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ABDOMINAL IMAGING



■ GREAT CASES IN ABDOMINAL US

RSP1311 NEW Part of CD Collection BUN26

Robert A. Kane, MD; Michael D. Beland, MD;
Philip W. Ralls, MD

CME 1.25, Content Codes: [GI](#) [GU](#) [US](#)

This course uses a case-based format to identify and characterize malignancies of the liver, kidneys, biliary tract and pancreas. The current status in the United States of contrast-enhanced ultrasound (US) for evaluating Focal Liver Lesions (FLLs) is reviewed. The role of US imaging in common renal disease is also presented, including review of a wide variety of acute and chronic diseases of the kidneys. Finally, the course promotes recognition of unusual and instructive cases in the biliary tract and pancreas.

■ GASTROINTESTINAL: ACUTE ABDOMINAL PAIN

RSP1211 NEW Part of CD Collection BUN26

Rajan T. Gupta, MD; Jay P. Heiken, MD;
Desiree E. Morgan, MD

CME 1.50, Content Codes: [GI](#) [ER](#)

Acute abdominal pain presents a diagnostic challenge for radiologists. Common and uncommon etiologies for bowel obstruction are presented in this course, with emphasis on identification of key features that impact clinical management. State-of-the-art techniques for evaluating intestinal ischemia, acute appendicitis and acute diverticulitis are presented, including review of major complications in acute diverticulitis. Cross-sectional imaging of acute pancreatitis and discussion of appropriate management round out this comprehensive review of acute abdominal pain.

■ GASTROINTESTINAL: GALLBLADDER AND BILE DUCTS

RSP2511 NEW

Ivan Pedrosa, MD; Benjamin M. Yeh, MD

CME 1.00, Content Codes: [GI](#) [CT](#) [MR](#)

The gallbladder and bile duct can provide the radiologist with a host of complicated imaging findings. Review of basic anatomy and physiology of the biliary system kicks off this course, providing appropriate context for discussion of both malignant and benign disorders of the gallbladder. Emphasis is placed on appropriate CT and MR techniques for imaging the gallbladder and bile ducts, including the advantages and limitations of different imaging protocols. Methods to differentiate benign versus malignant disorders of the gallbladder and bile ducts are presented, including identifying disorders such as biliary stones, biliary inflammation, cholangitis, cholangiocarcinoma, and gallbladder carcinoma. Case-based review of imaging findings of each of these disease processes promotes differential visual identification.

■ GASTROINTESTINAL: LIVER

RSP1911 NEW

Courtney A. Coursey, MD; Claude B. Sirlin, MD

Erik K. Paulson, MD

CME 1.50, Content Codes: [GI](#) [MR](#) [CT](#)

This course provides a comprehensive review of liver imaging, including both CT and MR techniques. Detection of liver pathology using optimized CT protocols is discussed, including protocol modification to achieve reductions in radiation dose. MR protocols for evaluation of the liver are presented, including review of extracellular, combined extracellular and hepatobiliary (gadobenate dimeglumine, gadoxetate disodium), and blood-pool (gadofosveset trisodium) MR contrast agents. Test your knowledge and experience in identifying focal liver lesions on CT and MR in a case-based review format.

■ ABDOMINAL MRI FOR BETTER DIAGNOSIS

RSP1711 NEW Part of CD Collection BUN26

Richard C. Semelka, MD; Diego R. Martin, MD, PhD;
Russell N. Low, MD

CME 1.75, Content Codes: [GI](#) [QA](#) [MR](#)

This course reviews the major concerns regarding image quality in full-body and abdominal MR, including techniques for reducing motion artifacts. Additionally, this course reviews the applications of MRI in evaluation of diffuse liver disease and common liver tumors. Finally, this course describes MR imaging techniques and protocols for intestinal and peritoneal imaging, including focus on the value of gadolinium-enhanced MRI and diffusion-weighted MRI for diagnosis.

■ TRAUMATIC ABDOMEN AND PELVIS

RSP1510

Robert A. Novelline, MD; Jorge A. Soto, MD;

Sue Ellen Hanks, MD

CME 1.75, Content Codes: [ER](#) [GI](#) [GU](#) [VA](#) [CT](#)

Management of traumatic abdominal and pelvic injuries relies heavily on the radiologists' ability to rapidly recognize and provide intervention for their patients. This course describes optimal MDCT protocols for evaluating and diagnosing active abdominal bleeding, including CTA for patients with vascular trauma. In addition, review of CT angiography as a method of identifying and characterizing active bleeds in certain subgroups is discussed. Triage concerns are addressed for abdominal and pelvic trauma patients, focusing on rapid diagnosis and vascular intervention.

■ ACUTE CONDITIONS OF THE ABDOMEN

RSP1310

Francis Joseph Scholz, MD; Rajan T. Gupta, MD;

Douglas S. Katz, MD; Jay P. Heiken, MD

CME 1.75, Content Codes: [CT](#) [ER](#) [IR](#) [GI](#)

This course reviews the differential diagnoses for a broad spectrum of acute inflammatory conditions affecting the luminal and solid organs. Analysis of bowel dysfunction on CT is presented, as well as a discussion of the accurate detection and characterization of gallbladder disease. State-of-the-art CT techniques for evaluation of suspected intestinal ischemia are also provided.

■ SMALL BOWEL IMAGING

RSP1010

*Jeff L. Fidler, MD; Tracy Anne Jaffe, MD;
Michael Macari, MD*

CME 1.75, Content Codes: [CT](#) [GI](#) [MR](#)

MR and CT imaging can provide useful diagnostic information in patients with medical conditions of the small bowel. This course reviews advantages and limitations of CT and MR imaging of the small bowel, focusing on the CT appearance of small bowel obstruction as well as current imaging strategies and techniques to identify small bowel bleeds. Review of epidemiology and clinical management of Crohns disease on CT and MR is also discussed.

