



# Competencies for Oncology Pharmacists in Canada

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## Introduction and Background

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The Canadian Association of Pharmacy in Oncology (CAPHO) is a member-directed professional organization with a mission of supporting and advancing oncology pharmacy practice in Canada.

CAPHO is the recognized leader of Canadian oncology pharmacy practice. The association provides a platform for oncology pharmacists, pharmacy technicians, and pharmacy assistants to collaborate, share knowledge, and enhance expertise in delivering safe and effective, evidence-based pharmacotherapy to patients with cancer.

Holding true to CAPHO's core values of quality, inclusivity & accountability, collaboration & engagement, and knowledge advancement & innovation, CAPHO is proud to present the **Competencies for Oncology Pharmacists in Canada**. This document will be referred to as *The Competencies* in the remaining text and applies specifically to pharmacists.

## Definitions

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The following terms are used frequently throughout *The Competencies*. The definitions, as determined by the task force for the purposes of this document, are provided below:

- **Oncology Pharmacist** - a licensed pharmacist that practices in a setting that delivers care to adult or pediatric patients with cancer and/or provides pharmacotherapy for the treatment of solid tumours (medical oncology and/or gynecological oncology) and/or tumours of the hematopoietic system and lymphoid tissues (malignant hematology).
- **Oncology Pharmacy Practice** - a broad term to encompass the delivery of professional services by pharmacists, pharmacy technicians, and/or pharmacy assistants (as appropriate for their jurisdictional scope of practice) in a setting that provides care to patients with cancer.
- **Anticancer Therapy** - the treatment of cancer using any medical modality, such as surgery, radiation, medications, and stem cell transplant.
- **Anticancer Pharmacotherapy** - the medical treatment of cancer using medications. This includes all types of **medications** used for antineoplastic purposes (including cellular mobilization and conditioning) such as chemotherapy (cytotoxic agents), targeted small molecule therapies, monoclonal antibodies, CAR T-cell therapy, T-cell engager therapies, immune modulating agents, and hormonal manipulation therapies.
- **Supportive Care** - any care (non-pharmacologic and pharmacologic) that is provided to improve quality of life by preventing or treating the symptoms of cancer or the side effects caused by anticancer therapy.

- **Supportive Care Pharmacotherapy** - pharmacologic intervention that is provided to improve quality of life by preventing or treating the symptoms of cancer or the side effects caused by anticancer therapy.
- **Cancer-related Pharmacotherapy** - pharmacotherapy that encompasses both anticancer pharmacotherapy and supportive care pharmacotherapy.
- **Pharmacotherapy Assessment** - the pharmacist's process of proficiently assessing medication orders or prescriptions to ensure the prescribed therapy is indicated, effective, safe, and accessible for a patient. A therapy is accessible when the patient can reasonably access the therapy and is expected to not experience barriers to adherence.

## Purpose

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*The Competencies* describe the **knowledge, skills, and attitudes (KSA)** required by oncology pharmacists in Canada. This document provides guidance for optimal practice of oncology pharmacists with considerations of the unique aspects of anticancer pharmacotherapy, supportive care pharmacotherapy, and the distinctive medication-related care needs of persons with cancer.

## Development Methodology

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A pan-Canadian task force of oncology pharmacists from the CPhO membership with extensive and diverse experience in oncology pharmacy practice was created in 2021. Documents and publications developed outside of Canada with the shared purpose of describing oncology pharmacist competencies, along with key Canadian documents related to general pharmacist competencies and health care, were collected and distributed to the task force (see Appendix 1). Each task force member reviewed the documents to generate ideas and explore the current landscape for developing pan-Canadian competencies for oncology pharmacists. Consensus was reached for five themes, that were then designated as the **Five Pillars**: 1) Professional Practice in Cancer Care, 2) Knowledge of Cancer and its Management, 3) Safe and Appropriate Use of Anticancer and Supportive Care Pharmacotherapy, 4) Person-Centered Care in Clinical Oncology, and 5) Health Promotion and Advocacy.

Through a collaborative and iterative process, the task force developed an inventory of competencies within each of the five pillars. Each competency defines an area of knowledge, a skill, or an attitude that was agreed upon as an expectation of oncology pharmacists in Canada. Each knowledge competency is followed by descriptive statements that explain the components and/or the level of expertise to be attained. Similarly, each skill and attitude is followed by descriptions of the behaviours, actions and/or capabilities expected on a consistent basis. The process involved extensive discussion with the goal of consensus among the task force members.

After building consensus within the task force for an initial draft of the document, it was distributed to a selection of CAPHO member pharmacists with extensive oncology experience and varying locations and roles for feedback. This feedback was given consideration by the task force and incorporated into the document when agreed to be appropriate. The second draft was distributed to the CAPHO pharmacist membership for feedback through a questionnaire. The responses from the membership were given extensive consideration by the task force prior to developing the final version of the document.

