

# Refresher Course Schedule

## RSNA Refresher Courses

Sunday, November 26

2:00 PM – 3:00 PM

### RC101

Case-based Review: Approach to Diffuse Lung Disease (An Interactive Session)

*Nestor L. Müller, MD, PhD*  
*Thomas E. Hartman, MD*  
*Ann N. Leung, MD*

### RC102

Reviewing Manuscripts for the RSNA Journals (Sponsored by the RSNA Publications Council)

*Anthony V. Proto, MD*  
*William W. Olmsted, MD*

### RC103

The Heart on Chest Radiographs and CT Scans: Practicalities of Daily Interpretation

*Laura E. Heyneman, MD*  
*Gautham P. Reddy, MD*  
*Philip N. Cascade, MD*

### RC104

The Hip and Pelvis: Sports Imaging (An Interactive Session)

*B. J. Manaster, MD, PhD*  
*Carol L. Andrews, MD*  
*Cheryl A. Petersilge, MD*

### RC105

Spine Imaging: Nondegenerative Disease

*Anne G. Osborn, MD*  
*Kelly K. Koeller, MD*

### RC106

Ear-, Nose-, and Throat-related Emergencies

- A. Temporal Bone: Normal Anatomy and Trauma  
*Joel D. Swartz, MD*
- B. Orbital and Facial Trauma  
*Alisa D. Gean, MD*
- C. Intracranial Complications of Sinusitis and Otitis Media  
*Christine M. Glastonbury, MBBS*

### RC107\*

Categorical Course in Diagnostic Radiology: Genitourinary—CT and MR in Urinary Tract Evaluation

- A. Techniques of CT Urography: The Pros and the Cons  
*Richard H. Cohan, MD,*  
*Coordinator*
- B. CT Urography: Detection of Pathology and the Pitfalls  
*Elaine M. Caoili, MD*
- C. MR Urography and Renography: Techniques and Application  
*Vivian S. Lee, MD, PhD*

### RC108

Imaging of Chest and Abdominal Trauma

- A. Imaging of Chest Trauma  
*Eric J. Stern, MD*
- B. Imaging of Abdominal Trauma: Part 1  
*James T. Rhea, MD*
- C. Imaging of Abdominal Trauma: Part 2  
*Kathirkamanathan*  
*Shanmuganathan, MD*

### RC109

CT Colonography: How to Build a Successful Clinical Program

*Andrea Laghi, MD*  
*Michael E. Zalis, MD*  
*Perry J. Pickhardt, MD*

### RC110

New Developments in Ultrasound: Improving Your Practice of Ultrasound

- Peter L. Cooperberg, MD, Moderator*
- A. Harmonic Imaging in Ultrasound Practice  
*Peter N. Burns, PhD*
  - B. Spatial Compounding and Other Noise-reducing Techniques  
*Peter L. Cooperberg, MD*
  - C. Elastography  
*Jonathan M. Rubin, MD, PhD*
  - D. Real-Time CT/US Fusion Imaging  
*Luigi Solbiati, MD*

### RC111

Musculoskeletal Imaging in Nuclear Medicine: Current and Emerging Methods

*Ronald L. Van Heertum, MD*  
*Manuel L. Brown, MD*  
*Kastytis C. Karvelis, MD*

### RC112

Fast and Reliable CT Angiography: Strategies for Technique Optimization

- A. Acquisition  
*Mathias Prokop, MD*
- B. Contrast Medium  
*Myron A. Pozniak, MD*
- C. Postprocessing, Workflow, and Interpretation  
*Elliot K. Fishman, MD*

### RC114

Imaging and Therapy of Vascular Malformations

*Barry Stein, MD*  
*Robert L. Vogelzang, MD*  
*Robert J. Rosen, MD*

### RC115+

Update Course in Diagnostic Radiology: Breast Imaging—Mammography: Interpretation Pointers for Detection of Early Breast Cancer

- A. Masses, Asymmetries, and Architectural Distortion  
*Laszlo K. Tabar, MD*
- B. Calcifications  
*Gilda Cardenosa, MD*
- C. Supplementary Views  
*Barbara S. Monsees, MD*

### RC116

Patient-centered Radiology: Use It or Lose It (Sponsored by the RSNA Public Information Committee)