■ PANCREATIC IMAGING

RSP1210

*Fergus V. Coakley, MD; Mark E. Baker, MD;
Alec Jeffrey Megibow, MD, PhD;
Desiree Emma Morgan, MD*

CME 1.75, Content Codes: [GI](#) [OI](#) [CT](#) [MR](#)

Optimal imaging of the pancreas is essential in determining morphology of common pancreatic abnormalities. This course outlines methods for performing a technically optimized CT or MR scan of the pancreas, with discussion of identification strategies for acute pancreatitis as seen on contrast-enhanced CT and MR. Detecting the appearance of pancreatic adenocarcinoma on state-of-the-art MDCT and MR imaging is also reviewed, along with imaging findings related to cystic pancreatic masses.

■ ESOPHAGEAL AND GASTRIC CONDITIONS

RSP1410

*William Moreau Thompson, MD;
Richard Michael Gore, MD; Cheri Lee Canon, MD*

CME 1.50, Content Codes: [GI](#) [OI](#)

In this course, common approaches to identification of malignancies of the esophagus and stomach are discussed, focusing on barium studies and cross-sectional imaging specifically. Imaging features and findings useful in the diagnosis of gastric malignancies are discussed. A review of postoperative imaging findings in patients with gastric cancer surgery is presented, along with imaging approaches for patients with gastrointestinal surgery including esophagogastrectomy with gastric pull-up, fundoplication, and gastric bypass procedures.

■ CT COLONOGRAPHY

RSP1110

*Abraham H. Dachman, MD; Perry J. Pickhardt, MD;
David H. Kim, MD; Dushyant V. Sahani, MD*

CME 1.75, Content Codes: [CT](#) [GI](#) [QA](#)

This course reviews techniques to optimize CT colonography scanning in difficult cases, including discussion of technical optimization and quality assurance. Differentiation between lesion detection on 3D vs. 2D imaging is provided. Presenters also review nationally established benchmarks for CTC imaging and current efforts to expand colorectal cancer screening using CTC. Staging of colorectal cancer and treatment strategies based on TNM staging are also presented.

■ THE INCIDENTAL SMALL RENAL MASS

RSP2510 Part of CD Collection BUN24

*Stuart G. Silverman, MD; Brian Robert Herts, MD;
Ivan Pedrosa, MD*

CME 1.50, Content Codes: [GU](#) [OI](#) [MR](#) [CT](#)

Evaluation of small renal masses presents radiologists with a challenge in determining which lesions should cause concern and which can be ignored. This course reviews the latest developments in evaluating small solid and cystic renal masses on MDCT, MR imaging, and biopsy. Additionally, this course outlines strategies for characterization of masses into “leave-alone,” “observation” and “treatment” categories. Through characterization of these masses, a practical and medically appropriate approach to managing these lesions is reviewed.

■ RENAL ARTERY DISEASE

RSP1509 Part of CD Collection BUN24

Myron A. Pozniak, MD; W. Dennis Foley, MD

CME 0.75, Content Codes: [GU](#) [CT](#) [VI](#)

To be able to most effectively evaluate images for renal artery disease, the radiologist should understand the pathophysiology and natural history of atherosclerotic and fibromuscular forms of the disease. This course provides a discussion of these disease processes and the ways to best evaluate them using 16- and 64-slice MDCT systems. Included is a look at the potential role of dual-energy CT in calcium subtraction, artifact reduction, and iterative reconstruction.

CARDIOVASCULAR IMAGING



■ VASCULAR DISEASES IN YOUNG ADULTS

RSP1411 NEW

Elliot K. Fishman, MD; Frandics P. Chan, MD, PhD; Jean-Francois Paul, MD; Richard L. Hallett, II, MD

CME 1.50, Content Codes: [VA](#) [CT](#) [MR](#)

Join in on this comprehensive review of vascular diseases in young adults, including congenital, genetic, and inflammatory diseases. Identification and clinical significance of main coronary artery anomalies are presented, with emphasis on detection and analysis of congenital heart disease in young adults. Specific vascular pathologies are reviewed, including those that have strong genetic markers. CT imaging findings are used to demonstrate a wide variety of vascular pathologies, ranging from Marfans Syndrome to Loeys Dietz Syndrome. Classification of vasculitis and appropriate CT and MR techniques are also included. Finally, review of common vascular disease entities seen in recreational and competitive athletes is discussed.

IMAGING OF ADULT CONGENITAL HEART DISEASE

RSP2211 NEW

Linda B. Haramati, MD; Carlos S. Restrepo, MD;
Jeffrey M. Levsky, MD, PhD

CME 1.75, Content Codes: [CA](#) [CT](#) [MR](#)

Classification, anatomy, and pathophysiology of the most common systemic and venous pulmonary anomalies of the chest are reviewed in this course on adult congenital heart disease. The various types of simple shunts that can present in adulthood are reviewed, promoting recognition of the CT and MR features of atrial septal defect, ventricular septal defect, patent ductus arteriosus and coronary cameral fistula. Systemic and pulmonary venous anomalies are also reviewed, demonstrating their most significant imaging findings. This course concludes with adult presentation of tetralogy of Fallot, as well as transposition of the great vessels and single ventricle states.

