



COLLEGE of AMERICAN
PATHOLOGISTS
Education

CAP18

The Right Knowledge.
The Right Diagnosis.

October 20–24, 2018
Hyatt Regency Chicago
Chicago, Illinois

CAP18 Continuing Education Course Information

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8:00–9:00 AM



M1662 Not Just “Carcinoid” Anymore: Update on Gastroenteropancreatic Neuroendocrine Neoplasms

1.25 CME/SAM CREDITS

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 their 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 tumors and poorly differentiated neuroendocrine carcinomas
- Identify crucial distinctions among neuroendocrine neoplasms in different gastrointestinal organs
- Employ judicious immunohistochemical staining for proper specimen workup

Faculty

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

9:30–11:30 AM



S1870 Masqueraders of Malignancy in Breast Pathology: Strategies and Solutions

2.5 CME/SAM CREDITS

Breast lesions that masquerade as malignancies frequently present diagnostic challenges for pathologists in their daily practice. Benign lesions mistaken for in situ or invasive carcinomas lead to false positive diagnoses. This course will include common as well as rarer mimics of malignancy in breast pathology and will provide diagnostic strategies and solutions useful in recognizing these potentially hazardous cases. Topics covered will include intraductal proliferative lesions, papillary lesions, pseudoinvasive lesions, mucinous lesions, spindle cell lesions, and nipple lesions. Examples will be drawn from the presenters' daily practice and their consultation cases. A case-based teaching approach with audience interaction will be used. Morphologic features will be emphasized throughout the course with integration of ancillary techniques (for example, immunohistochemistry), highlighting their strengths and limitations.

You will learn to:

- Use a diagnostic approach to recognize and distinguish benign lesions from malignant mimickers in breast pathology
- Effectively integrate immunohistochemistry and molecular testing into diagnostic algorithms in breast pathology
- Identify the strengths and limitations of ancillary tests pertaining to breast pathology
- Avoid errors and pitfalls in diagnosis of problematic and challenging breast lesions

Faculty

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

1:30–3:30 PM



S1706 The Laboratory’s Role in Monitoring Chronic Opioid Therapy

2.5 CME/SAM CREDITS

The US is confronting an epidemic of prescription drug abuse. Collaboration between physicians treating chronic pain and the laboratory has been identified as a key point of intervention to reduce the risks of abuse, misuse, and diversion of these drugs. This course will: 1) provide background information on chronic opioid therapy and its challenges; 2) aid pathologists in understanding laboratory testing, including the limitations of the analytical methodologies; 3) assist pathologists in building a knowledge base to interpret test results; and 4) provide a framework for clinical consultations on drug compliance. Faculty will encourage attendees to participate in interactive case studies that illustrate the key educational objectives of the curriculum.

You will learn to:

- Identify the clinical issues related to opioid prescribing for chronic pain indications
- Define the clinical needs and expectations of urine drug testing in pain management
- Address preanalytic and analytic issues of drug testing for pain management
- Interpret drug testing results

Faculty

Tai C. Kwong, PhD

Barbarajeen Magnani, PhD, MD, FCAP



S1851 New Classifications for Cytology: Paris System for Urinary and Milan System for Salivary Gland

2.5 CME/SAM CREDITS

Cytologists need to be knowledgeable and keep pace with the recent advances in cytological classifications to modify the way specimens are processed, reviewed, reported, and managed. The two new cytological classifications of the Paris System for urinary cytology and the Milan System for salivary gland cytology have changed and will continue to change the practice of these challenging sites. Both are common types of cytological specimens; and due to the morphological overlap, the lesions are fraught with diagnostic pitfalls. This American Society of Cytopathology-sponsored session will explore the value and practical applications of these classifications by addressing adequacy, processing, diagnostic categories and criteria, differential diagnoses, role of ancillary tests, and management guidelines. Course participants will be able to work up urinary cytology and salivary gland cytology cases with confidence. The uniform system of reporting will enable improved communication with clinicians for optimal patient care.

You will learn to:

- Review the bases for the Paris and Milan classification systems
- Identify the morphological criteria and pitfalls for various benign and neoplastic entities
- Demonstrate the role of ancillary immunocytochemical and molecular tests in lesions of these sites
- Recognize the management options of lesions in these sites

Faculty

Jeffrey F. Krane, MD, PhD, FCAP

Eva M. Wojcik, MD, FCAP

Cosponsored by the American Society of Cytopathology (ASC)

8:00–9:15 AM



P1800 Starting the Conversation: The Physician Burnout Crisis—Improving Resiliency and Wellness

1.25 CME/CE CREDITS

One of health care's most precious resources—its physicians—is under fire by multiple stressors, leading to physician distress and declining well-being, sometimes with fatal consequences. Denial and a call to “toughen up” only exacerbates the issue.

Join three national experts who will candidly discuss the epidemic of physician burnout, including national statistics and stories that touch our own specialty. They will cite the sources (it's not what you think) and signs of burnout and the negative impact it has on the individual physician, the practice, and, ultimately, the patient. The speakers will share resources to help identify when burnout is present and its extent, and highlight those institutions that are actively and successfully addressing the problem. Lastly, the speakers will make a “call to action” to keep the conversation going at the national level, to advocate for individual physician self-care, and to build a culture of wellness at the practice and institution levels.

You will learn to:

- Discuss the growing issue of physician burnout, its negative consequences, and the drivers impacting pathology
- Recognize telltale signs of burnout in yourself and in others
- Identify national and local resources and support systems available to build resiliency and wellness, both in individuals and at the practice level
- Advocate for pathologist self-care and self-improvement at the practice and national levels

Faculty

Bryan Bohman, MD

Timothy J. Bono, PhD

James S. Hernandez, MD, FCAP



S1652 Hard and Soft Boiled: How to Succeed as Laboratory Director and Not Get Cooked

2.5 CME/SAM/CE CREDITS

All laboratory directors should master two major areas addressed by this course. The first area involves the implementation of new programs or procedures, including acquisition of major equipment, staffing, and other resources. Faculty will use the specific example of the implementation of next-generation sequencing; but the problems and solutions they discuss will be broadly applicable to other technologies and testing platforms. The second critical area covers the handling of difficult clinicians with an emphasis on strategies designed to respond to complaints, unreasonable requests, and abusive behavior toward laboratory staff.

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

S1705 Get Tweeting—A Hands-On Interactive Twitter Primer for Pathologists

2.0 CME CREDITS

Twitter use by physicians, especially pathologists, continues to rapidly grow. Twitter provides an easy-to-use communications platform for rapid education, news, and networking that helps busy pathologists stay engaged and informed without taking up much time. Many pathologists see the benefits of joining Twitter but are unsure about how to get started. This hands-on workshop will teach you everything you need to know: how to set up an account, how to use @ and #, and how to tailor Twitter to your professional goals and needs. Faculty will briefly discuss other types of social media as well. Attendees will receive personalized one-on-one assistance from experienced Twitter users during the workshop. If you have been interested in joining Twitter but have been dragging your feet, this course is for you!

You will learn to:

- Set up, configure, and use a professional Twitter account
- Identify and avoid privacy and ethical violations while using Twitter
- Identify and implement a variety of different ways Twitter can benefit pathologists

Faculty

Jerad M. Gardner, MD, FCAP

Xiaoyin (Sara) Jiang, MD, FCAP



S1739 What's Trending? Instructive Breast Pathology Cases to Better Equip You and Your Laboratory for the Rapidly Changing Clinical and Molecular Landscape of Breast Cancer
2.5 CME/SAM CREDITS

As clinical practices change, it is imperative for pathologists to integrate current management guidelines into the laboratory. Through a case-based format that includes audience participation, the faculty will address recent practice trends in breast pathology. Faculty will cover standardization of processing and reporting postneoadjuvant chemotherapy-treated breast specimens. The second part of the course will focus on high-risk lesions encountered in core biopsies; it will include illustrative examples to reinforce diagnostic criteria and current molecular data in the literature. Finally, the course will review the integration of molecular prognostic assays into the daily workflow of the practicing pathologist. Upon completion of the course, practicing pathologists will be sufficiently skilled to manage recently employed changes in trends in breast pathology.

You will learn to:

- Examine the postneoadjuvant chemotherapy-treated breast specimen in a standardized manner
- Report the findings of the postneoadjuvant chemotherapy-treated breast specimen
- Classify high-risk lesions in core needle biopsy samples
- Recognize the clinical ramifications of the diagnoses of high-risk lesions in core needle biopsy samples
- Communicate the findings of high-risk lesions in core needle biopsy samples to clinicians
- Integrate molecular prognostic assays into the laboratory workflow
- Communicate information about molecular prognostic assays to clinicians

Faculty

Timothy M. D'Alfonso, MD, FCAP

Sandra J. Shin, MD, FCAP

Sonal Varma, MD, FCAP

9:30–11:30 AM



S1857 Forget Your Unease With Interstitial Lung Disease: Top 10 Pearls to Change Your Practice Immediately

2.0 CME CREDITS

When you see transbronchial or surgical lung biopsies, do you feel anxious and uneasy? If so, this course is for you. Based on years of experience with one of the highest-volume interstitial lung disease (ILD) consult practices in the US, faculty identified the top 10 pearls (in frequency and importance) that will change the way you practice and improve your product. The course begins with an introduction to the current classification of ILD and how to approach the biopsy. However, the majority of the course uses simulated cases that engage the audience and bring each critical pearl to life. Classifying fibrosing lung disease, acute lung injury, and granulomatous disease are a few of the important topics covered. Participants will leave with a specific list of pearls to use on their next ILD case.

