

SPH MSK

Goals & Objectives CanMeds

Level: PGY 2 - 5

Rotation Supervisor: Dr. David Fenton

During the course of the four years, residents will receive minimum six months of dedicated musculoskeletal training which may be performed at St. Paul's Hospital and/or VGH. Residents are expected to develop graded responsibility as they rise from first to fourth year level. Guidance will be given to each resident at the commencement of a rotation, an interim evaluation will occur halfway through the rotation, and a final evaluation will be given at the end of each rotation. The final evaluation will be a consensus evaluation from all staff and fellows that the resident worked with during that specific rotation. The final evaluation will be submitted to the residency training program director.

All residents are expected to arrive in the department by 0800 hours and stay until the conclusion of the working day, approximately 1730 hours. If a resident is absent from his/her MSK rotation for any reason, he/she should give ample warning to Dr. Fenton or Dr. Cresswell. Vacation and conference requests must be booked with Dr. Fenton or Dr. Cresswell in advance, at least two weeks prior to any planned absence from the rotation.

Ongoing teaching and interaction with staff and fellows occurs throughout the day as per the appended schedule.

Medical Expert:

- Knowledge of MR, CT and US physics, artifacts and understanding imaging protocols as related to MSK imaging.
- Knowledge of multi-planar anatomy of the knee, shoulder, wrist, hand, hip, ankle, foot, elbow, spine, pelvis and TMJ.
- Knowledge of clinical radiology and pathology as it pertains to MSK imaging
- Detects findings and interprets findings into an appropriate differential diagnosis
- Ability to summarize case, offer recommendations, understands treatment and clinical implications
- Knowledge of the procedure: indications, complications, appropriate alternatives, use of conscious sedation, post procedure care, appropriate modality (U/S, Fluoro, or CT guidance)
- Basic technical ability: patient positioning, sterile technique, local anaesthetic, simple procedures such as arthrograms, therapeutic injections and joint aspirations of the common joints (shoulder, knee, hip and wrist)
- Advanced technical ability: ability to perform more difficult procedures

More specifically:

PGY2/3 (first MSK rotation): The first 1-2 weeks should focus primarily on gaining basic knowledge of MSK anatomy, pathology and plain radiography. Chapters 1, 15, 10 and 2-8 of Musculoskeletal MRI by Kaplan and Helms should be read (in that order) as soon as possible during the first rotation. The remaining chapters should be read if time permits or early in the second rotation. First-year residents will work closely with the MSK fellows and staff. Residents will be taught and expected to perform straight forward arthrograms, therapeutic injections and aspirations of the shoulder, hip and knee independently but with staff/fellow supervision by the end of the rotation. Residents will participate in all academic rounds and MSK ultrasound sessions (schedule appended below). Residents will observe/participate in all fellow read-outs which are scheduled once or twice per day as per the schedule. Residents will read 10-20 plain radiographs from the "hotseat" list and read them out with the MSK staff. Residents should complete the MSK Radiography Teaching File. Once the relevant chapters in Kaplan and Helms have been read, residents should begin reading cases, beginning with CT of all body parts, and MRI of the Knee. MRI of the Shoulder and Spine can be included if time permits. Residents will present at at-least one Friday MSK rounds. This is a 10 minute presentation of a topic in MSK radiology, chosen by the resident, usually related to an interesting case encountered during the rotation.

PGY3/4 (second/third MSK rotation): Residents should read the remaining chapters in Kaplan and Helms and review Chapters 1, 15, 10 and 2-8 if necessary. Residents will continue to perform straight forward injections under Fluoro +/- U/S guidance independently but with supervision. Residents will participate in all academic rounds and MSK ultrasound sessions (schedule appended below). Residents will observe/participate in all fellow read-outs which are scheduled once or twice per day as per the schedule. Residents will read a wide variety of cases including Plain Radiography, CT of all joints (including SPECT CT), MRI of the Knee, Shoulder, Wrist, Ankle, Hip and Spine. Residents will present at at-least one Friday MSK rounds. This is a 10 minute presentation of a topic in MSK radiology, chosen by the resident.

PGY5: Senior residents are expected to function in the capacity of a fellow/junior staff. At the initiation of the rotation, the resident should identify areas of specific weakness and/or interest and the training will help address these issues. Senior residents are expected to check cases, to review cases with staff, to consult with referring physicians, to initiate appropriate intervention (under supervision), and to report examinations as appropriate. Senior residents will participate in all academic rounds, MSK ultrasound sessions and all fellow readouts. Residents will present at at-least one Friday MSK rounds. This is a 10 minute presentation of a topic in MSK radiology, chosen by the resident.

Communicator:

- Establish therapeutic relationship with patients/families
- Obtain and synthesize relevant history from patients/families/communities
- Listen effectively
- Communicates effectively with patients, families and other health professionals.
- Demonstrate appropriate and timely communication of findings to referring physicians
- Able to obtain appropriate informed consent for MSK procedures
- Give accurate, concise, complete reports

Collaborator

- Respects, recognizes the roles of, and consult effectively with the healthcare team, including nurses and technologists
- Contribute effectively to other interdisciplinary team activities

LEADER ROLE:

- Implement processes to ensure personal practice improvement
- Set priorities and manage time to integrate practice and personal life
- Apply the science of quality improvement (ie discussion of potential audit) to contribute to improving
- systems of patient care
- Contribute to a culture that promotes patient safety, including recognition of patient safety issues, and utilization of health informatics to improve patient safety
- Demonstrate leadership skills to enhance health care

Health Advocate

- Understands benefits and limitations/risks related to the various modalities utilized in MSK imaging and image guided MSK procedures
- Understands the appropriate use of MSK imaging and rationalization of use of imaging resources

Scholar

- Effectively teaches others, including residents, medical students, patients and other health professionals
- Demonstrates continuous self-directed learning (reads around cases and topics)
- Demonstrates evidence based medical approach and critical appraisal with regards to radiology literature
- Develop, implement and monitor a personal continuing education strategy
- Contribute to development of new knowledge

Professional

- Deliver highest quality care with integrity, honesty and compassion
- Exhibit appropriate personal and interpersonal professional behaviors
- Practice medicine ethically consistent with obligations of a physician
- Demonstrates insight with regards to own limitations, strength and weaknesses, asks for help when appropriate
- Acceptance of constructive criticism

Reading List:

Recommended Textbooks:

1. Musculoskeletal MRI by Kaplan, Helms, Major et al. This book is worth owning but there is a copy in the fellows office.
2. Fundamentals of Skeletal Radiology (The “pink book”) by Clyde Helms, 2004
3. MSK Chapters of Brandt and Helms.
4. Bone and Joint Imaging, 2nd edition by Resnick, Kransdorf
5. Magnetic Resonance Imaging in Orthopaedics and Sports Medicine by David W. Stoller. 3rd Edition

Reading around cases that the resident encounters during his/her rotation is mandatory. This can be done with Stat DX and the internet can provide many review articles (eg Radiographics).