CARDIAC: EMERGING CT TECHNOLOGIES

RSP1609

Martin H. Hoffmann, MD; Marc Dewey, MD;
Uwe J. Schoepf, MD; James P. Earls, MD

CME 1.75, Content Codes: [CT](#) [CA](#)

The latest developments in cardiac CT imaging are examined in this course, including 256- and 320-row scanners, dual-source CT, and many of their clinical applications. Also included is a discussion of the controversy surrounding cardiac CT, providing the practitioner with ways to assess the risks of radiation dose. Finally, there is a look to the future of MDCT systems such as adaptive statistical iterative reconstruction (ASIR), dual energy imaging, and prospective gating.

CARDIAC—NEW DEVELOPMENTS IN SPECT AND PET OF THE HEART

RSP2109 Part of CD Collection BUN14


Daniel S. Berman, MD; Marcelo F. Di Carli, MD;
Markus Schwaiger, MD

CME 1.75, Content Codes: [NM](#) [CA](#)

Developments in molecular imaging provide unique potential for visualization of the biologic mechanisms involved in cardiovascular disease and therapy. This course examines the latest advances in imaging methodology which facilitate translation of molecular imaging into the clinical setting of cardiovascular disease. Radiologists are given ways to stay abreast of these developments, and devise strategies for cardiovascular imaging using SPECT/PET and CAD detection.

UPDATE: CARDIAC—EVALUATION OF ISCHEMIA WITH CT, MR, AND NUCLEAR IMAGING

RSP2609 Part of CD Collection BUN14

Dominique Delbeke, MD, PhD;
David A. Bluemke, MD, PhD 
Joao A. Lima, MD

CME 1.75, Content Codes: [NM](#) [MR](#) [CT](#) [CA](#)

SPECT and PET, MR imaging, and MDCT imaging can all be used to evaluate patients with myocardial ischemia. Discussed here are the latest indications for use of each modality, their relative advantages and disadvantages, and the utility of complementary anatomical and functional imaging. Included is a review of the appearance of myocardial ischemia in each of these modalities.

TOPICS IN AORTIC IMAGING

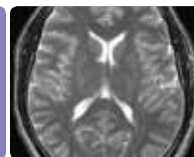
RSP2009

Dominik Fleischmann, MD; Geoffrey D. Rubin, MD 

CME 1.50, Content Code: [VI](#)

Join in this comprehensive review of the pathology, epidemiology, and natural history of acute aortic dissection, and its current anatomic classification. Appropriate imaging strategies are presented, as well as the significant imaging findings in patients with acute aortic syndromes. Endograft repair is a possible therapeutic option for some patients, and the role of CT in follow-up assessments is discussed.

HEAD AND NECK IMAGING/NEURO-RADIOLOGY



IMAGING OF THE NECK

RSP2811 NEW

Wendy R. Smoker, MD, FACR; Deborah L. Reede, MD

CME 1.50, Content Codes: [HN](#) [NR](#)

Fascially-defined spaces of the suprahyoid and infrahyoid neck are reviewed in this course, providing methods for identifying common pathologies of each space. Clinical presentation and imaging characteristics of common neck masses are discussed, including a differential diagnosis algorithm for common lesions. This course also reviews the importance of clinical history and physical exam findings in identifying common neck masses.

■ BRAIN IMAGING WORK-UP FOR DEMENTIA

RSP2611 NEW

Alexander Drzezga, MD; Yoshimi Anzai, MD; Kirk A. Frey, MD, PhD; Satoshi Minoshima, MD, PhD
CME 1.75, Content Codes: NM NR MR CT

A comprehensive review of dementia and cognitive disorders is presented in this course, including emerging PET imaging techniques for their evaluation. Diagnostic features evident in dementia work-up using FDG-PET diagnostic are described. The course will be of greatest benefit to those who actively engage in brain PET imaging, but also will be useful to those interested in learning about the evolving field of dementia imaging.

■ BRAIN VASCULAR MALFORMATIONS AND HEMORRHAGE

RSP2011 NEW

Alice B. Smith, MD; James G. Smirniotopoulos, MD
CME 1.50, Content Codes: VA NR ER

Learn to recognize the various types of vascular malformations of the brain and brain hemorrhage in this comprehensive review. Associated risks and treatment options for each type of vascular malformation are discussed. The imaging appearance of hemorrhage within the brain and the underlying pathophysiology of iron metabolism is presented, along with associated risks and treatment options. In addition, methods to distinguish significant microbleeds from macrobleeds in hypertensive disease and amyloid angiopathy are included.

■ EASILY MISSED FINDINGS IN EMERGENCY NEUROIMAGING


RSP2410

Diego B. Nunez, MD, MPH; James Michael Provenzale, MD; Peter George Kranz, MD; Clint W. Sliker, MD
CME 1.50, Content Codes: ER NR HN

Due to the complexity of the anatomic structures of the head and neck, radiologists must employ strategies to reduce errors and missed findings during imaging. This course reviews easily overlooked findings and diagnostic errors in traumatic and non-traumatic conditions of the skull base and neck. In addition, it explores common pitfalls in emergency imaging of the head and neck, with an emphasis on CT angiography in case-based approaches to identifying diagnostic errors. Strategies and diagnostic clues to minimize errors are also presented.

■ THYROID AND PARATHYROID IMAGING

RSP2210

Jill Eve Langer, MD; Laurie A. Loevner, MD 
CME 1.50, Content Codes: CT MR RO US HN OI

Sonography is one of the most valuable tools available to radiologists when performing imaging studies for thyroid and parathyroid imaging. During this course, the role of sonography in detection and characterization of thyroid nodules is defined, while also describing sonographic features of thyroid nodules that have increased chances of malignancy. Techniques for using ultrasound-guided FNA are also discussed. Additionally, the role of cross sectional imaging in detection of metastatic thyroid carcinoma is described.