You will learn to:

- Integrate clinical and radiographic information into your interpretation of ILD
- Correctly interpret fibrotic lung disease
- Recognize and report biopsies with acute lung injury
- Avoid pitfalls in the assessment of granulomatous lung disease

Faculty

Brandon T. Larsen, MD, PhD, FCAP
Maxwell L. Smith, MD, FCAP

Cosponsored by the Pulmonary Pathology Society (PPS)



S1868 Cervical Adenocarcinoma: From AGUS to Zebras—Cytology and Histology of Usual Type Adenocarcinomas and Special Variants

2.5 CME/SAM CREDITS

Are those reactive endocervical cells or are they adenocarcinoma in situ (AIS)? Is that pattern an invasive adenocarcinoma or just extensive AIS? How does one recognize gastric-type adenocarcinoma and does it matter? If you've struggled with these questions, join faculty for an interactive, case-based workshop addressing glandular lesions in cervical cytology, small biopsy specimens, and resection specimens. The workshop will cover threshold criteria for distinguishing reactive changes from atypical glandular cells and adenocarcinoma in situ and provide tips for correlating cervical cytology findings with those in the corresponding tissue sample. Faculty also will review changes in the classification of endocervical adenocarcinomas, including the pattern-based Silva classification system and special variants such as gastric type.

You will learn to:

- Cite specific criteria for distinguishing reactive changes from atypical glandular cells (Pap) and adenocarcinoma in situ (biopsy)
- Apply a standardized approach for integrating cervical cytology findings with histology findings in the cervical biopsy report
- Recognize when and how to apply the Silva classification system to invasive adenocarcinomas
- Distinguish usual type endocervical adenocarcinomas from special variants, such as gastric type

Faculty

Christina S. Kong, MD, FCAP
Teri A. Longacre, MD, FCAP

9:30–11:30 AM



S1874 The Tipping Point of Digital Pathology: Are Primary Diagnosis and Computer-Aided Diagnosis a Reality?

2.0 CME CREDITS

Primary diagnosis using digital slides is now approved by the Food and Drug Administration. Now more than ever, there is an increasing discussion about digital pathology and how image analysis in pathology can be beneficial. Several questions arise: How are these going to affect current pathology workflows and practice? What are the legal and regulatory implications? How much of an impact should one anticipate on patient safety, efficiency, workload, and collaboration? For practicing pathologists and residents, this course will review the current status of the field with some real-life examples by a pathologist and image analysis scientist, working in this field more than 10 years. At the end of this course, participants will be able to recognize how these systems can integrate with their current workflow and improve their practice.

You will learn to:

- Describe what digital pathology is and the state of the technology today
- Review the current status of image analysis tools available to the practicing pathologist
- Recognize how image analysis is an enabling technology for digital pathology
- Explain the value proposition of digital pathology and image analysis in terms of enhanced diagnosis, quality assurance, and improved productivity

Faculty

Metin N. Gurcan, PhD

Anil V. Parwani, MD, PhD, FCAP



S1878 Current Controversies in Serology Testing

2.5 CME/SAM/CE CREDITS

Despite advances in molecular technology, serology testing still plays an important role in the diagnosis of many infectious diseases; it also is the primary method that physicians recognize most autoimmune disorders. This course will review some controversies related to the use of serology testing, including methodologies (immunofluorescence versus ELISA); diagnostic approaches (screening versus focused testing versus algorithms); and the appropriate use of the laboratory when monitoring patients after initiation of treatment. Key areas covered will include syphilis, infectious hepatitis, HIV infection, antinuclear antibody testing, celiac disease, and paraneoplastic autoimmune neurological syndromes. This course is recommended by the CAP's Diagnostic Immunology Resource Committee.

You will learn to:

- Recommend the most cost-effective serology tests for the diagnosis of a variety of autoimmune and infectious disorders
- Identify differences between methods used to detect antibodies in the clinical laboratory
- Manage the use of reference laboratories when responding to unusual requests for serology testing

Faculty

James D. Faix, MD, FCAP

Daniel D. Rhoads, MD, MLS(ASCP), FCAP

9:30–11:30 AM



V1888 Practical Issues in Testicular Pathology: A Case-Based Discussion

2.0 CME CREDITS

This case-based video microscopy session will focus on challenging differential diagnosis of testicular tumors, incorporating best practices of how to appropriately utilize immunohistochemical stains and avoid potential diagnostic pitfalls. Furthermore, the discussion will incorporate how to handle testicular specimens in the gross room to ensure accurate tumor staging as well as the most up-to-date AJCC staging information.

You will learn to:

- Identify diagnostic challenges of testicular tumors and appropriately utilize immunohistochemical stains if needed
- Classify testicular tumors utilizing the most up-to-date WHO 2016 terminology
- Apply methods to ensure accurate staging of testicular tumors

Faculty

Muhammed T. Idrees, MD, FCAP

Chia-Sui S. Kao, MD, FCAP

12:00–1:00 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.

R1609 Indigestion? Difficult Physicians and How to Deal With Them

Faculty

Paul Bachner, MD, FCAP

R1690 My Surgical Pathology and Cytopathology Coding Dilemmas: Getting It Right—An Advanced Discussion

Faculty

Mark S. Synovec, MD, FCAP



R1807 Coagulation Testing Quality: How to Recognize and Minimize Anticoagulant Interferences

Faculty

Kristi J. Smock, MD, FCAP



R1816 The Anatomic Pathology Diagnostic Management Team Conference—Building Value for Pathologists

Faculty

Timothy C. Allen, MD, JD, FCAP

2:00–3:00 PM



M1821 The Real-time Anatomic Pathology Diagnostic Management Team

Conference

1.25 CME/SAM CREDITS

Pathologists have not traditionally discussed cases directly with patients, nor have pathologists traditionally sat with patients and examined the patients' cases. However, in today's molecular era there is a growing need for pathologists to directly discuss with patients their diseases and explain in layperson's terms what those diseases are and what they entail, including the need for molecular testing. The real-time anatomic pathology diagnostic management team conference is a new concept in which the pathologist joins clinical and radiologic colleagues in real time, using HIPAA-compliant Skype technology, to discuss with a patient (and possibly also the patient's family) the patient's disease process including diagnosis, current treatment, and future management.

You will learn to:

- Recognize the importance of the real-time anatomic pathology diagnostic management team conference and the extent to which it will benefit patients and pathologists
- Describe the specific technical requirements of a successful conference
- Differentiate the roles of the conference participants
- Identify the proscribed role of the pathologist as a member of the patient's care team consulting with the patient via the conference

Faculty

Timothy C. Allen, MD, JD, FCAP

Harpreet K. Talwar, MD



M1824 The Challenge of Laboratory-Developed Tests: A Regulatory and

Legislative History

1.25 CME/SAM CREDITS

Regulation of laboratory-developed tests (LDTs) is an important and controversial policy issue facing the in vitro diagnostic and clinical laboratory communities. How are laboratory tests regulated, and what laws and regulations govern decisions on LDT oversight? Through an engaging presentation, this session provides a clear introduction to the regulatory history of both the 1976 Medical Device Amendments and the Clinical Laboratory Improvement Amendments of 1988. This up-to-date and informative session will address how these laws have been applied to LDT oversight, as well as review Food and Drug Administration efforts and possible Congressional activities regarding LDT regulatory oversight

You will learn to:

- Identify regulatory authority for reagents under the Medical Device Amendments
- Recognize requirements for assay validations under the Clinical Laboratory Improvement Amendments of 1988
- Appraise current regulatory efforts regarding LDTs at the federal level
- Assess the costs and benefits of LDT regulatory oversight in their professional practice

Faculty

Jonathan R. Genzen, MD, PhD, FCAP

2:00–3:00 PM



M1845 Subspecialty Practice in Surgical Pathology: Pros, Cons, and More

1.0 CME CREDIT

Subspecialty signout—be it pure or hybrid—is becoming increasingly common in surgical pathology. This change is not limited to large academic medical centers as it once was. Today community practices also can be seen moving toward subspecialization either by internal or external means. There are many benefits to subspecialty signout, but there are drawbacks as well. This course will briefly review the literature and then will present the potential advantages and disadvantages of subspecialty practice, followed by a description of the faculty's experience transitioning from a general practice to a hybrid model and finally to complete subspecialty surgical pathology practice.

You will learn to:

- Describe the existing literature regarding the impact of subspecialty practice and quality measures
- Discuss the impact of subspecialty surgical pathology practice on pathologists
- Identify the impact of subspecialty signout on laboratory workflow and staffing

Faculty

Linda M. Schiffhauer, MD

Christa L. Whitney-Miller, MD, FCAP

2:00–5:30 PM



H1615 Peripheral Blood Lymphoproliferative Disorders: Leukemias, Lymphomas, and Reactive Mimickers

3.75 CME/SAM 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 workup 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

3:30–5:30 PM



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 the 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 subcompetency and informs every human interaction in our professional and personal lives. This is true of everyone, including laboratory professionals, administrative assistants, residents, fellows, and pathologists; and it is true for pathologists in all practice settings and experience levels.

