

NUMC Department of Radiology



Vascular & Interventional Radiology Elective

Goals

Students will be involved in the diagnosis, management and treatment of patients referred to the Interventional Radiology (IR) service. Radiologic anatomy, radiologic differential diagnosis, and image-based treatment will be reviewed. Students will participate in interventional procedures, imaging interpretation, consultations and daily rounds.

Educational Objectives

By completion of this rotation, the medical student will be able to:

- obtain understanding of indications and contraindications for common interventional procedures, including: lower extremity arteriography, renal angiography, chemo embolization, hemodialysis access management, venous access procedures, abscess drainage, biopsy, TIPS and others;
- gain knowledge of arterial and venous anatomy important to interventional radiology;
- know how to perform pre-procedure evaluations for most common procedures;
- comprehend indications and contra-indications of common IR procedures;
- learn to perform basic vascular access procedures under direct supervision of an Interventional Radiology attending and resident
- participate in the post-procedure management issues on daily rounds.

Background

Interventional radiologists are physicians who specialize in minimally invasive, targeted treatments. They offer the most in-depth knowledge of the least invasive treatments available coupled with diagnostic and clinical experience across all specialties. They use X-ray, MRI and other imaging to advance a catheter in the body, such as in an artery, to treat at the source of the disease internally. As the inventors of angioplasty and the catheter-delivered stent, which were first used in the legs to treat peripheral arterial disease, interventional radiologists pioneered minimally invasive modern medicine. Today, interventional oncology is a growing specialty area of interventional radiology. Interventional radiologists can deliver treatments for cancer directly to the tumor without significant side effects or damage to nearby normal tissue.

Many conditions that once required surgery can be treated less invasively by interventional radiologists. Interventional radiology treatments offer less risk, less pain and less recovery time compared to open surgery.

September 2013, the American Board of Medical Specialties has approved the new Dual Primary Certificate in IR and Diagnostic Radiology (DR). This primary certificate deems IR separate from DR as it designates a unique and distinct area of medicine, rather than a subspecialty certificate within an existing specialty, i.e. DR.

Furthermore, ACGME has approved and is in the works of making IR an individual residency separate from DR. This will be formalized in approximately a few years and will require interested medical students to apply directly to the new IR residency in the match process.

[Elective Description](#)

Students will work directly with the Interventional Radiology Attending and Resident and be fully incorporated into the IR team, including the nurses and technologists. Diagnostic and Interventional Radiology plays a vital role in daily patient care and has interactions with all medical specialties. Our students will experience the integral role of Radiology and IR in diagnosis, management and treatment of patients. The elective will develop history and physical (H&P) examination skills, differential diagnosis knowledge and procedural skills. Furthermore, students will take part in treatment of trauma patients as NUMC is a Level 1 Trauma center and will scrub into angiogram and embolization procedures.

[Clinical Experience](#)

The medical student will function as an integral part of the Vascular & Interventional Radiology service. This entails, focused H&Ps, evaluating appropriateness criteria for procedures, reviewing radiologic anatomy and differential diagnosis, supervised IR procedures, post-procedural care of patients, and daily patient and imaging rounds.

[Didactic Experience](#)

Students will have regularly scheduled radiology conferences in the morning and at noon. In addition, there will be a dedicated introductory core IR lecture series to provide an overview of the image-guided procedures offered by the IR service. Students will also attend lectures provided by the radiology residents and have the opportunity to attend many interdisciplinary conferences. Students are introduced to digital imaging and PACS and they will be provided beneficiary online teaching files and IR review materials.

[Additional Elective Information](#)

On the first day of the rotation, students will register with the Undergraduate Medical Education Office and meet at 9:00 a.m. in the radiology library on the second floor for general orientation and tour with one of the residents. Daily attendance will be kept. Rotation begins with morning rounds and/or the first procedure at 8:30am and will end with completion of the last case and/or afternoon rounds.

[Evaluation Method](#)

Student evaluations will be determined by active participation in rounds, case discussions, and involvement in procedures. Feedback will be obtained from the residents and IR team. A short quiz comprising of vascular anatomy and basic IR procedural knowledge will be administered. Feedback from the rotating students will also be collected and used as a basis to improve the elective experience.

[Course Director](#)

Salman S. Shah, MD

[How to Apply](#)

If you are interested in applying, please call 516-572-5399 or visit us at www.numc.edu.