■ ADVANCED NEUROVASCULAR MR ANGIOGRAPHY

RSP1109 NEW Part of CD Collection BUN18

Timothy J. Carroll, PhD; J. K. Demarco, MD
CME 1.25, Content Codes: MR NR VI

Imaging carotid plaque components can have important implications for patient management. Conducting MR angiography presents unique technical challenges, and this course begins with a review of the MR pulse sequences that are essential for effective neurovascular imaging. A discussion is included of the technical factors for optimal large FOV carotid contrast-enhanced MR angiography at 1.5 and 3.0 T, as well as small FOV 3.0 T angiography. Important comparisons are provided with CT angiography to help distinguish the best modality choices.

■ HEAD AND NECK CANCER: ADVANCED TOPICS


RSP2709

Lawrence E. Ginsberg, MD; Peter M. Som, MD; Daniel W. Williams, III, MD
CME 1.75, Content Codes: HN NR

Head and neck cancers present particular imaging challenges whether at initial diagnosis or at follow-up imaging. This course reviews the common appearance of these malignancies on CT, MRI and PET/CT, and indications of their perineural spread. The expected imaging findings following such procedures as neck dissection, myocutaneous flap surgery, and radiation treatment are examined, as well as the common imaging pitfalls in these patients.

■ BRAIN PERFUSION IMAGING: TECHNIQUES AND APPLICATIONS

RSP1309 Part of CD Collection BUN18

Max Wintermark, MD; A. Gregory Sorensen, MD 
Joseph A. Maldjian, MD

CME 1.75, Content Codes: [CT](#) [MR](#) [NR](#)

Brain perfusion imaging has growing applications, including in the assessment of patients at risk for stroke and Alzheimers disease. This is a discussion of the latest applications, techniques, and protocols for both CT and MR perfusion imaging. The imaging appearance of many commonly seen clinical entities is reviewed, as well as common artifacts and pitfalls in CT and MR imaging of the brain. An explanation of clinical arterial spin labeling (ASL) MR imaging is included, with a look at its present and future applications.

MOLECULAR IMAGING/NUCLEAR MEDICINE



■ IMAGING EVALUATION OF MULTIPLE MYELOMA

RSP1910

Gerwin Schmidt, MD; Michael E. Mulligan, MD

CME 1.50, Content Codes: [RO](#) [OI](#) [CT](#) [MR](#)

Imaging of multiple myeloma is multi-faceted, with the radiologist evaluating not only disease stage but also treatment response and complications while considering dose. This course provides in-depth review of diagnosis and staging of multiple myeloma and provides tools for identification of infiltrating patterns in correlation to histology. Typical appearances of multiple myeloma in WB-MRI and correlation on WB-MDCT are shown. In addition, assessment of treatment responses and complications in myeloma patients is reviewed, with discussion of typical appearance of myeloma lesions after treatment on radiograph, CT, and MR images.

■ ESSENTIALS OF NUCLEAR MEDICINE: RENAL AND V/Q SCANS

RSP1009

Kevin P. Banks, MD, Darlene F. Metter, MD


CME 1.00, Content Code: [NM](#)

Renal and lung function scans are two of the most common applications in nuclear medicine. This course reviews the essential elements of diuretic renography and of V/Q scans, including appropriateness criteria, proper image processing, and accurate interpretation. Discussion includes identifying the most common causes of false-positive and false-negative results, and effective means to minimize both of these.

MUSCULOSKELETAL IMAGING



■ EASILY MISSED FINDINGS IN ER: EXTREMITY INJURIES


RSP1111 

Dominic Barron; Joseph S. Yu, MD; Ken F. Linnau, MD, MS; Lee F. Rogers, MD

CME 1.25, Content Codes: [MK](#) [ER](#)

In an emergency-based setting, swift and accurate diagnosis of extremity injuries is key for optimal patient care. This course reviews the most easily missed findings of both upper and lower extremities in a wide variety of imaging modalities. Sites of review include ankle, foot, knee, femur, shoulder, elbow, wrist, hand, & thumb. Strategies to avoid missed findings are presented for each site, along with best-practice imaging procedures to avoid errors in diagnosis.

■ OSTEOPOROSIS AND MARROW IMAGING

RSP1611 

Leon Lenchik, MD; Thomas M. Link, MD; Bradford J. Richmond, MD; Sandra L. Moore, MD

CME 1.75, Content Codes: [MK](#) [CT](#)

DXA can be an extremely helpful tool in the diagnosis of osteoporosis. The role of DXA imaging in osteoporosis is described, as well as a review of various pitfalls of DXA interpretation. Vertebral fracture assessment in the diagnosis of osteoporotic fractures is discussed, with detailed review of the utility of conventional radiographs, CT, MRI, and DXA for this assessment. Appropriate use of the Fracture Risk Assessment Tool (FRAX) is included, as well as the advantages and disadvantages of QCT as compared to DXA. Finally, basic anatomic, pathologic, and physiological principles in marrow imaging on MR are included.

■ EMERGING TECHNIQUES IN MUSCULOSKELETAL IMAGING

RSP1409 Part of CD Collection BUN20

Hollis G. Potter, MD; Sharmila M. Majumdar, MD

CME 1.00, Content Code: [MK](#)

Radiologists encounter challenges in identifying many of the most common clinical musculoskeletal conditions such as complications of arthroplasty, particle disease, and synovitis. This course examines the constantly evolving techniques for imaging the musculoskeletal system. Strategies for effective imaging are provided, including ways to reduce metal artifacts at clinical scanning.

