

## **Medical Oncology Competencies**

2018 VERSION 1.0

Effective for residents who enter training on or after July 1<sup>st</sup> 2018.

### **DEFINITION**

Medical Oncology is a medical subspecialty concerned with the study of cancer and the care of patients with cancer.

#### MEDICAL ONCOLOGY PRACTICE

Medical Oncologists practice in a variety of clinical settings to offer a wide spectrum of medical care to patients with a confirmed or suspected diagnosis of cancer.

Medical Oncologists provide individualized care and support to adult patients and their families throughout the trajectory of their illness. The cancer continuum spans health promotion and preventive measures, screening, initial assessment and diagnosis of cancer, treatment, survivorship, follow-up, and supportive, palliative, and end-of-life care. Medical Oncologists use their knowledge of the basic and clinical sciences of oncology, and special expertise in the prescription of systemic therapy of cancer, to care for patients at each stage of the continuum. Medical Oncologists work in intraprofessional teams with surgeons, radiation oncologists, medical imaging specialists, pathologists, and palliative care and other physicians to develop a multimodality evidence-based approach to management. They collaborate with other health care professionals to provide broad and comprehensive care to patients with cancer and their families.

Medical Oncology is a rapidly evolving discipline that involves the safe and appropriate use of highly specialized and newly emerging treatments and technologies, and judicious stewardship of resources, and is practised within regional cancer care systems. In addition to providing expert clinical care, Medical Oncologists provide leadership in the administration of cancer care programs and systems; provide education to patients and their families, communities, and other health care professionals; and conduct relevant research. Medical Oncologists are committed to advancing and disseminating knowledge and improving cancer outcomes for individuals and communities.

#### **ELIGIBILITY REQUIREMENTS**

Royal College certification in Internal Medicine, or enrolment in a Royal College-accredited residency program in Internal Medicine, is required (see requirements for these qualifications). All candidates must be Royal College certified in Internal Medicine in order to be eligible to write the Royal College examination in Medical Oncology.

A maximum of one year of training may be undertaken concurrently with training for certification in Internal Medicine, with approval from the program directors in both Internal Medicine and Medical Oncology.

#### MEDICAL ONCOLOGY COMPETENCIES

## **Medical Expert**

#### **Definition:**

As *Medical Experts*, Medical Oncologists integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional values in their provision of high-quality and safe patient-centred care. Medical Expert is the central physician Role in the CanMEDS Framework and defines the physician's clinical scope of practice.

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

- 1. Practise medicine within their defined scope of practice and expertise
  - 1.1. Demonstrate a commitment to high-quality care of their patients
  - 1.2. Integrate the CanMEDS Intrinsic Roles into their practice of Medical Oncology
  - 1.3. Apply knowledge of the clinical and biomedical sciences relevant to the practice of Medical Oncology
    - 1.3.1. Basic sciences as they relate to the development, diagnosis, and management of cancer
    - 1.3.2. Natural history of cancers, including risk factors, incidence, prevalence, genetic predisposition, growth and dissemination patterns, and prognostic variables
    - 1.3.3. Screening and preventive methods for different cancers
    - 1.3.4. Diagnostic tools to establish diagnosis and evaluate patients with cancer
    - 1.3.5. Staging and risk stratification of cancers using the tumour-node-metastasis (TNM) staging system, other relevant classification systems, and applicable predictive and prognostic indices
    - 1.3.6. Mechanisms of action, indications, principles of administration, complications, and expected outcomes of established and emerging systemic therapeutic modalities, including
      - 1.3.6.1. Cytotoxic chemotherapy
      - 1.3.6.2. Hormonal therapy
      - 1.3.6.3. Molecular targeted therapy
      - 1.3.6.4. Immunotherapy
      - 1.3.6.5. Stem cell transplantation relevant to cancer
      - 1.3.6.6. Supportive care for prevention and treatment of complications of systemic therapy