The practice of giving good feedback is a learned communication skill. This interactive session will use case-based learning, audience response, and demonstrations of different feedback techniques and provide 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 aids so they can immediately apply the techniques learned 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



S1643 Your Turn: Management of the Bleeding Patient

2.5 CME/SAM 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, you receive a page from the blood bank. 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. Faculty will cite recent literature; cover current indications for platelets, plasma, and cryoprecipitate; and discuss management of newer anticoagulants.

You will learn to:

- Act as a transfusion medicine consultant for an actively bleeding patient
- Educate pathologists on the reversal of new anticoagulant agents and recent platelet transfusion guidelines
- Help develop protocols for patients who are on warfarin and are experiencing intracranial hemorrhage

Faculty

Thomas DeLoughery, MD

Theresa A. Nester, MD, FCAP

Cosponsored by AABB

3:30–5:30 PM

S1725 Method Validation and Verification: Case Studies and Laboratory Challenges

2.0 CME CREDITS

Method validation and verification studies establish the performance of our laboratory instrumentation. Medical directors must be proficient in the studies required as well as the statistical interpretation of study results. This course will provide both trainees and established medical directors with the key information about method validation requirements. Participants will gain proficiency interpreting method statistics and consulting with physicians on patient impact of method performance through use of real-world examples and interactive discussion.

You will learn to:

- Identify the difference between method validation and method verification
- Describe the studies required to document method performance
- Interpret method performance data and statistical study outcomes
- Identify challenges to method performance using real-world examples

Faculty

James H. Nichols, PhD, D(ABCC)
Lauren N. Pearson, DO, MPH, FCAP



S1748 Welcome to the REAL World: Crucial Survival Tips for the New Medical Director

2.5 CME/SAM CREDITS

New laboratory directors are rarely prepared for regulatory and accreditation issues that face them. Even very seasoned pathologists and laboratory directors struggle to keep up with new regulatory requirements that pose high risk. Faculty will use stories of regulatory and accreditation challenges to engage the audience in a discussion on these complex issues. One speaker will focus on unexpected issues encountered in the first three to five years in practice as a laboratory director, including proficiency testing and inspection issues; the second speaker will focus on newer regulatory and accreditation issues that pose high risk, such as interlaboratory proficiency testing communication.

You will learn to:

- List regulatory issues that can adversely impact the laboratory
- Explain how the laboratory can optimize proficiency testing processes (eg, ordering, performance, reporting results, and investigation/response) to avoid accidental regulatory/compliance penalties
- Describe regulatory/compliance issues that recent graduates are not prepared to handle as a new laboratory director
- Define new regulatory/compliance trends or issues of which even experienced laboratory directors may not be aware

Faculty

Gaurav Sharma, MD, FCAP
Christina M. Wojewoda, MD, FCAP

3:30–5:30 PM



S1842 Optimizing Rapid On-Site Evaluation in the Bronchoscopy Suite: The Basics and Beyond

2.5 CME/SAM CREDITS

Do you find rapid on-site evaluation using Diff Quik difficult? Are rapid on-site evaluations in the bronchoscopy suite a new or continuing part of your practice? This session will provide participants an opportunity to discuss issues surrounding appropriate specimen triage and highlight some of the pitfalls about endoscopic transbronchial ultrasound-guided (EBUS) rapid on-site evaluations. EBUS-fine-needle aspiration (FNA) cases with virtual slides will be available for individual review prior to the course, focusing on difficult decisions regarding adequacy, specimen triage, and pitfalls in interpretation. The cases will be reviewed with audience interaction during the session, with each case demonstrating a particular focus in regard to optimizing patient care.

You will learn to:

- Interpret Diff Quik-stained EBUS-FNA cytology slides
- Identify situations in which specimen triage is critical during EBUS-FNA rapid on-site evaluations
- Recognize appropriate triage options that can be used during EBUS-FNA rapid on-site evaluations
- Identify and avoid potential pitfalls in the interpretation of EBUS-FNA rapid on-site evaluations

Faculty

Christine N. Booth, MD, FCAP

Deborah J. Chute, MD



S1866 Lymphoma or Not? How to Make the Best Diagnosis in Cutaneous Lymphoid Proliferations

2.0 CME CREDITS

The accurate diagnosis of cutaneous lymphoma is challenging because of the clinical and histopathologic overlap with inflammatory/reactive disorders. To improve diagnostic accuracy, faculty will discuss critical cutaneous lymphomas and benign mimics. They also will provide an update to recently described provisional entities, such as primary cutaneous CD4 positive small/medium T-cell lymphoproliferative disorder, and provide an updated review of new classifications of entities (WHO 2018). T-cell receptor (TCR)-polymerase chain reaction has been demonstrated to be a useful ancillary technique; however, this test also may yield confusing results due to identification of clonal proliferations in inflammatory disorders. Therefore, the course will address updated genomic data and novel diagnostic modalities, including high-throughput sequencing. The target audience for this course includes residents, fellows, pathologists, hematopathologists, and dermatopathologists.

You will learn to:

- Recognize key histologic features and clinical clues to reactive lymphoid proliferations to distinguish them from neoplasia and malignancy
- Accurately diagnose recently described and provisional entities (WHO 2018)
- Integrate cost-effective ancillary studies (immunohistochemistry and molecular genetic/genomic studies) to distinguish and appropriately classify benign and malignant lymphoid disorders

Faculty

Jinah Kim, MD, PhD

Antonio Subtil-DeOliveira, MD, FCAP

8:00–9:00 AM



M1626 CNS Tumors and Molecular Advances

1.25 CME/SAM CREDITS

Learn current central nervous system (CNS) tumor diagnostic criteria and review frozen sections, permanent sections, routine immunohistochemical, fluorescence in situ hybridization (FISH), and molecular markers for common CNS tumors 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

M1722 Hot Topics in Hemostasis

1.0 CME CREDIT

Hemostasis testing is a rapidly changing area of pathology practice. Two current hot topics include evaluation of direct oral anticoagulant (DOAC) effect and challenges in monitoring the new extended half-life factor VIII and factor IX replacement products using factor assays. Faculty will offer a thoughtful analysis of recent literature pertaining to each topic. They will incorporate practical tips, including observations from CAP proficiency testing data and laboratory accreditation issues related to both of these topics. A question-and-answer session and/or interactive questions will promote discussion among participants.

You will learn to:

- Describe the laboratory assays currently available to measure DOAC effect in individual patients
- Evaluate DOAC interferences in common and esoteric hemostasis assays
- Assess the performance of your factor assays in the presence of new extended half-life FVIII and FIX replacement products
- Review FVIII and FIX replacement product package inserts for information pertaining to laboratory performance of factor assays

Faculty

Russell A. Higgins, MD, FCAP

Karen A. Moser, MD, FCAP



M1876 Update on Invasive Parasitic Infections for Surgical Pathologists

1.25 CME/SAM CREDITS

This session will cover the identification of various parasites in tissue and body fluids. It will serve as an introduction to interpretation of Wright's Geisma- and H&E-stained slides highlighting the various parasites that may be encountered in the clinical setting. Strongyloidiasis, schistosomiasis, paragonimiasis, and other -iasis that involve invasion of tissue by parasites will be covered.

You will learn to:

- Identify structures in tissues that indicate possible parasites
- Delineate parasite-tissue tropisms

Faculty

Julie A. Ribes, MD, PhD, FCAP

8:00–11:30 AM



H1880 From Social Media to the Water Cooler: How to Be a Better Communicator

3.0 CME CREDITS

Clear, concise communication is required in all pathology practices with many constituencies, such as colleagues, clinicians, staff, nurses, administrators, and patients. Effective communication with all of these audiences may be difficult. Conventional modalities such as meetings, conference calls, written communications, and emails may have limited effect or may be used inappropriately. Newer communication platforms, such as social media, may be unfamiliar to many pathologists. In this course, three senior pathologists with many years of communications experience will share their insights and secrets in the use of old and new communication channels. The emphasis will be on identifying better modes of communication as well as pitfalls in written, verbal, and visual interactions. The course will include opportunities for dialog between the course presenters and the participants.

You will learn to:

- Identify social media applications for your practice
- Apply better practices for meetings
- Review good and bad uses of emails
- Apply new techniques for written, verbal, and visual communication

Faculty

Timothy C. Allen, MD, JD, FCAP

Paul Bachner, MD, FCAP

Eric F. Glassy, MD, FCAP

9:30–11:30 AM



S1620 MACRAscopic Analysis of the New Quality Payment Program: Maximize Reimbursement While Demonstrating Value

2.5 CME/SAM CREDITS

Will your practice be subject to a 4% penalty next year? In March 2015, Congress passed HR 2, the Medicare Access and CHIP Reauthorization Act of 2015, which not only repealed the sustainable growth rate (SGR), it also replaced the prior quality programs with a new quality payment program (QPP) that created two payment pathways: 1) the Merit-based Incentive Payment System (MIPS) and 2) the Alternative Payment Model (APM). The reporting requirements for these programs started January 2017. Physicians will start feeling the impact of their performance in 2019, with bonuses or penalties of up to 4%. In 2020, the potential swing is 5% based on 2018 performance, and these potential impacts will continue to increase to a maximum of 9% in 2022. These programs are constantly evolving. The CMS will propose changes to the 2019 program in the proposed rule that will be published in June 2018. This course will explain the program and its implementation and provide current information on the ways you and your practice can successfully participate in the current and upcoming year to avoid a penalty and potentially receive a bonus.