*Philip O. Alderson, MD*  
*Michael N. Brant-Zawadzki, MD*

# Refresher Course Schedule (continued)

## RC117

### Molecular Biology for Radiologists

- A. Molecular Imaging Introduction and Overview  
*Martin G. Pomper, MD, PhD*
- B. Introduction to Molecular Biology: Overview for Imagers  
*Vladimir Ponomarev, MD, PhD*
- C. Methods in Molecular Biology  
*Venu Raman, PhD*

## RC118

### Therapeutic Response Assessment in Oncology

- A. Conventional and Novel Techniques for Therapeutic Response Assessment  
*Lawrence H. Schwartz, MD*
- B. MR Imaging Techniques in Tumor Response Assessment  
*Gregory S. Karczmar, PhD*
- C. PET in Tumor Response Assessment  
*Malik Juweid, MD*

## RC119

### Imaging and Prostate Cancer Radiation Treatment Planning

- A. Imaging  
*Vamsidhar R. Narra, MD*
- B. Therapy  
*Jeff M. Michalski, MD*

## RC120

### Proton Therapy

- A. Physics  
*Alfred Smith, PhD*
- B. Clinical  
*James D. Cox, MD*

## RC121++

### Update Course in Diagnostic Radiology Physics: Advances in Breast Imaging—Physics, Technology, and Clinical Applications: Breast Anatomy, Pathology, and Diagnosis of Disease

- A. Breast Disease: Anatomy, Pathology, and Diagnosis  
*Debra L. Monticciolo, MD*

### B. Cancer Screening and Diagnostic Work-up

*Stephen A. Feig, MD*

### C. Screening Mammography Issues and Controversies

*Daniel B. Kopans, MD*

## RC122

### Transition to Heterogeneity Corrections

*Eric E. Klein, MS*

*Craig W. Stevens, MD, PhD*

## RC123

### Minicourse: From Image to Decision—Science and Technology for Effective Interpretation of Medical Images: Why Study Perception?

*Ehsan Samei, PhD, Co-Director*

*Elizabeth A. Krupinski, PhD,*

*Co-Director*

### A. Image Perception in Modern Medicine

*Ehsan Samei, PhD*

### B. A Short History of Image Perception in Radiology

*Elizabeth A. Krupinski, PhD*

### C. Clinical Relevance of Perceptual Issues in Radiology

*Francine L. Jacobson, MD, MPH*

## RC125\*\*

### Categorical Course in Diagnostic Radiology Physics: From Invisible to the Visible—The Science and Practice of X-Ray Imaging and Radiation Dose Optimization

### A. Introduction

*Walter Huda, PhD*

*Donald P. Frush, MD*

### B. Radiographic Image Formation and Characteristics

*Perry Sprawls, Jr, PhD*

### C. Measures of Image Quality

*Michael J. Flynn, PhD*

## RC126

### (Re)Designing Your Department (Basic Imaging Informatics)

*Bradley J. Erickson, MD, PhD,*

*Moderator*

### A. The Reading Workstation

*Brian J. Bartholmai, MD*

### B. Retrofitting Old Buildings

*Osman Ratib, MD, PhD*

### C. Designing New Buildings for the Digital Age

*Bill Rostenberg, FAIA, FACHA*

## RC127

### Important Issues in Radiology Practice and Management: Contracts, Governance, and Service Metrics

*Lawrence R. Muroff, MD*

*Julie A. Muroff Esq.*

*Patty Riskind, MBA*

## RC128

### Minicourse in Oncologic Imaging: Imaging Opportunities in Clinical Trials—Practice Opportunities for Imagers in Clinical Trials

*C. Carl Jaffe, MD*

*Gary Kelloff, MD*

*Daniel Sullivan, MD*

*Mitchell Schnell, MD, PhD*

## RC129

### Minicourse: Optimize Your Body MR Practice—From Safety to Protocol Design: MR Imaging Safety Issues—Update 2006 (An Interactive Session)

### A. MR Safety: Implants and Devices

*Frank G. Shellock, PhD*

### B. ACR MR Safety Guidelines: Reducing It to Practice

*Emanuel Kanal, MD*

### RC130

Workstation Design (Advanced Imaging Informatics) (In Conjunction with the Society for Imaging Informatics in Medicine)  
*Eliot L. Siegel, MD, Moderator*

- A. Software Designs for Better Human-Computer Interface  
*Steven C. Horii, MD*
- B. Hardware Options for Better Human-Computer Interface  
*Khan M. Siddiqui, MD*
- C. Reading Room and Ergonomics  
*Eliot L. Siegel, MD*

