CAP16 COURSE INFORMATION

Updated May 17, 2016

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Sunday, September 25, 2016
8:00-9:15 AM

P1600 The Immune Checkpoint Revolution in Cancer Treatment: "Moonshot" or "Pie in the Sky"?
1.0 CME/CE CREDIT

Advances in cancer treatment have been incremental and evolutionary for many years. Patient survival advantages of weeks or months were only slowly teased out of painstaking trials mixing combinations of surgery, chemotherapy, and radiation. Over time we have learned much about patient selection, dosing regimens, and drug toxicities. With a better understanding of and the ability to test for specific molecular biomarkers in tumors, targeted therapy emerged with great fanfare and promise. Companion diagnostics and molecular testing spread as pathologists and laboratories labored to identify those tumors likely to respond. We finally were able to turn specific switches "on" or "off," thwarting the growth of a host of tumor types, sometimes showing dramatic responses. Were the responses durable? The answer behind the question tells another story. In most cases, therapy selected resistant tumor clones and ultimately failed.

We stand on the cusp of a totally new approach to cancer treatment, where the primary focus is on the host immune response rather than the tumor. Several recently approved immune checkpoint inhibitors have burst onto the scene with dramatic stories of durable, complete responses in patients whose cancers were refractory to all other therapies. This new approach comes with new testing technologies, uncertainties, and controversies. You will want to hear about these, as well as the potential impact of the new treatment paradigms on how we diagnose tumors and test patients. Join us for a lively discussion of this dramatic and recent paradigm shift from the perspectives of the patient, the oncologist, and the pathologist.

You will learn to:

- Describe new cancer treatment strategies that target the host immune response and how they integrate with tumor-targeted therapies and traditional therapies
- Apply knowledge of both established and evolving biomarkers of response to immunotherapies across cancer types
- Recognize the challenges faced by patients and oncologists relating to cost, trial eligibility, and testing, when using recently approved therapies

FACULTY
Christopher S. Lathan, MD, MS, MPH
Barry A. Nelson
Lynette M. Sholl, MD, FCAP

9:30-11:30 AM

S1405 CAP-ADASP Interpretive Diagnostic Error Reduction Through Targeted Case Reviews
2.5 CME/SAM CREDITS

Numerous studies have demonstrated that laboratory errors occur at rates ranging from 0.25% up to 40%. Among all errors, interpretive or analytic errors account for approximately 15% to 25% of laboratory errors, yet they account for over 90% of malpractice claims against pathologists. Therefore, developing strategies aimed at preventing interpretive errors is desirable. The CAP and the *Association of Directors of Anatomic and Surgical Pathology (*ADASP) convened a panel of experts to investigate the role of second-pathologist review in preventing diagnostic interpretive errors. A systematic literature review was performed to answer the question: Does a targeted review of surgical pathology or cytopathology cases reduce the error rate before case sign-out and if so, what are the best reviewing methods? Faculty will discuss implementation of the final recommendations in different practice settings.

You will learn to:
- Assess the risk in your practice for interpretive diagnostic error
- Identify the type of cases at risk for interpretive diagnostic error
- Develop a strategy of case reviews that will mitigate interpretive error risk
- Determine the best method to reduce interpretive diagnostic error

Faculty
Raouf E. Nakhleh, MD, FCAP

S1458 Massive Transfusion Protocols in Trauma and Obstetrics
2.0 CME CREDITS

Pathologists overseeing transfusion services and hemostasis laboratories may be faced with the challenge of creating protocols for massive transfusion. Two patient populations—trauma patients and obstetric patients—are at risk for experiencing rapid life-threatening hemorrhage complicated by coagulopathy. However, these two patient groups have distinct differences and clinical needs that must be understood to ensure optimal management. Faculty will utilize case-based scenarios comparing and contrasting traumatic and obstetric patients to explore:
- Acute coagulopathy of trauma shock and coagulopathy complicating obstetric hemorrhage
- Use of laboratory testing, including both standard and viscoelastic clot-based testing, in massive transfusion protocols (MTPs)
- Risks and benefits in massive transfusion management
- Adjuvant pharmacotherapy for management of massive hemorrhage

You will learn to:
- Compare and contrast the pathophysiology of traumatic hemorrhage complicated by coagulopathy and obstetric hemorrhage arising from multiple etiologies
- Design a massive transfusion protocol (MTP) for patients experiencing traumatic and/or obstetric hemorrhage
- Apply the use of adjuvant pharmacotherapy in the management of traumatic and obstetric hemorrhage
- Describe the utility of real-time laboratory testing to guide MTPs

Faculty
Evelyn L. Lockhart, MD, FCAP
Pampee P. Young, MD, PhD, FCAP

S1560 Diagnostic Challenges in Low-Grade B-Cell Lymphomas
2.0 CME CREDITS

This course is a case-based presentation, addressing the challenges and pitfalls in the morphologic assessment of follicular lymphoma (FL), mantle cell lymphoma (MCL), and chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL). FL, MCL, and CLL/SLL are common entities diagnosed in lymph node biopsies; however, there are diagnostic challenges associated with each of them. The first challenge that presenters will address includes histologic grading (core versus excisional biopsy, interobserver variability) and pattern in FL. Additionally, faculty will cover the difficulty of morphologic variants of FL (pediatric-type, floral variant, marginal zone or plasmacytic differentiation, in situ versus partial involvement), MCL (blastoid, pleomorphic), CLL/SLL (prominent proliferation centers), and their clinical significance. And finally, presenters will address atypical immunophenotypes, such as CD10(-) FL; CD10(+), BCL-6(+) MCL; CD5(-) MCL; cyclin D1 (-) MCL; CD23(+)/FMC-7(-) MCL; CD23(-)/FMC-7(+) CLL/SLL; or cyclin D1 expression in CLL/SLL.

You will learn to:
- Describe the morphologic variants of FL and their clinical implications
- Discuss the challenges and limitations of histologic grading in FL
- Distinguish the morphologic variants of MCL and their clinical significance
- Interpret the clinical impact of atypical immunophenotypes in low grade lymphomas

Faculty
Yuri D. Fedoriw, MD, FCAP
Horatiu Olteanu, MD, PhD, FCAP

S1570 A Practical Approach for Challenging Dermatopathology Cases: What Doesn't Kill You Makes You Stronger
2.5 CME/SAM CREDITS

Do you have an interest in dermatopathology? If so, attend this session to hear faculty elaborate on pitfalls in the diagnosis of cutaneous neoplasms that may result in diagnostic errors with significant clinical impact. The session focuses on histological mimickers, including skin malignancies that resemble reactive conditions or benign neoplasms, benign conditions that masquerade as malignancies, and tumors that are prone to be mistaken for other types of cutaneous malignancies. The faculty will structure the session as a case-oriented didactic lecture and present real cases from their experiences. Additionally, faculty will discuss the salient features of each entity and provide tips to avoid misdiagnosis.

You will learn to:
- Recognize a variety of dermatopathology cases that are prone to be misdiagnosed
- Identify histologic features that are useful in preventing pitfalls in diagnosis
- Determine appropriate ancillary studies that help arrive at the correct diagnosis

Faculty
Aleodor A. Andea, MD, MBA, FCAP
Deborah L. Cook, MD, FCAP

S1617 Development and Validation of Quantitative Image Analysis in Anatomic Pathology for Diagnostic, Prognostic, and Predictive Purposes
2.0 CME/CE CREDITS

Image algorithms are increasingly being used to assist quantifying immunohistochemistry results of whole slide images. These algorithms provide more reproducible and accurate measurements than manual reads. The most commonly applied image analysis tools are those used for quantifying breast cancer markers. There are currently no established guidelines to ensure that image analysis used in pathology

laboratories is reliable and safe for clinical practice. The faculty will provide an in-depth review of the issues encountered in quantitative image analysis for diagnostic, prognostic, and predictive purposes focusing on the evidence-based guidelines on image analysis currently in development by the CAP Pathology and Laboratory Quality Center.

You will learn to:
- Explain how the evidence was obtained to inform the draft recommendations in development by the CAP Pathology and Laboratory Quality Center
- Apply the evidence-based guidelines to ensure consistency in quantitative image analysis
- Assess the changes needed to comply with the guideline

Faculty
Marilyn M. Bui, MD, PhD, FCAP
Liron Pantanowitz, MD, FCAP


S1628 Body Fluid Chemistry Analysis: Who Knew It Could Be So Complicated?
2.0 CME/CE CREDITS

This interactive session will use case-based examples to present body fluid cases and testing scenarios encountered in the clinical chemistry laboratory. Participants will relate and apply the necessary components and considerations of the preanalytic, analytic, and post-analytic phases of testing. Further, faculty will focus on how to interpret regulatory requirements, formulate a strategy to address regulatory requirements through analytical validation of body fluid chemistry testing methods, assess clinical utility, and discuss the limitations of current methods.

You will learn to:
- Recognize current body fluid testing practices in your laboratory
- Identify potential gaps in your laboratory's body fluid testing practices
- Interpret chemistry analyte results in body fluids for patient management
- Design a validation plan to measure chemistry analytes in body fluid specimens that will address regulatory requirements

Faculty
Darci R. Block, PhD, DABCC
Deanna D.H. Franke, MT(ASCP), PhD, DABCC

Cosponsored by the American Association for Clinical Chemistry (AACC)


S1666 Gastric Pathology: A Practical Approach for the Practicing Pathologist
2.0 CME CREDITS

This course will discuss the keys to effective surgical pathology of the stomach, including tumor and non-tumor pathology. The faculty will use case presentations to illustrate and reinforce key points, demonstrating how they are used to effectively recognize, diagnosis, and report these important entities. Faculty will discuss the utility and limitations of new clinical and pathologic technologies and their impact on diagnosis and management. Changes in consensus guidelines will also be presented. With ample time for questions, discussion between faculty and participants will be encouraged. This course is intended for practicing surgical pathologists as well as residents and fellows.

You will learn to:
- Explain the criteria used to identify major gastritis patterns
- Use special stains properly in diagnosing infectious of the stomach
- Identify the criteria used to classify polyps and dysplasia of the stomach
- Apply immunostains as an aide to classify gastric polyps

Faculty
Michael S. Torbenson, MD
Tsung-Teh Wu, MD, PhD

Cosponsored by the Rodger C. Haggitt Gastrointestinal Pathology Society (GIPS)

V1425 Frozen Section Evaluation in Ovarian and Pelvic Lesions: An Interactive and Practical Approach With Real Cases
2.0 CME CREDITS

Faculty will present an overview of intraoperative frozen section interpretation of ovarian, fallopian tube, and peritoneal lesions, with an emphasis on differential diagnosis and the resolution of common and uncommon diagnostic problems. Faculty will attempt to replicate the pathologist's working environment at the frozen section desk by providing original frozen section slides, a brief clinical history, and limited time for interpretation. Following this exercise, faculty will review the diagnosis, differential diagnosis, and subsequent management of the case, with emphasis on appropriate communication with the surgical team when a definitive diagnosis is not possible. In addition, participants will learn how to determine the relevant clinical features necessary to establish a diagnosis, including differential diagnosis and how to communicate a management scheme in the face of challenging cases.

You will learn to:
- Provide an intraoperative diagnosis of ovarian, fallopian tube, and peritoneal lesions
- Integrate the necessary clinical information to perform an accurate frozen interpretation and differential diagnosis
- Communicate with the surgeon when reviewing challenging and unusual cases

Faculty
Fadi W. Abdul-Karim, MD, FCAP
Abha Goyal, MD, FCAP

Additional fee applies

V1448 A Potpourri of Common Diagnostic Challenges in Gastrointestinal Pathology
2.0 CME CREDITS

The faculty will present a case-based diagnostic approach to a spectrum of common nonneoplastic and neoplastic entities (dysplasia, polyps, mesenchymal neoplasms, immunologic and inflammatory disorders) encountered throughout the gastrointestinal (GI) tract. The majority of the cases have been pooled from a large-volume consultation practice. In addition to discussing the practical approach and pitfalls, faculty will also cover relevant differential diagnosis using actual cases. The session will place emphasis on diagnostic terminology as well as the judicious use of ancillary techniques to arrive at an appropriate diagnosis.