- 1.3.7. Indications, complications, and expected outcomes of surgery, radiation therapy, radiopharmaceuticals, and multimodality therapy for patients with cancer
- 1.3.8. Toxicities and adverse outcomes of multimodality therapeutic interventions as they relate to systemic therapies
- 1.3.9. Medical emergencies arising from cancer or systemic therapies
- 1.3.10. Diagnosis and management of paraneoplastic syndromes
- 1.3.11. Management of cancers arising in special populations, including immunosuppressed hosts, in pregnancy, the elderly, adolescents and young adults, Indigenous patients, and patients in remote geographic locations
- 1.3.12. Supportive and palliative care of patients with cancer
- 1.3.13. Principles of medical assistance in dying (MAID)
- 1.3.14. Resources for the caregivers and family of the patient with cancer
- 1.3.15. Issues related to cancer survivorship, including physical, psychological, emotional, vocational, sexual, financial, lifestyle, and fertility effects
- 1.4. Perform appropriately timed clinical assessments with recommendations that are presented in an organized manner
- 1.5. Carry out professional duties in the face of multiple competing demands
- 1.6. Recognize and respond to the complexity, uncertainty, and ambiguity inherent in clinical practice
  - 1.6.1. Provide information related to prognosis and management when published evidence is limited, such as in the setting of rare cancers

## 2. Perform a patient-centred clinical assessment and establish a management plan

- 2.1. Prioritize issues to be addressed in a patient encounter based on level of urgency of the situation, the reason for consultation or visit, the patient's and family's understanding of the reason for referral, and their goals for the visit
- 2.2. Elicit a history, perform a physical exam, select appropriate investigations, and interpret their results for the purpose of diagnosis and management, disease prevention, and health promotion
  - 2.2.1. Elicit a relevant and focused history from the patient and, with consent, other sources as necessary, including family, translators, and health records. The history includes, as appropriate,
    - 2.2.1.1. Risk factors for cancer

<sup>\*</sup> Throughout this document, references to the patient's family are intended to include all those who are personally significant to the patient and are concerned with his or her care, including, according to the patient's circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.

- 2.2.1.2. Family history of cancer
- 2.2.1.3. Symptoms from cancer or its treatment
- 2.2.1.4. Presence and severity of comorbidities and their impact on functional status and life expectancy
- 2.2.1.5. Socioeconomic status and supports
- 2.2.1.6. Prior cancer treatments
- 2.2.1.7. Engagement in complementary and alternative medicine
- 2.2.1.8. Patient's expectations
- 2.2.2. Perform an assessment of the patient's performance status and functional status
- 2.2.3. Perform a physical exam tailored to the patient's symptoms, diagnosis, and possible toxicities and effects of treatment
- 2.2.4. Review and interpret the results of investigations, including laboratory tests, pathology, molecular diagnostic tests, and medical imaging; assess investigations for completeness and accuracy, and request additional investigations and/or reviews if indicated
- 2.2.5. Integrate the clinical data to establish the diagnosis, stage, prognosis, and goals of care
- 2.2.6. Identify patients for discussion at a multidisciplinary case conference
- 2.3. Establish goals of care in collaboration with patients and their families, which may include slowing disease progression, treating symptoms, achieving cure, improving function, and palliation
- 2.4. Establish a patient-centred management plan
  - 2.4.1. Propose management and treatment options appropriate for the patient and congruent with the patient's goals of care
    - 2.4.1.1. Identify appropriate and available clinical trials
  - 2.4.2. Adjust management and treatment based on toxicity, response, unanticipated circumstances, and/or other emerging relevant clinical data
  - 2.4.3. Determine, discuss, and revise the goals and plan of care at points of transition in the cancer continuum
- 3. Plan and perform procedures and therapies for the purpose of assessment and/ or management
  - 3.1. Determine the most appropriate procedures or therapies
    - 3.1.1. Tissue procurement for diagnosis
    - 3.1.2. Lumbar puncture
    - 3.1.3. Bone marrow aspiration and biopsy