## **Application of *The Competencies***

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*The Competencies* are an aspirational framework for oncology pharmacist scope of practice across Canada and are not intended to replace or infringe upon any standards of practice or legislation within each jurisdiction. Requirements for licensing and ethical practice must always be followed.

The task force recognizes that some institutions (or practice settings) may not have adequate support and resources in place for pharmacists to practice to full scope at the current time. Importantly, the task force recognizes that pharmacist scope of practice differs across jurisdictions in Canada, and that the role of the oncology pharmacist can vary between institutions and within institutions. For example, while some oncology pharmacists may focus on interdisciplinary proactive care, others may have duties in oncology pharmacotherapy order review or distribution and others may be focused on safety, research, or quality improvement initiatives. As such, content across the five pillars may or may not be pertinent to every oncology pharmacy practice. Ultimately, the task force has taken the approach to be comprehensive in its compilation of the KSA required for oncology pharmacists in order to be applicable to the broad range of practice settings and roles across Canada.

Pharmacist experience can also impact how *The Competencies* are used. For those who are new to oncology practice, *The Competencies* can be a guide for developing proficiency and expertise. Those with more experience will find them helpful for self-assessment and provide opportunities to improve their knowledge, refine their skills, or question a previously held perspective. Pharmacists of all levels can leverage *The Competencies* to identify areas for professional focus and educational growth. Further, *The Competencies* can act as supporting documentation for oncology pharmacists to advocate for improvements in oncology institutions, policies, and the larger public health care system. For health care administrators and pharmacy leaders, *The Competencies* can help inform program development and staff expectations. Educators can use this document as a resource in developing training programs and education plans.

## Assumptions and Points of Clarity

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The following points are intended to assist the reader with interpretation of this document.

1. All pharmacists are expected to honour and adhere to their jurisdictional code of ethics and standards of practice. As such, *The Competencies* are not meant to displace existing documents that govern or regulate the profession. Instead, they are intended to be supplementary guidance for oncology pharmacists, to provide the best care for persons with cancer.
2. Although this document was developed for the pan-Canadian audience, one must consider jurisdictional legislation and variations, as well as variations among centres, and ensure application of these competencies aligns within such requirements.
3. There are many examples throughout this document to help provide context around specific competencies. These examples are not inclusive of all scenarios or contexts that might exist for each competency.
4. In some ways there is overlap in competencies between Pillar 3 (Safe and Appropriate Use of Anticancer and Supportive Care Pharmacotherapy) and Pillar 4 (Person-Centered Care in Clinical Oncology). The intention is to provide guidance for competencies of oncology pharmacists when providing essential pharmacy services (Pillar 3) and the additional competencies associated with clinical patient care activities (Pillar 4).
5. Some competencies include the word “advanced”. When advanced is specified, the competency expectation is escalated to a higher level. Advanced knowledge could be considered synonymous with expertise and potentially indicative of specialization.
6. Educational initiatives could be created to assist members in meeting *The Competencies*. However, *The Competencies* are not intended to provide certifications or credentialing.

## Summary of the Five Competency Pillars

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<b>Pillar 1</b>	Professional Practice in Cancer Care
<b>Pillar 2</b>	Knowledge of Cancer and its Management
<b>Pillar 3</b>	Safe and Appropriate Use of Anticancer and Supportive Care Pharmacotherapy
<b>Pillar 4</b>	Person-Centered Care in Clinical Oncology
<b>Pillar 5</b>	Health Promotion and Advocacy

## Acknowledgments

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Members of the CAPHO Oncology Pharmacist Competencies Task Force included Tina Crosbie (chair), Tara Leslie, Laura Minard, Scott Simpson, and Danica Wasney. Project management support was provided by Jordyn Smith with LSD The Agency Consulting. Initial feedback was received from Nadine Glynn, Vincent Ha, Joanne Houlihan, Alex Martinson, Lynne Nakashima, Uzo Onochie-Roy, Jonathan Stevens, and Pamela Yafai. Feedback was then collected from individual members of CAPHO through a questionnaire. All feedback was considered with each series of revisions. The time and effort committed to the development and feedback process is greatly appreciated.

## Competencies for Oncology Pharmacists in Canada

### Pillar 1: Professional Practice in Cancer Care

#### SUMMARY

1.1	Exemplify professionalism
1.2	Communicate effectively
1.3	Document activities as per professional and institutional requirements
1.4	Appropriately respond to drug information questions
1.5	Demonstrate a commitment to practice proficiency
1.6	Exercise leadership
1.7	Foster collaboration with members of the patient care team
1.8	Foster a culture of patient safety

#### 1.1 Exemplify professionalism

- Demonstrate professional behaviours.
  - Demonstrate self-awareness.
  - Demonstrate ability to manage self and interactions with others.
  - Be accountable for actions and decisions.
  - Maintain appropriate professional boundaries.
  - Adhere to high ethical standards.
- Fulfill professional responsibilities.
  - Practice within appropriate scope.
  - Honour the laws and regulatory requirements of pharmacy practice.
  - Identify and manage conflict of interest situations.
- Demonstrate professional attitudes.
  - In words and action, demonstrate respect, empathy, compassion and inclusivity.
  - Advocate and take action to eliminate health inequities and their relation to cancer incidence, prevention, and outcomes.
  - Advocate and take action to eliminate discrimination (e.g., based on culture, race, religion, age, sex, gender, sexual orientation, abilities, comorbidities, stigma, mental health, addiction, and/or financial status).



