** Materials for this course will be release on 07/10/2019 **

Oncology Pharmacy Specialty Review Course for Recertification + RECERT EXAM Package (Cert # L199111)

**Teaser:** This online course will help you earn BCOP recertification credit. With this course, you will get comprehensive, practical guidance, with a variety of complex cases, including references for further study.

**Tag:** Certifications; Oncology

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**ACPE Numbers:** Various – see listing below  
**Pre-Sale Date:** 05/08/2019  
**Content Release Date:** 07/10/2019  
**Expiration Date:** 12/17/2019  
**Activity Type:** Application-based  
**CE Credits:** 25.75 (BPS and ACPE)  
**Activity Fee:** $475 (ASHP member); $675 (non-member)

**Accreditation for Pharmacists**

The American College of Clinical Pharmacy and American Society of Health-System Pharmacists are accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.

*These activities were recorded during a live educational event on May 2-4, 2019 in Minneapolis, Minnesota. Learners who claimed credit for the live activities should not claim credit for these home study activities.*

**Target Audience**

These activities are intended for board certified pharmacists seeking to update their knowledge and skills in oncology.

**Activity Overview**

This course is intended for BCOPs in need of recertification credit and is designed based on the content outline developed by the Board of Pharmacy Specialties (BPS) to provide an overview of recent standards and guidelines that specialists should be familiar with in practice. The course uses a case-based approach to discuss patient care issues. In this series, faculty will:

- Review pertinent clinical topics and practice skills
- List valuable resources for further self-study

This online course consists of 20 activities (see table below) and provides up to 25.75 hours of continuing pharmacy education credit and/or recertification credit.
Recertification Credit*
Board certified pharmacists are eligible to receive up to 25.75 hours of recertification credit for completing this course. To earn recertification credit, learners must review the course content and successfully complete the online assessments by the deadline. Only completed assessments will be eligible for credit; no partial or incomplete assessments will be processed. You are allowed only one attempt to successfully complete this assessment.

This course is not intended for those preparing to take the BPS Oncology Pharmacy Specialty Examination for Certification. To prepare for the examination, please see courses here: [http://elearning.ashp.org/catalog/onc-review](http://elearning.ashp.org/catalog/onc-review)

These activities are part of the ACCP and ASHP professional development program for BCOP recertification approved by the BPS.

*Please note: Review Course for Recertification may only be completed for recertification credit up to two times, in nonconsecutive years, during the 7-year recertification cycle.

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<th>Learning Activity</th>
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<th>Credit Hours</th>
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Learning Objectives
After participating in this CPE activity, leaners should be able to:

Breast Cancer
ACPE # 0204-9999-19-928-H01-P
- Design an appropriate patient-specific treatment, supportive care, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current treatment guidelines for patients with breast cancer.
- Discuss short- and long-term goals, including post-therapy and survivorship, with the patient with breast cancer and her or his caregiver.
- Determine appropriate pharmacotherapy for a patient with breast cancer based on genomic test results.
- Identify appropriate diagnostic and prognostic tests related to breast cancer.
- Select relevant information and guidance for the public regarding breast cancer-related issues (e.g., cancer risk factors, prevention, screening).

Gynecologic Malignancies
ACPE # 0204-9999-19-919-H01-P
- Design an appropriate patient-specific treatment, management, and monitoring plan taking into consideration efficacy and safety outcomes of clinical trials and current treatment guidelines for a patient with a gynecologic malignancy
- Compare and contrast the efficacy and toxicity of different routes of drug administration, including IP chemotherapy, in the treatment of ovarian cancer.
- Determine short-and long-term goals, including post-therapy and survivorship, with a patient with a gynecologic malignancy and her caregiver.
- Select relevant information and provide guidance for the public regarding gynecologic malignancy-related issues (e.g., risk factors, prevention and screening) for gynecologic malignancies.
- Cervical and Endometrial malignancies are covered in the handout only.