You will learn to:

- Describe the history and purpose of pay-for-performance programs
- Explain who is subject to QPPs, MIPS, and APM
- Identify ways to successfully participate in the MIPS program
- Measure the utility of using a Qualified Clinical Data Registry (QCDR)
- Assess the potential ramifications for not successfully participating

Faculty

W. Stephen Black-Schaffer, MD, FCAP

Diana M. Cardona, MD, FCAP



S1640 Wake Up! It's Not Too Early to Lead Quality Improvement

2.5 CME/SAM CREDITS

This interactive workshop will help you build skills related to quality improvement and laboratory medical direction. 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. Content targets trainees and new-in-practice pathologists who have limited experience in quality improvement; however, pathologists wishing to strengthen their skills in these topics are encouraged to attend.

You will learn to:

- Define the concept of quality in the laboratory and recognize opportunities for quality improvement
- Use 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 J. Olgaard, DO, FCAP

9:30–11:30 AM



S1823 Generational Differences and Diversity: The Impact on Your Practice

2.5 CME/SAM CREDITS

This interactive workshop will utilize case-based discussions supported by relevant literature to help participants define the generations and their needs and challenges. It will address challenges and suggest approaches to predicting future issues/needs of medical faculty using a generational perspective. A second component of the workshop will address the daily interactions encountered to examine microaggressions in the workplace. These small but frequent insults can have a significant and detrimental impact on the atmosphere of collegiality and teamwork that is vital to the workplace. Case discussions and interactions, including audience interaction, will be used to illustrate current issues and to share approaches to culture change.

You will learn to:

- Define the generations and their needs and challenges
- Predict future issues/needs of medical faculty using a generational perspective
- Define diversity issues such as microaggressions and their impact in the workplace

Faculty

Lydia P. Howell, MD, FCAP

Aryn M. Rojani, MD, PhD, FCAP



S1869 Soft Tissue Pathology Is Fun...Really! A Crash Course for General Pathologists

2.0 CME CREDITS

This course provides a whirlwind—but thorough—tour of soft tissue pathology highlighting the most common entities, the most common pitfalls, and the appropriate ancillary testing usage. Topics to be covered include dermal-based, myxoid, and myoepithelial lesions, in addition to the usual adipocytic, neural, and myogenic entities. This course also will provide a comprehensive update on selected topics pertinent to the everyday practice of pathology using a partial case-based approach and through audience participation. Presentation of content will meet the needs of the pathologist in training and the more experienced general pathologist, as well as those interested in sharpening their soft tissue pathology skills.

You will learn to:

- Diagnose the most common soft tissue lesions
- Recognize common pitfalls and benign mimics
- Utilize appropriate ancillary tests
- Discuss cases more clearly and confidently with clinicians

Faculty

Jerad M. Gardner, MD, FCAP

Nicole D. Riddle, MD, FCAP

9:30–11:30 AM



S1877 Changing the Platelet Paradigm: How Mitigation of Bacterial Sepsis Will Change Your World

2.0 CME CREDITS

Despite current methods, the risk of bacterial sepsis due to platelet transfusion, especially toward end of storage, remains a concern. The Food and Drug Administration (FDA) guidance effectively reduces the shelf life of a platelet component to three days unless certain criteria, such as point of issue testing or pathogen inactivation, are met. This presents regulatory, operational, financial, and patient-care challenges for the pathologist, blood bank, and blood center. This course will discuss the problem of septic platelet transfusions, the regulatory environment related to this problem, and the options for mitigating septic platelet transfusions that comply with the regulations. Perspectives from both hospital-based transfusion services and blood centers, including the impact on the workflow, budget, and information systems will be presented.

You will learn to:

- Identify the risk of bacterial contamination of platelets and septic platelet transfusions
- Define the current regulatory environment related to mitigating septic platelet transfusions, including the FDA guidance *Bacterial Risk Control Strategies for Blood Collection Establishments and Transfusion Services to Enhance the Safety and Availability of Platelets for Transfusion*
- Describe the options for methods that meet the regulatory requirements for mitigating septic platelet transfusions
- Assess the impact of mitigation methods on workflow, information systems, blood supplier relationships, product availability, and budget

Faculty

Julie L. Cruz, MD, FCAP

Julie Katz Karp, MD, FCAP

Susan N. Rossmann, MD, PhD, 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 (CIS) 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 also will 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 CIS from reactive urothelium
- Recognize unusual variants of bladder cancer

Faculty

Anil V. Parwani, MD, PhD, FCAP

Debra L. Zynger, MD, MS, 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.

R1601 Essential Immunohistochemical and Molecular Markers for General CNS Glial Tumors

Faculty

Mary E. Fowkes, MD, PhD, 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

R1702 Twitter Beyond the Basics: Analytics, Journal Clubs, and Optimizing Your Efficiency

Faculty

Xiaoyin (Sara) Jiang, MD, FCAP



R1803 An Approach to an Individualized Quality Control Plan

Faculty

Julie A. Ribes, MD, PhD, FCAP

2:00–4:00 PM

N1686 Launching the Young Pathologist: A Forum on the Transition From Pathology Trainee to Effective Pathology Practitioner

2.0 CME CREDITS

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 cover the challenges of transitioning from pathology training to effective pathology practice from the perspective of pathologists in their first job and the people who hire and mentor these young pathologists. The faculty (a pathology educator, two employers of pathologists [one community based and one academic], and a new-in-practice pathologist) will discuss best practices in this key transition and will 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, cosponsored by the Association of Pathology Chairs, 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)

2:00–4:00 PM

S1718 Contemporary Methods in Monoclonal Gammopathy Detection and IMWG Guidelines

2.0 CME CREDITS

This interactive workshop alerts attendees to changes in the most recent International Myeloma Working Group (IMWG) guidelines for detection of multiple myeloma. These changes allow treatment of some asymptomatic individuals formerly classified as smoldering multiple myeloma, thereby improving patient outcomes. The faculty will explore the laboratory's role in combining data from several techniques to improve detection, characterization, and monitoring of patients with monoclonal proteins. Faculty will show new methods for measuring M-proteins by gel and capillary electrophoresis and discuss improvements in detection and characterization by immunofixation and immunosubtraction, nephelometric assays for serum-free light chains, and the newer heavy-light combination assays. Illustrated by challenging cases, their use will demonstrate avoidable problems of false positive and false negative tests.

You will learn to:

- Incorporate new IMWG guidelines into your laboratory practice
- Implement a triage for detection of M-proteins appropriate for their clinical situation
- Identify when to use serum-free light chain and combined heavy-light chain analyses in appropriate situations
- Measure and characterize M-proteins by both gel and capillary electrophoresis

Faculty

David F. Keren, MD, FCAP**S1832 Fine-Needle Aspiration of Lymphoid Lesions: A Planned Approach to Maximize Diagnostic Value**

2.0 CME CREDITS

Pathologists are increasingly asked to perform and interpret fine-needle aspiration (FNA) biopsies when lymphoma is suspected. In this setting pathologists must function not only as diagnosticians but also as stewards of valuable but limited tissue. Pathologists must allocate specimens optimally among cytologic preparations, formalin, and flow immunophenotyping; provide an accurate diagnosis, yet request more tissue when needed; and ensure that diagnosis-specific standard of care ancillary studies are performed. Pathologists are cytopathology and hematopathology colleagues with years of collaborative experience in FNA lymphoma diagnosis. Join course presenters for a workshop with case-based, small-group exercises addressing optimized workflows for specimen stewardship, cytopathology-hematopathology teamwork in lymphoma diagnosis, and National Comprehensive Cancer Network (NCCN) guideline-focused prioritization and reporting of ancillary studies.

You will learn to:

- Optimally allocate FNA specimens for lymphoma diagnosis
- Maintain high accuracy in FNA lymphoma diagnosis and request additional tissue when indicated for definitive diagnosis
- Obtain ancillary studies as necessary for patient care based on NCCN guidelines

Faculty

Dita A. Gratzinger, MD, PhD, FCAP**Steven R. Long, MD, FCAP**

2:00–4:00 PM



S1836 Top 10 Diagnostic Challenges in Non-Thyroidal Head and Neck FNA Biopsy

2.5 CME/SAM CREDITS

The anatomic complexity of the head and neck leads to a wide range of entities. Fine-needle aspiration (FNA) biopsy is particularly useful in this area and has become a widely accepted diagnostic modality for initial workup. In this session, faculty will focus on diagnostic pitfalls of common entities and practical approaches to uncommon lesions. The course will be divided into two parts that include salivary gland and various non-thyroidal/non-salivary gland miscellaneous entities, including basaloid, cystic, large cell, and spindle cell lesions. A total of 10 cases demonstrating various diagnostic categories form the framework of the course. Faculty also will review up-to-date application of ancillary testing, lessons learned from cyto/histologic correlation, as well as the newly proposed Milan System for reporting salivary gland cytopathology.