## 1.2 Communicate effectively

- Communicate clearly and respectfully.
- Practice empathetic listening.
- Tailor the style, method, and timing of communication to optimize clarity in messaging.
- Be thoughtful in messaging with regards to breadth and depth of content.
- Take appropriate steps to confirm the message was received and understood as intended.
- When providing education, appreciate the variety of learning styles and preferences of colleagues, patients and care partners.
- Use trusted language translation resources, when needed.

## 1.3 Document activities as per professional and institutional requirements

- Ensure accurate, timely, and thorough documentation for all patient care activities.
- Complete workload documentation of pharmacist activities as per institutional requirements.
- Demonstrate commitment to optimizing efficiency in documentation.
- Ensure documentation facilitates handover for ongoing/future patient care.

## 1.4 Appropriately respond to drug information questions

- Clarify the question when needed.
- Utilize appropriate resources to inform the response.
- Formulate an evidence-based response that considers patient factors (when applicable).
- Effectively communicate the response in writing or verbally or both as appropriate.
- Document the response as appropriate.

## 1.5 Demonstrate a commitment to practice proficiency

- Identify and address knowledge gaps and skill deficiencies through self-reflection and feedback.
- Engage in continuous professional and personal development.
- Continuously strive to optimize workflow and efficiency in assigned tasks.
- Prioritize tasks and manage time appropriately.

## 1.6 Exercise leadership

- Support and foster the education and development of others (e.g., mentorship, teaching, and precepting).
- Facilitate a team environment that encourages trust and collaboration.
- Manage and delegate appropriately.
- Proactively identify and curate opportunities to improve practice efficiencies.
- Identify when system changes are necessary, take initiative to develop and implement a plan for improvement, and evaluate the change.
- Support cancer-related professional organizations and when feasible, consider joining and/or volunteering as able.
- Advocate for development and implementation of, and adherence to, operating procedures that align with accrediting body standards.

### **1.7 Foster collaboration with members of the patient care team**

- Recognize and include the patient as a member of their care team.
- Establish and maintain professional intra- and inter-disciplinary relationships.
- Develop role clarity by understanding the oncology pharmacist role and the roles of other professions within the intra- and inter-disciplinary care team to meet patient goals.
- Foster an environment of trust, inclusivity, and reliability when working within a team.
- Collaborate with other pharmacists and health care professionals to ensure patients are provided with the best possible care.

### **1.8 Foster a culture of patient safety**

- Follow institutional risk reduction and error prevention strategies.
- Report errors or near misses to facilitate learning and improve patient safety.
- Advocate for, and contribute to, a practice environment that emphasizes fairness, accountability, and learning in the context of human error and system failures.

## Pillar 2: Knowledge of Cancer and its Management

### SUMMARY

2.1	Maintain knowledge of cancer terminology
2.2	Maintain knowledge of etiology, pathophysiology, clinical presentation, and incidence of cancer
2.3	Maintain knowledge of cancer risk factors, prevention, and screening
2.4	Maintain expertise in anticancer pharmacotherapy
2.5	Maintain expertise in supportive care and toxicity management
2.6	Maintain knowledge of health outcomes based on cancer disease and patient factors
2.7	Maintain knowledge of cancer-related drug literature and clinical trials
2.8	Maintain knowledge of strategies to optimize health during survivorship
2.9	Maintain knowledge of social determinants of health (SDoH) and health inequalities and their impact on cancer outcomes

#### 2.1 Maintain knowledge of cancer terminology

- Maintain knowledge of common terminology used in oncology practice (e.g., curative intent, adjuvant, neoadjuvant, extension of life, palliative/palliation, supportive care, metastatic disease, quality of life, progression free survival, overall survival).

#### 2.2 Maintain knowledge of etiology, pathophysiology, clinical presentation, and incidence of cancer

- Describe the etiology, pathophysiology, and incidence of various cancers.
- Recognize cancer-related symptoms and symptom changes that may be indicative of new disease, disease improvement or disease progression.

#### 2.3 Maintain knowledge of cancer risk factors, prevention, and screening

- Explain pharmacologic, biologic, genetic, and environmental risk factors for developing cancer.
- Describe strategies for cancer prevention and explain recommendations based on evidence and jurisdictional guidelines (e.g., cancer-preventing immunizations, limiting tobacco and tobacco smoke exposure, limiting alcohol intake, sun safety).
- Describe cancer screening programs and explain recommendations based on evidence and jurisdictional guidelines.