Prostate Cancer
ACPE # 0204-9999-19-922-H01-P
- Design an appropriate patient-specific treatment, supportive care, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current treatment guidelines for patients with prostate cancer.
- Identify appropriate diagnostic, prognostic and monitoring tests for a patient with prostate cancer.
- Determine short- and long-term goals, including post-therapy and survivorship, with a patient with prostate cancer and his caregiver.
- Select relevant information and guidance for the public regarding prostate cancer-related issues (e.g., factors, prevention, screening).
Pediatric Malignancies and Supportive Care
ACPE # 0204-9999-19-935-H01-P

- Design an appropriate patient-specific treatment, supportive care, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current treatment guidelines for pediatric patients with cancer.
- Assess the prognostic impact of relevant cancer-related molecular biology testing for a pediatric patient with cancer.
- Discuss with a pediatric patient who has cancer and his or her caregiver the short-and long-term treatment goals, including post-therapy and survivorship.
- Assess the impact of pharmacogenomics on the efficacy and toxicity of relevant anticancer and supportive-care agents for a pediatric patient with cancer.
- Assess the regulatory, ethical, and patient rights issues related to conducting research, including informed consent and confidentiality.

Upper Gastrointestinal and Hepatocellular Carcinomas
ACPE # 0204-9999-19-932-H01-P
Application-based: 0.75 credit hours

- Design an appropriate patient-specific treatment, management, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current treatment guidelines for patients with esophageal, gastric, or hepatic malignancies.
- Assess the impact of pharmacogenomics on the efficacy and toxicity of relevant anticancer agents used for gastrointestinal malignancies.
- Devise and communicate appropriate plans for preventing, monitoring, and treating radiation recall and other complications of radiation therapy.

Bladder, Renal Cell, and Testicular Cancers
ACPE # 0204-9999-19-926-H01-P

- Design an appropriate patient-specific treatment, supportive care, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current treatment guidelines for patients with bladder, renal cell, or testicular carcinoma.
- Determine short- and long-term goals, including post-therapy and survivorship, with a patient with bladder, renal cell, or testicular carcinoma and his or her caregiver.
- Devise and communicate appropriate plans for preventing, monitoring, and treating adverse reactions associated with the treatment with tyrosine kinase inhibitors and mTOR inhibitors.

Melanoma and Non-Melanoma Skin Cancers
ACPE # 0204-9999-19-918-H01-P

- Design an appropriate patient-specific treatment, supportive care, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current treatment guidelines for patients with melanoma.
- Identify relevant cancer-related molecular biology testing for a patient with melanoma.
- Devise and communicate appropriate plans for preventing, monitoring and treating adverse reactions associated with the treatment of melanoma, including thyroid level monitoring for chemotherapy agents, immune-mediated toxicities and toxicity from BRAF inhibitors.
- Determine long-term goals, including post-therapy and survivorship, with the patient with melanoma or non-melanoma skin cancer and his or her caregiver.
- Select relevant information and guidance for the public regarding melanoma and non-melanoma skin cancer-related issues (e.g. risk factors, prevention, and screening).
Non-melanoma skin cancers, including basal cell, squamous cell and Merkel Cell carcinomas are also included in the handout only.

Research Design, Statistics, and Evaluating Oncology Literature
ACPE # 0204-9999-19-916-H04-P

- Evaluate the oncology literature, including study design, methodology, statistical analysis, and applicability of results to clinical practice for the oncology patient population.
- Select an appropriate statistical test (parametric or nonparametric) for use in evaluating findings from an oncology study based on the type of data (i.e., nominal, ordinal, continuous).
- Critique the validity and interpret the results of various types of oncology studies (e.g., meta-analyses, noninferiority trials).
- Interpret findings from the use of study endpoints (e.g., objective response, time to progression, adverse events, quality of life, overall survival) in oncology research.
- Define, calculate, and interpret sensitivity, specificity, positive and negative predictive values, measures of effect, correlation, and regression for an oncology study.
- Identify potential sources of bias and evaluate the appropriateness of conclusions drawn based on outcomes in an oncology study report.

Adult Acute Leukemias and Myelodysplastic Syndromes
ACPE # 0204-9999-19-927-H01-P

- Design an appropriate patient-specific treatment, supportive care, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current treatment guidelines for adults with acute leukemia or myelodysplastic syndrome.
- Assess the prognostic impact of relevant cancer-related molecular biology testing for an adult with acute leukemia or myelodysplastic syndrome.
- Devise and communicate appropriate plans for preventing, monitoring, and treating adverse reactions from pharmacotherapy for acute leukemia and myelodysplastic syndrome in an adult, including tumor lysis syndrome, neurotoxicity, differentiation syndrome, and cardiac toxicity from arsenic trioxide, and other agents as appropriate.
- Determine appropriate pharmacotherapy for acute leukemia or myelodysplastic syndrome in an adult based on genomic test results.