You will learn to:
- Identify variations in Barrett-related dysplasia
- Describe the diagnostic approach to common inflammatory/immune-related conditions in the GI tract
- Recognize common serrated polyps
- Describe the diagnostic approach to mesenchymal neoplasms in the GI tract
- Recognize pitfalls in assessing colorectal polyps

Faculty
Deepa T. Patil, MD, FCAP

Additional fee applies

NOON–1:00 PM

Round Table Discussions—Lunch Included
1.0 CME/CE CREDIT

Join the experts for lunch! Exchange information and share solutions in a relaxed setting with your peers. You will learn to improve your ability to identify solutions to common problems through interactive sessions with colleagues. An additional fee applies.

R1419 The National Opioid Crisis: What Is Your Laboratory's Role in Supporting Front-Line Treating Physicians

Faculty
Barbarajean Magnani, PhD, MD, FCAP

R1464 The Era of Accountable Care and the "New" Pathologist; Staying Visible Among Clinical Colleagues in 2016 and Beyond

Faculty
Mara H. Rendi, MD, PhD, FCAP


R1606 New Oral Anticoagulants Compared to Warfarin

Faculty
Leonard I. Boral, MD, FCAP


R1608 Body Fluid Testing in the Clinical Laboratory

Faculty
Jonathan R. Genzen, MD, PhD, FCAP

1:00-2:00 PM

M1596 How is My Payment Determined for Pathology Services?
1.0 CME CREDIT

In this highly interactive course, learn about the important concepts of payment of services on the Medicare Physician Fee Schedule (PFS) and current procedural terminology (CPT) coding. Faculty will provide an overview of how current coding and billing practices were developed and how the Centers for Medicare & Medicaid Services (CMS) determines the payment amount for codes on the PFS. Faculty also will discuss how CPT codes are modified and how code modification can lead to payment changes on the PFS. As a result of participating in this course, participants will understand the fundamentals of the current systems to better comprehend the changing payment environment and to predict future trends.

This course and the complementary CAP16 courses R1690 and R1691 provide a review of concepts in CPT coding, Medicare PFS valuation, and payment policy challenges that pathologists currently face.

You will learn to:

- Explain CPT, AMA/Specialty Society Relative Value Scale Update Committee (RUC), resource-based relative value scale (RBRVS), PFS, Relative Value Units (RVUs)
- Describe how a new code is initiated, developed, valued, and put into practice
- Explain how existing codes are modified
- Distinguish between Medicare PFS valuation and Medicare clinical laboratory fee schedule (CLFS) valuation
- Identify the differences and similarities in coding between Medicare and private payers

Faculty
Jonathan L. Myles, MD, FCAP
Mark S. Synovec, MD, FCAP

2:00-4:00 PM

S1556 HPV Testing in Head and Neck Carcinomas
2.5 CME/SAM CREDITS

A number of testing methodologies (eg, p16, PCR, RT-PCR, DNA ISH, mRNA ISH, cytology-based testing) are available for detecting human papillomavirus (HPV) in head and neck squamous cell carcinomas (HNSCC). However, these tests vary in their sensitivities and specificities for detecting HPV. The HPV status of HNSCC of the oropharynx is currently used to predict prognosis and may also soon be used to determine therapy. However, poor analytical sensitivities and specificities of selected tests can result in detection errors. Faculty will present an in-depth review of the role of HPV in head and neck cancer with an emphasis on the oropharynx. Additionally, the session will cover available testing methodologies and their limitations, as well as review the evidence-based guidelines currently in development by the CAP Pathology and Laboratory Quality Center.

You will learn to:
- Appraise the various high-risk HPV testing methods (and surrogate markers) for patients being evaluated for carcinomas of the head and neck
- Apply evidence-based guidelines to ensure proper use of HPV testing (and surrogate markers) for head and neck carcinomas
- Assess the changes needed to comply with the guidelines
- Recognize the role of HPV in head and neck carcinogenesis

Faculty
William C. Faquin, MD, PhD, FCAP
James S. Lewis Jr., MD, FCAP

S1575 Sequence Gazing: Variant Calling and Interpretation for Next-Generation Sequencing
2.5 CME/SAM/CE CREDITS

Attend this clinical next-generation sequencing (NGS) testing course to learn more about the emerging NGS component of precision medicine. These tests generate large amounts of genetic data that must undergo bioinformatic analysis to extract clinically useful results. While “sequence gazing” initially appears to be a daunting and technical task, the basic principles are approachable for all pathologists. In this session, the faculty will review the basic principles of sequencing and present the steps required to identify variants in clinical data. Additionally, the faculty will present uses of public databases and the medical literature to determine the significance of these variants for patient care. Case studies will be used to reinforce concepts, such as reporting of incidental variants and variants of uncertain significance.

You will learn to:
- Summarize the target enrichment methods used for clinical NGS
- Distinguish classes of genetic variation detected by NGS
- Describe steps involved in processing NGS data to identify sequence variants
- Differentiate between clinically significant and insignificant sequence variants
- Describe the issues raised by discovery of incidental variants

Faculty
Eric J. Duncavage, MD, FCAP
Ian S. Hagemann, MD, PhD, FCAP

Cosponsored by the Association for Molecular Pathology (AMP)

S1643 Your Turn: Management of the Bleeding Patient
2.0 CME CREDITS

Welcome to Wednesday. The day is typical, with three frozen sections for a parathyroid case and several cases awaiting review and sign-out. While preparing for tumor board, the blood bank pages you. The emergency department has used several uncrossmatched group O units for a trauma patient and a sample for ABO typing has not arrived. They are requesting six plasma units. This session will discuss the management of patients who are bleeding or at risk of bleeding. Using case-based scenarios, the faculty will lead an interactive session and provide considerations when making transfusion recommendations. Recent literature will be cited; and current indications for platelets, plasma, and cryoprecipitate, as well as management of newer anticoagulants, will be discussed.

You will learn to:
- Advise clinicians on the appropriate use of vitamin K instead of plasma
- Help develop protocols for patients on warfarin experiencing intracranial hemorrhage
- Cite at least one recent guideline on indications and dosing for platelet transfusions

Faculty
Thomas DeLoughery, MD
Theresa A. Nester, MD, FCAP

Cosponsored by the American Association of Blood Banks (AABB)

V1668 Peripheral Blood Smear Review: A Case-Based Approach
2.0 CME CREDITS

The peripheral blood smear is often the first sign of abnormality in a patient. In this course, faculty will use video microscopy to review slides for cases of basic peripheral blood smear abnormalities, including differential diagnostic considerations for leukocytosis, anemia, neutropenia, and thrombocytopenia. Faculty will demonstrate how to use peripheral blood morphologic findings to guide a cost-effective approach to utilizing ancillary studies and identify recommended next steps. By the end of the course, participants will have reviewed basic principles of diagnosis by peripheral blood smear morphology and updated their knowledge about the diagnostic and biologic significance of key findings.

You will learn to:
- Integrate clinical history, laboratory test results, and blood smear evaluation to determine the etiology of a patient's anemia
- Recognize typical peripheral blood smear morphologic findings in neoplastic and nonneoplastic leukocytosis
- Recommend appropriate additional laboratory testing and pathology evaluation for the workup of patients with anemia, thrombocytopenia, leukopenia, and leukocytosis
- Recognize typical morphologic findings in anemia

Faculty
Devon S. Chabot-Richards, MD, FCAP

Additional fee applies

V1469 Benign Mimickers and Variants of Prostatic Carcinoma: Diagnostic Pitfalls on Needle Biopsies
2.0 CME/CE CREDITS

Benign mimickers of cancer can often lead to diagnostic issues in prostate cancer pathology; these mimickers are a difficult area in current practice with lesions like adenosis, partial atrophy, and

inflammation causing errors in diagnosis (false positives). Furthermore, there are several variants of prostate cancer that can easily be missed because they resemble benign entities in the prostate. These variants include foamy variant, atrophic variant, and pseudohyperplastic variant, which may be misclassified as benign (false negatives), especially in limited biopsies, leading to serious consequences. In this session, faculty will review glass or digitized slides of small foci of prostatic adenocarcinoma, benign mimickers of cancer, and unusual variants of prostate carcinoma to help the attendees gain familiarity with diagnostic pitfalls. Faculty will emphasize the judicious use of immunohistochemical stains as well as necessary molecular tests for addressing these difficult lesions in limited biopsy specimens.

You will learn to:
- Identify the microscopic features of some of the more common benign mimickers of prostatic adenocarcinoma
- Identify the microscopic features of some of the more common variants of prostatic adenocarcinoma
- Describe the limitations and proper use of immunohistochemistry panels and molecular tests to distinguish small foci of prostatic carcinoma from benign mimickers

Faculty
Anil V. Parwani, MD, PhD
Debra L. Zynger, MD, MS, FCAP

Additional fee applies

2:00-5:30 PM

H1418 Common Diagnostic Challenges in Gastrointestinal Pathology—A Special Focus on Current Management Guidelines
3.75 CME/SAM CREDITS

Pathologists are expected to provide succinct, accurate, and specialized reporting, especially for mucosal biopsies, due to the practice of standardized clinical management for various gastrointestinal disorders. Targeted toward pathologists-in-training and practicing pathologists, either in a clinical or an academic setting, the course will integrate various aspects of morphology, molecular medicine, and current management guidelines. The case-based discussion will encompass details about Barrett esophagus, intestinal metaplasia at GE junction, dysplasia versus reactive changes, and idiopathic inflammatory bowel disease (IBD) and IBD-related dysplasia. Other discussion highlights include classification of colorectal polyps, malignancy in colorectal polyps, and intraepithelial lymphocytosis-pattern of injury in small bowel biopsies. The course content not only will facilitate understanding of basic concepts and diagnostic mimicry, but also it will emphasize composing reports that will complement standardized clinical care.

You will learn to:
- Grade Barrett-related dysplasia
- Differentiate dysplasia from reactive atypia
- Classify IBD and IBD-related dysplasia
- Accurately classify colorectal polyps (traditional and serrated) and assess malignancy in these settings
- Evaluate intraepithelial lymphocytosis pattern of injury in small bowel biopsies
- Compose meaningful reports with a special attention to current nomenclature and management guidelines

Faculty
John R. Goldblum, MD, FCAP
Deepa T. Patil, MD, FCAP

H1432 Problematic Patterns in Breast Pathology—An Integrated Diagnostic Approach
3.75 CME/SAM CREDITS

Breast lesions most often present to pathologists as one of several morphologic patterns, each with an associated differential diagnosis. Faculty will integrate histologic patterns with ancillary studies to enhance the diagnosis of problematic cases. This course will utilize pattern recognition in breast pathology as a strategy for distinguishing common and also rare entities. Faculty will cover in situ patterns (eg, cribriform, solid, papillary, dyshesive), invasive patterns (eg, small gland infiltrative, mucinous), and spindle/fibroepithelial patterns. In addition, faculty will share extensive examples drawn from their daily practice, as well as cases they received in consultation. Morphologic features will be strongly emphasized with careful integration of ancillary techniques, such as immunohistochemistry and molecular tests, to highlight their strengths and limitations.

You will learn to:
- Use a pattern-based diagnostic approach, including strategies to recognize and distinguish a variety of entities in breast pathology
- Integrate immunohistochemistry and molecular testing into a morphologic-based method
- Identify the strengths and limitations of ancillary tests as they pertain to breast pathology
- Distinguish common and rare breast lesions that may be encountered in daily practice
- Avoid errors and pitfalls in the diagnosis of problematic and challenging breast lesions

Faculty
Yunn-Yi Chen, MD, PhD, FCAP
Timothy W. Jacobs, MD, FCAP

H1559 Flow Cytometry of Blood and Bone Marrow: Key Diagnoses That You Never Want to Miss
3.0 CME/CE CREDITS

Diagnostic flow cytometry is a powerful ancillary tool that can augment the morphologic examination of blood and bone marrow; however, common pitfalls include erroneously excluding neoplastic populations with suboptimal gating techniques and overinterpreting normal reactive populations that mimic neoplasia. In this course, experts will present key flow cytometry cases comprising blood and bone marrow specimens. Example cases include monoclonal B lymphocytosis, systemic mastocytosis, plasma cell myeloma, reactive B lineage precursors, and increased reactive myeloblasts. The final portion of the session will focus on a structured approach to T cell leukemia/lymphoma. Faculty will discuss gating strategies and pearls to avoid common pitfalls for each case.