You will learn to:

- Recognize major diagnostic challenges in non-thyroidal head and neck FNA cytology
- Develop practical strategies to avoid diagnostic pitfalls
- Determine when to make a definitive diagnosis and when to give a diagnostic category to guide clinical management
- Update the new knowledge and effectively incorporate ancillary techniques to aid diagnosis

Faculty

Ming Jin, MD, PhD, FCAP

Paul E. Wakely Jr., MD



S1850 Lemonade out of Lemons: Adjustments to Difficult Inspection Encounters

2.5 CME/SAM CREDITS

Would you say your last laboratory inspection was a lemon? Are you still carrying the wounds? This session will present difficult inspection scenarios and offer insights, recommendations, and strategies for navigating these difficult inspections. More importantly, moderators will facilitate sharing of techniques designed to avoid adverse situations during future inspections. This course will provide practical information from the collective experience of team leaders and laboratory directors focused on optimizing the inspection experience. Attendees will find communication techniques, such as effective listening and separating the people from the problem, invaluable in their everyday dealing with laboratory professionals, clinicians, administrators, and patients. This course is designed to benefit both the experienced and novice team leaders and laboratory directors.

You will learn to:

- Apply effective and professional communication skills during difficult on-site inspection situations, resulting in a more collegial and educational inspection experience
- Use available CAP resources to optimally prepare and participate in inspections to fulfill regulatory requirements
- Respond to and prevent challenging inspection situations

Faculty

Gregory A. Gagnon, MD, FCAP

Andrew J. Goodwin, MD, FCAP

2:00–4:00 PM



S1856 Problems With Inadequacy? Increasing Tumor Yield With Optical Microscopy Imaging

2.5 CME/SAM CREDITS

Personalized medicine has drastically changed how pathologists manage tumor biopsy specimens as pathologists. Pathologists often find themselves with insufficient tissue to meet all diagnostic and molecular testing needs for patients, requiring them to undergo repeat biopsy. Optical microscopy techniques are nondestructive, high-resolution imaging modalities that can be used in vivo for real-time biopsy guidance, or ex vivo for rapid on-site assessment of biopsy adequacy. In both settings, optical microscopy imaging has strong potential to increase tumor yield, and help solve a critical problem in pathologists' practice. In this session, faculty will introduce pathologists to optical microscopy imaging, its role in biopsy guidance/assessment, and the role of pathologists in implementing and interpreting these imaging techniques in their practice.

You will learn to:

- Identify need for increased tumor volume for diagnostic and molecular studies and the limitations of current methods to assess adequacy
- Describe in vivo microscopy (IVM) imaging and its role in tumor biopsy guidance to increase yield
- Examine ex vivo microscopy (EVM) imaging and its role in rapid biopsy adequacy assessment
- Discuss the role pathologists can play in implementing and interpreting IVM and EVM imaging as part of their clinical practice

Faculty

Lida P. Hariri, MD, PhD

Savitri Krishnamurthy, MD, FCAP

John D. Pfeifer, MD, PhD, FCAP



S1860 Uterine, Ovarian, and Tubal Serous Carcinoma in the Female Genital Tract: Differential Diagnosis and Grading

2.5 CME/SAM CREDITS

Serous carcinoma in the female genital tract continues to be a problem area for diagnostic surgical pathologists. This course will address the distinction between: 1) uterine serous carcinoma and other histologic subtypes of endometrial cancer; 2) borderline and low-grade serous carcinoma; and 3) low-grade and high-grade serous carcinoma. These distinctions are important because patients are managed differently for each of these disease entities. The course will specifically provide diagnostic criteria, terminology, and the standardized reporting format for serous epithelial neoplasms (uterine/ovarian/tubal/peritoneal) with emphasis on use of ancillary studies, including p53 to improve diagnosis. Faculty will use a case-based approach, and the audience will then be able to interactively test their skills on another series of cases. Time for questions/discussions will follow each case.

You will learn to:

- Identify differences in surgical and medical treatment of serous neoplasia subtypes
- Utilize standard criteria to diagnose the main subtypes of serous neoplasia in the ovary/tube/peritoneum
- Utilize p53 ancillary studies to refine classification of serous tumors

Faculty

Ann K. Folkins, MD, FCAP

Teri A. Longacre, MD, FCAP

2:00–4:00 PM



S1865 Coagulation Testing: How Do We Get the Best Results?

2.5 CME/SAM CREDITS

Hemostasis/thrombosis is a complex area of laboratory practice. The impact of preanalytical variables on coagulation testing is well known but can be difficult to control. The presence of anticoagulant medications in coagulation specimens creates a significant quality issue. In addition, new accreditation checklist requirements help to ensure the analytical validity of coagulation test results, but pathologists may not have adequate familiarity with concepts, such as calibration verification and analytical measurement range (AMR) verification. Coagulation laboratories that exist within large, multisite systems are tasked with implementing systemwide standardization while still maintaining needed flexibility. This course will include discussion of useful guidelines and practical tips addressing the topics of preanalytical variables, test validation, and systems-based approaches in coagulation testing.

You will learn to:

- Discuss best practices to ensure quality in the preanalytic phase of coagulation testing
- Identify coagulation tests subject to requirements for calibration and AMR verification
- Describe how to address the requirements for calibration and AMR verification during coagulation test validation
- Apply systems-based approaches to ensure quality of coagulation testing

Faculty

John D. Olson, MD, PhD, FCAP

Kristi J. Smock, MD, FCAP



S1882 Applying the New AJCC Staging System to Daily Diagnostic Practice:

Gastrointestinal Pathology

2.0 CME CREDITS

This Rodger C. Haggitt GI Pathology Society session is an evidence-based update on the new AJCC staging system, specifically with regards to gastrointestinal neoplasms. It will address critical changes that have been made to staging parameters and how to apply them to daily diagnostic practice. The course has a didactic component, followed by case presentations that illustrate and reinforce key points. The faculty will explain and demonstrate how to recognize important or challenging pathologic aspects of GI cancers as relevant to the updated cancer staging system and how pathologists will impact the patient's management. There will be ample time for questions, and discussion between the presenters and participants will be encouraged. The course is intended for practicing surgical pathologists as well as residents and fellows.

You will learn to:

- Identify new staging parameters in gastrointestinal tumors
- Recognize strengths and weaknesses of the evidence behind the changes in staging parameters
- Accurately diagnose pathological aspects of gastrointestinal tumors that may impact clinical management, such as proper grossing, margin assessment, and other staging components
- Identify the latest clinical treatments of GI tumors

Faculty

Amitabh Srivastava, MBBS, FCAP

Hanlin L. Wang, MD, PhD

Maria Westerhoff, MD (Moderator)

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

8:00–9:00 AM



M1661 CAP-IASLC-AMP Molecular Testing Guidelines for Selection of Lung Cancer

Patients—Revision

1.25 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. 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. Faculty will review the evidence and logic behind the new recommendations and will cover topics such as recommendations regarding new actionable predictive biomarkers, for testing for EGFR and ALK TKI resistance, and 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 the impact of the new recommendations on patient care and appropriate methods of testing (preanalytic, analytic, and postanalytic 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)



M1741 Validating a Whole Slide Imaging System—A Case-Based Approach to the CAP

Guidelines

1.25 CME/SAM/CE CREDITS

Digital pathology systems must be validated prior to being used in a clinical setting. Although the CAP has provided guidelines on validating whole slide imaging, many pathologists have minimal experience with operating a digital pathology system. This course is intended to teach participants how to validate a whole slide imaging system. First, faculty will review the CAP-published guidelines with particular focus on intended clinical use, sample number, and concordance rate, and will cover use cases, including intraoperative diagnosis and consultation. Faculty will present the course interactively with participants engaged in a hypothetical validation study. Finally, faculty will discuss conditions in which revalidation of a system must be considered.

You will learn to:

- Design a validation study for a whole slide imaging system that meets CAP guidelines
- Determine the human resources required for a validation study
- Calculate the concordance rate between standard microscopy of glass slides versus whole slide scanned images
- Determine when a whole slide imaging system needs to be revalidated

Faculty

Brent T. Tan, MD, PhD, FCAP

8:00–9:00 AM



M1893 Artificial Intelligence: Pathology's Armageddon

1.0 CME CREDIT

The rise of machines is upon us, and the technological singularity is at hand. Is it possible to coexist or will Alexa have the last word? Will the tsunami of big data crush us or bring new opportunities? Should we embrace the new order of machine learning and data-driven algorithms or become a pathology Luddite and resist? Join us for a point/counter-point discussion of the perils and possibilities that machine learning and artificial intelligence (AI) bring to the practice of pathology. Contribute to the discussion about the future and judge for yourself if the ghost in the machine is a real possibility or a pipe dream fed by virtual rumors about a day that will never dawn.

You will learn to:

- Describe the various terms associated with artificial intelligence, such as machine learning, deep learning, etc
- Review the state of AI and machine learning in health care in general and pathology in particular
- Describe the opportunities and risks that artificial intelligence brings to pathology and learn to separate the hype from the hope
- Appraise current and potential algorithmic anatomic and clinical pathology applications to see what the future might bring
- Discuss the regulatory environment associated with machine and deep learning and the role of agencies, such as the Food and Drug Administration, and the CAP
- Review the role for pathologists in validating the tools that use black-box machine learning

Faculty

Eric F. Glassy, MD, FCAP (Moderator)

Matthew G. Hanna, MD

Ronald Jackups III, MD, PhD, FCAP

9:30–11:30 AM

S1719 The WHO and Beyond: Myeloproliferative Neoplasms

2.0 CME CREDITS

The World Health Organization (WHO) recently presented the 2016 revision to the WHO classification of myeloid neoplasms and acute leukemia, including modified criteria for myeloproliferative neoplasms (MPNs). The impetus for these revisions in MPNs was largely based upon the identification of new molecular markers; and in each of the cases, the new criteria contain genetic mutations or genetic evolution as a major criterion. Faculty will define and apply these new criteria through a series of cases, demonstrating best practices with both algorithm and panel-based testing as guided by the clinical and morphologic presentations. In addition, faculty will discuss the potential prognostic significance of additional mutations, extending the course beyond the WHO.