Lymphomas
ACPE # 0204-9999-19-929-H01-P

- Design an appropriate patient-specific treatment, supportive care, and monitoring plan to include effectiveness, toxicities and outcomes, based on the most current guidelines for patients with lymphoma.
- Assess the prognostic impact of relevant cancer-related molecular biology testing.
- Devise and communicate appropriate plans for preventing, monitoring, and treating adverse reactions associated with pharmacotherapy for lymphoma and other cancers, including chemotheraphy-induced pulmonary toxicities and extravasations.

Chronic Leukemias
ACPE # 0204-9999-19-917-H01-P

- Design an appropriate patient-specific treatment, supportive care, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current treatment guidelines for patients with chronic leukemia.
• Assess the prognostic impact of relevant cancer-related molecular biology testing in a patient with chronic leukemia.
• Determine appropriate pharmacotherapy based on genomic test results in a patient with chronic leukemia.
• Devise and communicate appropriate plans for preventing, monitoring, and treating infusion-related reactions from monoclonal antibodies used in the treatment of hematologic malignancies.
• Devise and communicate appropriate plans for preventing, monitoring, and treating adverse reactions associated with pharmacotherapy for the treatment of cancers, including hematologic toxicities from tyrosine kinase inhibitors used to treat chronic myelogenous leukemia.

Hematopoietic Stem Cell Transplantation
ACPE # 0204-9999-19-933-H01-P
• Design an appropriate patient-specific treatment, supportive care, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current guidelines for patients undergoing hematopoietic stem cell transplantation (HSCT).
• Debate the advantages and disadvantages of various methods of peripheral blood stem cell mobilization.
• Discern dose-limiting toxicities and appropriate strategies to prevent toxicity from chemotherapy agents employed in HSCT conditioning regimens, and differentiate between myeloablative, non-myeloablative, and reduced-intensity HSCT conditioning regimens.
• Create a plan for prevention and management of acute and chronic graft-versus-host disease (GVHD) using appropriate systemic and ancillary therapies.
• Discuss short-and long-term treatment goals, including post-therapy and survivorship, with the patient undergoing HSCT and his or her caregiver.

Lung Cancer
ACPE # 0204-9999-19-920-H01-P
• Design an appropriate patient-specific treatment, supportive care, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current treatment guidelines for patients with lung cancer.
• Identify relevant cancer-related molecular biology testing for a patient with lung cancer.
• Assess the impact of pharmacogenomics on the efficacy and toxicity of relevant anticancer and supportive-care agents for a patient with lung cancer.
• Devise and communicate appropriate plans for preventing, monitoring and treating adverse reactions associated with pharmacotherapy for lung cancer.
• Develop and communicate a prevention and management strategy for chemotherapy-induced nausea and vomiting for patients with any type of cancer.
• Select relevant information and guidance for the public regarding lung cancer-related issues (e.g., risk factors, prevention, and screening).

Lower Gastrointestinal and Pancreatic Cancers
ACPE # 0204-9999-19-930-H01-P
• Design an appropriate patient-specific treatment, supportive care, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current treatment guidelines for patients with lower gastrointestinal (GI) or pancreatic cancers.
• Discuss short- and long-term treatment goals, including post-therapy and survivorship, with a patient with lower GI or pancreatic cancers and his or her caregiver.
• Assess the impact of pharmacogenomics on the efficacy and toxicity of relevant anticancer and
supportive-care agents for a patient with lower GI or pancreatic cancers.
• Devise and communicate appropriate plans for preventing, monitoring and treating adverse reactions
associated with pharmacotherapy for lower GI or pancreatic cancers including chemotherapy-induced
diarrhea and dermatologic toxicities from epidermal growth factor receptor inhibitors.
• Select relevant information and guidance for the public regarding lower GI and pancreatic cancer-
related issues (e.g., risk factors, prevention, screening).
• Devise and communicate appropriate plans for preventing, monitoring and treating adverse reactions
associated with pharmacotherapy for lower GI or pancreatic cancers including hand-foot syndrome,
hand foot skin reaction, neurotoxicity from oxaliplatin, and management of hypersensitivity reactions to
monoclonal antibodies used for solid tumors

Head, Neck and Adult Central Nervous System (CNS) Malignancies
ACPE # 0204-9999-19-921-H01-P
• Design an appropriate patient-specific treatment, management and monitoring plan taking into
consideration efficacy and safety outcomes from clinical trials and current treatment guidelines for
patients with head, neck, adult central nervous system (CNS) malignancies, or thyroid cancers.
• Select relevant information and provide guidance to the public regarding head and neck cancer-related
issues (e.g., risk factors, prevention, and screening).
• Devise and communicate appropriate plans for preventing, monitoring and treating adverse reactions associated
with treatment of cancers including cancer cachexia, mucositis and xerostomia.