■ SPINE IMAGING

RSP2909

Robert W. Hurst, MD; Elias R. Melhem, MD, PhD
CME 1.25, Content Codes: [NR](#) [MR](#) [VI](#)

Understanding the classification and clinical manifestations of spinal vascular malformations is important to their diagnosis and management. This course reviews the typical imaging features of these conditions, and discusses the use of newer imaging modalities and techniques. The importance of parallel imaging of the spine is discussed, as well as clinical applications of 3D high-resolution MR imaging at 3 T.

■ CURRENT TOPICS IN HIP IMAGING

RSP2309

Stephen J. Eustace, MD; Christian W. Pfirrmann, MD
CME 1.00, Content Code: [MK](#)

This course explains the sometimes challenging imaging of the femoroacetabular articulation and the pubic symphysis, common sources of hip pain in many patients. The commonly encountered pathologies in these entities are discussed, as well as appropriate MR, MR arthrographic and CT imaging algorithms for specific indications. Potential image-guided interventions for treatment of conditions of the hip are illustrated.

■ IMAGING OF UPPER EXTREMITY ENTRAPMENT NEUROPATHIES

RSP2809 Part of CD Collection BUN20

John A. Carrino, MD, MPH; Zehava S. Rosenberg, MD; Carlo Martinoli, MD; Jenny T. Bencardino, MD
CME 1.75, Content Codes: [MK](#) [MR](#) [US](#)

Upper extremity entrapment neuropathies such as carpal tunnel syndrome occur with some frequency, and the radiologist plays an important role in their diagnosis and management. This course examines the use of ultrasound and MR imaging in identifying and managing these lesions. The imaging characteristics of these neuropathies at ultrasound and MR imaging is demonstrated, at initial diagnosis and at various stages of follow-up imaging.

■ OSTEOPOROSIS: CLINICAL AND IMAGING FEATURES

RSP1909 Part of CD Collection BUN20

Frank Waldron-Lynch, MD, PhD; Donald M. Bachman, MD; Jean M. Weigert, MD
CME 1.75, Content Codes: [MK](#) [CT](#)

The World Health Organization has developed a 10-year hip fracture and all-fracture prediction model which is designed to help physicians in the management and treatment of patients with osteoporosis. This course reviews that model and provides guidance on the important role of imaging in diagnosing and managing these patients. The vital role of dual X-ray absorptiometry (DXA) and quantitative CT imaging are explained, along with the common imaging appearance of many forms of osteoporosis.

PEDIATRIC IMAGING



■ PEDIATRIC ABDOMINAL IMAGING

RSP1811 **NEW** Part of CD Collection BUN25

Shreyas S. Vasanawala, MD, PhD; Carol E. Barnewolt, MD ; Kassa Darge, MD, PhD
CME 1.75, Content Codes: [GI](#) [MR](#) [ER](#) [PD](#)

This course focuses on pediatric abdominal imaging, including pediatric liver disease, gynecological anomalies, and renal disease. Common indications for MR imaging in pediatric hepatobiliary disease are discussed, along with best-practice application of MR techniques for diagnosis of hepatobiliary dysfunction in the pediatric population. The embryology behind common congenital uterovaginal anomalies is discussed, providing a guide to pediatric gynecological MRI for evaluation of these anomalies. Strategies for best quality use of MR urography in evaluation of renal disease in children is also presented. In closing, the advantages and drawbacks of renal functional analysis in MR urography is discussed.

■ PEDIATRIC GASTROINTESTINAL IMAGING

RSP2711 **NEW** Part of CD Collection BUN25

George A. Taylor, MD; Andrea S. Doria, MD
CME 1.00, Content Codes: [GI](#) [PD](#)

This course reviews a range of pediatric gastrointestinal concerns, including blunt abdominal trauma, appendicitis, and inflammatory bowel disease. The strengths and limitations of abdominal CT for detection of bowel and mesenteric injury are reviewed, including understanding the significance of peritoneal fluid in the setting of blunt abdominal trauma. An evidence-based review of appendicitis is also presented, including advantages and disadvantages of different imaging modalities, as well as methodological techniques to evaluate acute appendicitis. Additionally, updated MRI sequences for evaluation of inflammatory bowel disease and Crohns Disease in pediatric populations are presented.

■ PEDIATRIC NEUROIMAGING: FOCUS ON DOSE REDUCTION

RSP2810

Michael F. McNitt-Gray, MD; Charles Mack Glasier, MD; Blaise Vincent Jones, MD

CME 1.50, Content Codes: [CT](#) [NR](#) [PD](#) [QA](#)

Radiation dosing is a constant consideration in the mind of radiologists while imaging, particularly for pediatric patients. This course reviews and provides working strategies for reducing dose (mAs and/or kVp) in pediatric populations. Basic principles of dose standardization and reduction in pediatric neuro-CT are examined, as well as impact of dose reduction on image quality. Additional discussion of advanced imaging techniques developed to limit radiation dose is included.

■ PEDIATRIC ONCOLOGIC IMAGING

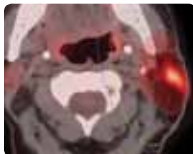
RSP2710 Part of CD Collection BUN23

M. Beth McCarville, MD; Fred E. Avni, MD, PhD; Stephan Dieter Voss, MD, PhD

CME 1.50, Content Codes: [CT](#) [NM](#) [PD](#) [OI](#) [MR](#) [PH](#)

In this course, the role of imaging in diagnosis, staging, treatment and follow-up of children with osseous and soft-tissue sarcomas is discussed, with emphasis on developing an imaging approach in both CT and MR for diagnosis. Additionally, this course focuses on identification of and response to technical issues and radiation dose concerns related to PET/CT in children. Indications for PET/CT in staging, response assessment, and surveillance in pediatric tumors are presented.

