Acute Leukemia

John Valgus, Pharm.D., BCOP
Clinical Assistant Professor; Hematology/Oncology Clinical Specialist
University of North Carolina Hospitals and Clinics
Chapel Hill, North Carolina

Learning Objectives:

1. Identify the aspects of acute promyelocytic leukemia which differentiate this disease state from other subtypes of acute myeloid leukemia
2. Describe the role of all-trans retinoic acid, arsenic trioxide, and conventional chemotherapy in the treatment of acute promyelocytic leukemia
3. Discuss the mechanisms of action of all-trans retinoic acid and arsenic trioxide

Bladder, Renal Cell, and Testicular Cancers

Patrick Medina, Pharm.D., BCOP
Associate Professor
University of Oklahoma Health Sciences Center
Oklahoma City, Oklahoma

Learning Objectives:

1. Describe the role of the von Hippel-Lindau (VHL) gene in renal cell cancer
2. Summarize the role epidermal growth factor receptor (EGFR), vascular endothelial growth factor (VEGF), and raf/MEK/ERK pathway on cell growth in renal cell cancer
3. Outline the pharmacological principles for agents used to treat renal cell cancer.
4. Compare and contrast the mechanism of action of sunitinib, sorafenib, and temsirolimus in metastatic renal cell cancer.
5. Outline clinical data regarding these new agents in renal cell cancer

Breast Cancer I

Laura Boehnke Michaud, Pharm.D., BCOP, FASHP
The University of Texas
M. D. Anderson Cancer Center
Houston, Texas

Learning Objectives:

1. Identify patients who may benefit from the addition of ixabepilone to capecitabine for the treatment of breast cancer.
2. Discuss the benefits these patients may experience with the addition of ixabepilone to this chemotherapy regimen.
3. Identify the appropriate dosing and administration schedule for ixabepilone and capecitabine when given in combination for the management of breast cancer.
4. Review the overall safety related to the addition of ixabepilone to capecitabine.
5. Review the mechanism of action and pharmacology of the epothilones, specifically ixabepilone.
6. Discuss how this information may be incorporated into standard treatment recommendations for the treatment of breast cancer.

Breast Cancer II

Laura Boehnke Michaud, Pharm.D., BCOP, FASHP
The University of Texas
M. D. Anderson Cancer Center
Houston, Texas

Learning Objectives:

1. Identify the absolute and relative benefits gained with the addition of trastuzumab to chemotherapy in the adjuvant setting to treat early stage breast cancer.
2. Identify the absolute and relative risks associated with the addition of trastuzumab to chemotherapy in the adjuvant setting to treat early stage breast cancer.
3. Review the overall safety related to the addition of trastuzumab to chemotherapy in the adjuvant treatment setting.
4. Discuss how this information may be incorporated into standard treatment recommendations for the adjuvant treatment of early stage breast cancer.

Hematopoietic Stem Cell Transplantation

Helen L. Leather, B.Pharm
Clinical Pharmacy Specialist BMT/leukemia
College of Pharmacy
University of Florida
Gainesville, Florida

Learning Objectives:

1. Discuss the role of hematopoietic stem cell transplantation (HSCT) as part of the treatment of adult acute myeloid leukemia.

2. Compare and contrast outcomes with conventional chemotherapy and autologous HSCT in adults.

3. Compare and contrast outcomes achieved with conventional chemotherapy and allogeneic HSCT in adults.

4. Describe the role of autologous and allogeneic HSCT in adult acute myeloid leukemia.

5. Describe the optimal timing for HSCT in adult acute myeloid leukemia patients

6. Identify the optimum source of stem cells for transplantation.

7. Discuss the role of T-cell depletion as part of the transplant process for adult acute myeloid leukemia.

8. Outline the role of HSCT (autologous and allogeneic) and conventional chemotherapy in the treatment of acute lymphoblastic leukemia

Hypercalcemia

Val R. Adams, Pharm.D., FCCP, BCOP
University of Kentucky College of Pharmacy

Learning Objectives:

1. Describe the presenting signs and symptoms of hypercalcemia of malignancy
2. Recommend a treatment plan for a patient with severe hypercalcemia of malignancy.
3. Describe the time course of response to therapy to hypocalcemic agents.
4. Describe the common side effects of hypocalcemic agents.

Literature Evaluation and Biostatistics in Oncology

Linda S. Tyler, Pharm.D., FASHP
Director, Drug Information Service
University of Utah Hospitals & Clinics
Salt Lake City, Utah

Learning Objectives:

Given a meta-analysis addressing an issue in oncology:

1. Describe the purpose of Forrest and funnel plots and interpret the information presented.

2. Interpret I^2 values.

3. Assess heterogeneity qualitatively and quantitatively.

4. List factors that are important to consider when determining if it is appropriate to combine studies for a meta-analysis.