- 3.1.4. Diagnostic paracentesis, thoracentesis, and pericardiocentesis
- 3.1.5. Systemic therapy
  - 3.1.5.1. Cytotoxic therapy
  - 3.1.5.2. Hormonal therapy
  - 3.1.5.3. Molecular targeted therapy
  - 3.1.5.4. Immunotherapy
- 3.1.6. Other cancer treatment modalities, with or without systemic therapy
- 3.1.7. Supportive care, including blood products, and medications to prevent or reduce adverse effects or treat symptoms, as appropriate
- 3.1.8. Therapeutic procedures, including use of sclerosing agents and placement of indwelling catheters
  - 3.1.8.1. Paracentesis
  - 3.1.8.2. Thoracentesis
  - 3.1.8.3. Pericardiocentesis
- 3.1.9. Minimally invasive procedures for relief or palliation of symptoms
- 3.1.10. Palliative care
- 3.2. Obtain and document informed consent, explaining the risks and benefits of, and the rationale for, a proposed procedure or therapy
- 3.3. Prioritize a procedure or therapy, taking into account clinical urgency and available resources
- 3.4. Perform procedures in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances
  - 3.4.1. Bone marrow aspiration and/or biopsy
- 3.5. Provide systemic therapy for management of cancer in a time frame appropriate to the clinical situation and commensurate with the local health care system's resources
  - 3.5.1. Identify the need for and manage central venous access
  - 3.5.2. Prescribe systemic therapy and supportive care medications
  - 3.5.3. Direct the delivery of systemic therapies
  - 3.5.4. Administer intrathecal chemotherapy via lumbar puncture or Ommaya reservoir
  - 3.5.5. Manage immediate complications or adverse reactions

### 4. Establish plans for ongoing care and, when appropriate, timely consultation

- 4.1. Implement a patient-centred care plan that supports ongoing care, follow-up on investigations, response to treatment, and further consultation
  - 4.1.1. Active care: following up investigations, monitoring for adherence, and monitoring response to treatment and complications
  - 4.1.2. Follow-up: surveillance, monitoring for relapse, and monitoring for treatment complications
  - 4.1.3. Survivorship or end-of-life care: referral to a family physician, palliative care, home care services, psychological support, spiritual support, nutritional support, and/or rehabilitation

## 5. Actively contribute, as an individual and as a member of a team providing care, to the continuous improvement of health care quality and patient safety

- 5.1. Recognize and respond to harm from health care delivery, including patient safety incidents
  - 5.1.1. Adverse events in the prescribing or administering of systemic therapy or supportive care medications
  - 5.1.2. Missed, delayed, or incorrect diagnoses
  - 5.1.3. Unanticipated complications of oncologic therapies
  - 5.1.4. Adverse events in handover and transition of care plans
  - 5.1.5. Lack of timely care
- 5.2. Adopt strategies that promote patient safety and address human and system factors
  - 5.2.1. Apply strategies to enhance safe prescription and administration of systemic therapy

#### Communicator

#### Definition:

As *Communicators*, Medical Oncologists form relationships with patients and their families that facilitate the gathering and sharing of essential information for effective health care.

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

## 1. Establish professional therapeutic relationships with patients and their families

- 1.1. Communicate using a patient-centred approach that encourages patient trust and autonomy and is characterized by empathy, respect, and compassion
- 1.2. Optimize the physical environment for patient comfort, dignity, privacy, engagement, and safety

- 1.3. Recognize when the perspectives, values, or biases of patients, physicians, or other health care professionals may have an impact on the quality of care, and modify the approach to the patient accordingly
- 1.4. Respond to a patient's non-verbal behaviours to enhance communication
- 1.5. Manage disagreements and emotionally charged conversations appropriately, including discussions regarding diagnosis, prognosis, treatment, goals of care, and end-of-life care
- 1.6. Adapt to the unique needs and preferences of each patient and to his or her clinical condition and circumstances

# 2. Elicit and synthesize accurate and relevant information, incorporating the perspectives of patients and their families

- 2.1. Use patient-centred interviewing skills to effectively gather relevant biomedical and psychosocial information
- 2.2. Provide a clear structure for and manage the flow of an entire patient encounter
- 2.3. Seek and synthesize relevant information from other sources, including the patient's family, with the patient's consent
  - 2.3.1. Integrate and synthesize relevant patient information with the patient's values, preferences, expectations, and health care goals