### RC132+++

Update Course in Diagnostic Radiology Physics: Multidimensional Image Processing, Analysis, and Display—Computer-aided Diagnosis in Abdominal Imaging

- A. Computer-aided Liver Surgery Planning  
*Milan Sonka, PhD*
- B. Three-dimensional Computer-aided Diagnosis in CT Colonography  
*Hiroiyuki Yoshida, PhD*
- C. Image Display and Interpretation in CT Colonography  
*Matthew A. Barish, MD*

### RC133

Continuous Quality Improvement  
*Brent James, MD*

### RC150

MR-guided Breast Biopsy (Hands-on Workshop)  
*Michelle D. McDonough, MD*  
*Elizabeth R. DePeri, MD*  
*Annamaria Wilhelm, MD*  
*Francesca D. Beaman, MD*  
*Lia Bartella, MBChB,*  
*Elizabeth A. Morris, MD*  
*Gary J. Whitman, MD*  
*Alice S. Rim, MD*  
*Hiroiyuki Abe, MD*  
*Elsie Levin, MD*  
*Constance D. Lehman, MD, PhD*  
*Mitchell D. Schnall, MD, PhD*  
*Margarita L. Zuley, MD*  
*Carol H. Lee, MD*  
*Steven E. Harms, MD*

*Peter R. Eby, MD*  
*Toula Destounis, MD*  
*Lisa Broddle, RT(MR)(R)*  
*Robin Harville*  
*Petrina A. Causer, MD*

### RC151

Differential Diagnosis of Mediastinal Masses (How-to Workshop)  
*Paul L. Molina, MD*  
*Jane P. Ko, MD*  
*Georgeann McGuinness, MD*

### RC152

Techniques of Freehand Invasive Sonography with Thermal Ablation (Hands-on Workshop)  
*William E. Shiels II, DO*  
*Brian D. Coley, MD*  
*Alda F. Cossi, MD*  
*Robert D. Lyon, MD*  
*Michael V. Krasnokutsky, MD*  
*Kenneth H. Cho, MD*  
*Joseph A. Ronsivalle, DO*  
*Horacio M. Padua, Jr, MD*  
*Mark L. Lukens, MD*  
*Hayden W. Head III, MD*  
*Stephen D. Brown, MD*  
*Clifford R. Weiss, MD*  
*Jeong Min Lee, MD*

### RC153

How to Use a PACS Workstation: Basic (Hands-on Workshop)  
*James A. Brunberg, MD*

### RC154

Getting Started with PowerPoint: Building a Basic Slide (Hands-on Workshop for Radiologists)  
*Ken L. Schreiber, PhD, MD*

## Monday, November 27

8:30 AM – 10:00 AM

### RC201

New Thoracic Imaging Technologies: 64-Slice Multidetector CT, Postprocessing, PET/CT, and Enhanced Radiography Methods  
*Theresa C. McLoud, MD, Moderator*  
*James F. Gruden, MD*  
*Geoffrey D. Rubin, MD*  
*Reginald F. Munden, DMD, MD*  
*Heber MacMahon, MD*

### RC202 S

Teaching and Evaluating the Competencies

- A. Ethics: What Is It?  
*Richard B. Gunderman, MD, PhD*
- B. Teaching and Evaluating Professionalism  
*E. Stephen Amis, MD*
- C. Teaching and Evaluating Practice-based Learning and Improvement and Systems-based Practice  
*Deborah A. Baumgarten, MD, MPH*

### RC203

Cardiac MR Imaging: From Physics to Protocols  
*John N. Oshinski, PhD*  
*Vivian S. Lee, MD, PhD*

### RC204

Imaging of Lower Extremity Entrapment Neuropathies  
*Zehava S. Rosenberg, MD*  
*Jenny T. Bencardino, MD*  
*Carlo Martinoli, MD*

### RC205

Phakomatoses: Common and Uncommon  
*James G. Smirniotopoulos, MD*  
*Thomas P. Naidich, MD*

### RC206 S

Head and Neck Cancer: What the Clinician Needs to Know

- A. Nasopharyngeal Cancer  
*Laurie A. Loevner, MD*
- B. Oropharyngeal and Oral Cavity Cancer  
*Suresh K. Mukherji, MD*
- C. Cancer of the Larynx and Hypopharynx  
*Hugh D. Curtin, MD*

