

**2009**  
**EDITORIAL REVISIONS 2011**

*This document applies to those who begin training on or after July 1<sup>st</sup>, 2011.*

(Please see also the "Policies and Procedures.")

## **DEFINITION**

Medical Oncology is a medical subspecialty which is concerned with the study, research, diagnosis and medical management of neoplastic diseases.

## **GOALS**

Upon completion of training, a resident is expected to be a competent specialist in Medical Oncology capable of assuming a consultant's role in the specialty. The resident must acquire a working knowledge of the theoretical basis of the specialty, including its foundations in the basic medical sciences and research.

Only candidates certified by the Royal College of Physicians and Surgeons of Canada in Internal Medicine may be eligible for the Certificate of Special Competence in Medical Oncology.

During the course of training, the resident must acquire a high degree of clinical competence in the investigation and management of patients with the spectrum of neoplastic diseases. The resident must acquire understanding of the basic scientific principles which relate to cancer and its treatment, particularly systemic management; chemotherapy, hormonal therapy, targeted therapy and immunologic approaches. Competency must also be attained in issues of survivorship, acute and long-term complications of cancer and its treatments, and supportive and palliative care. The resident must develop the ability to function as a consultant in the inpatient and ambulatory settings as a part of a multidisciplinary team. Expertise in communications, relevant investigative methods and technical skills are essential, together with skill in the collection and interpretation of data and decision-making.

Residents must demonstrate the requisite knowledge, skills, and attitudes for effective patient-centered care and service to a diverse population. In all aspects of specialist practice, the graduate must be able to address issues of gender, sexual orientation, age, culture, ethnicity and ethics in a professional manner.

## MEDICAL ONCOLOGY COMPETENCIES

At the completion of training, the resident will have acquired the following competencies and will function effectively as a:

### Medical Expert

#### **Definition:**

As *Medical Experts*, Medical Oncologists integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional attitudes in their provision of patient-centered care. *Medical Expert* is the central physician Role in the CanMEDS framework.

#### **Key and Enabling Competencies: Medical Oncologists are able to...**

#### **1. Function effectively as consultants, integrating all of the CanMEDS Roles to provide optimal, ethical and patient-centered medical care**

- 1.1. Perform a Medical Oncology consultation, including the presentation of well-documented assessments and recommendations in written and/or verbal form in response to a request from another health care professional
- 1.2. Demonstrate use of all CanMEDS competencies relevant to Medical Oncology practice
- 1.3. Identify and appropriately respond to relevant ethical issues arising in care of patients with cancer
- 1.4. Demonstrate the ability to prioritize professional duties when faced with multiple patients and problems
- 1.5. Demonstrate compassionate and patient/family-centered care
- 1.6. Recognize and respond to the ethical dimensions in Medical Oncology decision-making
- 1.7. Recognize situations which require medical expertise other than patient care, such as providing expert legal testimony or advising governments

#### **2. Establish and maintain clinical knowledge, skills and attitudes appropriate to Medical Oncology practice**

- 2.1. Apply knowledge of the clinical, socio-behavioural, and fundamental biomedical sciences relevant to Medical Oncology, including:
  - 2.1.1. Basic sciences including growth kinetics, molecular biology, radio biology, biochemistry, pharmacology, endocrinology and immunology as they relate to the understanding of cancer and its treatment
  - 2.1.2. Natural history of cancer, including risk factors, genetic predisposition, growth and dissemination patterns, and prognostic variables
  - 2.1.3. Appropriate diagnostic tools to evaluate the patient with cancer, including laboratory tests, imaging modalities and non-invasive and invasive techniques

