Cardiovascular and Interventional Radiology. SCVIR 1989; JVIR 1991; 2:59-65.
8. Levin DC, Becker GJ, Dorros G et al. Training Standards for Physicians Performing Peripheral Angioplasty and Other Percutaneous Peripheral Vascular Interventions. A Statement of Health Professionals from the Special Writing Group of Councils on cardiovascular Radiology, Cardio-Thoracic and Vascular Surgery and Clinical Cardiology, The American Heart Association. SCVIR, 1997; JVIR, 1994; 5:87-89; Circulation 1992; 86:1348-1350.
9. Spittell JA, Creager MA, Dorros G, Isner JM, Nanda NC, Ochsner JL, Wexler L, Young JR. Recommendations for Peripheral Transluminal Angioplasty: Training and Facilities. Am. Coll. Cardiology Policy Statement. JACC 1993;21:546-548.
10. Cardella JF, Casarella WJ, DeWeere JA, Dorros GM, Gray JE, Katzen BT, Laragh JH, Levin DC, Marx VM, Nickoloff EL, Pentecost MJ, Roubin GS, Martin EC. Optimal Resources for the Examination and Endovascular Treatment of Peripheral and Visceral Vascular Systems. American Heart Association Intercouncil Report on Peripheral and Visceral Angiographic and International Laboratories. Am. Heart Assoc. Medical/Scientific Statement Circulation 1994;89:1481-1493.
11. Pentecost MJ, Criqui MA, Dorros G, Goldstone J, Johnston KW, Martin EC, Ring EJ, Spies JB. Guidelines for Peripheral Percutaneous Transluminal Angioplasty of the Abdominal Aorta and Lower Extremity Vessels. A Statement for Health Professionals for a Special Writing Group for the Councils on Cardiovascular Radiology, Arteriosclerosis, Cardiothoracic and Vascular Surgery, Clinical Cardiology and Epidemiology and Prevention, The American Heart Association. Am. Heart Assoc. Medical/Scientific Statement. Circulation 1994;89:511-531.
12. Joint Commission. The Comprehensive Accreditation Manual for Hospitals; 1997; Medical Staff Standard 5.4.3:MS-33; 6.8:MS-47.

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I. PRIVILEGES:

A) CAROTID STENTING

B) CERVICO-CEREBRAL ANGIOGRAPHY

PURPOSE:

To ensure that patients with carotid artery disease receive the highest quality of care the Vascular Center in collaboration with the Chiefs of Radiology, Medicine, Neurosurgery, Neurology and Surgery have established credentialing criteria, standards of practice, and Quality Assurance programs for the practice of 1) cervico-cerebral angiography and 2) carotid stenting. They are based on recommended standards suggested by the Society of Interventional Radiology, American Society of Therapeutic and Interventional Neuroradiology, American Society of Neuroradiology, Society for Cardiac Angiography and Interventions, and Society of Vascular Surgery (13-15)**. These criteria were established to comply CMS guidelines and with standards of the Joint Commission which require medical staff members to have delineated clinical privileges, follow standards of practice and comply with Quality Assurance programs (16, 17).

** The credentialing criteria, standards of practice and Q/A program delineated in this document have been taken from published guidelines of the Society of Interventional Radiology, American Society of Therapeutic and Interventional Neuroradiology, American Society of Neuroradiology, Society for Cardiac Angiography and Interventions, and Society of Vascular Surgery (13-15). This document, along with its references, are guidelines to provide high quality medical care and compliance with CMS regulations. These guidelines are not inclusive of all proper methods of care. They will be reviewed and updated periodically as our knowledge and treatment of carotid disease advances. The ultimate judgment and decision regarding the evaluation, management and treatment of any patient must be made by the physician based on consideration of all pertinent clinical information relevant to the patient's individual clinical situation.

DEFINITIONS:

CERVICO-CEREBRAL ANGIOGRAPHY:

A diagnostic angiogram is defined as the percutaneous passage of a catheter into an artery or vein under fluoroscopic guidance with subsequent injection of contrast material and imaging of the vascular distribution being evaluated to establish extent of disease for optimal treatment planning. Imaging is performed utilizing conventional film or high resolution digital imaging. Conventional cineradiography or video fluoroscopy alone is insufficient for routine documentation and recording of diagnostic and interventional vascular procedures.