# Refresher Course Schedule (continued)

## RC207\*

Categorical Course in Diagnostic Radiology: Genitourinary—Prostate Cancer Imaging: Relevance, Current Practices, and Evolving Techniques

- A. Prostate Cancer Imaging: Past, Present, and Future  
*Peter L. Choyke, MD*
- B. Nodal Staging in Prostate Cancer: Current Deficiencies and Evolving Techniques  
*Mukesh G. Harisinghani, MD, Coordinator*
- C. MR Spectroscopy of Prostate Cancer: Current Practices and Techniques  
*Hedvig Hricak, MD, PhD*
- D. MR Imaging in Prostate Cancer: Current Practices and Techniques  
*Jelle O. Barentsz, MD, PhD*

## RC208

Imaging Head Trauma and Nontraumatic Central Nervous System Emergencies

- A. Head Trauma  
*Alisa D. Gean, MD*
- B. Nontraumatic Central Nervous System Emergencies  
*A. Gregory Sorensen, MD*

## RC209 S

CT of the Acute Abdomen: Bowel Origin (An Interactive Session)

*Michael P. Federle, MD*  
*Jay P. Heiken, MD*

## RC210

Obstetrical Ultrasound I: Improving Your Practice of Ultrasound

*Peter W. Callen, MD, Moderator*

- A. Fetal Sonology: A Lexicon  
*Peter W. Callen, MD*
- B. The Fetal Heart throughout Pregnancy  
*Shi-Joon Yoo, MD*
- C. The Fetal Brain throughout Pregnancy  
*Ants Toi, MD*

## RC211

Imaging Musculoskeletal Infections: How to Rationally Integrate Nuclear Medicine Imaging with MR Imaging and CT

*Christopher J. Palestro, MD*  
*Charito Love, MD*

## RC212

Fast and Reliable MR Angiography: Strategies for Technique Optimization

- A. Acquisition  
*Stefan O. Schoenberg, MD, PhD*
- B. Contrast Medium  
*Thomas M. Grist, MD*
- C. Postprocessing, Workflow, and Interpretation  
*Martin R. Prince, MD, PhD*

## RC214

Treatment of Lower Extremity Venous Disease

*Gerant M. Rivera-Sanfeliz, MD*  
*Robert J. Min, MD*  
*Melvin Rosenblatt, MD*

## RC215+

Update Course in Diagnostic Radiology: Breast Imaging—Mammography-guided Biopsy

- A. Stereotactic Biopsy: Equipment, Devices, and Technique  
*D. David Dershaw, MD*
- B. Core Biopsy: Mammographic-Pathologic Assessment of Results  
*Lawrence W. Bassett, MD*
- C. Medicolegal Aspects of Breast Imaging Interpretation and Intervention  
*R. James Brenner, MD, JD*

## RC216 S

Sexual Harassment: What You Don't Know Can Hurt You (An Interactive Session) (Sponsored by the RSNA Professionalism Committee)

*Steven K. Teplick, MD, Moderator*

- A. Harassment between Physician and Patient  
*Alan C. Hartford, MD, PhD*  
*Murray L. Janower, MD*

- B. Harassment between Physician and Employee  
*John P. Livoni, MD*

- C. Harassment between Physician and Physician  
*Marilyn J. Goske, MD*  
*Carol M. Rumack, MD*

- D. Legal Implications  
*Leonard Berlin, MD*

## RC217

Target Identification and Bioinformatics

- A. Proteins for Imaging: Receptors, Enzymes, and Transporters  
*William C. Eckelman, PhD*
- B. Informatics for Imaging: General Principles  
*Edward H. Herskovits, MD, PhD*
- C. Informatics for Imaging: Genomics and Proteomics  
*Samira Guccione, PhD*

## RC218

PET/CT in Oncology I

*Ella A. Kazerooni, MD, MS*  
*Heather Jacene, MD*  
*Timothy J. Akhurst, MD*

## RC221++

Update Course in Diagnostic Radiology Physics: Advances in Breast Imaging—Physics, Technology, and Clinical Applications: Mammography—Physics, Common Problems, and Accreditation

- A. Physics of Mammography  
*J. Anthony Seibert, PhD*
- B. Common and Less Common Problems Found during Screen-Film MQSA Physics Performance Audits  
*Gary T. Barnes, PhD*
- C. Update on Accreditation of Screen-Film and Digital Mammography  
*Priscilla F. Butler, MS*