You will learn to:

- Define the changes in the diagnostic criteria of MPNs in the new WHO
- Apply the WHO criteria to several real life cases
- Specify best practices when using algorithm versus panel testing
- Integrate new knowledge of additional mutations into daily practice

Faculty

Mark D. Ewalt, MD, FCAP**Cecilia Yeung, MD*****Cosponsored by the Association for Molecular Pathology (AMP)*****S1729 A Practical Approach to Diagnosing Common Informatics Problems: What Every Pathologist Needs to Know**

2.0 CME CREDITS

Pathologists and laboratory directors face problems on a regular basis that have informatics components. Proper resolution of these issues requires the participation of a laboratory professional in the process. Therefore, it is critical for pathologists and medical directors to understand how to effectively approach, diagnose, and treat common informatics problems in conjunction with other clinical providers, hospital/client leadership, IT staff, and laboratory staff. Faculty will use team-based learning to work through three practical problems in the management of laboratory data, covering common issues such as laboratory orders, laboratory results, implementation of new technology, and security of laboratory data. Both process-based as well as technology-based issues will be discussed. Faculty will lead participants to develop their clinical diagnostic informatics acumen. While this is a returning course, new cases will be used in the discussion.

You will learn to:

- Participate in the diagnosis of common informatics-related problems that occur in the laboratory
- Communicate and work with local information management resources toward problem resolution
- Identify the critical role that pathologists can/should play in the overall management strategy of laboratory data for patient care

Faculty

Alexis B. Carter, MD, FCAP**John H. Sinard, MD, PhD, FCAP****Myra L. Wilkerson, MD, FCAP**

9:30–11:30 AM

**S1828 New External Programs for Laboratory Quality Assurance****2.5 CME/SAM CREDITS**

This session will provide an overview of the CAP's external quality assurance/proficiency testing (PT) programs and review relevant Centers for Medicare & Medicaid Services (CMS) requirements and the CAP's Laboratory Accreditation Program Checklists. Three specific areas of focus will include: 1) the accuracy based grading PT surveys, 2) the multiple instrument comparison (Quality Cross Check) PT survey, and 3) the PT surveys for linearity validation and analytical measurement range for coagulation testing. In addition, the session will review the CAP's experience and reporting procedures in these areas. Clinical laboratory professionals working with and interested in monitoring analytical and quality performance including laboratory directors, pathologists, clinical chemists, medical technologists/medical technicians, and IVD industry personnel are the intended audience.

You will learn to:

- Identify the new CAP and CMS requirements for quality assessment
- Describe the importance of commutable PT samples
- Explain the importance of multiple instrument comparisons
- Apply AMR validation and linearity to coagulation testing

Faculty

Keri J. Donaldson, MD, FCAP

Charles S. Eby, MD, FCAP

Anthony A. Killeen, MD, PhD, FCAP

**S1854 The Interface of Cytology and Histology in Thyroid and Salivary Gland Pathology****2.0 CME CREDITS**

Thyroid and salivary gland neoplasms represent some of the most challenging surgical pathology and cytology cases encountered by pathologists today. Using a case-based format, this session will present a variety of diagnostically challenging thyroid and salivary gland lesions from the consultation files of the speakers. Differential diagnosis of follicular-patterned thyroid neoplasms will be discussed, including the recently proposed terminology of *NIFTP* (noninvasive follicular thyroid neoplasm), criteria for capsular/vascular invasion, and minimal criteria for diagnosing papillary thyroid carcinoma. A practical diagnostic approach will be employed to evaluate salivary gland neoplasms, such as cellular benign neoplasms, basaloid tumors, and low-intermediate grade malignancies, with emphasis on potential pitfalls. The session also will provide updates on the Milan System for reporting salivary gland cytopathology and the Bethesda System for reporting thyroid cytopathology.

You will learn to:

- Distinguish histologically between NIFTP and other follicular-patterned thyroid neoplasms
- Utilize strict cytologic criteria in the differential diagnosis of thyroid indeterminate lesions, and understand the benefits and limitations of molecular studies
- Explain the updates on Bethesda System for reporting thyroid cytopathology
- Utilize a practical approach to evaluating salivary gland cytologic specimens, and how to best avoid potential pitfalls
- Describe the new Milan System for reporting salivary gland cytopathology
- Utilize a combination of histologic features and immunohistochemistry to subclassify challenging salivary gland neoplasms, and appropriately grade them when applicable

Faculty

Tarik M. Elsheikh, MD, FCAP

Bruce M. Wenig, MD, FCAP

9:30–11:30 AM



S1858 Why Is Everything Positive? Panreactivity in Blood Bank Testing

2.5 CME/SAM CREDITS

It is essential that the blood bank perform pretransfusion testing to select red blood cell units that are appropriate for an individual patient. Panreactivity in antibody screens and panels precludes the ready identification of underlying red blood cell alloantibodies and may make finding compatible red blood cell units difficult or impossible. During this course, faculty will use a case-based approach to examine the various causes of panreactivity in pretransfusion testing. The causes of panreactivity that will be covered include warm and cold autoantibodies, alloantibodies to high-frequency red blood cell antigens, and drug interferences, notably daratumumab. This course is sponsored by the CAP's Transfusion Medicine Resource Committee.

You will learn to:

- Describe the varying causes of panreactivity in pretransfusion testing
- Identify serological techniques that assist in determining the cause of panreactivity and identifying underlying red blood cell alloantibodies
- Discuss how to select red blood cell units for patients with panreactivity

Faculty

Julie Katz Karp, MD, FCAP

Glenn E. Ramsey, MD, FCAP

Nicole D. Zantek, MD, PhD, FCAP



S1864 How to Practically Approach Atypical Melanocytic Neoplasms (Gray-Zone Lesions) in Children and Adults

2.5 CME/SAM CREDITS

This session will focus on the key aspects of emerging molecular study in addition to the traditional clinical and histophenotypic features of borderline melanocytic neoplasms. These neoplasms include Spitzoid melanocytic lesions in children and adults, nevoid melanomas, melanomas associated with nevi, capsular melanocytic nevi in sentinel lymph nodes, and severe dysplastic nevi, based on the presenters' extensive experience in a large tertiary referral cancer center. Early and correct recognition of these lesions is of utmost interest for practicing general pathologists to reduce incorrect or nondefinitive diagnosis and costs for unnecessary studies and to help streamline turnaround time of results for patients and their case management. Presenters will conclude the session with a summary of the key features and an algorithmic approach, followed by real-case review of various common and challenging cases with interactive discussion to establish a definite diagnosis using the best practice.

You will learn to:

- Identify the key clinicohistopathological features, which define the best practical approach for the evaluation of gray-zone melanocytic lesions, leading to correct diagnosis of malignant versus benign melanocytic lesions
- Interpret the results of ancillary studies, including molecular assays in the context of clinical and histopathologic features of each patient

Faculty

Phyu P. Aung, MD, PhD, FCAP

Doina Ivan, MD

9:30–11:30 AM



V1873 Inflammatory Bowel Disease and Colon Cancer: Selected Update in Diagnosis and Staging

2.0 CME CREDITS

This two-hour video microscopy tutorial will complement issues discussed in two CME courses being offered at the 2018 meeting. The first course updates the AJCC 8th edition for staging cancers of the gastrointestinal tract and the second course addresses inflammatory bowel disease (IBD). Using examples from daily clinical and consultation practice, this microscopy tutorial will discuss important issues in colon cancer staging, such as evaluation of tumor budding and use of special stains in diagnosis of vascular invasion and serosal perforation. It also will provide participants an opportunity to review common mimickers of IBD and the spectrum of atypia in IBD, ranging from florid reactive change to dysplasia, with an emphasis on morphologically distinctive phenotypes of dysplasia in IBD and changes commonly seen in targeted biopsies obtained during surveillance colonoscopies using enhanced visualization techniques.

You will learn to:

- Score tumor budding in colon
- Identify the utility, or lack thereof, of special stains in diagnosing serosal perforation or vascular invasion in colon cancer staging
- Recognize common mimickers of IBD, including checkpoint inhibitor colitis
- Recognize common pitfalls in dysplasia diagnosis
- Identify specific morphologic phenotypes of dysplasia in IBD and their clinical relevance

Faculty

Amitabh Srivastava, MBBS, 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.