CAROTID STENTING:

Carotid stenting involves percutaneous transluminal angioplasty and stent placement as well as utilization of protective devices and pharmacologic agents for prevention and treatment of embolic and other complications. Carotid stenting must be preceded by angiographic assessment of the entire vascular distribution including the intracranial circulation in which the intervention is being performed. It also includes angiographic documentation of the result and appropriate clinical follow-up.

II. CREDENTIALING:

A) BACKGROUND KNOWLEDGE (1, 2, 3)

Physicians applying for credentials should have documented extensive clinical training in the diagnosis and treatment of patients with carotid and cerebrovascular disease as outlined in (B) *Training*. A basic body of knowledge must include the anatomy, natural history and clinical manifestations of carotid and cerebrovascular disease; non-invasive evaluation of carotid and cerebrovascular disease; indications and contraindications for diagnostic angiography and stenting; the risks and benefits of these procedures; recognition of complications and the understanding of their treatment; alternative therapies; thrombolytic techniques; radiation physics and technical aspects and usage of x-ray equipment needed for diagnostic angiography and endovascular interventions.

B) TRAINING (1, 2, 3)

(1) BASIC CLINICAL TRAINING

- American Board of Radiology Certification/Eligibility with additional training in Neuroradiology, Interventional Radiology or Interventional Neuroradiology
- American Board of Internal Medicine Certification/Eligibility with additional fellowship training and Certification/Eligibility in Cardiovascular Diseases/ Interventional Cardiology.

- American Board of Surgery Certification/Eligibility with additional fellowship training and Certification/Eligibility in Vascular Surgery.
- American Board of Neurosurgery Certification/Eligibility with additional fellowship training in Interventional Neuroradiology
- American Board of Neurology Certification/Eligibility with additional fellowship training in Interventional Neuroradiology

(2) PROCEDURAL TRAINING AND EXPERIENE

Extensive training or experience in carotid and cerebral angiography and carotid stenting procedures is required and may be obtained through one of the following routes:

(a) Qualification by Training:

A physician may qualify by completing a fellowship-training program, which includes extensive experience in diagnostic angiography and interventional procedures. At a minimum this experience must include performance of 100 diagnostic cardiac/coronary, peripheral, renal cervico-cerebral and/or visceral angiograms and 50 percutaneous interventions as a supervised Primary Operator^{##} among the various vascular territories. The applicant should have training and experience in the use of thrombolytic therapy in those vascular territories. To qualify for carotid angiography the applicant must have a minimum experience of performing 30 diagnostic carotid/cerebral angiograms, 15 of which as a supervised primary operator. To qualify for carotid stenting in addition to the above the applicant must have a minimum experience of performing 25 carotid stent procedures 13 of which as a supervised primary operator. The applicant must also have experience in recognition and management of intraprocedural complications (ie. cerebrovascular, cardiovascular and vascular access events). These requirements may be met during a formal subspecialty-training program of at least 1-year duration performed after completion of basic specialty training. Complete and detailed documentation of procedural training in the form of a Case Log[#] should be available and included with the credentialing application.

[#] *A Case Log should include for each procedure: facility name, patient name, identification number and /or date of birth, examination date, the procedure undertaken, method of anesthesia, specific balloons and stents used and immediate complications.*

^{##} *Primary operator means the trainee is handling the catheter, guidewire, EPD, and stent under direct supervision of a credentialed operator. Only one Trainee can be considered the primary operator on any one CAS procedure. Supervised experience means that the trainee is scrubbed alongside an experienced credentialed operator.*

(b) Qualification by Experience:

A physician may qualify for privileges by having extensive previous experience in peripheral, renal and/or coronary as well as percutaneous interventions involving these vessels and must demonstrate acceptable complication and success rates. At a minimum this experience must include performance of 100 diagnostic cardiac/coronary, peripheral, renal, cervico-cerebral and/or visceral angiograms and 50 percutaneous interventions as supervised primary operator among the various vascular territories. The applicant should have training and experience in the use of thrombolytic therapy in those vascular territories. To qualify for carotid angiography the applicant must have a minimum experience of performing 30 diagnostic carotid/cerebral angiograms, 15 of which as a supervised primary operator.* To qualify for carotid stenting in addition to the above the applicant must have a minimum experience of performing 25 carotid stent procedures, 13 of which as a supervised primary operator.* The applicant must also have experience in recognition and management of intraprocedural complications (ie. cerebrovascular, cardiovascular and vascular access events). Documentation in the form of a Case Log of results and complications must be presented and the data confirmed by the institution where the experience was obtained. The applicant must also demonstrate attendance at postgraduate courses for a total of at least 50 Category I continuing medical education credits in carotid angiography, carotid stenting and acute stroke management.

C. PROVISIONAL PRIVILEGES:

In the initial credentialing period the practitioner will first be granted: **Provisional Privileges:** During the provisional period the practitioner's first five (5) carotid angiographic and stent procedures will be monitored by a credentialed member of the Vascular Center designated by the Director or the Q/A committee. Pending assessment of the outcome of the provisional period by the Q/A committee and Director, full privileges or additional training and monitoring will be recommended.

D. MAINTENANCE OF PRIVILEGES

Maintenance of privileges requires continuous experience. All cases must be performed in compliance with practice standards of the physician's sub-specialty with clearly documented procedural indications, successes and complication rates submitted to Vascular Center biannually. A Case Log of a minimum of 20 consecutive cases must be submitted to the Vascular Committee every two years at time of Medical Staff reappointment.

Based on this experience, the Vascular Center Committee will determine if recredentialing is appropriate or if additional training is needed. During any credentialing or recredentialing period the practitioner must submit his/her clinical cases to the Q/A committee on a monthly basis to allow for an ongoing evaluation of the practitioner's performance. **Compliance of case documentation with the case report forms for carotid stenting is mandatory. Non-compliance with case report forms submission of >60 days will result in administrative suspension of privileges.** If the committee finds the performance below an acceptable standard, privileges may be suspended and additional training and/or supervision recommended.

Continuing Education Requirements; To maintain privileges attendance at postgraduate continuing education courses involving carotid angiography, stenting and acute stroke management must be documented. A minimum of 20 hours of category I credit is required biannually. All credentialed physicians must attend 75% of the multi-specialty Vascular Center Morbidity and Mortality (M&M) Conferences annually. At the M&M Conferences, recent therapeutic cases will be reviewed including [1] the indication for stent placement; [2] surgical evaluation; [3] outcome, and [4] any complications.

Credentialing and re-credentialing of physicians to perform carotid angiography and carotid stenting will be recommended by the respective Chiefs of Radiology, Medicine, Neurosurgery, Neurology and Surgery upon the recommendation of the Vascular Center Committee. Physicians applying for privileges must be members of the medical staff.

REFERENCES

13. Clinical Competence Statement on Carotid Stenting: Training and Credentialing for Carotid Stenting – Multispecialty Consensus Recommendations. A report of the SCAI/SUMB/SUS Writing Committee to Develop a Clinical Competence Statement on Carotid Interventions. J Am Coll Cardiol 2005; 45: 165-74.
14. Quality Improvement Guidelines for the Performance of Cervical Carotid Angioplasty and Stent Placement. Developed by a Collaborative Panel of the ASITN, ASNR and SIR. J Vasc Interv Radiol 2003; 161: 1079-1093.
15. ACCF/SCAI/SUMB/SIR/ASITN 2007 Clinical Expert Consensus Document on Carotid Stenting. J Am Coll Cardiol 2007; 49: 127-70.
16. Joint Commission. The Comprehensive Accreditation Manual for Hospitals; 1997; Medical Staff Standard 5.4.3:MS-33; 6.8:MS-47.
17. CMS Manual System. Pub. 100-04 Medicare Claims Processing. Dept. of Health and Human Services (DHHS) Centers for Medicare and Medicaid Services (CMS). Transmittal 531. April 22, 2005.

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