PHYSICS



■ PHYSICS: CT IMAGING—ADVANCED APPLICATIONS

RSP1709

Uwe J. Schoepf, MD; Thorsten R. Johnson, MD; Leonard F. Berliner, MD

CME 1.75, Content Codes: [PH](#) [GN](#) [CT](#) [CA](#) [VI](#)

Rapidly evolving CT scanner technology has produced changes in clinical application of CT, especially involving cardiac imaging, dual-energy scanning, and interventional procedures. This course reviews the technical implications of these developments, and how they will continue to change diagnostic and interventional radiology. A discussion of cutting-edge robotics and navigation technology is included.

■ PHYSICS: CT IMAGE GENERATION: FROM MULTISLICE TO CONE-BEAM CT

RSP2409

Thomas G. Flohr, PhD; Willi Kalender, PhD

CME 1.75, Content Codes: [PH](#) [CT](#)

Recent developments in CT technology include new detector designs, scan strategies, and image reconstructions. This course reviews these developments in terms of both their potential and their limitations. In addition, there is discussion of important influences of image reconstruction on image quality parameters.

ONCOLOGIC IMAGING



■ IMAGING MIMICS OF COMMON MALIGNANCIES

RSP2111 NEW

Soonmee Cha, MD ; Steven L. Primack, MD; Liina Poder, MD; Cynthia S. Santillan, MD

CME 1.50, Content Code: [OI](#)

Tumor-mimicking lesions at imaging can pose diagnostic dilemmas and challenges in clinical management and assessment of prognosis. This course illustrates the three different disease processes – infectious, ischemic, and inflammatory – in the brain that most often mimic brain tumors at imaging. Additionally, a category-based approach to and features of mimics of thoracic malignancy is presented. Congenital, infectious, and inflammatory entities that can be mistaken for abdominal malignancies are included in this comprehensive review. Finally, an overview of various mimics of cancers of gynecological origin is presented, along with a multi-modality approach to imaging and strategies to avoid pitfalls in diagnosis.

■ PROSTATE MRI UPDATE

RSP2411 NEW

Peter L. Choyke, MD; Neil M. Rofsky, MD

CME 1.25, Content Codes: [GU](#) [BO](#) [MR](#) [OI](#)

This course provides radiologists with an in-depth review of prostate cancer diagnosis and care. The current status and limitations of prostate cancer treatment in the PSA screening era are discussed. Current prostate cancer care guidelines are reviewed, including potential contributions of MR imaging to diagnosis, biopsy, and care management.

■ WHAT DIAGNOSTIC RADIOLOGISTS NEED TO KNOW ABOUT RADIATION ONCOLOGY

RSP2910 Part of CD Collection BUN23

Stephanie A. Terezakis, MD; Ruth F. Lavigne, MD; Maximilian Diehn, MD, PhD; Dwight E. Heron, MD
CME 1.50, Content Codes: [RO](#) [OI](#) [NM](#)

Oncologic imaging can present significant challenges for radiologists and radiation oncologists when planning treatment for a positive patient outcome. This course reviews commonly used terminology and discusses the role of imaging in tissue contouring of tumors and normal tissue. Multiple imaging modalities are discussed, with emphasis on situational appropriateness and risk factors for each modality. Recommendations for potential new uses for PET in radiation therapy are explored, in addition to a review of clinical outcomes.

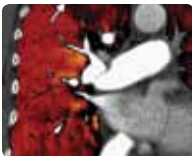
■ IMAGING CHALLENGES FOR RADIATION ONCOLOGY: TREATMENT ASSESSMENT

RSP2209 Part of CD Collection BUN23

Katja Langen, PhD; Robert Jeraj
CME 1.00, Content Codes: [RO](#) [OI](#)

When radiologists conduct repeat imaging studies of patients undergoing oncologic treatment, the question arises, "Are we doing any good?" This course provides needed answers as it reviews the uses and limitations of CT and FDG/PET imaging in cancer treatment. Treatment assessment criteria for CT and PET are examined, as well as a discussion of other molecular imaging markers.

THORACIC IMAGING



■ PULMONARY DISEASES AND INFECTIONS

RSP2311 NEW

David A. Lynch, MD; H. Page McAdams, MD; Ann N. Leung, MD
CME 1.50, Content Codes: [CH](#) [CT](#)

Correct diagnosis of pulmonary diseases and infections requires the radiologist to be familiar with a host of key imaging findings. In this course, the clinical and radiologic manifestations of pulmonary infections are presented. Strategies for differentiating between reticular abnormalities and ground glass opacity on CT are discussed. In addition, this course reviews the various types of acute aortic syndromes including classic aortic dissection, aortic intramural hematoma and penetrating atherosclerotic ulcer. The role of imaging in diagnosis and management of these acute aortic syndromes round out this course.

■ HOT TOPICS IN THORACIC IMAGING

RSP1011 NEW

Denise R. Aberle, MD; Ioannis Vlahos, MBBS; Martine J. Remy-Jardin, MD, PhD
CME 1.50, Content Codes: [CH](#) [CT](#)

Focusing on hot topics in thoracic imaging, this course provides a solid foundation for discussion of current thoracic imaging issues. This course will explain the experimental design and participant characteristics of the National Lung Screening Trial, as well as a means to implement image-based screening for lung cancer in light of NLST findings. Dual-energy CT is discussed within the context of thoracic imaging, highlighting the physics principles and different techniques by which dual-energy CT images can be generated. Discussion of optimized CT protocols for integration of morphology and function in a single examination is presented.