R1691 Current Payment Policy Challenges in Pathology Practice

Faculty

Jonathan L. Myles, MD, FCAP

R1711 Dealing With Matters of Professionalism in the Workplace

Faculty

Ronald E. Domen, MD, FCAP

Suzanne Z. Powell, MD, FCAP

R1737 Managing the People Who Manage Your Information System

Faculty

John H. Sinard, MD, PhD, FCAP

R1738 Digital Pathology Applications for the Community Practice

Faculty

Brent T. Tan, MD, PhD, FCAP

 **R1804 Communication: Good and Bad**

Faculty

Paul Bachner, MD, FCAP

2:00–3:00 PM



M1792 PD-L1 Biomarker Testing: An Update for Practicing Pathologists

1.25 CME/SAM CREDITS

Immunotherapy targeting the PD-1/PD-L1 pathway represents a new therapeutic paradigm and a promising treatment option for advanced non-small-cell lung cancers, melanoma, and, more recently, gastric and gastroesophageal carcinomas. Currently, two PD-L1 immunohistochemistry assays have been approved as companion/complimentary diagnostic tests for PD-1 checkpoint inhibitors. In this setting, practicing pathologists are playing an increasingly larger role as consultants on test selection and integrated clinical interpretation. This course will review the practical uses of PD-L1 immunohistochemistry tests, including their specimen requirements, interpretive criteria, frequent challenges, reporting, limitations, and indications, and will reinforce these concepts with examples of PD-L1 analysis of non-small-cell lung cancer, melanoma, and carcinomas of gastric and gastroesophageal origin. Discussion will also focus on practical aspects of PD-L1 immunohistochemistry test development, validation, implementation, and quality control/assurance.

You will learn to:

- Identify the different PD-L1 immunohistochemistry assays that have been approved as companion diagnostic tests for PD-1/PD-L1 checkpoint inhibitors
- Recognize the indications, specimen requirements, applications, limitations, and intricacies of PD-L1 immunohistochemistry testing in solid tumors with emphasis on non-small-cell lung cancer, melanoma, and gastric and gastroesophageal carcinomas
- Recognize the different aspects of PD-L1 IHC test development, validation, implementation, and quality control/assurance

Faculty

Georgios Deftereos, MD, FCAP

Larissa V. Furtado, MD, FCAP



M1872 Papillary Lesions of the Breast

1.0 CME CREDIT

Papillary breast lesions are not uncommonly encountered in routine practice but are quite challenging to diagnose. These breast papillary lesions include papilloma with or without atypia (atypical papilloma), papilloma involved by ductal carcinoma in situ (DCIS), intraductal papillary carcinoma (papillary DCIS), encapsulated papillary carcinoma, solid papillary carcinoma, and invasive papillary carcinoma. Some of the papillary lesions are uncommon; and general pathologists should be familiar with the morphology, ancillary studies, histopathological classification, and optimal treatment. In a recent study, 28% of 600 surveyed pathologists misclassified invasive papillary carcinoma as in situ carcinoma and 24% diagnosed encapsulated papillary carcinoma as invasive. This course aims to help pathologists become familiar with the papillary lesions of the breast.

You will learn to:

- Diagnose the papillary lesions of the breast by morphology and appropriate ancillary studies
- Identify the treatment options and prognosis of the papillary lesions of the breast

Faculty

Xiaoxian (Bill) Li, MD, PhD, FCAP

2:00–5:30 PM

H1634 Genomic Pathology 101: An Interactive Workshop

3.0 CME CREDITS

As diagnosticians, all pathologists must understand genomic testing. 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 introductory principles related to the development of genomic assays and interpretation of results. The workshop also will 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 workshop. 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

Allison M. Cushman-Vokoun, MD, PhD, FCAP

Richard L. Haspel, MD, PhD, FCAP

Nikoletta Sidiropoulos, MD, FCAP

3:30–5:30 PM



N1895 The Evolving Landscape of Liquid Biopsies: What We Can Do for Our Patients Now

0.0 CME/CE Credits

Liquid biopsies can detect circulating tumor DNA in cancer patients and provide information regarding the genomic features of their tumors. The ease of obtaining blood (rather than core needle or other sampling of solid tumors) can offer definite advantages in terms of settings where the solid tumor sample is challenging to obtain. This course will cover the findings of the recent ASCO / CAP Joint Review publication in this area as well as subsequent publications that have subsequently emerged. An oncologist from a large cancer center will explain why this approach is valuable in their practice. Representatives from a large commercial provider of this assay will talk about the technical aspects of the assay and what the test can detect.

You will learn to:

- Appreciate the ASCO / CAP Joint Review assessment of liquid biopsies
- Understand how the field has evolved since the Joint Review publication
- Grasp the principles and potential pitfalls of liquid biopsies
- Know the clinical settings where liquid biopsies are most informative

Faculty

John V. Heymach, MD
Richard Lanman, MD
Alexander J. Lazar, MD, PhD, FCAP



S1633 Practical Challenges in Peripheral Blood Evaluation: A Case-Based Approach

2.5 CME/SAM CREDITS

Peripheral blood smear findings are often the first sign of an abnormality in a patient. In this course, faculty will use a case-based approach to review common challenges in peripheral blood smear evaluation. This will include differential diagnostic considerations for T- and B-cell lymphocytosis, monocytosis, anemia, neutrophil abnormalities, and thrombocytosis. The course will emphasize best practices in the diagnosis of a patient from a peripheral blood smear, including a cost-effective approach using ancillary studies and recommended next steps. Faculty will provide updates to diagnostic criteria from the 2016 edition of *WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues*. 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:

- Recognize nonneoplastic and neoplastic disorders in the peripheral blood smear
- Describe key morphologic findings of anemia and what these findings indicate
- Distinguish reactive from malignant causes of lymphocytosis, monocytosis, and thrombocytosis
- Discuss the differential diagnosis of abnormal neutrophil morphology
- Triage peripheral blood specimens for appropriate ancillary testing

Faculty

Devon S. Chabot-Richards, MD, FCAP
Carla S. Wilson, MD, PhD, FCAP

3:30–5:30 PM

S1708 Problem Cases in Surgical Pathology: Slide Seminar

2.0 CME CREDITS

The course will address problem areas of diagnosis in surgical pathology using a slide seminar format. Faculty will present selected cases and use them as a platform for an in-depth discussion of the topic. Discussion will center on modern criteria for diagnosis, the pitfalls associated with the lesions discussed, and the role and limitations of special techniques for diagnosis. Audience interaction will engage participants, and questions and answers will be encouraged.

You will learn to:

- Identify new entities in surgical pathology
- Recognize common pitfalls involved in the diagnosis of uncommon tumors
- Identify the role and limitations of special techniques for the diagnosis of uncommon tumors

Faculty

Kumarasen Cooper, MBChB, FCAP

Saul Suster, MD, FCAP

Paul E. Wakely Jr., MD

Bruce M. Wenig, MD, FCAP

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



S1717 Vignettes in Ethics and Professionalism: A Case-Based Discussion

2.5 CME/SAM CREDITS

Unprofessional behaviors may occur at any level in any organization and can compromise workplace morale as well as patient care. The faculty will guide participants through a series of hypothetical scenarios in which unprofessional behavior is observed in pathology practice. Participants will employ an audience response system to monitor opinions before and after a discussion of key points. Participants will learn to recognize unprofessional behaviors and to focus an appropriate response of the observed behavior while avoiding pitfalls that may produce unintended consequences to the responder or the organization. From any level of experience, participants will be encouraged to share their experiences, either as having had to confront others or as having been confronted about unprofessional conduct.

You will learn to:

- Recognize unprofessional behaviors in the workplace
- Know the roles of stated or imputed intentions or diagnoses of those exhibiting unprofessional behaviors
- Respond to unprofessional behavior in a way that is commensurate with its severity and recurrence
- Avoid breaches of privacy or discrimination issues when responding to unprofessional behavior

Faculty

Ronald E. Domen, MD, FCAP

Suzanne Z. Powell, MD, FCAP

Cosponsored by The Pierre W. Keitges, MD, FCAP Memorial Program on Medical Ethics under the aegis of the CAP Foundation. The program addresses aspects of pathology from an ethical perspective.

3:30–5:30 PM



S1727 Beyond Elevated Liver Enzymes: Recognizing Patterns of Liver Injury

2.5 CME/SAM CREDITS

The liver has a limited pathologic response to a myriad of insults. The term *elevated liver enzymes* is frequently the only clinical data that accompanies liver pathology specimens. Familiarity with common patterns of liver injury and the integration of these findings with clinical history leads to an accurate diagnosis. This course will present a systematic approach to recognizing features of chronic and acute liver injury (drug related, autoimmune, fibrosis) encountered in everyday pathology practice.

You will learn to:

- Identify patterns of liver injury caused by biliary disease, autoimmune disease, and chronic hepatitis
- Effectively diagnose and differentiate cirrhosis from hepatoportal sclerosis
- Recognize drug reaction (ie, cholestasis, bile duct injury)
- Integrate laboratory values and pathologic features to formulate a cohesive diagnosis

Faculty

Safia N. Salaria, MD, FCAP

Mary K. Washington, MD, PhD, FCAP



S1847 Pathology of the Urinary Tract: Clarification, Classifications, and Caveats

2.0 CME CREDITS

Urothelial neoplasia is a rapidly evolving diagnostic area with numerous evidence-based changes reflected in the 2016 WHO and 8th edition AJCC manuals and in emerging molecular data in the literature. This course will provide a practical approach to H&E diagnosis, application of ancillary tests, and clinical communication, using case-based discussion to address the H&E differential diagnosis, application of immunohistochemistry and molecular tests, updated staging considerations based on anatomic location, and role of communication with urology and oncology to optimize patient care. Specific topics will include invasive urothelial carcinoma and its variants, superficial lesions and benign mimickers, urinary tract staging, and molecular classification of urothelial carcinoma. Didactic and interactive approaches will be used to facilitate learning.