You will learn to:
- Identify flow cytometry gating strategies to avoid the exclusion of neoplastic populations
- Recognize nonneoplastic populations by flow cytometry that mimic neoplasia
- Discover where unexpected atypical populations are most likely to be identified in standard flow cytometry screening tubes

Faculty
David M. Dorfman, MD, PhD, FCAP
Michael Keeney, ART, FCSMLS(D)
Michael A. Linden, MD, PhD, FCAP

NEW **H1615 Peripheral Blood Lymphoproliferative Disorders: Leukemias, Lymphomas, and Reactive Mimickers**
3.0 CME CREDITS

Pathologists frequently evaluate peripheral blood smears for lymphocytosis or the presence of abnormal lymphoid cells. In this course, faculty will use a case-based format to present an approach to morphologic

evaluation and cost-effective work-up for diagnosis of both benign and malignant lymphoid proliferations in the blood. The morphologic appearance of normal lymphoid populations will be contrasted with malignant lymphoproliferations as well as reactive processes that can mimic malignancies, such as viral lymphocytosis, persistent polyclonal B-cell lymphocytosis, “stress” lymphocytosis, and others. Neoplastic case presentations will include acute lymphoblastic leukemias, various peripheralized lymphomas, and chronic lymphoid leukemias, such as chronic lymphocytic leukemia, prolymphocytic leukemia, hairy cell leukemia, T-cell large granular lymphocytic leukemia, and others.

You will learn to:
- Distinguish normal/reactive lymphocytes from neoplastic lymphoid proliferations
- Recognize the morphologic and phenotypic features of acute lymphoblastic leukemias, chronic lymphoid leukemias, and peripheralized lymphomas
- Determine how to select cases for flow cytometry and other ancillary testing based on morphologic and clinical findings

Faculty
Kyle T. Bradley, MD, MS, FCAP
Jerry W. Hussong, MD, DDS, FCAP
Sherrie L. Perkins, MD, PhD, FCAP

2:30-3:30 PM

NEW **M1642 Evidence-based Medicine and the Role of Laboratory Practice Guidelines**
1.0 CME CREDIT

This course will present the current transition from *eminence-based medicine* to *evidence-based medicine*; this important concept will be addressed with specific examples of guidelines developed by the CAP Pathology and Laboratory Quality Center and others with an emphasis on understanding the quality of the evidence, the strength of recommendations and the considered judgment process involved. Discussion will follow on recently published guidelines and how they have affected pathology practice and could potentially affect accreditation requirements and quality initiatives. Finally, faculty will explore the limitations of laboratory practice guidelines, the need for future research, and the possible barriers that may impede pathologists and laboratories in adopting evidence-based guidelines.

You will learn to:
- Integrate core knowledge of evidence-based medicine into current practices
- Adapt evidence-based guidelines into laboratory and pathology practice settings
- Identify the similarities and differences between CAP evidence–based guidelines and CAP accreditation requirements

Faculty
Raouf E. Nakhleh, MD, FCAP

NEW **M1655 Endocervical Adenocarcinomas: A Practical and Informed Approach for Daily Sign-out**
1.0 CME CREDIT

This course reviews the key concepts (both basic and advanced) that are helpful in the histologic diagnosis and reporting of endocervical adenocarcinomas. Diagnosis of endocervical adenocarcinoma in situ and early invasive adenocarcinoma, WHO 2014 classification of endocervical adenocarcinomas with emphasis on variants (mucinous, villoglandular, adenosquamous and mesonephric types) and the histologic mimickers of endocervical adenocarcinoma, including secondary involvement by endometrial carcinoma will be discussed. Additionally, faculty will review a recently published histologic pattern-based classification for endocervical adenocarcinomas. Faculty will emphasize key issues in reporting of

endocervical adenocarcinomas on resection specimens. During the session, faculty will present several cases and ask for audience participation to reinforce the recognition of challenging endocervical lesions.

You will learn to:
- Discuss the WHO 2014 Classification of Endocervical Adenocarcinomas
- Diagnose endocervical adenocarcinoma in situ and invasive adenocarcinoma by understanding the recent histologic pattern-based classification of endocervical adenocarcinomas
- Identify uncommon types of cervical adenocarcinomas including villoglandular variant, mesonephric adenocarcinomas, adenosquamous carcinomas, adenoid basal carcinomas, and adenoid cystic carcinomas
- Formulate meaningful reports for resection specimens of endocervical adenocarcinomas

Faculty
Abha Goyal, MD, FCAP

4:30-5:30 PM

NEW **M1629 An Update on Current and Emerging Laboratory Methods for the Diagnosis and Monitoring of Monoclonal Gammopathies**
1.0 CME/CE CREDIT

This interactive one-hour course provides an up-to-date overview of current and emerging laboratory methods used to identify monoclonal proteins, including electrophoresis and immunofixation, free light chain, and immunoglobulin heavy/light chain assays. The intended audience for this session includes pathologists, residents, laboratory professionals, and clinicians involved in the diagnosis and management of patients with monoclonal disorders. Strengths and weakness of analytical approaches will be emphasized, particularly in the context of establishing cost-effective testing strategies and resolving discrepant results. Faculty will use an interactive, case-based approach to interpreting common and unusual laboratory findings.

You will learn to:
- Classify different types of monoclonal disorders based on characteristic clinical and laboratory findings
- Compare the strengths and weaknesses of electrophoretic and nephelometric approaches to identify and measure monoclonal antibodies
- Interpret both common and unusual patterns of test results

Faculty
Jonathan R. Genzen, MD, PhD, FCAP

NEW **M1637 Talking Forensic Pathology: A Survival Kit for Mixers**
1.0 CME CREDIT

Many members of the public equate the practice of pathology with autopsies and death investigation. Despite all efforts to refute this fallacy, pathologists are often faced with questions dealing with forensic pathology and scenarios portrayed on popular television shows. Many residents and hospital pathologists have limited experience with forensic pathology and could benefit from a discussion on how to hold an informed conversation on this topic. This two-person interactive discussion between a forensic pathologist and a nonpathologist will take place at a table at a fictional CAP mixer event. The discussion will entail scripted questions with unscripted answers with time remaining for participant questions. As with all mixers, discussion “crashers” are expected and encouraged.

You will learn to:
- Explain the differences between fictional forensic pathology and scientific reality
- Apply state-of-the-art forensic technology in your autopsy practice

- Articulate the similarities and differences between general and forensic pathology practice to a layperson

Faculty
Julie Stumpf Cina, MBA
Stephen J. Cina, MD, FCAP

M1661 CAP-IASLC-AMP Molecular Testing Guidelines for Selection of Lung Cancer Patients—Revision
1.0 CME CREDIT

The advent of targeted therapies based on predictive biomarkers has dramatically altered the role of the pathologist in lung cancer patient care. This course reviews new recommendations in the revised CAP/International Association for the Study of Lung Cancer (IASL)/Association for Molecular Pathology (AMP) lung cancer predictive biomarker guidelines for community pathologists, academic pathologists, molecular pathologists and trainees for daily patient care practice and for multidisciplinary tumor boards. The course will include a review of the evidence and logic behind the new recommendations and will cover topics such as recommendations regarding new actionable predictive biomarkers, recommendations for testing for EGFR and ALK TKI resistance, and recommendations regarding new testing methodologies including ALK translocation screening by immunohistochemistry.

You will learn to:

- Explain the recommendations about the new actionable biomarkers for lung cancer
- Identify impact of the new recommendations on patient care and appropriate methods of testing (preanalytic, analytic, and post-analytic actions)
- Identify when and how to test for EGFR and ALK resistance based on new observations and evidence since the first guideline
- Apply new recommendations about developments in biomarker testing with an emphasis on immunohistochemistry screening for ALK translocations

Faculty
Neal I. Lindeman, MD, FCAP

Cosponsored by the Association for Molecular Pathology (AMP)

Monday, September 26, 2016
8:00-10:00 AM

S1576 Case-Based Challenges in Liver Pathology: Pitfalls, Pointers, and Pearls
2.5 CME/SAM CREDITS

Targeted toward practicing pathologists and pathologists-in-training, the course will integrate various aspects of morphology, ancillary studies, and immunohistochemistry in challenging areas of neoplastic and medical liver pathology. Faculty will use case-based presentations that will encompass details of the limitations of identifying small liver lesions in an intraoperative setting, the differential diagnosis of common histologic patterns of liver injury, and the effective use of morphologic and immunohistochemical methods to differentiate between primary and metastatic neoplasms in the liver.

You will learn to:
- Recognize the limitations of frozen section for the diagnosis of liver lesions and to develop an algorithmic approach to them
- Distinguish among primary hepatocellular neoplasms using morphologic clues and ancillary techniques that assist in their diagnosis
- Use ancillary tests and immunohistochemistry to identify the primary site of metastatic tumors in the liver
- Develop an algorithmic approach to commonly misunderstood histologic patterns of medical liver disease and their respective differential diagnoses

Faculty
Kisha A. Mitchell-Richards, MD, FCAP
Robert M. Najarian, MD, FCAP

S1620 Pay for Performance and the Physician Fee Schedule—You Can Run But You Can't Hide
2.0 CME CREDITS

In March 2015, Congress passed HR 2, the "Medicare Access and CHIP Reauthorization Act of 2015" which repeals the sustainable growth rate (SGR) and replaces the current quality programs with a new program--the Merit-based Incentive Payment System" or MIPS. MIPS combines the current pay for performance programs, the Physician Quality Reporting System (PQRS), Meaningful Use (MU), and Value-Based Payment Modifier (VBM) along with a new category, Clinical Practice Improvement Activities, to create a single quality score. Starting in 2019, physicians can earn bonuses or receive penalties through MIPS of up to 4% depending on their performance in 2017. This will increase to 9% in 2022. This course will explain the program, its implementation, and provide current information on how to successfully participate.

You will learn to:
- Describe the history and purpose of pay for performance programs
- Explain who is subject to the MIPS program
- Identify ways to successfully participate in the MIPS program
- Assess the potential ramifications for not successfully participating

Faculty
Diana M. Cardona, MD, FCAP
Fay L. Shamanski, PhD

8:00-11:30 AM

H1427 The Great Mimickers in Hematopathology: Lymphoid Malignancies That Appear Benign and Benign Lesions That Appear Malignant
3.75 CME/SAM CREDITS

Learn how to avoid diagnostic pitfalls in lymphoid malignancies in this case-based course format. The faculty will present key distinguishing clinicopathologic features, newer immunohistochemical markers, and applicable molecular assays useful in the diagnostic work-up of challenging lymphoid lesions. Faculty will also discuss strategies for the cost-effective use of ancillary testing to confirm diagnoses. Cases will include nodal and extra-nodal presentation, lesions involving both pediatric- and adult-age groups, uncommon disorders and uncommon presentations of common entities, as well as some newly elucidated entities. This course will emphasize lesions that present a differential diagnosis of high clinical impact—specifically, benign disorders that appear malignant (eg, Kikuchi-Fujimoto disease, EBV related lymphoid proliferations, IgG4 disease, autoimmune lymphoproliferative syndrome) and lesions of low malignant potential (eg, CD4+ small/medium T-cell lymphoproliferative disorder). In addition, faculty will cover malignant lesions that appear benign (eg, early angioimmunoblastic lymphomas, lymphomatoid granulomatosis, follicular lymphoma pediatric type,) as well as unusual presentations of certain malignancies (eg, Hodgkin lymphoma).

You will learn to:
- Recognize histologic clues in difficult lymphoid lesions to avoid misdiagnoses
- Apply appropriate immunohistochemical markers and ancillary studies, including molecular testing, to differentiate malignancies from their benign mimickers and benign lesions from their malignant mimickers
- Define the key clinical and pathologic features of some newly described lymphoid lesions

Faculty
Parul Bhargava, MBBS, FCAP
Sherrie L. Perkins, MD, PhD, FCAP

H1457 Frozen Section Evaluation in Ovarian and Pelvic Lesions: Interactive Approach to a Correct Interpretation
3.75 CME/SAM CREDITS

Pelvic lesions submitted for frozen section, intraoperative evaluation have very important implications for management as most are submitted for evaluation with clinical suspicion of malignancy. While frozen section evaluation in pelvic organs is highly reliable, the implications are significant. The abundance of different types of ovarian and pelvic lesions, often with overlapping features, makes accurate interpretation of lesions very challenging. In this must-attend session for general and specialized pathologists as well as pathologists-in-training, faculty will present an easy and complete assessment of pelvic lesions with complete directed differential diagnosis. Additionally, the faculty will provide the tools needed to communicate the findings to clinicians and gynecologic oncologists, even in cases when a definitive diagnosis cannot be provided.