#### 2.4 Maintain expertise in anticancer pharmacotherapy

- Maintain advanced knowledge of anticancer medication classes, their respective mechanisms of action, and common combinations of anticancer medications that may be used.

- Maintain advanced knowledge of anticancer drug indications and contraindications.
- Maintain advanced knowledge of anticancer medication dosing (e.g., ranges, calculations, adjustments).
- Maintain advanced knowledge of appropriate routes of administration for anticancer medications (e.g., intravenous, intraperitoneal, subcutaneous, intrathecal, intramuscular, oral, topical).
- Maintain advanced knowledge of safe preparation, handling, compatibility, admixture processes, distribution, and administration of anticancer pharmacotherapy.
- Maintain advanced knowledge of institutional, national, and global standards for hazardous drug safety.
- Maintain advanced knowledge of pharmacodynamic and pharmacokinetic properties of anticancer medications.
- Maintain advanced knowledge of pharmacogenomic principles including predictive biomarkers for anticancer medications.
- Maintain advanced knowledge of the principles of multi-drug regimens including design (combinations, timing, duration), rationale, benefits/synergies, toxicities, and potential resistance mechanisms.
- Maintain advanced knowledge of mechanisms and management of common drug interactions related to anticancer pharmacotherapy (e.g., pathophysiology of QTc prolongation, changes in bleeding/clotting risk, pH dependent absorption, induction/inhibition of metabolic enzymes).
- Maintain advanced knowledge of oncology-specific therapeutic drug monitoring (e.g., methotrexate, asparaginase).

## 2.5 Maintain expertise in supportive care and toxicity management

- Stay updated on guidelines and best practices for supportive care and toxicity management relevant to one's own oncology practice setting.
- Describe the etiology, pathophysiology, signs/symptoms and prevention strategies, and maintain advanced knowledge of treatment strategies, for common and serious cancer complications and anticancer medication adverse effects, such as:
  - Myelosuppression, febrile neutropenia, cancer-related infections, bleeding and venous thromboembolism,
  - Antineoplastic induced nausea and/or vomiting (AINV) and other gastro-intestinal toxicities (e.g., mucositis, esophagitis, stomatitis, diarrhea, constipation),
  - Anticancer pharmacotherapy-related organ toxicities (e.g., nephrotoxicity, cardiotoxicity, hepatotoxicity, neurotoxicity),
  - Anticancer pharmacotherapy-related dermatologic and trichologic toxicities (e.g., tyrosine kinase inhibitor-related rashes, palmar-plantar erythrodysesthesia, alopecia),
  - Immune-related adverse events (e.g., endocrinopathies, inflammatory organ toxicities, rheumatological effects),
  - Fatigue and insomnia,
  - Injection-related reactions and hypersensitivity reactions,
  - Infertility,

- Oncologic emergencies including superior vena-cava syndrome (SVCS), tumour lysis syndrome (TLS), spinal cord compression, and hypercalcemia of malignancy, and
- Delayed toxicities such as secondary malignancies.
- Maintain advanced knowledge in unique and/or advanced supportive care pharmacotherapy applicable to one's own practice (e.g., radiation-induced nausea and/or vomiting, cytokine release syndrome (CRS), immune effector cell-associated neurotoxicity syndrome (ICANS), graft versus host disease (GvHD), sinusoidal obstruction syndrome (SOS), seizure management, survivorship, pain management, end of life care).
- Maintain knowledge of recommended vaccines, and timelines for administration, for patients that are planned for, receiving, or finished anticancer therapy.

## **2.6 Maintain knowledge of health outcomes based on cancer disease and patient factors**

- Understand oncology disease progression, including histology, pathology, grade, stage, and extent in order to appreciate patient prognosis.
- Describe different goals of anticancer therapy (e.g., symptom control, palliation, extension of life, cure).
- Understand disease and patient factors that contribute to realistic goals of care.

## **2.7 Maintain knowledge of cancer-related drug literature and clinical trials**

- Apply principles of evidence-based medicine in clinical decision making for patients with cancer.
- Engage in critical appraisal of anticancer pharmacotherapy research and literature.
- Appreciate unique aspects of oncology research such as trial designs, cancer research endpoints (e.g., progression-free survival (PFS), overall survival (OS), quality of life (QoL), response rate), and challenges in patient recruitment.

## **2.8 Maintain knowledge of strategies to optimize health during survivorship**

- Maintain knowledge of survivorship care and evidence-based recommendations for long term health after cancer.
- Understand the impact of pharmacologic measures (prescription medications, non-prescription medications, natural health products, supplements), non-pharmacologic measures, and integrative medicine (including complementary and alternative therapies) on long term health, including cancer outcomes, while respecting individual beliefs and values.
- Understand the impact of social factors (e.g., diet, exercise, alcohol intake, tobacco use, recreational drug use) on long term health including cancer outcomes.
- Maintain knowledge of local, regional and national organizations available to patients and/or care partners for support during their cancer journey.

