

Interventional Vascular Techniques and Vascular Laboratory: PGY 1-5

OBJECTIVES:

Demonstrate knowledge regarding the indications, contraindications, and possible adverse effects of diagnostic and interventional vascular procedures.

Demonstrate knowledge about the risks and appropriate safety practices concerning the use of ionizing radiation.

Demonstrate skill in the performance of diagnostic and therapeutic vascular interventions.

Demonstrate knowledge regarding the indications for and interpretation of noninvasive vascular laboratory techniques, and skill in the performance of these procedures.

PATIENT CARE:

PGY-1 (2 month rotation):

1. To understand radiation safety issues for the patient and operator
2. To understand arterial and venous radiographic anatomy.
3. To develop proficiency with percutaneous arterial and venous cannulation of the upper and lower extremity.
4. To become familiar with and be able to name all basic guidewires, catheters and other devices used for diagnostic and therapeutic interventional procedures.
5. To become proficient using the Mentis simulator for interventional procedures.
6. To perform under supervision diagnostic arteriography and venography of the abdomen and lower extremities.
7. To learn the indications for, the performance of, and the interpretation of arterial physiologic testing and venous duplex scanning for DVT.

PGY-2 (2 month rotation):

1. To demonstrate expertise with percutaneous puncture and with diagnostic arteriography of the abdomen and lower extremity.
2. To use the Mentis simulator to practice interventional techniques at this level.
3. To perform under supervision diagnostic arteriography of the renal and brachiocephalic arteries.
4. To perform under supervision balloon angioplasty and stenting of the iliac and lower extremity arteries.
5. To perform under supervision vena cava filter placement.
6. To use percutaneous closure techniques after arterial catheterization.
7. To learn the indications for, the performance of, and the interpretation of peripheral arterial duplex scanning and duplex scanning for venous valvular incompetence.

PGY-3 (2 month rotation):

1. To demonstrate expertise with the techniques learned during the previous years.
2. To use the Mentis simulator to practice interventional techniques at this level.
3. To perform under supervision catheter directed thrombolysis procedures.
4. To perform under supervision of balloon angioplasty and stenting of renal and mesenteric arteries.
5. To perform under supervision thrombin injection of femoral pseudoaneurysms.
6. To use embolic protection devices during renal and mesenteric stenting.
7. To learn the indications for, the performance of, and the interpretation of carotid artery duplex, abdominal arterial duplex, and upper extremity venous duplex scanning.

PGY-4 (2 month rotation):

1. To demonstrate expertise with the techniques learned during the previous years.
2. To use the Mentis simulator to practice interventional techniques at this level.
3. To perform under supervision carotid artery stenting.
4. To perform under supervision selective catheterization of branch arteries for coil embolization.
5. To perform under supervision submental angioplasty and laser treatment of leg arteries.
6. To use mechanical thrombolytic devices.
7. To read noninvasive vascular laboratory studies and perform interpretations under faculty supervision.

PGY-5 (4 months total in rotation):

1. To demonstrate expertise with the techniques learned during the previous years.
2. To demonstrate expertise with all basic and advanced interventional procedures.
3. To instruct a junior residents in basic diagnostic interventional procedures.
4. To independently manage complex interventional procedures with minimal faculty supervision.
5. To demonstrate appropriate rescue techniques for complications of interventional procedures.
6. To read sufficient noninvasive vascular laboratory studies and perform interpretations under faculty supervision to qualify for the Registered Vascular Technology examination.