### 3. Share health care information and plans with patients and their families

- 3.1. Share information and explanations that are clear, accurate, and timely, while assessing for patient and family understanding
  - 3.1.1. Respect the patient's preference regarding the extent and details of what information is shared
  - 3.1.2. Address the patient's and the family's fears, concerns, and expectations
  - 3.1.3. Provide effective descriptions of the different goals of treatment, including curative, adjuvant, neoadjuvant, life-prolonging, and palliative
- 3.2. Disclose harmful patient safety incidents to patients and their families accurately and appropriately

## 4. Engage patients and their families in developing plans that reflect the patient's health care needs and goals

- 4.1. Facilitate discussions with patients and their families in a way that is respectful, non-judgmental, and culturally safe
- 4.2. Assist patients and their families to identify, access, and make use of information and communication technologies to support their care and manage their health
- 4.3. Use communication skills and strategies that help patients and their families make informed decisions regarding their health

- 4.3.1. Apply decision support tools, where available, to engage patients in shared decision-making regarding investigations, evidence-based treatment options, and enrolment in clinical trials
- 4.3.2. When a patient's or family's goals of care may not be achievable, share concerns in a sensitive manner and work towards a mutual understanding
- 5. Document and share written and electronic information about the medical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy
  - 5.1. Document clinical encounters in an accurate, concise, complete, timely, and accessible manner, in compliance with regulatory and legal requirements
  - 5.2. Communicate effectively using a written health record, electronic medical record, or other digital technology
  - 5.3. Share information with patients and others in a manner that respects patient privacy and confidentiality, and enhances understanding

#### Collaborator

#### Definition:

As *Collaborators*, Medical Oncologists work effectively with other health care professionals to provide safe, high-quality patient-centred care.

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

- 1. Work effectively with physicians and other colleagues in the health care professions
  - 1.1. Establish and maintain positive relationships with physicians and other colleagues in the health care professions to support relationship-centred collaborative care
    - 1.1.1. Recognize the diverse roles, responsibilities, and competencies of other health care professionals
    - 1.1.2. Work collaboratively within an intraprofessional team to establish an appropriate cancer management plan
    - 1.1.3. Work collaboratively within an interprofessional team to provide optimal patient-centred care
    - 1.1.4. Work effectively with clerical and administrative support staff
  - 1.2. Negotiate overlapping and shared responsibilities with physicians and other colleagues in the health care professions in episodic and ongoing care
    - 1.2.1. Collaborate with primary care providers at all phases of the cancer continuum
    - 1.2.2. Effectively help coordinate optimal patient care across medical disciplines and with other health care professionals

- 1.3. Engage in respectful shared decision-making with physicians and other colleagues in the health care professions
  - 1.3.1. Contribute medical expertise to multidisciplinary case conferences and quality improvement initiatives
  - 1.3.2. Interact collaboratively in multidisciplinary case conferences
- 2. Work with physicians and other colleagues in the health care professions to promote understanding, manage differences, and resolve conflicts
  - 2.1 Show respect toward collaborators
  - 2.2 Implement strategies to promote understanding, manage differences, and resolve conflicts in a manner that supports a collaborative culture
- 3. Hand over the care of a patient to another health care professional to facilitate continuity of safe patient care
  - 3.1. Determine when care should be transferred to another physician or health care professional
  - 3.2. Demonstrate safe handover of care, using both oral and written communication, during a patient transition to a different health care professional, setting, or stage of care

#### Leader

#### Definition:

As *Leaders*, Medical Oncologists engage with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.