- 2.1.4. Staging of different tumours using the TNM classification system and applicable prognostic indices
- 2.1.5. Mechanisms of action, indications, complications and expected outcomes (curative or palliative) of different therapeutic modalities including chemotherapy, immunotherapy, targeted therapy, hormonal therapy, stem cell transplantation, radiation therapy, alone or in combined modality treatment
- 2.1.6. Principles of the administration of systemic therapies
- 2.1.7. Screening and preventive methods for different cancers
- 2.1.8. Paraneoplastic syndromes
- 2.1.9. Emergencies arising from the cancer itself or the systemic therapy administered
- 2.1.10. Cancers arising in special populations (e.g. immunosuppressed hosts, pregnant women or geriatric groups)
- 2.1.11. Supportive and palliative care of the patient with cancer
- 2.1.12. Support for the caregivers and family of the patient with cancer
- 2.1.13. Impact of therapeutic interventions including acute, subacute, long term and late side effects
- 2.1.14. Issues related to cancer survivorship
- 2.2. Describe the CanMEDS framework of competencies relevant to Medical Oncology
- 2.3. Apply lifelong learning skills of the Scholar Role to implement a personal program to keep up-to-date, and enhance areas of professional competence
- 2.4. Contribute to the enhancement of quality care and patient safety in Medical Oncology practice, integrating the available best evidence and best practices

### **3. Perform a complete and appropriate assessment of a patient**

- 3.1. Identify and explore issues to be addressed in a patient encounter effectively, including the patient's context and preferences which might affect the level of information they wish to hear and the treatment methods to be addressed
- 3.2. Elicit a history that is relevant, concise and accurate to the context and preferences appropriate to the patient with cancer, for the purposes of prevention and health promotion, diagnosis and/or management. This includes an evaluation of the patient's general health and performance status and, when appropriate, a geriatric assessment
- 3.3. Perform a focused physical examination that is relevant and accurate for the purposes of prevention and health promotion, diagnosis and/or management
- 3.4. Select medically appropriate investigative methods in a resource-effective manner
- 3.5. Demonstrate effective clinical problem solving and judgment to address patient problems, including interpreting available data and integrating information to generate differential diagnoses and management plans

- 3.6. Evaluate the clinical syndromes and toxicities associated with the therapies used in Medical Oncology

**4. Use preventive and therapeutic interventions effectively**

- 4.1. Implement a management plan in collaboration with a patient with cancer and their family
- 4.2. Demonstrate appropriate and timely application of preventive and therapeutic interventions relevant to Medical Oncology practice
- 4.3. Ensure appropriate informed consent is obtained for therapies
- 4.4. Ensure patients receive appropriate end-of-life care in a comprehensive way that takes into account the capacity of the primary caregiver and support system

**5. Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic**

- 5.1. Demonstrate effective, appropriate, and timely performance or delegation of diagnostic procedures relevant to Medical Oncology practice, including:
  - 5.1.1. Diagnostic paracentesis, thoracentesis and pericardiocentesis
  - 5.1.2. Lumbar puncture
  - 5.1.3. Bone marrow aspiration/biopsy
- 5.2. Demonstrate effective, appropriate, and timely performance or delegation of therapeutic procedures relevant to Medical Oncology practice, including:
  - 5.2.1. Therapeutic paracentesis, thoracentesis and pericardiocentesis including use of sclerosing agents
  - 5.2.2. Intrathecal chemotherapy through lumbar puncture or an Ommaya reservoir
  - 5.2.3. Supervision of chemotherapy
  - 5.2.4. Management of central venous catheter
- 5.3. Ensure appropriate informed consent is obtained for procedures
- 5.4. Document and disseminate information related to procedures performed and their outcomes
- 5.5. Ensure adequate follow-up is arranged for procedures performed and timely management of complications provided

**6. Seek appropriate consultation from other health professionals, recognizing the limits of their expertise**

- 6.1. Demonstrate insight into their own limitations of expertise in their care of cancer patients

- 6.2. Demonstrate effective, appropriate, and timely consultation of another health professional as needed for optimal multidisciplinary patient care during the diagnostic, therapeutic and palliative phases
- 6.3. Arrange appropriate follow-up care services for a patient and their family which includes but is not limited to referral to family physician, palliative care, home care services, psychological support, nutritional support and rehabilitation care

## **Communicator**

### ***Definition:***

*As Communicators*, Medical Oncologists effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after the medical encounter.