You will learn to:
- Formulate a differential diagnosis based on gross lesion features, patient age, and laterality
- Recognize different patterns of ovarian neoplasms detected in histologic morphology
- Perform a diagnosis and differential diagnosis after evaluating a specimen, including pertinent clinical history
- Communicate findings to a clinician/oncologic surgeon, even when a definitive diagnosis cannot be made

Faculty
Fadi W. Abdul-Karim, MD, FCAP
Abha Goyal, MD, FCAP

H1477 Patient Blood Management Program—What You Need to Know
3.0 CME CREDITS

Learn how to start and/or enhance a patient blood management program. Faculty will focus on reducing blood usage by defining guidelines for use of red blood cells, platelets and plasma, and use of order sets. The presenters will provide information on how to collect and analyze transfusion data by physician and department and will provide guidelines for anemia management before and during surgery (increase Hb presurgery, cell-saver use). Faculty will share information on the adverse aspects of blood transfusion and changes in blood during storage. Faculty will also discuss the avoidance of hospital-acquired anemia by blood volume reduction and test utilization.

You will learn to:
- Describe the overall aspects of a patient blood management program
- Apply blood utilization guidelines and evidence-based medicine to transfusion practice
- Describe how to collect and analyze transfusion data obtained by physicians and departments
- Describe the important adverse effects of blood transfusion
- Educate staff physicians about patient safety issues of transfusion

Faculty
Jerome L. Gottschall, MD, FCAP
Evelyn L. Lockhart, MD, FCAP
Lowell L. Tilzer, MD, PhD, FCAP

9:30-11:30 AM

S1403 Implementing Whole Slide Imaging for Clinical Use: What to Do and What to Avoid
2.5 CME/SAM/CE CREDITS

There is growing interest in using whole slide imaging (WSI) systems for a variety of clinical purposes in pathology. Specific applications include primary and frozen section diagnosis, pathologist-to-pathologist consultations, and multidisciplinary tumor conferences (tumor boards). Depending on the intended application, the implementation of a WSI system requires considerable planning and a dedicated team of individuals, comprising pathologists, histotechnologists, and laboratory managers, as well as institutional IT and LIS personnel. This course provides an opportunity for those considering the use of WSI for clinical applications to interact with early adopters, allowing participants to develop a practical implementation strategy for various WSI applications in their practice environment. For those already using WSI, the presenters will discuss workflow improvement and optimization.

You will learn to:
- Identify potential applications for whole slide imaging (WSI) in your practice
- Assemble an effective implementation team
- Select the optimal WSI system to meet present and future needs
- Train new users on how to use WSI
- Perform critical validation studies
- Critically assess the performance of a WSI system after going live

Faculty
Andrew J. Evans, MD, PhD
Walter H. Henricks, MD, FCAP
Liron Pantanowitz, MD, FCAP
Mohamed E. Salama, MD, FCAP

S1633 Peripheral Blood Refresher: A Case-based Approach
2.5 CME/SAM CREDITS

The peripheral blood smear is often the first sign of abnormality in a patient. In this course, faculty will use a case-based approach to review the basics of peripheral blood smears, which will include differential diagnostic considerations for leukocytosis, anemia, neutropenia, and thrombocytopenia. The course will emphasize best practices in the diagnosis of a patient from a peripheral blood smear, including a cost-effective approach to utilizing ancillary studies and recommended next steps. The faculty will review the basic principles of diagnosis by peripheral blood smear morphology and provide information about the diagnostic and biologic significance of key findings.

You will learn to:
- Integrate clinical history, laboratory test results, and blood smear evaluation to determine the etiology of a patient's anemia
- List causes of peripheral cytopenias
- Identify blood smear findings that can be useful in distinguishing the underlying etiologies of peripheral cytopenias
- Recommend appropriate additional laboratory testing and pathology evaluation for the workup of patients with anemia, thrombocytopenia, leukopenia, and leukocytosis
- Distinguish reactive from neoplastic peripheral leukocytosis

Faculty
Devon Chabot-Richards, MD, FCAP
Tracy I. George, MD, FCAP

S1640 Wake Up! It's Not Too Early to Lead Quality
2.5 CME/SAM CREDITS

This interactive workshop will build skills related to quality improvement and laboratory medical direction. The course content targets trainees and pathologists new-in-practice who have limited experience in quality improvement; however, pathologists wishing to strengthen their skills in these topics are encouraged to attend. A discussion of quality in the laboratory and a practice exercise using the "Plan, Do, Check, Act" (PDCA) cycle will kick off the workshop. Faculty will identify quality improvement tools and will facilitate a small group activity using process (flow) mapping. Attendees will have the opportunity to practice their new skills using a root cause analysis tool under faculty guidance. Ample time for questions and discussion will be available.

You will learn to:
- Define the concept of quality in the laboratory and recognize opportunities for quality improvement
- Utilize the PDCA Cycle
- Utilize process (flow) mapping as a quality improvement tool
- Identify tools to use to drive quality improvement
- Define a sentinel event and perform a root cause analysis

Faculty
Jennifer Laudadio, MD, FCAP
Ericka Olgaard, DO, FCAP

V1644 Bladder Biopsy and TURBT: Diagnostic Pitfalls, CIS, and Unusual Tumor Variants
2.0 CME CREDITS

Bladder biopsy and transurethral resections of bladder tumor (TURBT) are difficult specimens for the pathologist to diagnose due to tissue fragmentation, poor orientation, procedural artifacts, and numerous

mimickers. Identifying depth of tumor invasion and differentiating between reactive urothelium and urothelial carcinoma in situ are challenging. Furthermore, there are several tumor variants that can easily be missed. In this session, faculty will review glass slides that illustrate 1) differentiation of carcinoma in situ from reactive urothelium, 2) identification of mimickers of cancer, 3) how to establish the stage and grade of urothelial carcinoma, and 4) unusual variants of bladder cancer. Faculty will also describe the use of immunohistochemistry to aid in rendering a diagnosis.

You will learn to:
- Identify the histologic features of benign mimickers of bladder cancer
- Establish the stage and grade of urothelial carcinoma in bladder biopsy/TURBT specimens
- Differentiate urothelial carcinoma in situ from reactive urothelium
- Recognize unusual variants of bladder cancer

Faculty
Anil V. Parwani, MD, PhD, FCAP
Debra L. Zynger, MD, MS, FCAP

Additional fee applies

NEW **V1674 Challenging Dermatopathology Cases: How to Integrate Histology, Molecular Studies (and Common Sense) Into the Final Diagnosis**
2.0 CME/CE CREDITS

This video microscopy tutorial will focus on histologically challenging dermatopathology cases with a focus on melanocytic tumors in which additional ancillary molecular studies, including array CGH and/or SNP, FISH or gene expression profile analysis, can improve the diagnostic accuracy. Other challenging dermatopathology entities that are prone to misdiagnosis will also be presented. Participants will individually review slides from 10 dermatopathology cases selected from the presenters' consultation files, each case accompanied by a clinical history. During the group slide review portion of the course, faculty will discuss a provisory differential diagnosis based on histology for each case after which the participants will be presented with the results of ancillary molecular tests that were performed (if applicable) or with other salient information. For each case, the faculty will discuss the significance of the performed molecular tests and their impact on the final diagnosis. Faculty will familiarize participants with a tree decision algorithm, designed to maximize the positive and negative predictive value of ancillary molecular tests. Discussion will focus on the specific advantages and limitations of each test and on select cases to cover a range of benign to malignant lesions.

You will learn to:
- Recognize the categories of melanocytic lesions for which an accurate histologic diagnosis is difficult
- Determine appropriate ancillary molecular studies that may help establish a correct diagnosis
- Identify the indications and limitations of ancillary molecular studies

Faculty
Aleodor A. Andea, MD, MBA, FCAP
Deborah L. Cook, MD, FCAP

Additional fee applies

10:30-11:30 AM

M1554 Primary Human Papillomavirus Testing: A New Era in Cervical Cancer Screening?
1.25 CME/SAM/CE CREDITS

Attend this presentation to learn more about the first human papillomavirus (HPV) test for cervical cancer screening. The Food and Drug Administration (FDA) approved the HPV test for cervical cancer screening

in April 2014. There are now three potential screening methods, which are creating confusion among patients, pathologists, and health care providers about how to incorporate alternative screening strategies into practice settings. Laboratory professionals can expect questions from health care providers regarding HPV primary screening. The faculty will provide the latest information on primary HPV testing for cervical cancer, HPV testing methods and quality concerns, and the appropriate ways to follow and manage patients who have received primary HPV screening.

You will learn to:

- Explain the rationale for the FDA approval of primary HPV testing
- List the advantages, disadvantages, and potential pitfalls in HPV primary screening using current HPV testing platforms
- Describe appropriate patient screening intervals and follow-up
- Communicate the proper implementation of HPV primary screening to health care providers

Faculty
Barbara A. Crothers, DO, FCAP
Mohiedean Ghofrani, MD, MBA, FCAP

Cosponsored by the American Society of Cytopathology (ASC)

NOON–1:00 PM

Round Table Discussions—Lunch Included
1.0 CME/CE CREDIT

Join the experts for lunch! Exchange information and share solutions in a relaxed setting with your peers. You will learn to improve your ability to identify solutions to common problems through interactive sessions with colleagues. An additional fee applies.

R1463 The National Opioid Crisis: What Is Your Laboratory's Role in Supporting Front-Line Treating Physicians

Faculty
Barbarajean Magnani, PhD, MD, FCAP


R1601 Essential Immunohistochemical and Molecular Markers for General CNS Glial Tumors

Faculty
Mary E. Fowkes, MD, PhD, FCAP


R1607 New Oral Anticoagulants Compared to Warfarin

Faculty
Leonard I. Boral, MD, FCAP


R1611 Reactive Lymphoid Lesions Versus Low-Grade Lymphomas in Bone Marrow

Faculty
Horatiu Olteanu, MD, PhD, FCAP


R1690 My Surgical Pathology and Cytopathology Coding Dilemmas: Getting It Right

Faculty
Margaret H. Neal, MD, FCAP
Mark S. Synovec, MD, FCAP

2:00-3:00 PM

M1584 The Expected and Unexpected in Thyroid FNA—Lessons Learned From Cytologic-Histologic Correlations
1.25 CME/SAM CREDITS

This course will provide a review and an update of the current knowledge and diagnostic terminology on thyroid fine-needle aspiration (FNA) and the information on the utilization of ancillary tests. Faculty will use a case-based format to present four difficult thyroid FNA cases selected from their practices, based on “painful” personal experience, unexpected surprises, and valuable learning aspects. Presenters will review cytomorphologic features, differential diagnoses, and histologic follow-up of the discussed entity with illustrative examples, and each presenter will share his/her positive and negative experiences and thought processes. Additionally, faculty will discuss the impact of the diagnosis on clinical management and outcome. This course will provide participants an increased confidence in handling common and uncommon thyroid FNA cases with an improved diagnostic accuracy in their own practice.

You will learn to:
- Recognize characteristic cytomorphologic features of thyroid FNAs
- Discuss potential diagnostic pitfalls of thyroid FNAs through cytologic-histologic correlations
- Develop a practical approach on challenging thyroid FNA cases that have misleading clinical/radiologic information, mixed messages under the microscope, or unusual cytomorphologic features
- Gain confidence in using ancillary studies in thyroid FNA

Faculty
Ivan Damjanov, MD, PhD, FCAP
Fang Fan, MD, PhD, FCAP

2:00-4:00 PM

S1438 Pathologist Value: Making a Difference in ACOs and Other Value-Based Care Delivery Models
2.0 CME/CE CREDITS

Accountable care organizations (ACOs) and other value-based care delivery models are rapidly expanding. With over 780 ACOs currently in operation in the US, and with quality and value now firmly embedded into payment systems for physicians, the movement toward value-based care increasingly impacts pathologists. In this session, the faculty will explore the challenges and opportunities pathologists have to demonstrate value, exercise leadership, and influence patient and population health management within team-based and value-based care delivery models. In addition, faculty will discuss the alternative payment model provisions contained in the recently passed Medicare and CHIP Reauthorization Act (MACRA) and their impact on the growth of value-based care.

