

**Goals & Objectives for the Orthopaedic Surgery Resident  
McGill Musculoskeletal Oncology (MGH & RVH)**

*The following document is intended to guide you in some of the specific knowledge and skills you should develop on this rotation. This document is intended to augment but not replace the “Objectives of Training and Specialty Training Requirements in Orthopedic Surgery” and the “Specific Standards of Accreditation for Residency Programs in Orthopedic Surgery”. A copy of these documents is supplied in your residency handbook and is also available on the Royal College website. The resident is expected to be able to describe the rotation specific objectives prior to or at the commencement of the rotation. It is understood that a residency in Orthopaedics is a continuum. Senior residents will be able to meet the same objectives as junior residents as well as the senior objectives.*

**1. MEDICAL EXPERT**

**Cognitive and Diagnostic**

*Junior / Senior Resident*

- A. Obtain appropriate history and perform physical examination relating to a tumour and be competent in assessing the following:
  - Size of the tumour and its relationship to fascia
  - Neurovascular and articular involvement
  - Lymphatic involvement
  - Sites of metastatic potential for primary MSK tumours
  - Organs systems likely to metastasize to the MSK system
  - Tumour characteristics including issues specific to age and gender
- B. Describe the different tumour classes and their behaviour:
  - Primary lesions
  - Benign
  - Benign Aggressive
  - Malignant
  - Metastatic lesions
- C. Describe the presentation, radiologic characteristics and natural history of the most common primary bone tumour types:
  - Chondroid lesions
  - Osteoid lesions
  - Fibrous lesions
  - Others- unicameral bone cyst, hemangioma, histiocytosis, lipoma, eosinophilic granuloma, giant cell tumour, aneurysmal bone cyst, ewings sarcoma, adamantinoma, chordoma, solitary fibrous tumour
- D. Describe the presentation, radiologic characteristics and natural history of different primary soft tissue tumour types:
  - Fibrous lesions
  - Lipoid lesions
  - Muscle lesions

- Vascular lesions
  - Nerve lesions
  - Others - myxoma, fibrosarcoma, malignant fibrous histiocytoma, pigmented villonodular synovitis, giant cell tumour of tendon sheath, myositis ossificans, tumoral calcinosis
- E. For a given MSK tumour:
- Formulate a differential diagnosis and stage the tumour (according to the Enneking Musculoskeletal Tumour Society (MSTS) System)
  - Describe the appropriate biopsy principles of MSK tumours.
  - Formulate a treatment plan for the different tumour types
  - Describe the multidisciplinary approach to curative treatment and palliative care
- F. Formulate treatment plans for complications in MSK oncology surgery.

***Senior Resident***

- A. Display detailed knowledge of reconstructive options and technical considerations for the management of metastatic bone disease
- B. Display knowledge of options for reconstruction after resection of primary bone tumours
- C. Display the ability to recognize and manage complex post-operative complications, including septic arthroplasty, bleeding, instability.

**Technical**

***Junior Resident***

- A. To be able to perform with proficiency:
  - Open biopsy of bone and/or soft-tissue lesion
  - Stabilization of metastatic disease
  - Treatment of common benign tumours

***Senior Resident***

- A. To be able to perform with proficiency:
  - Open biopsy of bone and/or soft-tissue lesion
  - Stabilization of metastatic disease
  - Treatment of common benign tumours
- B. To develop skills and assist in:
  - Exploration of neurologic structures
  - Exploration of vascular structures
  - Dissection of primary bone and soft tissue tumours
  - Prosthetic reconstruction

## **2. COMMUNICATOR**

### *Junior / Senior Resident*

- A. Deliver information to patients and family in a humane manner so that the patient and family understand the options of care and are able to participate in the decision-making process
- B. Develop rapport, trust, and ethical therapeutic relationships with patients and families.
- C. Demonstrate an ability to listen effectively and address patients concerns.
- D. Develop strategies for delivering bad news and discussing end of life decisions.
- E. Effectively communicate with others involved in the multidisciplinary care of the oncology patient.
- F. Provide timely and appropriate consultation as requested.
- G. Obtain informed consent; appreciate alternative means of achieving consent if the patient is incompetent to provide consent, be it on the grounds of age or mental status, or other disqualifier.
- H. Maintain clear, accurate and appropriate written records.
- I. Write well-organized and legible orders and progress notes.
- J. Complete concise hospital discharge summaries promptly.
- K. Write well-organized letters, providing clear direction to the referring physician and other physician and allied personnel, where indicated.