### ***Key and Enabling Competencies: Medical Oncologists are able to...***

#### **1. Develop rapport, trust, and ethical therapeutic relationships with patients and families**

- 1.1. Recognize that being a good communicator is a core clinical skill for Medical Oncologists, and that effective physician-patient communication can foster patient satisfaction, physician satisfaction, adherence and improved clinical outcomes
- 1.2. Establish positive therapeutic relationships with patients with cancer and their families that are characterized by understanding, trust, respect, honesty and empathy
- 1.3. Respect patient confidentiality, privacy and autonomy
- 1.4. Listen effectively
- 1.5. Be aware of and responsive to nonverbal cues
- 1.6. Facilitate a structured clinical encounter effectively (e.g. family meeting)

#### **2. Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals**

- 2.1. Gather information about a disease and about a patient's beliefs (spiritual and other), concerns, expectations, illness experience, taking into consideration factors such as age, geriatric syndromes, general, ethnic and cultural background, socioeconomic status, general health status, and performance status
- 2.2. Seek out and synthesize relevant information from other sources, such as a patient's family, caregivers and other professionals with appropriate respect for patient confidentiality

**3. Convey relevant information and explanations accurately to patients and families, colleagues and other professionals**

- 3.1. Deliver information to a patient with cancer and family, colleagues and other professionals in an empathetic, humane manner and in such a way that it is understandable, encourages discussion and participation in decision-making while respecting the patient's preference for limited information

**4. Develop a common understanding on issues, problems and plans with patients, families, and other professionals to develop a shared plan of care**

- 4.1. Identify and explore problems to be addressed from a patient with cancer encounter effectively, including the patient's context, responses, concerns, and preferences
- 4.2. Respect diversity and difference, including but not limited to the impact of gender, religion and cultural beliefs on information delivery and decision-making
- 4.3. Encourage discussion, questions, and interaction in the encounter
- 4.4. Engage patients, families, and relevant health professionals in shared decision-making to develop a coherent plan of multidisciplinary cancer care (curative or palliative) with well-defined roles for each party involved
- 4.5. Address challenging communication issues effectively, such as obtaining informed consent, delivering bad news, and addressing anger, confusion and misunderstanding

**5. Convey effective oral and written information about a medical encounter**

- 5.1. Maintain clear, accurate, timely and appropriate records (e.g., written or electronic) of clinical encounters and plans using staging systems or prognostic indices as needed
- 5.2. Present verbal reports of clinical encounters and plans
- 5.3. Present medical information to the public or media about a medical issue

**Collaborator**

***Definition:***

As *Collaborators*, Medical Oncologists effectively work within a health care team to achieve optimal patient care.

***Key and Enabling Competencies: Medical Oncologists are able to...***

**1. Participate effectively and appropriately in an interprofessional health care team**

- 1.1. Describe the specialist's roles and responsibilities to other professionals

- 1.2. Describe the roles and responsibilities of other professionals within the health care team
- 1.3. Recognize and respect the diversity of roles, responsibilities and competences of other professionals in relation to their own and potential areas of overlap
- 1.4. Work with others to assess, plan, provide and integrate care for individual patients with cancer (or groups of patients)
- 1.5. Work with others to assess, plan, provide and review other tasks, such as research problems, educational work, program review or administrative responsibilities
- 1.6. Participate in interprofessional team meetings (such as tumour boards)
- 1.7. Enter into interdependent relationships with other professions for the provision of quality care
- 1.8. Respect team ethics, including confidentiality, resource allocation and professionalism
- 1.9. Demonstrate leadership in a health care team and identify priorities that need to be addressed, as appropriate

**2. Work with other health professionals effectively to prevent, negotiate, and resolve interprofessional conflict**

- 2.1. Demonstrate a respectful attitude towards other colleagues and members of an interprofessional team
- 2.2. Work with other professionals in a manner that prevents conflicts
- 2.3. Employ collaborative negotiation to resolve conflicts
- 2.4. Respect differences and address misunderstandings and limitations in other professionals
- 2.5. Recognize one's own differences, misunderstanding and limitations that may contribute to interprofessional tension
- 2.6. Reflect on interprofessional team function

**Manager**

***Definition:***

As *Managers*, Medical Oncologists are integral participants in health care organizations, organizing sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the health care system.