Lung Cancer

R. Donald Harvey, Pharm.D., BCPS, BCOP
Assistant Professor of Hematology and Oncology
Winship Cancer Institute
Emory University
Atlanta, Georgia

Learning Objectives:

1. Discuss therapeutic challenges with chemotherapy in non-small-cell lung cancer (NSCLC) in patients greater than 70 years of age.

2. Describe mutations and toxicities that predict response to erlotinib and their impact on disease control.

3. Evaluate response and toxicities associated with the addition of bevacizumab to carboplatin and paclitaxel in NSCLC patients over 70 years of age.

4. Compare response and toxicities with the addition of bevacizumab to carboplatin and paclitaxel in NSCLC patients above and below 70 years of age.

Multiple Myeloma

Chris Fausel, Pharm.D., BCPS, BCOP
Clinical Pharmacist
Adult Cancer Care Center
Indiana University Cancer Center
Indianapolis, Indiana

Learning Objectives:

1. Explain the rationale for initiating treatment for patients with refractory multiple myeloma.

2. Define the clinical benefit of the lenalidomide/dexamethasone containing arm offers to patients compared to single agent dexamethasone.

3. Evaluate the supportive care measures necessary for patients receiving the treatment regimens in this study.

4. Outline the clinically relevant toxicities between the respective treatment arms.

Ovarian Cancer

Dayna L. McCauley, Pharm.D., BCOP
Long Island Gynecologic Oncologists, PC
State University of New York at Stony Brook and
Winthrop-University Hospital
Smithtown, New York

Learning Objectives:

1. Describe the activity of Bevacizumab in patients with platinum resistant ovarian cancer.

2. Describe the toxicity of Bevacizumab in patients with platinum resistant ovarian cancer.

Pancreatic, Stomach, and Liver Tumors

Dina K. Patel, PharmD, BCOP
Clinical Pharmacy Specialist
M.D. Anderson Cancer Center
University of Texas

Learning Objectives:

1. Describe the pathogenesis and Pathophysiology of pancreatic, stomach, and liver tumors.
2. Identify the risk factors, clinical symptoms, and staging for pancreatic, stomach, and liver tumors.
3. Explain the role of screening and prevention in pancreatic, stomach, and liver tumors.
4. Outline the appropriate pharmacologic and non-pharmacologic treatment of pancreatic, stomach, and liver tumors.
5. Discuss the pharmacology and toxicities associated with each chemotherapeutic agent used to treat pancreatic, stomach, and liver tumors.

Pediatric Malignancy

Mark T. Holdsworth, Pharm.D., BCOP
Associate Professor of Pharmacy and Pediatrics
College of Pharmacy
University of New Mexico
Albuquerque, New Mexico

Learning Objectives:

1. Describe the recent evidence regarding the occurrence of osteonecrosis in survivors of childhood leukemia.

2. Summarize the likely mechanisms of corticosteroid-induced osteonecrosis.

3. Summarize the main risk factors of osteonecrosis in the childhood acute lymphoblastic leukemia (ALL) population.

4. Identify the common clinical presentation among children with ALL who develop osteonecrosis.

5. Describe the severity of intraconazole- related vincristine neurotoxicity.

6. Discuss appropriate antifungal prophylaxis therapy for pediatric ALL patients.

7. Summarize the likely mechanism by which an intraconazole-vincristine interaction is more severe than that observed with other azole antifungals.

Prostate Cancer

Jill M. Kolesar, Pharm.D., FCCP, BCPS
Associate Professor
University of Wisconsin Comprehensive Cancer Center
Madison, Wisconsin

Learning Objectives:

1. Describe the efficacy of oral phosphodiesterase type 5 (PDE5) inhibitors in treating erectile dysfunction following treatment of prostate cancer.
2. Understand the toxicity of oral phosphodiesterase type 5 (PDE5) inhibitors.
3. Outline a treatment plan for a man with erectile dysfunction after a radical prostatectomy, taking into consideration patient preferences, potential drug interactions, efficacy and toxicity.

Supportive Care

Theresa A. Mays, B.S., Pharm.D., BCOP
Director, Investigational Drug Section (IDS)
South Texas Accelerated Research Therapeutics (START)
San Antonio, Texas

Learning Objectives:

1. Assess a patient's eligibility for receiving erythropoietin stimulating agents (ESA) based on their clinical presentation and recently published guidelines.
2. Discuss the risks verses benefits for patients receiving ESA therapy.
3. Outline an appropriate monitoring plan for patients receiving ESA therapy.
4. Compare and contrast the differences between available ESA therapies.
5. Explain the rationale for monitoring iron studies and when iron supplementation should be used in patients receiving ESA therapy.

The Anticancer Drug Development Process

Jill M. Kolesar, Pharm.D., FCCP, BCPS
Associate Professor
University of Wisconsin Comprehensive Cancer Center
Madison, Wisconsin

Learning Objectives:

1. List the primary endpoints and population of phase 0 clinical trials.

2. Explain the benefits and limitations of phase 0 clinical trials.

3. Describe the ethical implications pf phase 0 clinical trials.

4. Compare and contrast phase 0 clinical trials and with other types of clinical trials.