Examination Specifications
Oncology Pharmacy
Board of Pharmacy Specialties

Name of Credential	BPS Board-Certified Oncology Pharmacist
Certification-Issuing Body	Board of Pharmacy Specialties
Designation Awarded	BCOP
Level of Proficiency	Specialty Certification
Target Population	Pharmacists who design, implement, monitor, and modify pharmacotherapeutic treatments; manage adverse events or clinical situations associated with cancer, cancer therapies; and facilitate and/or evaluate clinical trials, research, and investigational drugs
Program Purpose	To validate that the pharmacist has the advanced knowledge and experience to provide treatment and education that optimizes safety and outcomes for individuals receiving treatment for cancer, palliative and supportive care, and/or survivorship care; as well as support for cancer detection, screening, and risk-reduction
Eligibility Requirements	• Graduation from a pharmacy program accredited by the Accreditation Council for Pharmacy Education (ACPE) or a program outside the United States that qualifies the individual to practice in the jurisdiction • Current, active license or registration to practice pharmacy in the United States or another jurisdiction • One of the following, within the past 7 years: o At least 4 years of specialty area practice with at least 50% of time spent in the scope defined by the exam content outline o Completion of PGY1 pharmacy residency and at least 2 years of specialty area practice experience with at least 50% of time spent in the scope defined by the exam content outline o Completion of PGY1 pharmacy residency and PGY2 pharmacy residency in Oncology Pharmacy *Residency programs must be accredited by or deemed candidate status by the American Society of Health-System Pharmacists (ASHP) for PGY1, PGY2, and International Pharmacy Practice Residency Programs, or accredited by the Canadian Pharmacy Residency Board (CPRB) for year-1 programs.*
ECO Creation Date	July 2016

This document serves as examination specifications and certification scheme according to the respective requirements of the NCCA 2021 and ISO-IEC 17024:2012 standards.

For more information about the BCOP examination program, please refer to the BPS website and candidate's guide: www.bpsweb.org/specialty-exams/candidates-guide/.

Examination Content Outline

1	**Pathophysiology and Molecular Biology of Cancer**
1A	Apply knowledge of oncology literature to identify the information needed about pertinent pathophysiology and molecular biology in order to optimize patient care
1A1	Etiology and pathophysiology of cancer and cancer-related complications
1A2	Cancer-related molecular biology and testing
1A3	Molecular pathways affected by drug therapy
1A4	Cancers, including staging, diagnosis, prognosis
1B	Use genomic (germline and somatic) and molecular (prognostic and predictive) test results in order to optimize therapeutic decision making for individual patients
1B1	Molecular heterogeneity of cancer
1B2	Somatic and germline aberrations
1B3	Next-generation sequencing technologies
1B4	Genomics, transcriptomics, proteomics, pharmacogenomics
1B5	Prognostic tests and data
1B6	Predictive tests and data
1B7	Liquid biopsies (e.g., Cell-Free DNA, Circulating Tumor Cells)
1B8	Passenger and driver aberrations
1C	Assess situations that require companion diagnostics in order to enhance the value and effectiveness of therapy
1C1	Cancer therapies that require a companion diagnostic test
1C2	Appropriate use and interpretation of biologic tests with respect to treatment decision making
1C3	Adverse impact if tests are not used or test results are not used appropriately
1D	Identify potential mechanisms of tumor resistance in order to design or modify pharmacotherapeutic regimens
1D1	Mechanisms of tumor resistance
1D2	Implications of resistance with respect to treatment decision making
2	**Therapeutics, Patient Management, and Education**
2A	Establish therapeutic goals related to pharmacotherapeutic plans in order to determine appropriate treatment
2A1	Cancer-specific pathology results, molecular biology, and testing
2A2	Patient-specific oncologic history and current diagnosis
2A3	Factors that influence treatment goals (e.g., comorbidities, performance status, allergies, adherence)
2A4	Disease-specific, social, educational, cultural, and financial factors that influence treatment decisions and outcomes
2A5	Expected treatment-dependent efficacy and safety outcomes
2A6	Palliative and end-of-life care
2B	Design or modify evidence-based individualized pharmacotherapeutic plans based on the assessment of pertinent patient information by integrating pathophysiological, pharmacologic, pharmacogenomic, pharmacokinetic, pharmacodynamic, and pharmacoeconomic considerations
2B1	Cancer-specific pathology results, molecular biology and testing
2B2	Patient-specific oncologic history and current diagnosis