## **2.9 Maintain knowledge of social determinants of health (SDoH) and health inequalities and their impact on cancer outcomes**

- Acquire and maintain knowledge of patient-specific SDoH and health inequalities and their influence on patient outcomes (e.g., geography, extent of support systems, financial status, substance use, intellectual disabilities, cognitive function, race, culture, gender identity, sexual orientation).

- Stay current on research and scientific literature linking SDoH to inequities in cancer incidence, access to cancer care and treatments, and cancer outcomes.
- Demonstrate an ongoing commitment to enhance pharmacist knowledge of health equity, health literacy, underserved populations, inclusion, accessibility, SDoH, and The Truth and Reconciliation Commission of Canada Calls to Action.

## Pillar 3: Safe and Appropriate Use of Anticancer and Supportive Care Pharmacotherapy

### SUMMARY

3.1	Collect the appropriate information required for cancer-related pharmacotherapy assessment
3.2	Ensure the cancer-related pharmacotherapy plan is indicated and appropriate
3.3	Ensure the drug, dose, formulation, and scheduling is expected to be effective to meet the cancer-related health outcome
3.4	Ensure the cancer-related drug, dose, formulation, and scheduling is expected to be safe
3.5	Evaluate if the cancer-related drug is reasonably accessible
3.6	Optimize patient adherence to cancer-related pharmacotherapy
3.7	Ensure follow-up and ongoing pharmacist assessment as appropriate
3.8	Ensure safety standards are maintained in anticancer pharmacotherapy preparation, distribution, dispensing, and administration

#### 3.1 Collect the appropriate information required for cancer-related pharmacotherapy assessment

- Identify the cancer-related diagnosis and important factors for personalized medicine.
- Obtain a best possible medication history (BPMH).
- Complete an allergy assessment.
- Contribute to medication reconciliation at appropriate patient transition points.
- Seek out results from appropriate baseline tests and medical assessments completed by care providers (e.g., physical exam, laboratory, diagnostic imaging, ECGs).
- Seek out information regarding past medical history, previous anticancer therapy, pharmacogenomics, social history, goals of therapy, and goals of care as applicable and available.

#### 3.2 Ensure the cancer-related pharmacotherapy plan is indicated and appropriate

- When reviewing cancer-related pharmacotherapy orders, consider:
  - Evidence for the indication (e.g., Health Canada approval, guideline recommendation, clinical trials, etc.).
  - Patient's disease (e.g., diagnosis, staging, performance status, prior therapies).
  - Patient's age (e.g., pediatric, adolescent, young adult, older adult).
  - Predictive biomarkers and prognostic factors and markers, as applicable.
  - Patient goals of therapy and treatment intent (e.g., curative, life-extending, palliative).
  - Patient factors related to social determinants of health (SDoH).
  - Appropriateness of the order set (e.g., pre-printed, electronic) selected by the prescriber.

### **3.3 Ensure the drug, dose, formulation, and scheduling is expected to be effective to meet the cancer-related health outcome**

- When reviewing cancer-related pharmacotherapy orders, consider:
  - Therapeutic effectiveness of drug and dose based on evidence, disease, and patient-specific factors (e.g., renal function, hepatic function).
  - The most appropriate route of administration or formulation.
  - Appropriateness of cycle length or interval from last treatment.
  - Opportunities to improve efficacy with appropriate supportive therapy.
  - Avoiding reduced efficacy due to interactions with the patient's home medications (e.g., prescription, non-prescription, complementary medicines).
  - Expected response to therapy (e.g., applicable diagnostic tests, imaging, molecular tests).

### **3.4 Ensure the cancer-related drug, dose, formulation, and scheduling is expected to be safe**

- When reviewing cancer-related pharmacotherapy orders, consider:
  - Avoiding possible contraindications due to patient allergies, intolerances, comorbidities, concomitant medications, and previous treatments (e.g., cumulative anthracycline exposure).
  - Avoiding excessive risk for toxicity or adverse effects due to performance status, comorbidities, organ dysfunction, genetic polymorphisms, tolerance to past therapy, or interactions with concomitant medications.
  - Avoiding or minimizing adverse effects by ensuring appropriate supportive therapy is ordered.
  - Ensuring the appropriate time has passed since previous treatment with consideration of patient-specific factors and tolerance.
  - Ensuring the route and formulation to be provided is safe for administration (e.g., vincristine is ordered for IV route only).

### **3.5 Evaluate if the cancer-related drug is reasonably accessible**

- Determine if the cancer-related drug(s) is/are publicly funded in the patient's jurisdiction.
- Explore alternate strategies for funding when required and appropriate (e.g., patient support programs, compassionate programs, out-of-pocket expenses).
- Consider patient preferences, barriers to access and challenges for administration (e.g., swallowing, proximity to the cancer center, patient comprehension of treatment).
- Maintain awareness of institutional and resource barriers (e.g., staff, geographical, financial, and institutional) and/or existing supports (e.g., levels of care, trained staff, appropriate supportive care).