Cancer-related Infectious Diseases
ACPE # 0204-9999-19-931-H01-P
• Design an appropriate patient-specific management and monitoring plan to address potential infection-
related problems that may arise during or following cancer treatment based on the current guidelines
for treating cancer-related infectious diseases.
• Determine short-and long-term treatment goals, including post-therapy, with a patient with a cancer-
related infectious disease and his or her caregiver.

Oncology Practice Management
ACPE # 0204-9999-19-923-H04-P
• Evaluate oncology pharmacy services for compliance with established regulations and standards.
• Select quality-improvement activities that enhance the safety and effectiveness of the medication-use
process in oncology patient care.
• Examine the professional practice standards and guidelines for the safe handling and administration of
hazardous drugs.
• Consider national accreditation and federal regulatory requirements for the care of cancer patients
receiving chemotherapy or other hazardous drugs.
• Evaluate resources and develop methods for handling and disposal of hazardous drugs and related
materials.
• Consider medication reimbursement and patient assistance programs to optimize drug availability for
oncology patients.
• Evaluate policies and procedures related to conducting research involving investigational drugs,
including drug management in patients with cancer.
Multiple Myeloma
ACPE # 0204-9999-19-924-H01-P
- Design an appropriate patient-specific treatment, supportive care, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current guidelines for patients with multiple myeloma.
- Devise and communicate appropriate plans for preventing, monitoring and treating adverse reactions associated with the treatment of cancers, including bone metastases in multiple myeloma patients and thromboembolism, hypercalcemia of malignancy, and spinal cord compression in all oncology patients.
- Evaluate oncology pharmacy services for compliance with established REMS regulations and standards.

Adult Sarcoma
ACPE # 0204-9999-19-925-H01-P
- Design an appropriate patient-specific treatment, management, and monitoring plan taking into consideration efficacy and safety outcomes from clinical trials and current treatment guidelines for adult patients with sarcoma.
- Adjust treatment and monitoring plans as needed based on the pharmacokinetics of anticancer and supportive-care agents (e.g., methotrexate).
- Devise and communicate appropriate plans for preventing, monitoring and managing common problems associated with the treatment of adult patients with cancer including neurotoxicity from ifosfamide and hemorrhagic cystitis.

Pharmacogenomics in Oncology
ACPE # 0204-9999-19-934-H01-P
- Identify appropriate considerations for genetic interpretation in both the germline and somatic settings.
- Translate the results from somatic genetic testing into therapeutic recommendations based on prognostic, predictive and patient characteristics.
- Recognize the place in therapeutic decision making for companion diagnostic testing.

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Disclosures
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All faculty and planners for ASHP education activities are qualified and selected by ASHP and ACCP and required to disclose any relevant financial relationships with commercial interests. ASHP identifies and resolves conflicts of interest prior to an individual’s participation in development of content for an educational activity. Anyone who refuses to disclose relevant financial relationships must be disqualified from any involvement with a continuing pharmacy education activity.

- Karen M. Fancher: Consultant, AstraZeneca Pharmaceuticals, LP.
- Christine M. Walko: Consultant for Intermountain Health, Jackson Laboratories, and Foundation Medicine.
- All other planners, presenters, and reviewers of this session report no financial relationships relevant to this activity.

Methods and CE Requirements
Activities can be completed in any order. Each activity consists of audio, video, and/or PDFs and evaluations. Learners must review all content and complete the evaluations to receive continuing pharmacy education credit for each activity.

Follow the prompts to claim, view, or print the statement of credit within 60 days after completing the activity.
System Technical Requirements
Learning activities are delivered via your Web browser and Acrobat PDF. For all activities you should have a basic comfort level using a computer and navigating web sites.

View the minimum technical and system requirements for learning activities.

Development
These activities were developed by ASHP and ACCP.