You will learn to:
- Improve the integration of your practice into evolving value-based care delivery models
- Provide value-added services in your daily practice
- Establish your leadership role beyond the laboratory in the context of value-based care
- Evaluate your pathology practice to identify any needed adjustments for a more team-based and value-based setting
- Position your practice to thrive in the context of MACRA and value-based care

Faculty
W. Stephen Black-Schaffer, MD, FCAP
Donald S. Karcher, MD, FCAP (Moderator)
Patrick A. Twomey, MD, FCAP

S1523 Establishing Good Test Utilization Practices
2.5 CME/SAM/CE CREDITS

Inappropriate use of laboratory tests is common, well recognized, and complex. It can be challenging to identify reasons for misutilization, evaluate the scope of the problem, and find solutions for improvement. Presenters will review the sources for over- and underutilization of laboratory tests, explain methods to evaluate inappropriate practices, and offer guidance about practical strategies and interventions for improvements. Faculty will share information about what causes misutilization of laboratory tests, methods for assessment, and actions that add value to laboratory services by facilitating improvements in testing practices for their clinical setting.

You will learn to:
- Describe current test utilization practices
- Utilize information systems for test utilization improvement
- Apply interventional strategies to improve test ordering practices
- Evaluate the effectiveness of various strategies and interventions used to improve test utilization

Faculty
Gary W. Procop, MD, MS, FCAP
Ronald B. Schifman, MD, FCAP

S1531 Emerging Issues in Lung Cancer Predictive Biomarkers: Complementary Perspectives From Pathology and Medical Oncology
2.5 CME/SAM CREDITS

The advent of targeted therapies based on predictive biomarkers has dramatically altered the role of the pathologist in lung cancer patient care. The faculty will provide complimentary perspectives from a pulmonary pathologist and a medical thoracic oncologist on emerging issues in lung cancer predictive biomarkers. The faculty will also provide a practical multidisciplinary review of evolving topics for community pathologists, academic pathologists, and trainees for daily practice and tumor boards. Topics will include information on new predictive biomarkers for which oncologists are now ordering tests, the implications and challenges for immune therapy and associated PD-L1 testing, and the use of new antibodies for ALK immunohistochemistry for efficacy and cost reduction. The faculty will also offer a practical approach to next-generation sequencing panels, including squamous cell carcinoma of the lung.

You will learn to:
- Identify new lung cancer biomarkers
- Describe the clinical rationale of patient selection and treatment based on new biomarkers
- Recognize the implications and challenges for immune therapy and associated PD-L1 testing
- Apply ALK immunohistochemistry to daily practice for efficacy and cost reduction
- Apply data meaningfully from next-generation sequencing panels to patient care

Faculty
Eric H. Bernicker, MD
Philip T. Cagle, MD, FCAP

Cosponsored by the Pulmonary Pathology Society (PPS)

S1580 Molecular Biomarkers in Breast Cancer: How Do We Best Get to the Truth?
2.5 CME/SAM/CE CREDITS

Breast cancer biomarker testing has provided results that have allowed appropriate and effective therapy of breast cancer patients with impressive improvement in outcomes. New methods hold promise not only

to define the biomarkers but also to provide information about underlying molecular pathways. In this course, the experts will describe the strengths and weaknesses of these newer and traditional biomarker testing methods, contrasting the status of our knowledge and the scientific evidence. Faculty will define best practice principles, including informatics requirements, for application of these newer methods so that pathologists can apply them in their practices and use this knowledge to guide discussions with patients and providers.

You will learn to:
- List the optimal and possible methods for breast biomarker testing based on evidence
- Define the strengths and weaknesses of each method
- Enumerate the best practice principles underlying successful molecular testing for biomarker testing
- List informatics requirements for safe and effective molecular testing
- Apply best practice principles in biomarker testing of breast cancer specimens

Faculty
M. Elizabeth Hammond, MD, FCAP
Lynette M. Sholl, MD, FCAP


S1613 Diffuse Large B-cell Lymphomas: Greatest Hits, Doubles Hits, and Various Shades of Gray Zone Lymphomas
2.0 CME CREDITS

Diffuse large B-cell lymphomas (DLBCLs) which encompass the most commonly observed lymphoma category, one that is highly heterogeneous and composed of numerous variants and clinicopathologic subtypes. Furthermore, with the rapid advances in the understanding of the genetic basis for these subtypes, it is challenging for practicing surgical pathologists and hematopathologists to keep abreast of advances in ever-evolving diagnostic criteria, immunophenotypic and genetic prognostic factors, and therapeutic markers. The faculty will synthesize contemporary approaches to diagnosis and classification of DLBCLs. In addition, in anticipation of the World Health Organization (WHO) Classification of Hematopoietic Tumours, which will be published as an update in 2016, this course will also highlight important changes that will impact the diagnostic approach to DLBCLs. Further, the faculty will focus on how to distinguish DLBCLs from other aggressive B-cell lymphomas, such as Burkitt lymphoma and unclassifiable (intermediate or gray zone) B-cell lymphomas (BCLUs), as well as where to classify double hit lymphomas (DHLs).

You will learn to:
- Correctly classify DLBCLs using currently available tools
- Use immunohistochemical and molecular studies to identify clinically relevant subtypes of DLBCLs
- Distinguish DLBCLs from other aggressive B-cell lymphomas using contemporary laboratory tests

Faculty
Adam Bagg, MD
Megan S. Lim, MD, PhD, FCAP


S1635 Autopsy in the Biothreat Era: Challenges and Solutions
2.0 CME/CE CREDITS

In this era of emerging pathogens and threats of bioterrorism, pathologists will be called upon both to perform autopsies and to advise hospitals, government, funeral specialists, and law enforcement on issues pertaining to the handling of remains and disposition of the deceased. Few pathologists are familiar with the guidelines on new infectious agents or strategies for processing victims of various types of mass casualties. This course will address this critical knowledge gap, which can not only hamper pathologist effectiveness in difficult situations, but can also create safety risks for all involved with transportation or care of the decedent. Faculty will also provide information on guidelines for handling

frequent and emerging pathogens and strategies for response to mass fatality incidents, including the development or enhancement of existing disaster response plans.

You will learn to:
- Classify both frequently occurring and recently emerged infectious pathogens, which may affect the deceased
- Utilize best practices for autopsy and/or disposition of infectious remains
- Describe procedures and resources available in the event of a mass fatality incident
- Create an organizational mass fatality plan or enhance an existing plan

Faculty
Michelle B. Aurelius, MD, FCAP
Jody E. Hooper, MD, FCAP

S1636 Problematic Areas in Gastrointestinal Pathology
2.0 CME CREDITS

This course will highlight problematic topics in gastrointestinal pathology through the use of cases focusing on difficult areas in GI tract neoplasia. The faculty will discuss definitive diagnostic criteria and clinically relevant classifications and terminology will help guide practicing pathologists in their interpretation and formulation of clinically informative diagnostic reporting. A case-study approach will be used to introduce problematic areas in GI pathology; these cases will be provided to the participants prior to the course. Topics will include assessment of dysplasia in Barrett esophagus, and updates to diagnostic pathology reporting of colorectal carcinoma with particular emphasis on staging dilemmas in colorectal carcinoma. Additionally, the faculty will discuss the role of ancillary molecular and immunohistochemical testing in colorectal carcinoma in the selection of patients for targeted therapies and clinically relevant classifications of appendiceal neoplasia.

You will learn to:
- Discuss the standard diagnostic categories of dysplasia in the setting of Barrett esophagus, their histologic criteria, and clinical implications of dysplasia diagnoses in Barrett esophagus
- Assess colorectal carcinoma
- Formulate clinically relevant diagnostic pathology reports, including strategies for common diagnostic dilemmas in staging colorectal carcinoma
- Utilize and communicate the results of ancillary molecular and immunohistochemical studies in colorectal carcinoma
- Apply diagnostic criteria from clinically relevant classifications to neoplasms of the appendix

Faculty
Reetesh K. Pai, MD
Rish K. Pai, MD, PhD

S1639 Strategies for Communicating Critical Values and Pathology Error
2.5 CME/SAM/CE CREDITS

While much attention has been focused on the mitigation of medical errors, to date there has been little discourse and no guidance in pathology on the appropriate standards for the communication of pathology errors. Pathologists rarely undergo effective communication training although 30% to 50% of errors in medicine are related to failures in communication. This course will provide an overview on the general topic of communication theory, noise, and barriers. The faculty will also review beliefs and practices of pathologists regarding error disclosure. These discussions will be followed by simulated hand-off scenarios with audience participation, including critical value communication and strategies for effective communication of pathology error.

You will learn to:
- Describe the science of pathology hand-offs, including the frequency of hand-off failure and improvement strategies designed to reduce error
- Acquire a repertoire of tools that will assist in pathologist daily hand-off practices
- Highlight the barriers in discussing pathology error with colleagues, other physicians, and patients

Faculty
Suzanne M. Dintzis, MD, PhD, FCAP
Mara H. Rendi, MD, PhD, FCAP


S1682 Hot Topics in Clinical Pathology: The Old and the New
2.5 CME/SAM CREDITS

The daily challenges of clinical laboratory oversight are mushrooming. Keeping abreast of changes in technology, new and innovative clinical programs for patient care, and attendant new clinical guidelines, compounded by a shifting regulatory landscape contribute to these challenges. Faculty will provide up-to-date information and recommendations on how to manage a number of key issues that laboratory pathologists routinely encounter. Through interactive presentation of cases covering a variety of topics (ie, testing support for pediatric patients in community settings, toxicology in clinics versus emergency departments, and point-of-care hemostasis), participants will reflect on their management style and gain new knowledge of current recommendations and alternative approaches for management. This course complements S1685 “How Do I Deal With This? Challenging Issues in Clinical Laboratory Medicine” and attendees are encouraged to participate in both courses.

You will learn to:
- Assess and implement change in clinical pathology methods
- Proactively address changing laboratory support of patients in various settings (eg, accountable care organizations, shared savings plans)
- Share successful approaches on managing change that others can duplicate in their laboratories

Faculty
John R. Harbour, MD, FCAP
Gary L. Horowitz, MD, FCAP
Lynne Uhl, MD, FCAP


V1673 Top 10 Diagnostic Errors in Endoscopic Ultrasound-Guided Fine-Needle Aspiration
2.0 CME CREDITS

Diagnostic errors in the practice of EUS-FNA cytology can have significantly adverse practice/patient care outcomes. The faculty of this video microscopy session will include a senior cytopathologist and a senior surgical pathologist with special expertise in gastrointestinal (GI) pathology. A case-based approach will be used to microscopically review the top 10 entities in the pancreaticobiliary area that pose a diagnostic challenge and are prone to errors in EUS-FNA. The faculty will then review prevention strategies to help participants with decision making and problem solving in this area. Case review will revolve around cytomorphology, based on updated Papanicolaou Society of Cytopathology (PSC) guidelines, review of pertinent histology and application of ancillary testing, including immunochemistry and molecular testing. Faculty will also address the importance of quality measures such as clear and concise reporting, peer reviews, cytology-histology correlations, correlation with clinical and radiological findings, and error classification and tracking. An interactive discussion will follow each case to provide the participants and faculty the opportunity to share experiences.

You will learn to:
- Recognize major types of diagnostic errors and potential pitfalls in EUS-FNA practice with review of pertinent histology

- Explain the updated PSC guidelines and cytological criteria for pancreaticobiliary lesions to avoid diagnostic errors
- Recognize the importance of clinical, radiological, chemical, and molecular analyses
- Describe the implementation of improved quality systems for error tracking and reduction

Faculty
Rana S. Hoda, MD, FCAP
Jose Jessurun, MD

Additional fee applies


V1683 Pitfalls, Pointers, and Pearls in Liver Pathology: A Practical Approach
2.0 CME CREDITS

This case-based approach to the evaluation of the neoplastic and non-neoplastic liver, the faculty will review commonly encountered, but sometimes challenging, aspects of morphologic evaluation of the liver, providing the basis for further ancillary and clinical testing. Cases will encompass intraoperative evaluation of liver lesions, with emphasis on diagnostic clues and limitations, the well differentiated hepatocellular neoplasm, and the ongoing evolution of classification of lesions. Additionally, faculty will discuss the application of ancillary techniques to evaluate the malignant liver lesion and the detection of histologic patterns of liver injury to guide clinical management.