### **3.6 Optimize patient adherence to cancer-related pharmacotherapy**

- Encourage, monitor, and assess adherence to cancer and supportive care pharmacotherapy.
- Identify potential barriers to adherence (e.g., difficulty swallowing, early or advanced age, patient



health literacy, limited care partner support).

- When appropriate, provide strategies to assist with adherence (e.g., compliance packaging, reminder apps, alarms, engage with care partner(s)).
- Consider appropriate support needs, language, cultural sensitivity, accommodations, and individual preferences.

### **3.7 Ensure follow-up and ongoing pharmacist assessment as appropriate**

- Engage in pharmacotherapy assessment with each new treatment order, subsequent cycle of treatment, patient request, request from an interprofessional health care provider, or change in circumstance that questions therapy appropriateness.
- Take appropriate action for therapy adjustments (through recommendations, referral, consultation, adaptation, or prescribing) whenever an opportunity to improve treatment efficacy, safety, or adherence is identified.
- Collaborate with intra- and inter-professional team members to ensure continuity of care.

### **3.8 Ensure safety standards are maintained in anticancer pharmacotherapy preparation, distribution, dispensing, and administration**

- Support and engage in institutional safety standards to mitigate cytotoxic exposures to self, colleagues, patients, and care partners.
- Maintain practice standards to optimize cleanliness and sterility in preparation and distribution of pharmacotherapy.
- Maintain practice standards to ensure compounding and delivery of stable and sterile parenteral pharmacotherapy products.
- Maintain accuracy in anticancer product preparation (e.g., correct drug, diluent, dose) and distribution (e.g., correct delivery location).
- Maintain practice standards for appropriate labeling of anticancer preparations and prescriptions (e.g., drug name, dose, expiry date/time).
- Educate on the safe administration and disposal of anticancer medications within institutions and within a patient's residence or care facility.

## Pillar 4: Person-Centered Care in Clinical Oncology

### SUMMARY

4.1	Recognize persons with cancer as individuals with unique characteristics, values and health needs
4.2	Establish and maintain a professional relationship with the person with cancer and their care partner(s)
4.3	Gather relevant information in the provision of patient care
4.4	Assess the patient's cancer-related pharmacotherapy needs
4.5	Identify actual and potential drug therapy problems (DTPs) affecting cancer-related pharmacotherapy
4.6	Develop a patient-centered care plan addressing cancer-related pharmacotherapy needs
4.7	Implement and follow-through with the care plan
4.8	Educate, engage, and support patients and care partner(s) regarding cancer management
4.9	Prioritize health equity, inclusion, and accessibility in patient care activities

#### 4.1 Recognize persons with cancer as individuals with unique characteristics, values and health needs

- Appreciate the unique life experiences, personal convictions, moral principles, and cultural norms of a patient that shape their perspectives and values.
- Appreciate how a patient's unique personality traits can influence their interactions with healthcare providers.
- Acknowledge the diverse levels of emotional resilience and social support that can affect how a patient manages and copes with a cancer diagnosis.
- Explore the individual interests, passions, hobbies, and leisure activities that bring joy or comfort in a patient's life.
- Be mindful of a patient's personal circumstances that may contribute to discomfort or distress.

#### 4.2 Establish and maintain a professional relationship with the person with cancer and their care partner(s)

- Communicate the role and scope of the oncology pharmacist in the provision of patient care.
- Establish appropriate communication strategies if questions or concerns arise.
- Outline responsibilities of the oncology pharmacist, the patient, and care partner(s), as applicable.
- Respect patient autonomy.

- Minimize barriers to establishing an effective and trusting patient-pharmacist relationship.
- Uphold professional boundaries.

#### **4.3 Gather relevant information in the provision of patient care**

- Collect and organize pertinent information about the patient and their history, their diagnosis, and the treatment plan.
- Maintain knowledge of the various data sources available for patient-specific information and access them appropriately, only for the extent of detail required for relevant patient care.

#### **4.4 Assess the patient's cancer-related pharmacotherapy needs**

- Assess the patient's pharmacotherapy needs by reviewing medication history, diagnosis, and other relevant background information (e.g., comorbidities, social history).
- Determine the patient's goals for treatment and integrate their goals into care plan development.
- Balance patient goals with realistic expectations of anticancer therapy.
- Identify patient support needs (e.g., care partner(s), language, culture, religious observances, accommodations, ethnicity, gender identity, sexual orientation).
- Consider patient preferences, knowledge, skills, and executive function.