You will learn to:

- Diagnose carcinomas of the urinary tract, including urothelial carcinoma and its variants
- Recognize benign mimickers and avoid misdiagnosis that could lead to unnecessary treatment
- Identify staging challenges and how to successfully approach them in grossing and microscopy
- Incorporate relevant emerging ancillary tests into practice

Faculty

Mahul B. Amin, MD, FCAP

Donna E. Hansel, MD, PhD, FCAP

8:00–9:00 AM

P1899 Fine-Needle Aspiration Biopsy: Small Package—Expanding Information

1.0 CME/CE CREDITS

Fine-needle aspiration biopsy (FNAB) initially was applied exclusively to palpable masses using morphology alone for interpretation. Over time, imaging and endoscopy have greatly expanded the anatomical reach. Recent developments in molecular testing on very small specimens from nearly all anatomical sites has allowed the mining of sophisticated diagnostic, prognostic, and theranostic information.

Join us as Dr. Ljung shares her professional experience and perspective on the topic. Specifically she will cover:

- A brief history of FNAB
- The impact on thyroid disease management
- The thin prep system story
- Breast FNAB: initial enthusiasm followed by decline—what happened?
- Image-guided FNAB
- Molecular applications: specimen types and preparations
- The impact of specimen quality and training

Britt-Marie Ljung, MD, FCAP is professor emerita, past director of the Division of Cytopathology, cytopathology fellowship director, and past vice chair at the University of California San Francisco. She was coauthor and served as faculty for the CAP's award-winning Ultrasound-Guided Fine Needle Aspiration Advanced Pathology Program for pathologists. She is a member of the editorial boards of the *Journal of the American Society of Cytopathology*, *Cancer Cytopathology*, *Diagnostic Cytopathology*, and *Acta Cytologica*. As part of her commitment to Global Health, Dr. Ljung has taught and promoted FNAB in both east and west Africa as well as in Peru.

You will learn to:

- Describe the clinical use and evolution of FNAB
- Discuss the initial unintended impact of the thin prep system and the negative consequences of FNAB's casual introduction during 1980 to 1995
- Examine the impact of image-guided sampling
- Maximize sample yields for molecular testing
- Apply tools and strategies for training in procurement

Faculty

Britt-Marie Ljung, MD, FCAP

8:00–9:00 AM

M1681 Molecular Oncology Tumor Board: Breast Cancer

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, using breast cancer as an example. The rapid growth and expansion of molecular testing capabilities and the use of these diagnostic tests for clinical decision making has brought 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 in breast cancer
- Discuss the interpretation of results from molecular tumor profiles, including the identification of actionable aberrations
- Identify how tumor profiling data may be utilized to direct care and treatment strategies when applied to patient cases

Faculty

Aditya Bardia, MBBS, MPH
Deborah A. Dillon, MD, FCAP

Cosponsored by the American Society of Clinical Oncology (ASCO)



M1710 Problems and Controversies in the Interpretation of Thyroid Nodules

1.25 CME/SAM CREDITS

As a pathologist, if you are called upon to evaluate thyroid nodules in your routine practice, this course is for you. Faculty will address problem and controversial areas in the interpretation of thyroid nodules, including recent changes in terminology for the encapsulated follicular variant of papillary thyroid carcinoma, correct diagnosis of conventional and follicular variants of papillary carcinoma, unusual variants of papillary carcinoma, and benign and malignant follicular tumors of nonpapillary type. The course will use a case-based approach, with typical examples serving as a basis for broader discussion of the topics. Faculty will encourage audience participation in the form of questions-and-answers discussion.

You will learn to:

- Interpret the criteria for separating benign from malignant follicular nodules of the thyroid
- Identify the role of immunohistochemistry and molecular pathology in the diagnosis
- Explain the new nomenclature noninvasive tumors with papillary features

Faculty

Saul Suster, MD, FCAP

8:00–9:00 AM



M1885 Updates in Adult Renal Epithelial Neoplasia

1.0 CME CREDIT

The most recent addition of the WHO Classification of Genitourinary Tumors includes an updated list of renal epithelial tumor subtypes. Accurate classification can influence patient treatment options and prognosis. This course will address these recent updates in adult renal epithelial neoplasia and will provide morphologic clues and use ancillary studies to make the correct diagnoses. Additionally, evaluation of such tumors in limited tissue samples (eg, core biopsies) and a discussion of important inheritable renal tumors will take place. Pathologists in training and practicing pathologists will find this course useful.

You will learn to:

- Diagnose less common variants of renal epithelial neoplasia, including new entities added to the recently updated WHO classification of genitourinary cancers
- Diagnose the various hereditary renal cell carcinoma subtypes
- Identify appropriate biomarkers to diagnose and subtype kidney tumors

Faculty

Michelle S. Hirsch, MD, PhD

9:30–11:30 AM

**S1613 Diffuse Large B-Cell Lymphomas: Greatest Hits, Doubles Hits, and Various Shades of Gray-Zone Lymphomas**

2.5 CME/SAM CREDITS

Diffuse large B-cell lymphomas (DLBCLs), which encompass the most commonly observed lymphoma category, are highly heterogeneous and are composed of numerous variants and clinicopathologic subtypes. Furthermore, with the rapid advances in the understanding of the genetic basis for these subtypes, practicing surgical pathologists and hematopathologists find it challenging to keep abreast of advances in ever-evolving diagnostic criteria, immunophenotypic and genetic prognostic factors, and therapeutic markers. As the course's faculty, expert hematopathologists and a hematologist oncologist with clinical expertise in lymphoma will synthesize contemporary approaches to diagnosis and classification of DLBCLs and discuss the clinical management and therapeutic implications. Additionally, in response to the 2016 published update of the *World Health Organization (WHO) Classification of Tumours of Haematopoietic and Lymphoid Tissues*, this course will highlight important changes that will impact the diagnostic approach to DLBCLs. The faculty will focus on how to distinguish DLBCLs from other aggressive B-cell lymphomas, such as Burkitt lymphoma, high-grade B-cell lymphomas, including double-hit lymphomas (DHLs) and unclassifiable (intermediate or gray zone) B-cell lymphoma (BCLU).

You will learn to:

- 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
- Recognize the clinical management decisions and therapeutic implications associated with patients with aggressive B-cell lymphoma

Faculty

Adam Bagg, MD**Daniel J. Landsburg, MD****Megan S. Lim, MD, PhD, FCAP**

9:30–11:30 AM



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

2.5 CME/SAM CREDITS

Gestational trophoblastic disease (GTD) remains a challenging area in gynecologic diagnostic pathology. Faculty will review the evaluation of morphologically abnormal products of conception (POC), which is a major source of difficulty when it comes to diagnostic reproducibility and accuracy using routine stained slides. It may result in either overdiagnosis or underdiagnosis of a hydatidiform mole, with the consequence of over- or undertreatment 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 nontrophoblastic 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 they will present a practical, algorithm-based strategy for evaluating abnormal POC specimens, trophoblastic proliferations, and trophoblastic tumors. Additionally, faculty will discuss the appropriate selection and interpretation of ancillary immunohistochemical and molecular tests, including the most recently available ones, and the 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 mimickers
- 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

9:30–11:30 AM



S1830 Finding the Value: Cases for Improving Autopsy Effectiveness and Communicating Results

2.0 CME CREDITS

Diagnosis at autopsy brings together many aspects of pathology practice, from histologic classification to interpretation of laboratory values. This “autopsy tumor board” will show compelling cases of varied disease types and will interactively challenge attendees to select autopsy-extending ancillary studies and reach conclusions. The session also will encompass strategies for communication of results, utilization of the autopsy in quality improvement, and linking the autopsy to emerging research. Attendees will sharpen diagnostic skills and learn to utilize the autopsy as a platform to demonstrate value to clinicians and family members.

You will learn to:

- Integrate clinical history, laboratory, and imaging data to diagnose cause of death and other major disease
- Communicate complex results effectively to physician clients and family members
- Utilize autopsy as a practical tool for patient care, quality improvement, research, and demonstration of value

Faculty

Jody E. Hooper, MD, FCAP
Harold Sanchez, MD, FCAP



S1884 Common Errors in Diagnosing Chronic Colitis and the Challenges of IBD-Associated Dysplasia

2.0 CME CREDITS

Establishing a diagnosis of chronic inflammatory bowel disease (IBD) can be challenging and has far-reaching clinical consequences. Every biopsy diagnosed as chronic colitis does not imply IBD, and IBD patients do not always show a chronic colitis on biopsy. Further, a diagnosis of IBD dysplasia may lead to interventions that vary from a simple polypectomy to continued surveillance to a total colectomy, depending on patient characteristics and endoscopy findings. Using a combination of lectures (one hour) and slide discussion with digitally scanned slides (one hour), this course will address the problem of IBD mimickers and the spectrum of dysplasia in IBD. Faculty will focus on common errors and how misdiagnosis/miscommunication can be avoided by using a systematic approach to biopsy interpretation and standardized reporting nomenclature.

You will learn to:

- Identify key features of chronic colitis
- Recognize the importance of using standardized nomenclature in reporting
- Recognize the most commonly misdiagnosed mimickers of IBD
- Diagnose dysplasia and recognize the clinical implications of the diagnosis in IBD
- Describe the role of ancillary stains in diagnosis of IBD dysplasia

Faculty

Amitabh Srivastava, MBBS, FCAP

CAP18 FACULTY

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