You will learn to:
- Utilize morphology to select an appropriate immunohistochemistry panel in the evaluation of liver neoplasms
- Distinguish between benign and malignant liver lesions during frozen section, while recognizing the limitations of the technique
- Recognize common histologic patterns of medical liver disease
- Recommend appropriate ancillary and clinical workup for medical liver disease

Faculty
Kisha A. Mitchell-Richards, MD, FCAP
Robert M. Najarian, MD, FCAP

Additional fee applies

3:00-4:00 PM


M1626 CNS Tumors and Molecular Advances
1.0 CME CREDIT
Learn how the central nervous system (CNS) tumor diagnosis is rapidly changing with the elimination of some tumor types and the redefinition of others. With the use of frozen section, permanent section, and molecular markers through routine immunohistochemical, FISH, and molecular analysis, the session will focus on the more common CNS tumors and their molecular phenotypes with implications for patient treatment and prognosis.

You will learn to:
- Identify frozen section tips for CNS diagnosis
- Describe both new and current diagnostic tools for use in CNS tumors to obtain an improved diagnosis
- Recognize CNS tumor molecular phenotypes

Faculty
Mary E. Fowkes, MD, PhD, FCAP

Tuesday, September 27, 2016
8:00-9:00 AM

M1530 Practical Application of Lean and Six Sigma for Improving Laboratory Impact

1.25 CME/SAM/CE CREDITS

Use information from this course to improve laboratory services. The presenter will provide a high-level overview of major quality strategies and process tools, including Lean and Six Sigma. Additionally, the faculty will share information on the utility and application of these tools, including workflow mapping, standardized work, and value stream mapping, using real-world examples. The importance of leadership in ensuring the success of laboratory quality improvement endeavors will be emphasized. At the conclusion of the course, participants will be able to identify processes in their laboratory that could be optimized by applying the Lean/Six Sigma tools and techniques to enhance their laboratory value.

You will learn to:

- Describe the philosophy and methodology of Lean and Six Sigma
- Identify Lean and Six Sigma project opportunities in your laboratory
- Apply Lean and Six Sigma techniques to improve laboratory impact

Faculty
Peter L. Perrotta, MD, FCAP

M1681 Molecular Oncology Tumor Board

1.0 CME CREDIT

In the format of a tumor board, experts from medical oncology and molecular pathology will discuss the generation and translation of molecular tumor profiling results and how they translate into improved outcomes for cancer patients. The rapid growth and expansion of molecular testing capabilities and the use of these diagnostic tests for clinical decision making has brought about significant opportunities and challenges. Physicians struggle to keep abreast of the new information generated by the rapidly changing field of tumor genomics. Through the discussion of a patient case, faculty will focus on relevant molecular pathways, selection and generation of molecular panels, interpretation of results, identification of actionable aberrations, and the translation of this information into improved patient care. As genetics and genomics become increasingly important in the treatment of cancer, the need for educational resources to help providers incorporate these new testing methodologies into practice has become vital.

You will learn to:

- Explain key concepts in tumor genomics
- Discuss the interpretation of results from molecular tumor profiles, including the identification of actionable aberrations
- Examine tumor profiling data as applied to a patient case and discuss how it may be utilized to direct care and treatment strategies

Faculty
Daniel G. Haller, MD
Stanley R. Hamilton, MD, FCAP
Bhoomi Mehrotra, MD

Cosponsored by the American Society of Clinical Oncology (ASCO)

8:00-11:30 AM

NEW **H1634 Genomic Pathology 101: An Interactive Workshop**
3.0 CME CREDITS

As diagnosticians, all pathologists must understand genomic testing. The cost of a whole exome sequence is approaching $1,000; and next-generation sequencing (NGS) has already led to personalized chemotherapy for cancer patients and is now being rapidly incorporated into clinical care. Using a case-based, interactive small-group approach, faculty will review principles related to the development of genomic assays and interpretation of results. The workshop will also include practical hands-on instruction with the use of online genomic pathology tools. As such, participants should bring a tablet or laptop (preferred) so they can participate in this part of the course. Members of a national genomics education committee who are experts in molecular pathology, medical education, and genetic counseling have developed this session.

You will learn to:
- Identify the benefits and limitations of genomic analyses for advanced cancer patients
- Describe the role of pathologists in facilitating genomic testing and reporting results
- Discuss the process and limitations of NGS-data analysis
- Utilize online tools to interpret the clinical significance of genomic data

Faculty
Richard L. Haspel, MD, PhD, FCAP
Debra G. B. Leonard, MD, PhD, FCAP
John D. Pfeifer, MD, PhD, FCAP

9:00-11:00 AM

NEW **N1686 Launching the Young Pathologist: A Forum on the Transition from Pathology Trainee to Effective Pathology Practitioner**
CME/CE CREDIT Not Applicable

The transition from pathology residency and/or fellowship training to junior attending status is often a source of great anxiety on the part of both new-in-practice pathologists and those who hire them. This workshop will deal with the challenges of transitioning from pathology training to effective pathology practice, from the perspective of both the pathologist in her/his first job and the people who hire and mentor these young pathologists. The faculty (a pathology educator, two employers of pathologists [one community-based, one academic], and a new-in-practice pathologist) will discuss best practices in this key transition, describe ongoing efforts by the pathology education community to better align pathology training and modern pathology practice. Faculty will solicit input from participants to inform these ongoing efforts. The workshop will include presentations and a panel discussion. This session should be of interest to residents, fellows, new-in-practice pathologists, heads of pathology groups, and pathology department chairs.

You will learn to:
- Describe the major challenges in the transition from pathology training to successful pathology practice
- List best practices in helping new-in-practice pathologists safely and effectively navigate the first one to three years of practice
- Detail the ongoing efforts to better align pathology training with the needs of modern pathology practice and provide input on these efforts

Faculty
W. Stephen Black-Schaffer, MD, FCAP
Barbara S. Ducatman, MD, FCAP
Gene N. Herbek, MD, FCAP
Donald S. Karcher, MD, FCAP (Moderator)
Nicole D. Riddle, MD, FCAP

Cosponsored by the Association of Pathology Chairs (APC)

9:30-11:30 AM

S1494 CAP/ASH Guidelines for Initial Work-up for Acute Leukemia
2.0 CME CREDITS

Work-up of acute leukemias varies across the country, leading to variable practice, cost, and time to diagnosis. The work-up of acute leukemia now involves the collection of a variety of samples for morphologic, immunophenotypic, and genetic evaluation for both the initial diagnosis as well as the determination of prognostic markers and markers for future disease monitoring. The faculty will present information on the CAP/American Society of Hematology (ASH) evidence-based guidelines to help both pathologists and treating physicians determine what material to collect and what tests to order for a complete yet cost-effective evaluation.

You will learn to:
- Determine proper sample collection at the time of diagnosis
- Identify key decision points that trigger appropriate test ordering
- Apply CAP/ASH recommendations for test selection

Faculty
Daniel A. Arber, MD

Cosponsored by the American Society of Hematology (ASH)



S1614 Can You Hear Me Now? Giving and Receiving Feedback Effectively
2.5 CME/SAM CREDITS

Effective feedback is crucial to engaging team members. Feedback is personalized information based on direct observation that is crafted and delivered so receivers can use the information to achieve their best potential. In the laboratory setting, feedback (or lack thereof) extends beyond self-improvement and ultimately impacts patient care. The ability to give and receive feedback is an integral component of the communication subcompetence and informs every human interaction we have in our professional and personal lives. This is true of everyone, including laboratory professionals, administrative assistants, residents, fellows, and pathologists, and is true for pathologists in all practice settings and experience levels.

The practice of good feedback is a learned communication skill. This interactive workshop will use case-based learning, audience response, and demonstrations of different feedback techniques to teach take-home tips on giving and receiving feedback, to demonstrate four high-yield feedback techniques, and to understand a range of ways feedback is commonly received. The session will give participants take-away job aides so they can immediately apply the techniques learned in this session in their practice setting.

You will learn to:
- Describe how to provide effective feedback
- Explain how to effectively receive feedback
- Demonstrate feedback delivery methods

Faculty
Sarah M. Bean, MD, FCAP
Xiaoyin (Sara) Jiang, MD, FCAP

S1621 Autoantibodies: A Case-based Approach

2.5 CME/SAM/CE CREDITS

Autoantibody testing is important for the diagnosis and management of autoimmune disease. This interactive course will use a case-based approach to examine the use of autoantibody testing in a variety of organ-based and systemic autoimmune disorders, including autoimmune thyroid disease, celiac disease, peripheral and paraneoplastic neuropathies, glomerulonephritis, rheumatoid arthritis, and progressive systemic sclerosis. The faculty will present information on differential diagnosis, initial diagnostic testing, prognosis, and monitoring of treatment. The CAP's Diagnostic Immunology Resource Committee and the American Association for Clinical Chemistry's Clinical & Diagnostic Immunology Division are cosponsors of the session.

You will learn to:
- Recommend the most cost-effective autoantibody test for the diagnosis of a variety of autoimmune disorders
- Identify the differences between different immunology methods used to assay autoantibodies
- Describe the potential usefulness of new and emerging autoantibody markers

Faculty
James D. Faix, MD, FCAP
Stanley J. Naides, MD

Cosponsored by the American Association for Clinical Chemistry (AACC)

S1653 CAP-ASCP-ASCO Joint Guideline on HER2 Testing in Gastroesophageal Adenocarcinoma

2.0 CME CREDITS

The CAP, American Society of Clinical Pathologists (ASCP), and American Society for Clinical Oncology (ASCO) convened a panel of multidisciplinary experts to investigate evidence-based recommendations for HER2 testing in gastroesophageal adenocarcinoma.
Trastuzumab, a monoclonal antibody that interferes with the HER2 receptor function, with chemotherapy, was shown to improve survival of patients with advanced gastric cancers. The panel will review the evidence for HER2 testing in gastroesophageal adenocarcinoma to develop evidence-based recommendations. The results of literature will be discussed to answer two overarching questions:
- What is the optimal testing algorithm for the assessment of HER2 status in patients with gastroesophageal adenocarcinoma?
- What strategies can help ensure optimal performance, interpretation, and reporting of established assays in patients with gastroesophageal adenocarcinoma?

You will learn to:
- Describe current guidelines and recommendations for HER2 testing in gastroesophageal adenocarcinoma to determine prognosis and prediction of response to therapies
- Identify recommended laboratory practice guidelines when using HER2 testing in the evaluation of gastroesophageal adenocarcinoma
- Apply recommended guidelines for HER2 testing for gastroesophageal adenocarcinoma

Faculty
Jaffer Ajani, MD
Angela N. Bartley, MD, FCAP
Mary Kay Washington, MD, FCAP

S1671 Patient Samples Fit for Molecular Analysis: The Fate of Precision Medicine Is in Your Hands
2.0 CME/CE CREDITS

Learn about the quality requirements for human biospecimens that are destined for genomic or proteomic analysis in this course. Faculty will review the biospecimen science that demonstrates the effects of collection, handling, processing, and storage ("preanalytic") variables on the biomolecular quality and composition of human tissues and blood and how those effects alter scientific analysis data in artifactual ways. Discussion will cover the work being done by the CAP Specimen Standards for Precision Medicine Project to address the urgent needs to implement evidence-based practices in anatomic pathology to control, eliminate (where possible), and record key variables that have the greatest detrimental impact on biospecimen quality and analysis results.

You will learn to:
- Identify the top 10 preanalytic variables that have the largest detrimental impact on biospecimen quality and composition in genomic and proteomic analyses
- Describe the performance metrics that need to be met to control key preanalytic variables and standardize specimens for molecular analysis
- Appraise existing practices in anatomic pathology and analyze the barriers and opportunities for practice improvement in applying specimen standards

Faculty
Kenneth J. Bloom, MD, FCAP
Carolyn C. Compton, MD, PhD, FCAP
David G. Hicks, MD, FCAP
Michael J. Misialek, MD, FCAP

NOON–1:00 PM

Round Table Discussions—Lunch Included
1.0 CME/CE CREDIT

Join the experts for lunch! Exchange information and share solutions in a relaxed setting with your peers. You will learn to improve your ability to identify solutions to common problems through interactive sessions with colleagues. An additional fee applies.