#### **4.5 Identify actual and potential drug therapy problems (DTPs) affecting cancer-related pharmacotherapy**

- Assess the patient's medications and cancer-related pharmacotherapy needs for actual and potential DTPs considering pre-existing (home) medications, supportive care pharmacotherapy, prescribed/planned anticancer therapy, complementary alternative medicines (CAM), natural health products, patient allergies/intolerances, medical conditions, and genomics (as applicable). Drug therapy problems may include issues related to:
  - Medication indication
    - The patient is receiving an unnecessary drug therapy.
    - The patient requires additional drug therapy to meet a health outcome.
  - Medication effectiveness
    - The patient is receiving a drug therapy that is ineffective or not optimally effective for their health needs.
    - The patient is receiving a drug therapy at too low of a dose to meet their health needs.
  - Medication safety
    - The patient is receiving a drug therapy at too high of a dose.
    - The patient is experiencing or is at risk of developing an adverse drug event.
  - Drug interactions
    - Interactions between cancer-related pharmacotherapy and other medications.
    - Interactions between cancer-related pharmacotherapy and other medical conditions.
    - Interactions between cancer-related pharmacotherapy and natural health products.

- Medication access or adherence
  - The patient cannot readily access the medication (e.g., limited availability, cost, geography).
  - The patient faces challenges to adherence (e.g., patient preference to not take, misunderstanding in instructions, memory impairment, difficult dosage form).

#### **4.6 Develop a patient-centered care plan addressing cancer-related pharmacotherapy needs**

- Develop a prioritized care plan according to DTPs and patient needs including:
  - Reasonable therapeutic alternatives.
  - Recommendations that consider best evidence and patient factors, values, and preferences.
  - Appropriate and realistic monitoring parameters and timeframes.
  - An appropriate follow-up plan that considers patient preferences and ensures continuity of care.
- Refer to other care providers as appropriate.
- Prescribe anticancer therapies and/or supportive care medications collaboratively as appropriate for scope of practice and jurisdiction.
- Provide recommendations regarding vaccinations and immunize as appropriate.

#### **4.7 Implement and follow-through with the care plan**

- Take measures to ensure the patient understands the care plan (e.g., medication purpose(s), name(s), dose(s), how and when to take), the monitoring requirements and when to communicate with the care team while respecting patient autonomy in managing their health.
- Ensure the patient has appropriate prescriptions.
- Facilitate continuity of care.
- Follow-up with the patient and/or care partner(s).
- Reassess the patient and modify the plan when anticancer pharmacotherapy needs change.

#### **4.8 Educate, engage, and support patients and care partner(s) regarding cancer management**

- Strive to engage with patients in an environment conducive to learning (e.g., few distractions, conversations at eye level) that also respects patient privacy.
- Consider appropriate timing, health literacy, and the level of information that the patient wants to receive.
- Educate the patient and care partner(s) regarding cancer and supportive care pharmacotherapy (e.g., before, during and after treatment).
- Recognize how patient education is received and adapt as needed to improve delivery of the intended message.
- Assess patient understanding of their pharmacotherapy including administration, expectations for efficacy, side effects (e.g., including self-care prevention and management strategies), and self-monitoring.
- Assess the need for reiteration of information throughout treatment.
- Consider support needs and identify modalities that work best for the patient.

- When appropriate, provide written patient information that aligns with institutional standards (e.g., reputable source with appropriate language and level of complexity).
- Ensure the patient knows how to access the pharmacy and/or cancer care team if questions arise.

#### **4.9 Prioritize health equity, inclusion, and accessibility in patient care activities**

- Consider how patient-specific factors can influence cancer outcomes (e.g., extent of support systems, financial considerations, substance use, intellectual disabilities, cognitive difficulties, racial inequities, cultural differences, religious observances, gender identities, sexual orientations).
- Interact with patients and the health care team with an awareness of health inequities, social determinants of health, and underserved populations.
- Honour and answer the Calls to Action of The Truth and Reconciliation Commission of Canada.

## Pillar 5: Health Promotion and Advocacy

### SUMMARY

5.1	Advance the practice of oncology pharmacy
5.2	Advocate for and engage in the full scope of practice for oncology pharmacists
5.3	Advocate for patients and care partner(s) to optimize health outcomes and wellbeing
5.4	Advocate for appropriate cancer prevention, screening, and risk reduction strategies
5.5	Advocate for strategies to improve health outcomes for underserved populations and those with reduced health literacy
5.6	Advocate for economic sustainability in cancer-related pharmacotherapy
5.7	Advocate for planetary considerations in oncology pharmacy practice

#### 5.1 Advance the practice of oncology pharmacy

- Advocate for access to an oncology pharmacist for all people with cancer.
- Advocate for public awareness of the role of the oncology pharmacist.
- Advocate for and promote the value of oncology pharmacists on patient outcomes.
- Embrace opportunities to promote the role of oncology pharmacists within institutions, the health care system, and society.
- Seek out opportunities to network with oncology practitioners to build relationships that facilitate the advancement of oncology pharmacy practice (e.g., professional not-for-profit oncology organizations).
- Support the advancement of oncology pharmacy technician practice.

