

# Curriculum

## MUSCULOSKELETAL RADIOLOGY FELLOWSHIP

### Department of Diagnostic Radiology Allegheny General Hospital

#### **BACKGROUND AND GOALS**

A nontraditional fellowship in musculoskeletal diseases as well as emergency and trauma imaging has been designed for qualified applicants at this Level I Trauma Center. Applicants should be enrolled in an ACGME-accredited residency program, should be eligible for licensure in the Commonwealth of Pennsylvania, and should have reasonable expectations for passing the written and oral examinations of the American Board of Radiology. The fellowship will provide training in all aspects of imaging as applicable to the musculoskeletal system, including radiography, computed tomography (CT), magnetic resonance (MR), arthrography, biopsies, and image-guided orthopaedic interventional procedures (screw placements). The fellow will have ample opportunity for rotations through the neuroradiology and body imaging sections. Because this is a nontraditional fellowship, the fellow will be expected to spend no greater than 20% of his/her time functioning as a junior attending.

#### **SUPERVISION**

The fellow will be, at all times in that role, supervised by Drs. Richard H. Daffner and Robert Sciulli. Both are experienced musculoskeletal radiologists. Both are members of the Society of Skeletal Radiology and the American College of Radiology. In addition, Dr. Daffner is a member of the International Skeletal Society and the American Society of Emergency Radiology. Dr. Sciulli is a former orthopaedic surgeon and is certified by the American Board of Orthopaedic Surgery.

Supervised duties will include image interpretation, performance of invasive procedures (arthrograms, biopsies, aspirations), and resident and student teaching. All imaging studies to be reported and all reports of those imaging studies and procedures will be reviewed by one of the supervising staff. All procedures will be performed under direct supervision of the attending staff. In addition, the fellow will be encouraged to develop and execute a research project on a subject of his/her interest. The goal will be to not only

become involved in scholarly pursuits, but also to prepare a paper for presentation and/or publication in the peer-review literature.

Studies performed and interpreted during “service time” will not be reviewed, since the fellow will be a Board certified, licensed practitioner.

## **GENERAL OBLIGATIONS AND DUTY HOURS**

1. Preview imaging studies in the reading room and dictate those studies.
2. Oversee resident interpretations of studies prior to staff review.
3. Perform arthrograms, aspirations, biopsies under supervision of attending staff.
4. Teach residents and students (see below).
5. Duty hours normally 8 AM to 5 PM.

## **TEACHING RESPONSIBILITIES**

1. Instruct residents and students in basics of MSK imaging and diseases.
2. Present a case conference every third week as part of the ongoing department conference schedule.
3. Supervise resident-run Bring Your Best Case Conference in a regular rotation with other staff members and fellows.
4. Present two didactic conferences per year on a subject of his/her choosing.

## **SERVICE OBLIGATIONS AND CALL FREQUENCY**

1. Not more than one day per week staffing GI fluoroscopy or chest reading room.
2. Not more than one weekend per month providing General Radiology weekend coverage as part of the regular call rotation. This should average approximately once every six weeks with current staffing.

## Academic Content

1. Trauma
  - a. Mechanisms of injury
  - b. Principles of fracture immobilization and fracture healing
  - c. Upper limb injuries
  - d. Pelvic injuries
  - e. Lower limb injuries
  - f. Vertebral injuries
  - g. Facial injuries
  - h. Stress injuries
  - i. Pseudofractures and variants
2. Arthritis: Anatomy, Physiology, and Pathology
  - a. Inflammatory arthritis (rheumatoid, ankylosing spondylitis, psoriatic, Reiter's)
  - b. Crystal induced arthritis (gout, pseudogout, hydroxyapatite)
  - c. Degenerative (osteoarthritis, inflammatory osteoarthritis)
  - d. Infectious (pyogenic, tubercular, fungal)
  - e. Neuropathic
3. Infections
  - a. Pyogenic

- b. Tubercular
- c. Fungal
- 4. Neoplasms
  - a. Principles of diagnosis, pathophysiology
  - b. Benign tumors - chondroid, osteoid, fibrous, miscellaneous
  - c. Malignant tumors - chondroid, osteoid, fibrous, round cell, metastatic
  - d. Tumor-like disorders
- 5. Metabolic Disorders
  - a. Physiology of bone development and growth
  - b. Disorders of ossification
  - c. Disorders of mineralization
  - d. Disorders of remodeling
- 6. Postoperative Appearances
  - a. "Normal" postoperative appearances
  - b. Complications of surgery