R1465 Best Practices in Waived and Nonwaived POCT

Faculty
David S. Bosler, MD, FCAP
Sharon M. Geaghan, MD, FCAP

R1522 Biospecimen Collection and Management for the Community Pathologist

Faculty
Philip A. Branton, MD, FCAP

R1604 Pathologists' Role in Hospital Quality Activities

Faculty
John R. Harbour, MD, FCAP

R1612 Leading Your Laboratory: How to Take Charge and Exercise Your Authority as a CLIA Laboratory Director

Faculty
David S. Wilkinson, MD, PhD, FCAP

R1678 Problem Solving: Microbiology as Part of the Hospital Multidisciplinary Team Working Together to Improve Communications and Patient Safety

Faculty
Nancy E. Cornish, MD, FCAP
Rebecca T. Horvat, PhD, D(ABMM)

R1691 Current Payment Policy Challenges in Pathology Practice

Faculty
Jonathan L. Myles, MD, FCAP
Margaret H. Neal, MD, FCAP

1:30-2:30 PM

M1551 CAP-National Society for Histotechnology (NSH) Guideline for Uniform Labeling of Blocks and Slides in Surgical Pathology
1.25 CME/SAM/CE CREDITS

The labeling of paraffin blocks and microscopic glass slides in the practice of surgical pathology varies from institution to institution and introduces potential risk of preanalytic error. This course will present recommendations for uniform labeling of blocks and slides in surgical pathology. Faculty will review the evidence-based guideline that was recently developed by the CAP Pathology and Laboratory Quality Center and the NSH.

You will learn to:
- Determine how preanalytic labeling errors in surgical pathology impact patient care
- Apply evidence-based guideline to ensure specimen integrity in surgical pathology
- Assess the changes needed to comply with the guideline

Faculty
Richard N. Eisen, MD, FCAP

1:30-3:30 PM

S1587 Diagnostic Solutions to Problematic Nonsquamous Head and Neck Neoplasms
2.5 CME/SAM CREDITS

Biopsy pathology of nonsquamous head and neck neoplasms remains a diagnostic challenge due to scarcity, limited tissue size, poor tissue orientation, crush- or cautery-induced artifact, and spectrum of overlapping histomorphologic features. The presenter will review practical aspects of

histopathology/immunohistopathology, differential diagnosis, and molecular pathology (when applicable) of nonsquamous head and neck neoplasms. Using a case-based format, the faculty will present information on how neoplasms are subdivided by their principal histopathologic feature(s) (ie, clear cell, oncocytic, basaloid, large rounded cell, and spindled histology). Additionally, faculty will focus on the sinonasal region, minor salivary glands, oral cavity, soft tissue, and larynx. Major salivary gland neoplasms are discussed sparingly. Finally, the faculty will concentrate on diagnostic pitfalls, appropriate immunohistochemical (IHC) selection, and updated IHC panels of nonsquamous neoplasms.

You will learn to:
- Recognize the histopathology and differential diagnosis of basaloid/rounded cell neoplasms of the head and neck
- Assess and practice proper IHC testing in nonsquamous head and neck cancers
- Discriminate among problematic mesenchymal neoplasms of the head and neck
- Interpret challenging clear cell head and neck neoplasms
- Review the common as well as uncommon oncocytic and oncocyte-like neoplasms arising in the head and neck

Faculty
Paul E. Wakely Jr., MD

S1589 Molecular Testing Guidelines for the Selection of Colorectal Cancer Patients for Targeted and Conventional Therapies
2.5 CME/SAM CREDITS

Using molecular testing to enhance the response of colorectal cancers (CRC) to targeted and conventional therapies has been the center of many recent studies. Faculty will review the evidence-based recommendations for the molecular testing of CRC tissues to guide EGFR-targeted therapies and conventional chemotherapy regimens. These recommendations were developed through the collaboration between four societies: American Society of Clinical Pathology (ASCP), College of American Pathologists (CAP), Association for Molecular Pathology (AMP), and American Society of Clinical Oncology (ASCO). This session will present the recommendations formulated from the intensive systematic review of over 3,000 articles and provide interactive discussion with the panelists.

You will learn to:
- Describe current guidelines and recommendations for molecular testing in the evaluation of colorectal cancer to determine prognosis and prediction of response to therapies
- Identify recommended laboratory practice guidelines for molecular testing of key markers (eg, *KRAS, NRAS, BRAF, MSI*) to determine colorectal cancer therapies
- Apply recommended guidelines for molecular testing for colorectal cancer

Faculty
Carmen J. Allegra, MD
Stanley R. Hamilton, MD, FCAP
Antonia R. Sepulveda, MD, PhD, FCAP

S1679 Microbiology for the AP Pathologist
2:0 CME/CE CREDITS

The clinical microbiology laboratory continues to evolve and change with the development of new technology (eg, MALDI TOF and multiplex molecular assays), the increase of antibiotic resistance in microorganisms, complex patient cases with underlying diseases, and emerging infectious diseases like Ebola--all of which presents challenges to the directors of these laboratories. Some of the issues microbiology laboratories must address includes the need to ensure laboratory safety, provide appropriate specimen collection, and update algorithms for testing patients infected with agents such as

HCV and HIV. Other new considerations include the increase in antibiotic resistance and how the laboratory should work with health care institutions by collaborating on a plan for stewardship of antibiotic use.

You will learn to:

- Identify how to function as a part of the multidisciplinary hospital Antibiotic Stewardship
- Recognize the essential components of an effective laboratory safety program
- Describe at least three laboratory testing algorithms used to make a diagnosis of an infectious disease
- Discuss new technologies available to diagnose infectious disease in the laboratory, their characteristics, and if the technologies are a good fit for your laboratory

Faculty
Nancy E. Cornish, MD, FCAP
Rebecca T. Horvat, PhD, D(ABMM)

3:00-5:00 PM

S1524 Critical Differential Diagnoses in Soft Tissue Pathology
2.5 CME/SAM CREDITS

In this course, the faculty will provide a structured approach to dissecting common and critically important differential diagnoses in soft tissue tumors of the dermis, subcutis, and deep soft tissues. The presenters will not only provide the conventional wisdom but will also dig deep down into their collective experience to give diagnostic pearls not found in most textbooks. Their approach, based on countless hours of teaching these differential diagnoses to residents and surgical pathologists, will allow participants to conclusively sort out difficult differential diagnoses using histologic features as well as immunohistochemical and molecular studies. Whether participants are residents or seasoned surgical pathologists who occasionally have to deal with the frustration of encountering a soft tissue neoplasm, this course holds value for you.

You will learn to:

- Formulate an accurate differential diagnosis of common soft tissue tumors based on histologic and clinical cues
- Sort out the differential diagnoses using immunohistochemical markers
- Determine the differential diagnosis using molecular markers

Faculty
Steven D. Billings, MD, FCAP
Brian P. Rubin, MD, PhD, FCAP

S1646 Gestational Trophoblastic Diseases: A Practical Update in Classification, Immunohistochemistry, and Molecular Diagnostic Testing
2.0 CME CREDITS

Gestational trophoblastic disease (GTD) remains a challenging area in gynecologic diagnostic pathology. This course will review the evaluation of morphologically abnormal products of conception (POC) is a major source of difficulty when it comes to diagnostic reproducibility and accuracy using routine stained slides. This may result in either over-diagnosis or underdiagnosis of a hydatidiform mole, with the consequence of over- or under-treatment and potential delay in fertility planning. Recent advances in immunohistochemistry and molecular diagnostic tools, in particular molecular genotyping, have allowed for more definitive pathologic diagnoses. Similarly problematic is the recognition and classification of trophoblastic tumors since these may mimic benign trophoblastic alterations or non-trophoblastic tumors that carry entirely different management, therapeutic, and prognostic implications. Faculty will review a spectrum of newly available immunohistochemical tools that can be applied to navigate through this

differential diagnosis and will present a practical, algorithm-based strategy to evaluating abnormal POC specimens, trophoblastic proliferations and trophoblastic tumors. Faculty will discuss the appropriate selection and interpretation of ancillary immunohistochemical and molecular tests, including the most recently available ones, as well as pearls and pitfalls in their use.

You will learn to:
- Evaluate morphologically abnormal products of conception specimens for signs of early hydatidiform mole
- Interpret and integrate p57 immunohistochemistry, DNA ploidy testing, and molecular genotype testing in the evaluation of possible early hydatidiform mole
- Distinguish trophoblastic proliferations and trophoblastic tumors from their major diagnostic mimics
- Apply a strategic approach to the selection of immunohistochemical stains to diagnose trophoblastic proliferations and tumors

Faculty
Karuna Garg, MD
Joseph T. Rabban, MD, MPH


S1649 Benign Mimickers of Thoracic Neoplasia—A Practical Approach to Common Pitfalls
2.0 CME CREDITS

This practically oriented course is for general surgical pathologists and pathology residents who in their daily practice review material from pulmonary, pleural or mediastinal biopsies, or resection specimens. The objective of the course is to review and discuss, via the presentation of selected case studies, a selection of benign pulmonary, pleural, and mediastinal lesions which are easily mistaken for malignant processes based on their clinical presentation and morphological appearance. The types of lesions discussed will include ectopic, histiocytic, hyperplastic and cystic proliferations. Faculty will present an outline of the histopathologic diagnostic criteria and features important for the differential diagnosis.They will also discuss the role of immunohistochemistry and other ancillary techniques and provide a comprehensive syllabus to summarize the course contents.

You will learn to:
- Explain key concepts in thoracic pathology
- Apply the latest techniques and procedures in daily practice
- Review and utilize modern standards, criteria, and classification schemas involving thoracic diseases

Faculty
Cesar A. Moran, MD
Annikka Weissferdt, MD


S1685 How Do I Deal With This? Challenging Issues in Clinical Laboratory Medicine
2.5 CME/SAM CREDITS

The daily challenges of clinical laboratory oversight are mushrooming. Keeping abreast of changes in technology, new and innovative clinical programs for patient care, and attendant new clinical guidelines, compounded by a shifting regulatory landscape contribute to these challenges. The faculty will provide up-to-date information and recommendations on how to manage a number of key issues that laboratory pathologists routinely encounter. Through an interactive presentation of cases covering a variety of topics (ie, HCV testing algorithms, blood bank technology, and the role of pathologists in chronic kidney disease), participants will reflect on their management style and gain new knowledge of current recommendations and alternative approaches for management. This course complements S1682 “Hot Topics in Clinical Pathology: The Old and the New” and attendees are encouraged to participate in both courses.

You will learn to:

- Assess and implement change in clinical pathology methods
- Proactively address changing laboratory support of patients in various settings (eg, accountable care organizations, and shared savings plans)
- Share successful approaches on managing change that others can duplicate in their laboratories

Faculty
D. Robert Dufour, MD, FCAP
Gary L. Horowitz, MD, FCAP
Lynne Uhl, MD, FCAP

4:00-5:00 PM

M1547 American Board of Pathology Maintenance of Certification Update
1.25 CME/SAM CREDITS

The American Board of Pathology's (ABP) Maintenance of Certification (MOC) program is still a relatively new concept for pathologists since time-limited certification began in 2006. The faculty will provide a history of MOC and outline the components of MOC, including timelines and fees. Additionally, the presenter will highlight recent changes to the MOC program, including continuing certification; dispel myths and misinformation about the MOC program, especially Part III; and convey the benefits of MOC participation. During the question and answer portion of the course, the ABP will also solicit feedback from MOC participants.

You will learn to:

- Recognize the components and requirements of the ABP MOC program
- Identify the changes to the MOC program that have recently occurred
- Describe the myths and misinformation that people have about the MOC program
- Recognize the value of MOC to diplomats and the public

Faculty
Rebecca L. Johnson, MD, FCAP

5:30-6:30 PM

P1688 Lymphoma Diagnosis and Classification: My Search for the Holy Grail
1.0 CME/CE CREDIT

The diagnosis and classification of malignant lymphomas is one of the major challenges in diagnostic pathology—a source of frustration with constantly shifting sands and a field littered with the remains of academic battles. This special evening plenary presentation will provide a personal perspective on how the field has evolved over the last four decades. We have seen major changes both in the ways we evaluate lymphoid proliferations and in the increasingly long list of lymphomas we must recognize. This process has been driven not only by technologic advances, but also by the development of new and more targeted therapies that require increasingly precise diagnoses.

Join us as Steven Swerdlow, MD reviews how lymphoma classification has evolved from a strictly morphologic approach to one in which we aim to recognize distinct clinicopathologic entities using a multiparameter approach, culminating with the 2016 revision of the WHO classification. He also will discuss the evolution of how we diagnose lymphomas, as we strive to practice state-of-the-art but still cost-effective medicine.

Dr. Swerdlow is Professor of Pathology at the University of Pittsburgh School of Medicine and director of the Division of Hematopathology. He is an internationally recognized hematopathologist, author, and teacher, included among “American’s Top Doctors®.” He is also the lead editor of the WHO monograph on tumors of the haematopoietic and lymphoid tissues and a trustee of the American Board of Pathology.