#### 5.2 Advocate for and engage in the full scope of practice for oncology pharmacists

- Acquire and maintain additional practice authorizations in accordance with jurisdictional regulations.
- Prescribe, hold, discontinue, re-start, adapt and modify anticancer drug therapies and associated supportive care medications, as appropriate for patient needs.
- Order, receive and interpret laboratory tests, as appropriate for patient needs and scope of practice.
- Engage in cancer-related peer-education initiatives, precepting of oncology learners, and oncology pharmacist mentorship.
- Conduct and/or engage in cancer-related research, quality improvement and/or quality assurance initiatives.
- Participate in the development and/or implementation of oncology-related clinical trials.

### **5.3 Advocate for patients and care partner(s) to optimize health outcomes and wellbeing**

- Listen to patients as they express their individual needs, goals, and preferences, and advocate for them to the healthcare team when necessary.
- Advocate for fair, equitable, and timely access to appropriate cancer therapy that weighs the expected benefits (patient important outcomes) with costs.
- Advocate for patient and care partner access to broader support and external services when required (e.g., food/nutrition support, transportation services, psychosocial resources, patient support groups, care partner support groups, addictions and mental health services).

### **5.4 Advocate for appropriate cancer prevention, screening, and risk reduction strategies**

- Support development of public health policy to reduce the risk of cancer and burden of disease.
- Encourage and promote cancer risk reduction behaviours for patients, care partner(s) and the general public (e.g., sun safety, physical fitness, limiting tobacco and tobacco smoke exposure, limiting alcohol intake, weight management, optimizing nutrition).
- Facilitate patient and public awareness and participation in cancer screening programs.
- Encourage people to receive appropriate cancer-preventing vaccinations as per recommended schedules.

### **5.5 Advocate for strategies to improve health outcomes for underserved populations and those with reduced health literacy**

- Appreciate the historical injustices and social constructs that disadvantage patients from equitable access to care.
- Consider factors related to the social determinants of health (SDoH), equity, diversity, and inclusion (EDI) and their relevance to health literacy and health outcomes.
- Ensure readiness and flexibility to meet the cancer-related pharmacotherapy needs of all patients, particularly those in underserved populations.
- Consider and utilize different strategies to support varying levels of health literacy and learning styles (e.g., written vs. audio vs. video communications, use of technology, the patient education environment, message reinforcement).

### **5.6 Advocate for economic sustainability in cancer-related pharmacotherapy**

- Support drug stewardship initiatives that ensure effective, safe, and sustainable use of medications.
- Advocate for economic sustainability in drug approvals, formulary additions, and prescribing practices.
- Support strategies to reduce drug wastage (e.g., dose rounding, batching, dose banding).
- Support initiatives that manage issues related to drug shortages (e.g., recommended alternatives, ethical allocation).
- Advocate for strategies that conserve and reduce resources related to oncology drug compounding and distribution.

## 5.7 Advocate for planetary considerations in oncology pharmacy practice

- Consider the environmental impact of anticancer drug delivery, compounding, and disposal.
- Support strategies for waste reduction (e.g., drugs, compounding supplies, administration supplies).
- Support strategies to reduce air, land, and water pollution related to anticancer drug use.
- Educate patients and care partners for safe disposal of anticancer medications.



## Appendix 1:

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The task force would like to acknowledge the following publications and documents for their guidance and influence in the development process:

1. National Association of Pharmacy Regulatory Authorities (NAPRA). Professional Competencies for Canadian Pharmacists at Entry to Practice, 2014. Accessed at <https://www.napra.ca/wp-content/uploads/2022/09/NAPRA-Comp-for-Cdn-PHARMACISTS-at-Entry-to-Practice-March-2014-b.pdf>
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3. Association of Faculties of Pharmacy of Canada (AFPC). AFPC Educational Outcomes for First Professional Degree Programs in Pharmacy in Canada, 2017. Accessed at [https://www.afpc.info/system/files/public/AFPC-Educational%20Outcomes%202017\\_final%20Jun2017.pdf](https://www.afpc.info/system/files/public/AFPC-Educational%20Outcomes%202017_final%20Jun2017.pdf)
4. Hematology/Oncology Pharmacy Association (HOPA). Scope of Hematology/Oncology Pharmacy Practice, 2013. Accessed at [https://www.hoparx.org/documents/111/HOPA13\\_ScopeofPracticeBk1.pdf](https://www.hoparx.org/documents/111/HOPA13_ScopeofPracticeBk1.pdf)
5. National Cancer Control Programme. National Competency Framework for Pharmacists Working in Cancer Care. Accessed at <https://www.hse.ie/eng/services/list/5/cancer/profinfo/training/pharmacist%20cancer%20care%20competency%20framework.pdf>
6. Carrington C, Weir J, Smith P. The development of a competency framework for pharmacists providing cancer services. *J Oncol Pharm Practice* 2010;17(3):168-78.
7. Truth and Reconciliation Commission of Canada. Truth and Reconciliation Commission of Canada: Calls to Action, *Exhibits*. Accessed at [https://publications.gc.ca/collections/collection\\_2015/trc/IR4-8-2015-eng.pdf](https://publications.gc.ca/collections/collection_2015/trc/IR4-8-2015-eng.pdf)
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