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

- Contribute to the improvement of health care delivery in teams, organizations, and systems
  - 1.1. Apply the science of quality improvement to contribute to improving systems of patient care
  - 1.2. Contribute to a culture that promotes patient safety
  - 1.3. Analyze patient safety incidents to enhance systems of care
  - 1.4. Use health informatics to improve the quality of patient care and optimize patient safety
- 2. Engage in the stewardship of health care resources
  - 2.1. Allocate health care resources for optimal patient care

- 2.2. Apply evidence and management processes to achieve cost-appropriate care
  - 2.2.1. Incorporate and model the principles of Choosing Wisely Canada (Oncology) and other peer-reviewed guidelines in clinical decision-making

#### 3. Demonstrate leadership in professional practice

- 3.1. Demonstrate leadership skills to enhance health care
- 3.2. Facilitate change in health care to enhance services and outcomes

### 4. Manage career planning, finances, and health human resources in a practice

- 4.1. Set priorities and manage time to integrate practice and personal life
- 4.2. Manage a career and a practice
  - 4.2.1. Effectively manage clinical duties, including prioritization of cases and delegation of duties when appropriate
  - 4.2.2. Maintain an appropriate balance between clinical responsibilities, research, administrative, and teaching and learning commitments
  - 4.2.3. Manage the administrative and clinical responsibilities of patient care in the ambulatory setting, including the timely review of test results, and communication with patients and other health care professionals between patient visits
- 4.3. Implement processes to ensure personal practice improvement

### **Health Advocate**

#### Definition:

As *Health Advocates*, Medical Oncologists contribute their expertise and influence as they work with communities or patient populations to improve health. They work with those they serve to determine and understand needs, speak on behalf of others when required, and support the mobilization of resources to effect change.

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

- 1. Respond to an individual patient's health needs by advocating with the patient within and beyond the clinical environment
  - 1.1. Work with patients to address determinants of health that affect them and their access to needed health services or resources
    - 1.1.1. Advocate for access to the most effective therapies by helping patients overcome barriers, including enrolment in financial assistance programs, other access programs, and/or the patient's private insurance provider
    - 1.1.2. Work with patients to identify opportunities for fertility preservation

- 1.2. Work with patients and their families to increase opportunities to adopt healthy behaviours
- 1.3. Incorporate disease prevention, health promotion, and health surveillance activities into interactions with individual patients, such as
  - 1.3.1. Smoking cessation
  - 1.3.2. Adoption of a healthy lifestyle
  - 1.3.3. Surveillance for new primary cancers or recurrences, where appropriate
  - 1.3.4. Referral to a familial/hereditary cancer clinic
- 1.4. Propose and organize additional resources to help patients and/or their families access options for mitigating the impact of their illness and implementing the management/treatment plan, including nursing, social work, psychosocial supports, and home care services
- 2. Respond to the needs of the communities or populations they serve by advocating with them for system-level change in a socially accountable manner
  - 2.1. Work with a community or population to identify the determinants of health that affect them, including
    - 2.1.1. Environmental and/or occupational exposures
    - 2.1.2. Genetic factors
    - 2.1.3. Socio-economic factors
    - 2.1.4. Barriers to access to care and resources
  - 2.2. Improve clinical practice by applying a process of continuous quality improvement to disease prevention, health promotion, and health surveillance activities
  - 2.3. Contribute to a process to improve health in the community or population they serve
    - 2.3.1. Identify opportunities to enhance cancer care delivery to the community and population they serve
  - 2.4. Demonstrate an understanding of the structures of local, provincial/territorial, and national cancer care systems, and identify opportunities for patient and/or physician advocacy within those systems

#### Scholar

#### Definition:

As *Scholars*, Medical Oncologists demonstrate a lifelong commitment to excellence in practice through continuous learning, and by teaching others, evaluating evidence, and contributing to scholarship.