You will learn to:
- Describe the elements involved in developing a clinically useful and biologically meaningful lymphoma classification
- Use a pragmatic up-to-date multiparameter approach for the diagnosis of lymphoma
- Recognize changes in practice related to the 2016 revision of the WHO lymphoma classification

Faculty
Steven H. Swerdlow, MD

Wednesday, September 28, 2016
8:00-9:00 AM

M1450 Back to the Future: Molecular Testing of Myeloproliferative Neoplasms in 2016
1.25 CME/SAM CREDITS

This course of high-yield value provides a timely review of the application of molecular testing to the diagnosis of myeloproliferative neoplasms (MPNs). Using a case-based format, faculty will present a contemporary approach to the integration of morphologic and genetic findings for the workup of MPNs and will discuss optimal strategies for initial testing and follow-up, including the choice of methodology (eg, FISH versus karyotype versus PCR). The presenter will introduce several recently identified recurrent mutations that promise to revolutionize this area of clinical practice. Discussion will also address the impact of exciting new analytic approaches in the laboratory. Participants will learn which tests are necessary and when, how, and why to use them.

You will learn to:
- Select appropriate methods for detecting the *BCR-ABL1* fusion
- Guide clinicians in minimal residual disease monitoring of chronic myelogenous leukemia
- Apply mutation analysis for *JAK2* and *MPL* in a rational and cost-effective fashion
- Incorporate new genes such as *CSF3R* and *CALR* into the MPN diagnostic algorithm

Faculty
David R. Czuchlewski, MD, FCAP

M1662 Not Just "Carcinoid" Anymore: Update on Gastroenteropancreatic Neuroendocrine Neoplasms
1.0 CME CREDIT

Neuroendocrine neoplasms of the gastrointestinal tract and pancreas can seem like a quagmire. With the updated WHO classification guidelines, pathologists must skillfully utilize diagnostic criteria, immunohistochemical staining, and proper terminology to convey critical information to a patient's clinical team. This session will dissect the new guidelines, including its gray areas. Additionally, faculty will discuss neuroendocrine lesions by organ system, and recommend best practices for using immunohistochemistry.

You will learn to:
- Diagnose and categorize gastroenteropancreatic neuroendocrine neoplasms using correct criteria and terminology
- Distinguish histologic features of well-differentiated neuroendocrine tumor and poorly differentiated neuroendocrine carcinoma
- Identify crucial distinctions among neuroendocrine neoplasms in different gastrointestinal organs
- Employ judicious immunohistochemical staining for proper specimen work-up

Faculty
Raul S. Gonzalez, MD, FCAP
Chanjuan Shi, MD, PhD, FCAP

8:00-11:30 AM

H1472 Slide Seminar: Problem Cases in Surgical Pathology
3.0 CME CREDITS

This slide seminar will highlight problem areas of diagnosis in surgical pathology for practicing pathologists in the community setting. Faculty will offer 10 case presentations of unusual or problematic cases in various areas in surgical pathology. The morphologic features, immunohistochemical profiles,

and molecular genetic features (when pertinent) will be highlighted, followed by a discussion of the differential diagnosis. The presenters will encourage active participation from the audience with questions and answers.

You will learn to:
- Recognize newly described entities in surgical pathology
- Identify updated criteria for diagnosis
- Select the appropriate ancillary studies for diagnosis

Faculty
Kumarasen Cooper, MBChB, FCAP
Ivan Damjanov, MD, PhD, FCAP
Thomas Krausz, MD, FCAP
Saul Suster, MD, FCAP
Paul E. Wakely Jr., MD

Cosponsored by the Arkadi M. Rywlin (AMR) International Pathology Slide Seminar Club


H1667 Hot Topics in Surgical Pathology and Cytopathology of the Pancreas and Biliary Tract
3.0 CME CREDITS

This session will provide an overview of the challenges and practical clues to the histologic and cytologic diagnosis of solid and cystic tumors of the pancreatobiliary tract and neoplasia of the gallbladder, biliary tract, and ampulla. Faculty will give a detailed description of the orientation and dissection of pancreaticoduodenectomy (Whipple) specimens and will discuss ampullary tumors, including new terminology used for signing-out these neoplasms. Faculty will also provide information on the diagnosis of gallbladder dysplasia as well as the appropriate dissection and sampling of these specimens. Other topics will include the histology and cytology of selective problematic solid pancreatic lesions and neoplasms with an emphasis on an algorithmic approach to diagnosis and differentiation from key morphologic mimics, including the use of ancillary studies. The faculty will also discuss the preoperative cytologic evaluation of pancreatic cysts. Participants will learn about the surgical pathology of cystic pancreatic lesions as well the classification, clinical significance, and reporting terminology for intraductal pancreatic and biliary tract neoplasms. Discussion on the morphologic and molecular differences between extrahepatic and intrahepatic cholangiocarcinoma will conclude the session.

You will learn to:
- Assess key gross, histologic/cytologic features that distinguish pancreatic ductal adenocarcinoma from mimics (including chronic pancreatitis and other solid tumors)
- Classify and grade pancreatic neuroendocrine neoplasms
- Classify and report on cystic and intraductal pancreatic and ampullary neoplasms, cholangiocarcinoma, and gallbladder dysplasia
- Dissect pancreaticoduodenectomy specimens to ensure accurate tumor identification, sampling, and lymph node retrieval
- Utilize ancillary testing in the diagnosis of solid and cystic pancreatobiliary tumors
- Describe the cytologic features of solid and cystic pancreatic tumors/lesions, and distinguish them from common mimics

Faculty
Volkan Adsay, MD, FCAP
Alyssa M. Krasinskas, MD, FCAP
Michelle D. Reid, MD, FCAP

Cosponsored by the Pancreatobiliary Pathology Society (PBPS)

9:30-11:30 AM

S1316 Autopsy Evaluation of Coronary and Ischemic Heart Disease and Its Treatment

2.5 CME/SAM CREDITS

Every pathologist is familiar with the postmortem findings of untreated coronary artery and ischemic heart disease. However, new treatment interventions and modalities have altered the usual pathologic findings. Clinicians are asking autopsy pathologists more questions about the efficacy of treatment modalities or if the patient died of other cardiac causes. The course will review the pathology of ischemic heart disease emphasizing the examination of treatment interventions and hardware. You will learn to differentiate treatment-induced morphologic changes from the underlying disease. The faculty will use case studies to help identify treatment of ischemic heart disease or its fatal complications.

You will learn to:

- Evaluate the effectiveness of treatment modalities in ischemic heart disease
- Differentiate between treatment effects and underlying heart disease
- Identify fatal complications in ischemic heart disease
- Describe commonly accepted autopsy practices relating to coronary and ischemic heart disease
- Recognize the pathologic features of coronary atherosclerosis and ischemic myocardial disease

Faculty
Michael D. Bell, MD, FCAP
Dylan V. Miller, MD, FCAP

S1445 Diagnosis of Prostate Cancer 2015: Current Concepts and Controversies

2.5 CME/SAM CREDITS

Faculty will present current diagnostic criteria and terminology for prostate cancer, highlighting mimics and pitfalls, as well as immunohistochemical biomarkers and their utility. The presenter will use cases and images as practical and useful clues for the diagnosis for the contemporary pathologist. Current concepts and controversial topics will be presented in a balanced, objective, and empirical format. This session will provide an optimal environment for interaction with peers with ample time for questions and answers.

You will learn to:

- Discuss the current criteria for diagnosis of minimal prostate cancer
- Identify common and rare mimics that pose diagnostic potential pitfalls
- Define immunohistochemical markers useful in diagnosis and risk assessment

Faculty
David G. Bostwick, MD, MBA, FCAP

S1593 Endometrial Cancer: What You Need to Know

2.5 CME/SAM CREDITS

Take this course to receive a review of valuable and updated information, which will enable participants to approach cases of endometrial cancer effectively utilizing the most current scientific data. Faculty will address the most frequently encountered and critical issues in this area, including standard and emerging guidelines for proper intraoperative assessment, clues to ensure an accurate diagnosis and histotype, and the recognition of artifacts that can alter the FIGO stage or case management. Additionally, the presenters will cover the use and proper interpretation of immunohistochemical stains and the roles of microsatellite instability testing and sentinel lymph node technique.

You will learn to:
- Apply a systemic approach to accurately diagnose endometrial cancer
- Select and interpret immunohistochemical studies to assist in diagnosing the endometrial cancer type
- Recognize features that could impact the treatment and prognosis of these neoplasms
- Identify the role of microsatellite instability testing in endometrial cancer
- Identify the role of sentinel lymph node technique in the setting of endometrial cancer

Faculty
Elizabeth D. Euscher, MD, FCAP
Anais Malpica, MD, FCAP

S1652 Hard and Soft Boiled: How to Succeed as Laboratory Director and Not Get Cooked
2.5 CME/SAM/CE CREDITS

This course will address two major areas that all laboratory directors should master. The first is the implementation of new programs or procedures including acquisition of major equipment, staffing, and other resources. The specific example will be the implementation of Next-Generation Sequencing, but the problems and solutions discussed will be broadly applicable to other technologies and testing platforms. The second critical area faculty will address will be the handling of difficult clinicians with an emphasis on strategies for responding to complaints, unreasonable requests and abusive behavior towards laboratory staff. Faculty will also discuss strategies for helping laboratory staff respond to unreasonable clinician requests.

You will learn to:
- Prepare a proposal and a business plan for new technology
- Build clinician and institutional support for new technology
- Use simple strategies to deal with demanding or abusive clinicians
- Encourage laboratory staff to better understand and relate to demanding clinicians

Faculty
Paul Bachner, MD, FCAP
David S. Wilkinson, MD, PhD, FCAP

NOON–1:00 PM

Round Table Discussions—Lunch Included
1.0 CME/CE CREDIT

Join the experts for lunch! Exchange information and share solutions in a relaxed setting with your peers. You will learn to improve your ability to identify solutions to common problems through interactive sessions with colleagues. An additional fee applies.

R1417 Surf the Wave of Point-of-Care Testing Technologies

Faculty
Sharon M. Geaghan, MD, FCAP
Deborah A. Perry, MD, FCAP

R1541 Biospecimen Collection and Management for the Community Pathologist

Faculty
Philip A. Branton, MD, FCAP

 **R1602 Showing Laboratory Value—Creating Annual Business Reviews**

Faculty
John R. Harbour, MD, FCAP

 **R1609 Indigestion? Difficult Physicians and How to Deal With Them**

Faculty
Paul Bachner, MD, FCAP

 **R1610 Autoantibody Shop: Top 10 Tests Used in Diagnostic Immunology**

Faculty
James D. Faix, MD, FCAP

Cosponsored by the American Association for Clinical Chemistry (AACC)

CAP ’16 FACULTY LIST

Abdul-Karim, Fadi W., MD, FCAP
Adsay, Volkan, MD, FCAP
Ajani, Jaffer, MD
Allegra, Carmen J., MD
Andea, Aleodor A., MD, MBA, FCAP
Arber, Daniel A., MD
Aurelius, Michelle B., MD, FCAP
Bachner, Paul, MD, FCAP
Bagg, Adam, MD
Bartley, Angela N., MD, FCAP
Bean, Sarah M., MD, FCAP
Bell, Michael D., MD, FCAP
Bernicker, Eric H., MD
Bhargava, Parul, MBBS, FCAP
Billings, Steven D., MD, FCAP
Black-Schaffer, W. Stephen, MD, FCAP
Block, Darci R., PhD, DABCC
Bloom, Kenneth J., MD, FCAP
Boral, Leonard I., MD, MBA, FCAP
Bosler, David S., MD, FCAP
Bostwick, David G., MD, MBA, FCAP
Bradley, Kyle T., MD, MS, FCAP
Branton, Philip A., MD, FCAP
Bui, Marilyn M., MD, PhD, FCAP
Cagle, Philip T., MD, FCAP
Cardona, Diana M., MD, FCAP
Chabot-Richards, Devon S., MD, FCAP
Chen, Yunn-Yi, MD, PhD, FCAP
Cina, Stephen J., MD, FCAP
Compton, Carolyn C., MD, PhD, FCAP
Cook, Deborah L., MD, FCAP
Cooper, Kumarasen, MBChB, FCAP
Cornish, Nancy E., MD, FCAP
Crothers, Barbara A., DO, FCAP
Czuchlewski, David R., MD, FCAP
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