***Key and Enabling Competencies: Medical Oncologists are able to...***

**1. Participate in activities that contribute to the effectiveness of their health care organizations and systems**

- 1.1. Work collaboratively with others in their organizations

- 1.2. Participate in systemic quality process evaluation and improvement, such as patient safety initiatives, development of guidelines and treatment protocols
- 1.3. Describe the structure and function of the health care system as it relates to cancer care, including the roles of physicians
- 1.4. Describe principles of health care financing, including financing of new and expensive therapies and drugs, physician remuneration, budgeting and organizational funding
- 1.5. Recognize the fiscal impact of prescribing treatments, and understand the concept of economic analyses in making treatment decisions

## **2. Manage their practice and career effectively**

- 2.1. Set priorities and manage time to balance patient care, practice requirements, outside activities and personal life
- 2.2. Understand how to manage a practice including finances and human resources
- 2.3. Implement processes to ensure personal practice improvement and maintenance of competence
- 2.4. Employ information technology appropriately for patient care

## **3. Allocate finite health care resources appropriately**

- 3.1. Recognize the importance of just allocation of health care resources, aiming to provide optimal patient care while maximizing effectiveness, efficiency and accessibility to these resources
- 3.2. Apply evidence-based investigation, treatment and sound management processes for cost-appropriate care

## **4. Serve in administration and leadership roles, as appropriate**

- 4.1. Chair or participate effectively in committees, meetings and tumour boards
- 4.2. Lead or implement change in the area of cancer care
- 4.3. Recognize the relevance of the elements of health care delivery (e.g., work schedules, capacity for the delivery of care including chairs and beds for chemotherapy, nurses specialized in cancer care, chemotherapy delivery, specialized pharmacists)

## **Health Advocate**

### ***Definition:***

As *Health Advocates*, Medical Oncologists responsibly use their expertise and influence to advance the health and well-being of individual patients, communities, and populations.



**Key and Enabling Competencies: Medical Oncologists are able to...**

**1. Respond to individual patient health needs and issues as part of patient with cancer care**

- 1.1. Identify the health needs of an individual patient with cancer by identifying the patient's status with respect to one or more of the determinants of health (e.g., exposure history, poverty, unemployment, education); adapting the assessment and management accordingly, and assessing the patient's ability to access various services in the health and social system
- 1.2. Identify opportunities for advocacy, health promotion and disease prevention with individuals to whom they provide care and their caregivers

**2. Respond to the health needs of the communities that they serve**

- 2.1. Describe the practice communities that they serve
- 2.2. Identify opportunities for advocacy, health promotion and disease prevention in the communities that they serve (including work environment, socio-economic status), and respond appropriately
- 2.3. Appreciate the possibility of competing interests between the communities served and other populations

**3. Identify the determinants of health for the populations that they serve**

- 3.1. Identify the most important determinants of health for populations with neoplastic diseases (i.e., environmental/occupational exposures, genetic and socio-economic factors, and barriers to access to care and resources), being familiar with the underlying research evidence and applying this understanding to common problems and conditions in the specialty of Medical Oncology
- 3.2. Identify vulnerable or marginalized populations within those served and respond appropriately

**4. Promote the health of individual patients, communities, and populations**

- 4.1. Describe an approach to implementing a change in a determinant of health of the populations they serve
- 4.2. Describe how public policy impacts on the health of the populations served
- 4.3. Identify points of influence in the health care system and its structure
- 4.4. Describe the ethical and professional issues inherent in health advocacy, including altruism, social justice, autonomy, integrity and idealism
- 4.5. Appreciate the possibility of conflict inherent in their role as a health advocate for a patient or community with that of manager or gatekeeper
- 4.6. Describe the role of the medical profession in advocating collectively for health and patient safety

## Scholar

### **Definition:**

As *Scholars*, Medical Oncologists demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.