2B3	Factors that influence treatment goals (e.g., comorbidities, performance status, allergies, adherence)
2B4	Disease-specific, social, educational, cultural, and financial factors that influence treatment decisions and outcomes
2B5	Expected treatment-dependent efficacy and safety outcomes
2B6	Current treatment guidelines and literature
2B7	Pharmacotherapies and other treatment modalities related to cancer treatment and supportive care
2B8	Complementary and alternative therapies
2B9	Drug resistance
2B10	Drug interactions
2B11	Toxicity grading and assessment
2B12	Drug administration and routes of delivery
2C	Use prevention and monitoring strategies to address complications and toxicities in order to optimize treatment outcomes
2C1	Prevention strategies
2C2	Monitoring strategies
2C3	Cancer complications
2C4	Treatment-related complications
2C5	Toxicity grading and assessment
2D	Establish survivorship care plans and associated management strategies
2D1	Short- and long-term complications
2D2	Cancer screening and follow up in survivors
2D3	Application of current survivorship guidelines and literature
2D4	Pharmacotherapies related to survivorship
2D5	Nonpharmacological treatments
2E	Educate patients and caregivers regarding pharmacotherapeutic plans
2E1	Pharmacotherapeutic regimens, schedules, and anticipated complications
2E2	Prevention, and management techniques of cancer-related complications
2E3	Cancer staging, diagnosis, prognosis, and treatments
2E4	Complementary and alternative medicines
2E5	Toxicity grading and assessment
2E6	Drug administration, interactions, and routes of delivery
2E7	Hazardous drug handling and disposal techniques
2E8	Social, educational, cultural, and financial factors that may influence treatment decisions
2E9	Appropriate educational techniques and assessment of comprehension
2F	Provide training and education to trainees and health care providers regarding oncologic treatment and supportive care
2F1	Effective educational techniques appropriate for learners needs and learning style
2F2	Development of learning objectives and assessment strategies
2F3	Pharmacotherapeutic regimens, schedules, and anticipated complications
2F4	Prevention, and management techniques of cancer-related complications
2F5	Cancer staging, diagnosis, prognosis, and treatments
2F6	Complementary and alternative medicines
2F7	Toxicity grading and assessment

2F8	Drug administration, interactions, and routes of delivery
2F9	Hazardous drug handling, BUD, and disposal techniques
2F10	Social, educational, cultural, and financial factors that may influence treatment decisions.
2F11	Appropriate educational techniques and assessment of comprehension
3	**Clinical Trials and Research**
3A	Evaluate the literature with regard to study design, methodology, and statistical analysis in order to determine the applicability of results to the oncology population
3A1	Methods for and considerations in conducting literature searches
3A2	Types of observational and interventional studies
3A3	Study design (e.g., hypothesis generation, limitations)
3A4	Internal and external validity
3A5	Relevance of the patient population
3A6	Calculation and interpretation of biostatistics in medical literature
3A7	Graphical representations in oncology literature
3A8	Endpoints of research studies
3A9	Clinical significance and statistical significance
3B	Apply knowledge of the drug development process as it relates to oncology clinical trials
3B1	Phases of, objectives for, and design of oncology clinical trials
3B2	Study designs that incorporate genomics
3B3	Approval of investigational new drugs
3B4	Approval of biosimilars
3B5	Collaborative trial groups
3C	Perform scholarly activities in order to promote patient-centered care
3C1	Identification of gaps in the literature (i.e., unanswered research questions)
3C2	Design of a hypothesis-driven research study
3C3	Venues and processes for disseminating new information (e.g., publication, presentations)
3D	Apply knowledge of regulations as they pertain to the conduct of research and clinical trials
3D1	Role of the Institutional Review Board (IRB) and regulatory bodies
3D2	Compliance with policies and procedures of the IRB and regulatory bodies
3D3	Ethical issues related to the conduct of research and clinical trials
3D4	Investigational drug management
4	**Practice Management**
4A	Establish institutional drug-use guidelines, policies, procedures, and formularies that are consistent with evidence, regulation, and/or current practice guidelines and standards in collaboration with other stakeholders
4A1	Clinical practice guidelines and best practices for cancer treatment and supportive care
4A2	National accreditation and regulatory organizations and their requirements
4A3	Professional practice standards and guidelines for safety (e.g., ASCO-ONS Standards for Safe Chemotherapy Administration, ASHP Guidelines on Handling Hazardous Drugs, USP 800, NIOSH)
4B	Maintain systems and technology to ensure the safety and effectiveness of the oncology medication use process
4B1	Electronic health information systems
4B2	Medication Use Evaluation, root cause analysis, ISMP communications, and other quality improvement strategies
4B3	Technologies that enhance the safety and quality of the dispensing process