■ GUIDELINES FOR THORACIC IMAGING

RSP2110 Part of CD Collection BUN22

Lawrence R. Goodman, MD; Ann N. C. Leung, MD; Heber Macmahon, MD; David Paul Naidich, MD; John R. Mayo, MD
CME 1.50, Content Codes: [CH](#) [CT](#)

This course reviews diagnostic guidelines for pulmonary embolism, with additional review of the STR/ATS Guidelines for evaluating pulmonary embolism in pregnant patients. Methods for dose reduction in CT pulmonary angiography for pulmonary embolism evaluation are described. Review of the Fleischner Society Guidelines for detection of small nodules is provided, with emphasis on recognition of potential pitfalls in nodule detection and management. Interim guidelines for management of solitary subsolid pulmonary lesions of various sizes are also presented.

■ HIGH-RESOLUTION CT: A PATTERN-BASED APPROACH

RSP2610 Part of CD Collection BUN22

Gerald F. Abbott, MD; Susan Jennifer Copley, MD, FRCR; Ella A. Kazerooni, MD
CME 1.50, Content Codes: [CH](#) [CT](#)

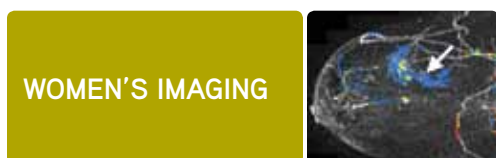
Diagnosis using High-resolution CT (HRCT) imaging of the lung requires pattern-based approaches. This course defines and illustrates the anatomic structures of the lung during HRCT, with emphasis on identifying the reticular and cystic patterns of the lung, including differential diagnosis of these patterns. In addition, review of centrilobular, perilymphatic, and other nodular patterns is discussed.

■ OBSTRUCTIVE LUNG DISEASE

RSP2310 Part of CD Collection BUN22

Jeffrey P. Kanne, MD; Philippe A. Grenier, MD
CME 1.25, Content Codes: [CH](#) [CT](#)

To effectively diagnose conditions of the lung, radiologists must be familiar with a large array of diseases and conditions. During this course, presenters review the imaging features of pulmonary emphysema including its characteristics on high-resolution computed tomography (HRCT). The course also describes the role of HRCT in lung volume reduction surgery (LVRS). Various surgical and non-surgical therapies for patients with severe emphysema and airflow obstruction are detailed. This course also provides additional review of the use of CT in evaluation of central airway diseases, such as COPD, bronchiectasis, and asthma.



■ CLINICAL BREAST MR IMAGING

RSP2911 NEW

Constance D. Lehman, MD, PhD; Christiane K. Kuhl, MD
CME 1.00, Content Codes: [BR](#) [MR](#) [OI](#)

This course reviews current recommendations for breast cancer imaging, with discussion of management of high-risk patients and patients with current breast cancer diagnosis. Evidence-based criteria for patient selection and appropriate use of breast MR are presented. Specific emphasis is placed on understanding diagnosis in breast cancer patients, including extent of disease evaluation and response to chemotherapy. Basic principles of MR image-guided biopsy procedures, follow-up and management are reviewed, along with common technical pitfalls and how to deal with them.

■ MISTAKES TO AVOID IN OBSTETRIC US

RSP1511 NEW

Peter M. Doubilet, MD, PhD; Mary C. Frates, MD;
Carol B. Benson, MD
CME 1.75, Content Codes: [GU](#) [OB](#) [US](#)

Imaging of the pregnant patient can provide unique challenges in preserving the health of both fetus and mother. Correct technique in imaging the pregnant patient is discussed in this course, including identification of common imaging mistakes of the first, second, and third trimesters. Correct fetal survey technique is presented, as well as methods to identify mistakes when performing a detailed fetal survey. Complications during pregnancy including early intrauterine pregnancy, ectopic pregnancy and early pregnancy failure are presented with image-based evidence.

■ MAMMOGRAPHY REVIEW

RSP1810

Stephen Albert Feig, MD; Christopher E. Comstock, MD
CME 1.00, Content Codes: [BR](#) [MO](#)

Mammography screening in a busy practice can provide unique diagnostic and patient management challenges for the radiologist. This course explores strategies for optimizing mammography screening practice through improved workflow, efficient scheduling, prompt and accurate reporting, and patient satisfaction with mammography screening procedures. In addition, this course reviews common screening mammography findings, such as subtle breast cancers and missed lesions, and provides a systematic approach to reducing missed cancers.

■ US IMAGING OF ADNEXAL CYSTIC MASSES

RSP2010

Douglas L. Brown, MD; Maitray D. Patel, MD;
Deborah Levine, MD
CME 1.50, Content Codes: [GU](#) [OB](#) [US](#)

Challenges of imaging adnexal cystic masses include the ability to differentiate between benign and malignant cysts. This course provides an in-depth review of simple adnexal cysts and appropriate follow-up criteria for both benign and suspected malignant cysts. It also provides methods for identifying the features of an adnexal cyst to improve prediction of malignancy. Differential diagnoses and sonographic features of hemorrhagic ovarian cysts, endometriomas and cystic teratomas are also presented.