### **Key and Enabling Competencies: Medical Oncologists are able to...**

#### **1. Maintain and enhance professional activities through ongoing learning**

- 1.1. Describe the principles of maintenance of competence
- 1.2. Describe the principles and strategies for implementing a personal knowledge management system
- 1.3. Recognize and reflect on learning issues in practice
- 1.4. Understand the utility of a personal practice audit
- 1.5. Pose an appropriate learning question
- 1.6. Access and interpret the relevant evidence
- 1.7. Integrate new learning into practice
- 1.8. Evaluate the impact of any change in practice
- 1.9. Document the learning process

#### **2. Critically evaluate medical information and its sources, and apply this appropriately to practice decisions**

- 2.1. Describe and utilize the principles of critical appraisal
- 2.2. Critically appraise retrieved evidence in order to address a clinical question
- 2.3. Integrate critical appraisal conclusions into clinical care

#### **3. Facilitate the learning of patients, families, students, residents, other health professionals, the public and others, as appropriate**

- 3.1. Describe principles of learning relevant to medical education
- 3.2. Identify collaboratively the learning needs and desired learning outcomes of others
- 3.3. Select effective teaching strategies and content to facilitate others' learning
- 3.4. Demonstrate effective lecture or presentation skills
- 3.5. Assess and reflect on a teaching encounter
- 3.6. Provide effective feedback
- 3.7. Describe the principles of ethics with respect to teaching

**4. Contribute to the development, dissemination, and translation of new knowledge and practices**

- 4.1. Describe the principles of research and scholarly inquiry
- 4.2. Describe the principles of research ethics
- 4.3. Pose a scholarly question
- 4.4. Conduct a systematic search for evidence
- 4.5. Select and apply appropriate methods to address the question
- 4.6. Disseminate the findings of a study
- 4.7. Participate effectively in the care of patients being considered for and enrolled on clinical trials

**Professional**

***Definition:***

As *Professionals*, Medical Oncologists are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behaviour.

***Key and Enabling Competencies: Medical Oncologists are able to...***

**1. Demonstrate a commitment to their patients, profession, and society through ethical practice**

- 1.1. Exhibit appropriate professional behaviors in practice, including honesty, integrity, commitment, compassion, respect and altruism
- 1.2. Demonstrate a commitment to delivering the highest quality care and maintenance of competence
- 1.3. Recognize and appropriately respond to ethical issues encountered in clinical practice such as truth-telling, consent, advanced directives, confidentiality, end-of-life care, conflict of interest, resource allocation, and research ethics
- 1.4. Manage conflicts of interest
- 1.5. Recognize the principles and limits of patient confidentiality as defined by professional practice standards and the law
- 1.6. Maintain appropriate relations with patients

**2. Demonstrate a commitment to their patients, profession and society through participation in profession-led regulation**

- 2.1. Demonstrate knowledge and an understanding of the professional, legal and ethical codes of practice
- 2.2. Fulfill the regulatory and legal obligations required of current practice

- 2.3. Demonstrate accountability to professional regulatory bodies
- 2.4. Recognize and respond to others' unprofessional behaviours in practice
- 2.5. Participate in peer review

**3. Demonstrate a commitment to physician health and sustainable practice**

- 3.1. Balance personal and professional priorities to ensure personal health and a sustainable practice
- 3.2. Strive to heighten personal and professional awareness and insight
- 3.3. Recognize other professionals in need and respond appropriately