4B4	Requirements for staff competence with regard to oncology pharmacy practice consistent with professional practice standards
4B5	Chemotherapy order set development and maintenance
4C	Apply knowledge of the procurement and reimbursement of oncology medications and services in order to optimize health care cost effectiveness
4C1	Medication reimbursement models
4C2	Pharmacy purchasing (e.g., PHS pricing, GPO contracts)
4C3	Reimbursement for clinical pharmacy services
4C4	Specialty pharmacy services
4D	Optimize processes in order to ensure the availability of oncology medications for patients
4D1	Patient assistance programs
4D2	Drug shortage management
4D3	Risk Evaluation Mitigation Strategy (REMS) programs
4D4	Compassionate use processes
5	**Public Health**
5A	Apply knowledge about cancer prevention, screening, and early detection strategies
5A1	Modifiable and non-modifiable risk factors
5A2	Prevention strategies
5A3	Screening guidelines
5A4	Early detection strategies
5B	Inform the public about reliable sources of information and cancer-support organizations
5B1	General resources to be used in informing the public about cancer and its treatment
5B2	Cancer-support organizations and resources

The examination content outline is a product of a job analysis (aka role delineation study) that includes facilitation of discussions with a representative panel of 15-20 subject matter experts who identify competencies required for safe and effective pharmacy practice in this specialty area as well as a validation survey soliciting endorsement of the identified competencies from certified pharmacists in this specialty area. The job analysis process is conducted every 5 years to help ensure that the competencies in the examination content outline reflect current pharmacy practice in the specialty area.

Examination Administration and Scoring

Number of Examination Items		Certification Exam	Recertification Exam
1	Pathophysiology and Molecular Biology of Cancer	35	20
2	Therapeutics, Patient Management, and Education	66	38
3	Clinical Trials and Research	25	14
4	Practice Management	38	22
5	Public Health	11	6
	TOTAL	**175**	**100**

	Certification Exam	Recertification Exam
Exam Administration Time	4 hours 23 minutes	2 hours 30 minutes
Minimum Score	200	200
Minimum Passing Score	500	500
Maximum Score	800	800

The certification examination is split into two parts with an optional break (up to 30 minutes) in between. Part 1 consists of 100 items (2 hours 30 minutes) and Part 2 consists of 75 items (1 hour 53 minutes).

Maintenance of Certification

Recertification Requirements	Pharmacists who earn the BCOP designation will be required to maintain their certification over a 7-year period by completing one of the following recertification pathways: • Achieving a passing score on the BCOP recertification examination in their seventh year following initial certification • Earning 100 hours of BPS-approved continuing pharmacy education (CPE) credit provided by the joint professional development programs offered by the American College of Clinical Pharmacy (ACCP) and the American Society of Health-System Pharmacists (ASHP) and the program offered by the Hematology/Oncology Pharmacy Association (HOPA). *Board Certified Oncology Pharmacists must complete the Oncology Pharmacy Preparatory Review Course for Recertification offered by ACCP/ASHP and/or the BCOP Preparatory and Recertification Course offered by HOPA at least once, but no more than three times, in nonconsecutive years, during the 7-year recertification cycle.*
Ethics and Professionalism	The Board of Pharmacy Specialties ascribes to the belief that certification carries an obligation for ethical behavior and professionalism necessary in all conduct. Candidates or certificants who are found to have exhibited unethical behavior or lack of professionalism may be prevented from pursuing certification or may be subject to suspension or withdrawal of certification, at the discretion of the Board of Pharmacy Specialties. Please refer to the BPS Ethics and Professionalism Policy: https://www.bpsweb.org/wp-content/uploads/2015/11/ethics.pdf