■ MAMMOGRAPHIC INTERPRETATION

RSP1809 Part of CD Collection BUN15

Carl J. D'Orsi, MD; Valerie P. Jackson, MD
CME 1.25, Content Codes: [MO](#) [BR](#)

Especially in the controversial environment of breast cancer screening guidelines from the U.S. Preventive Services Task Force, radiologists who perform screening mammography must be acutely aware of the importance of recognizing various breast masses. This course reviews the imaging appearance of suspicious breast masses, and discusses their appropriate work-ups. It concludes with a discussion of the advantages and controversies in computer-aided diagnosis (CAD) technology.

SPECIAL INTEREST



■ OBESITY: A CHALLENGE FOR IMAGING

RSP1610

Phyllis Glanc, MD; Syed Ahmad Jamal Bokhari, MD; Caitlin T. McGregor, MD

CME 1.75, Content Codes: **[GI]** **[GU]** **[OB]** **[US]** **[CT]**

Imaging obese patients presents many challenges, including image quality, radiation dose, and quality of care. This course reviews the risks and limitations of medical imaging studies for obese patients and defines strategies to overcome them. Techniques are presented to optimize CT imaging capabilities. Additionally, review of the significance of fatty liver disease in the obese patient is presented, with discussion of risk factors for fibrosis, cirrhosis, and HCC in relation to fatty liver disease. The role of US imaging in the obese or pregnant patient is also presented.

■ PARASITIC DISEASES: A HEAD-TO-TOE REVIEW

RSP1209

William D. Craig, MD; Alice B. Smith, MD; Mark D. Murphey, MD; Rachel Lewis, MD; Ellen M. Chung, MD; Jeffrey R. Galvin, MD; Leonard Glassman, MD; Grant Lattin, MD

CME 1.75, Content Code: **[GN]**

Particular patterns of abnormality are seen with parasitic diseases of all kinds, and these patterns have a pathologic basis. This course provides an explanation of the pathology of parasitic disease, the implications for imaging, and the effect on clinical presentation with the unique style and expertise of the Armed Forces Institute of Pathology.

■ COMPUTER-ASSISTED DECISION SYSTEMS IN BREAST AND LUNG IMAGING

RSP2509 Part of CD Collection BUN15

Mia K. Markey, PhD; Samuel G. Armato III, PhD

CME 1.75, Content Codes: **[BR]** **[CH]** **[IN]**

The development of computer aided diagnosis (CAD) applications is especially felt in breast imaging and thoracic radiology. This course looks at the successes and limitations of current CAD applications for breast imaging modalities and lung imaging. Future directions and likely implications for lung and breast imagers are examined.

OTHER PRACTICE CONSIDERATIONS



■ MALPRACTICE ISSUES IN RADIOLOGY

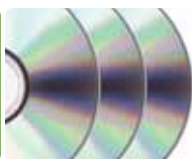
RSP1710

Leonard Berlin, MD; Harley Jay Hammerman, MD; Richard N. Taxin, MD

CME 1.25, Content Codes: **[HP]** **[QA]** **[PR]**

Expectations for clear, timely communication of imaging results may put radiologists at risk for malpractice claims based on failure to accurately communicate results. This course reviews the duties that the law and the ACR Practice Guideline on Communication have imposed on radiologists to effectively communicate radiologic findings to referring physicians and/or patients. Additionally, one practice's experience with an on-site imaging-results system is presented, with discussion of its impact on patient experience and care. The course explores both the advantages and disadvantages to patients and radiologists when establishing a process of direct communication.

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■ BREAST IMAGING/NEW TECHNOLOGIES COLLECTION

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The effect of new technologies on breast imaging, and their implications for clinical practice. Includes RSP1809 and 2509, two CDs offering 2.50 *AMA PRA Category 1 Credits*[™].

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Assessing patients who have, or are at risk for developing, some of the most common neurological conditions. Includes RSP1109 and 1309, two CDs offering 2.50 *AMA PRA Category 1 Credits*[™].

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A comprehensive review of the hottest areas of musculoskeletal radiology. Includes RSP1409, 2809, and 1909, three CDs offering 4.50 *AMA PRA Category 1 Credits*[™].

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■ PULMONARY COLLECTION

BUN22

A comprehensive study of CT imaging of the lungs, from the features of chronic obstructive conditions to evaluation of the patient at risk of pulmonary embolism. Includes RSP2110, 2610, and 2310, three CDs offering 4.25 *AMA PRA Category 1 Credits*[™].

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■ ONCOLOGIC IMAGING COLLECTION

BUN23

A systematic review of radiation oncology for the diagnostic radiologist, from terminology to treatment to follow-up imaging. Includes RSP2910, 2710 and 2209, three CDs offering 4.00 *AMA PRA Category 1 Credits*[™].

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■ RENAL COLLECTION

BUN24

A look at renal imaging studies, from assessment of vasculature to the discovery of incidental masses. Includes RSP2510 and 1509, two CDs offering 2.25 *AMA PRA Category 1 Credits*[™].

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■ PEDIATRIC GASTROINTESTINAL COLLECTION

BUN25 NEW

Explore CT and MR imaging strategies for pediatric gastrointestinal concerns, including liver disease, gynecological anomalies, renal disease and other acute gastrointestinal conditions. Includes RSP1811 and 2711, two CDs offering 2.75 *AMA PRA Category 1 Credits*[™].

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■ ABDOMINAL COLLECTION

BUN26 NEW

A comprehensive review of great cases in abdominal imaging, including identification and characterization of malignancies of the liver, kidneys, biliary tract and pancreas. Includes RSP1211, 1311, and 1711, three CDs offering 4.50 *AMA PRA Category 1 Credits*[™].

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