## RC222

### Respiratory Motion in Radiation Therapy

*Paul J. Keall, PhD*

*Gikas S. Mageras, PhD*

## RC223

### Minicourse: From Image to Decision—Science and Technology for Effective Interpretation of Medical Images: Radiologist Seeing and Thinking

*Ehsan Samei, PhD, Co-Director*

*Elizabeth A. Krupinski, PhD, Co-Director*

#### A. Perceptual and Cognitive Factors in Reading Medical Images

*Elizabeth A. Krupinski, PhD*

#### B. Image Quality: Clinical Relevance of Physical Performance

*Robert Saunders, Jr, PhD*

*Ehsan Samei, PhD*

#### C. Perception and the Human Visual System

*Michael J. Flynn, PhD*

## RC225\*\*

### Categorical Course in Diagnostic Radiology Physics: From Invisible to the Visible—The Science and Practice of X-Ray Imaging and Radiation Dose Optimization

#### A. Medical Radiation Dosimetry

*Walter Huda, PhD*

#### B. Radiation Risks in Diagnostic Radiology

*David J. Brenner, PhD, DSc*

#### C. Balancing Risks and Benefits in Medical Radiography

*Alan S. Brody, MD*

## RC226

### Using the Medical Image Resource Center (MIRC) Software (Basic Imaging Informatics)

*Eliot L. Siegel, MD, Moderator*

#### A. Using MIRC to Create Medical School and Resident Training Programs

*Krishna Juluru, MD*

#### B. Using MIRC for Departmental Teaching Files

*Adam E. Flanders, MD*

#### C. Using MIRC for Managing Imaging in Clinical Trials

*J. Jeffrey Carr, MD, MS*

#### D. New Developments in RSNA MIRC Tools

*John Perry*

## RC227

### How Radiologists Influence Reimbursement in 2006 (In Conjunction with the American College of Radiology)

*John A. Patti, MD*

*Richard Duszak, Jr, MD*

*Bibb Allen, Jr, MD*

*Christopher G. Ulrich, MD*

*James V. Rawson, MD*

*Pamela Kassing*

## RC228

### Minicourse in Oncologic Imaging: Imaging Opportunities in Clinical Trials—Clinical Trial Imaging Leading to Personalized Medicine

*Lalitha Shankar, MD, PhD*

*Denise Aberle, MD*

*Lawrence Schwartz, MD*

## RC229

### Minicourse: Optimize Your Body MR Practice—From Safety to Protocol Design: Optimize Your Body MR Imaging Protocols with the Experts

#### A. Cardiovascular

*David A. Bluemke, MD, PhD*

#### B. Abdomen

*Ivan Pedrosa, MD*

#### C. Pelvis

*Masoom A. Haider, MD*

## RC230

### Using Information Technology to Improve Your Business (Advanced Imaging Informatics)

*Paul J. Chang, MD, Moderator*

#### A. Using Information Technology to Document Your Value (P4P)

*Bruce I. Reiner, MD*

#### B. Optimizing Radiology Workflow by Maximizing Information Throughput

*Paul J. Chang, MD*

#### C. Leveraging the Orders Cycle

*Keith J. Dreyer, DO, PhD*

## RC232+++

### Update Course in Diagnostic Radiology Physics: Multidimensional Image Processing, Analysis, and Display—Introduction to Multidimensional Medical Imaging

#### A. Three-dimensional Image Processing, Analysis, and Visualization: Methods and Techniques

*Jayaram K. Udupa, PhD*

#### B. Three-dimensional Image Processing, Analysis, and Visualization: Clinical Applications

*Elliot K. Fishman, MD*

## RC250

### Common Pediatric Emergency Ultrasound Procedures (How-to Workshop)

*Brian D. Coley, MD*

*Harriet J. Paltiel, MD*

## RC251

### Imaging during the “Golden Hour” of Poly-Trauma (How-to Workshop)

*Frederick A. Mann, MD*

*Joel A. Gross, MD, MS*

*Tom Burdick, MD*

## RC252

### Interventional Breast Procedures (Hands-on Workshop)

*Elsie Levin, MD*

*Bruno D. Fornage, MD*

*Carl J. D’Orsi, MD*

*Liane E. Philpotts, MD*

*W. Phil Evans, MD*

*Joseph Spigel, MD*

*Etta D. Pisano, MD*

*Elizabeth A. Rafferty, MD*

*William R. Poller, MD*

*Rachel F. Brem, MD*

*Mary C. Mahoney, MD*

# Refresher Course Schedule (continued)

## RC253

How to Use a PACS Workstation:  
Basic (Hands-on Workshop)