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

## 1. Engage in the continuous enhancement of their professional activities through ongoing learning

- 1.1. Develop, implement, monitor, and revise a personal learning plan to enhance professional practice
- 1.2. Identify opportunities for learning and improvement by regularly reflecting on and assessing their performance using various internal and external data sources
- 1.3. Engage in collaborative learning to continuously improve personal practice and contribute to collective improvements in practice
  - 1.3.1. Identify the role of practice audits, multidisciplinary case conferences, quality improvement rounds, and the creation and use of clinical practice guidelines, in improving clinical outcomes

#### 2. Teach students, residents, the public, and other health care professionals

- 2.1. Recognize the influence of role-modelling and the impact of the formal, informal, and hidden curriculum
- 2.2. Promote a safe and respectful learning environment
- 2.3. Ensure patient safety is maintained when learners are involved
- 2.4. Plan and deliver learning activities
- 2.5. Provide feedback to enhance learning and performance
- 2.6. Assess and evaluate learners, teachers, and programs in an educationally appropriate manner

#### 3. Integrate best available evidence into practice

- 3.1. Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that can address them
- 3.2. Identify, select, navigate, and recognize limitations of pre-appraised resources, including
  - 3.2.1. Provincial drug formulary and regimen information
  - 3.2.2. Evidence-based guidelines
  - 3.2.3. Risk stratification tools
  - 3.2.4. Nomograms
- 3.3. Critically evaluate the integrity, reliability, and applicability of health-related research and literature
- 3.4. Integrate evidence into decision-making in their practice
  - 3.4.1. Develop a strategy to address decision-making when the available evidence is insufficient

3.4.1.1. Determine optimal treatments for rare cancers or underrepresented populations

## 4. Contribute to the creation and dissemination of knowledge and practices applicable to health

- 4.1. Demonstrate an understanding of the scientific principles of research and scholarly inquiry and the role of research evidence in health care
  - 4.1.1. Discuss the roles and responsibilities of researchers, both principal investigators and collaborators, and how they differ from the roles and responsibilities of clinical care
- 4.2. Identify ethical principles for research and incorporate them into obtaining informed consent, considering potential harms and benefits, and considering vulnerable populations
- 4.3. Contribute to the work of a research program
  - 4.3.1. Demonstrate awareness of available clinical trials, and promote patient enrolment, as appropriate
- 4.4. Pose questions amenable to scholarly investigation and select appropriate methods to address them
  - 4.4.1. Discuss and critique the possible methods of addressing a given scholarly question
  - 4.4.2. Participate in research or scholarly work relevant to Medical Oncology
- 4.5. Summarize and communicate to professional and lay audiences, including patients and their families, the findings of relevant research and scholarly work

#### **Professional**

#### Definition:

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

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

- 1. Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards
  - 1.1. Exhibit appropriate professional behaviours and relationships in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality
  - 1.2. Demonstrate a commitment to excellence in all aspects of practice

- 1.2.1. Identify and respond to barriers that affect a physician's ability to offer optimal care to the communities and populations served
- 1.3. Recognize and respond to ethical issues encountered in practice and in caring for patients with cancer, including
  - 1.3.1. Truth-telling/full disclosure of adverse events and medical errors
  - 1.3.2. Informed decision-making and consent
  - 1.3.3. End-of-life care
  - 1.3.4. Medical assistance in dying (MAID)
  - 1.3.5. Funding of cancer therapies and technologies
- 1.4. Recognize and manage conflicts of interest
- 1.5. Exhibit professional behaviours in the use of technology-enabled communication

## 2. Demonstrate a commitment to society by recognizing and responding to societal expectations in health care

- 2.1. Demonstrate accountability to patients, society, and the profession by responding to societal expectations of physicians
- 2.2. Demonstrate a commitment to patient safety and quality improvement
  - 2.2.1. Adhere to institutional policies and procedures related to prescribing systemic therapy

## 3. Demonstrate a commitment to the profession by adhering to standards and participating in physician-led regulation

- 3.1. Fulfil and adhere to professional and ethical codes, standards of practice, and laws governing practice
- 3.2. Recognize and respond to unprofessional and unethical behaviours in physicians and other colleagues in the health care professions
- 3.3. Participate in peer assessment and standard setting

## 4. Demonstrate a commitment to physician health and well-being to foster optimal patient care

- 4.1. Exhibit self-awareness and manage influences on personal well-being and professional performance
- 4.2. Manage personal and professional demands for a sustainable practice throughout the physician life cycle
- 4.3. Promote a culture that recognizes, supports, and responds effectively to colleagues in need