### *Senior Resident*

- A. Recognize the emotional stress for patients and families faced with musculoskeletal oncology conditions and their associated surgical management, a stress especially accentuated in the treatment of children.
- B. Gather information not only about the disease but also about the patient's beliefs, concerns and expectations about the illness, while considering the influence of factors such as the patient's age, gender, ethnic, cultural and socioeconomic background, and spiritual values on that illness and on any proposed surgical intervention.

## **3. COLLABORATOR**

### *Junior / Senior Resident*

- A. Describe the roles and responsibilities of the members of a multidisciplinary oncology team
- B. Develop a working relationship with the appropriate pathologist and radiologist
- C. Participate in Morbidity and Mortality rounds
- D. Describe support groups in the community who can assist the oncology patient and their families

### *Senior Resident*

- A. Identify and describe the role, expertise and limitations of all members of an interdisciplinary team required to optimally achieve a goal related to patient care, a research problem, an educational task, or an administrative responsibility.
- B. Participate in an interdisciplinary team, demonstrating the ability to accept, consider and respect the opinions of other team members, while contributing specialty-specific expertise.

## **4. MANAGER**

### *Junior / Senior Resident*

- A. Prioritize the investigation and management of the oncology patients
- B. Understand the balance of allocation of healthcare resources, balancing effectiveness, efficiency and access with optimal patient care
- C. Describe appropriate waiting times for the oncology patient
- D. Work effectively and efficiently in a health care organisation.
- E. Utilize information technology to optimise patient care, life-long learning and other activities.
- F. Be open to working effectively as a member of a team or a partnership and to accomplish tasks whether one is a team leader or a team member.
- G. Have basic knowledge of population-based approaches to health care services and their implication for medical practice.

## **5. HEALTH ADVOCATE**

### *Junior/Senior Resident*

- A. Understand the risk factors associated with the development of a malignancy
- B. Describe strategies to decrease the societal risk of malignancy
- C. Communicate to patients their individual risk factors

### *Senior Resident*

- A. Demonstrate knowledge of the management of individual patients, by identifying the patient's status with respect to one or more of the determinants of health (e.g., unemployment); adapting the assessment and management accordingly (e.g. the medical history to the patient's social circumstances); and assessing the patient's ability to access various services in the health and social system.

## **6. SCHOLAR**

### *Junior / Senior Resident*

- A. Pose a clinical research question.
- B. Recognize and identify gaps in knowledge and expertise around the clinical question.

- C. Formulate a plan to fill the gap including to:
  - conduct an appropriate literature search based on the clinical question;
  - assimilate and appraise the literature;
  - develop a system to store and retrieve relevant literature;
  - consult others (physicians and other health professionals) in a collegial manner.
- D. Propose a solution to the clinical question.
- E. Implement the solution in practice. Evaluate the outcome and reassess the solution.
- F. Identify practice areas for research.
- G. Prepare and present an appropriate lecture/presentation including critical appraisal of the literature; describe how this information could be integrated into practice

## **7. PROFESSIONAL**

### *Junior / Senior Resident*

- A. Demonstrate ethical practice in the management of the oncology patient including respect for issues regarding gender, ethnicity, religion, age and cultural.
- B. Demonstrate honesty, integrity, commitment, compassion, respect and altruism
- C. Achieve the following discipline-based objectives:
  - Display attitudes commonly accepted as essential to professionalism.
  - Use appropriate strategies to maintain and advance professional competence.
  - Continually evaluate his/her abilities, knowledge and skills and know his/her limitations of professional competence.
- D. Achieve the following personal/professional boundary objectives:
  - Adopt specific strategies to heighten personal and professional awareness and explore and resolve interpersonal difficulties in professional relationships.
  - Consciously strive to balance personal and professional roles and responsibilities and to demonstrate ways of attempting to resolve conflicts and role strain.
- E. Achieve the following objectives related to ethics and professional bodies:
  - Know and understand the professional, legal and ethical codes to which physicians are bound.
  - Recognize, analyze and attempt to resolve in clinical practice ethical issues such as truth-telling, consent, advanced directives, confidentiality, end-of-life care, conflict of interest, resource allocation, research ethics, etc.

***Senior Resident***

- A. Have basic knowledge of and be able to apply relevant legislation that relates to the health care system in order to guide one's clinical practice. (R4-R5)
- B. Recognize, analyze and know how to deal with unprofessional behaviors in clinical practice, taking into account local and provincial regulations.

*Revised – October 2018*