*James A. Brunberg, MD*

## RC254

Intermediate PowerPoint: Building  
Complex Slides (Hands-on Workshop  
for Radiologists)

*Ken L. Schreibman, PhD, MD*

## Tuesday, November 28

8:30 AM – 10:00 AM

## RC301

Multidetector CT of Pulmonary  
Arteries, Heart, and Thoracic Aorta

*Martine J. Remy-Jardin, MD, PhD*  
*Robert C. Gilkeson, MD*

*John R. Mayo, MD*

## RC302

Current Activities of the Radiology  
Residency Review Committee and  
the American Board of Radiology

A. Current Activities of the  
Radiology Residency Review  
Committee

*Judith S. Armbruster, PhD*

*Kay H. Vydareny, MD*

B. Current Activities of the American  
Board of Radiology

*Robert R. Hattery, MD*

*Anthony V. Proto, MD*

*Philip O. Alderson, MD*

## RC303

Coronary Artery CT and CT  
Angiography

*Marc Dewey, MD*

*Suhny Abbata, MD*

*David A. Bluemke*

## RC304

The Shoulder: Sports Imaging

*Lynne S. Steinbach, MD*

*Michael J. Tuite, MD*

*Adam C. Zoga, MD*

## RC305

White Matter Diseases of the Brain  
and Spinal Cord

*James M. Provenzale, MD*

*Majda M. Thurnher, MD*

## RC306

Head and Neck Cancer

A. Regional Nodal Metastases

*Peter M. Som, MD*

B. Evaluation of the Treated Neck

*Daniel W. Williams, MD*

C. Patterns of Denervation in the  
Head and Neck

*Wendy R. Smoker, MD*

## RC307\*

Categorical Course in Diagnostic  
Radiology: Genitourinary—  
Multidetector CT in the  
Genitourinary Tract

A. Multidetector CT in the  
Genitourinary Tract: Hype  
or Hope

*Elliot K. Fishman, MD*

B. The Era of Multidetector CT:  
Radiation and Contrast Issues

*Nigel C. Cowan, MD,*

*Coordinator*

C. Medical-Legal Issues in  
Genitourinary Imaging

*Jonathan W. Berlin, MD, MBA*

## RC309

Imaging of Focal Liver Lesions: State  
of the Art

A. Algorithm for Managing  
Incidental Lesions

*Erik K. Paulson, MD*

B. Diagnosing Lesions in the  
Noncirrhotic Liver

*Frank H. Miller, MD*

C. Diagnosing Lesions in the  
Cirrhotic Liver

*Jeffrey C. Weinreb, MD*

## RC310 S

Obstetrical Ultrasound II: Improving  
Your Practice of Ultrasound

*Eric E. Sauerbrei, MD, Moderator*

A. Early Pregnancy Failure: The Role  
of Ultrasound

*Eric E. Sauerbrei, MD*

B. Ultrasound in Early Fetal  
Assessment (10–14 Weeks  
Menstrual Age)

*Carol B. Benson, MD*

C. Ultrasound Evaluation of Possible  
Ectopic Pregnancy

*Faye C. Laing, MD*

## RC311 S

Improving Your PET-PET/CT Clinical  
Practice: Lessons Learned with  
Emphasis on Case Studies, Image/  
Pathologic Correlation, and Practical  
Issues with PET/CT  
(An Interactive Session)

*Harry Agress, Jr, MD*

*Paul D. Shreve MD*

## RC312

Pediatric Vascular Imaging with CT  
and MR

A. CT Angiographic and MR  
Angiographic Techniques  
in Children

*Francies P. Chan, MD, PhD*

B. Thoracoabdominal

*Marilyn J. Siegel, MD*

C. Extremities

*Orhan Konez, MD*

## RC314

Interventions in the Female Pelvis

*Lindsay S. Machan, MD*

*Amy S. Thurmond, MD*

*Jean-Pierre J. Pelage, MD, PhD*

## RC315+

Update Course in Diagnostic  
Radiology: Breast Imaging—Digital  
Mammography

A. Principles, Equipment, Technique,  
and Clinical Results

*Carl J. D'Orsi, MD*

B. Digital Tomosynthesis and Other  
Applications

*Daniel B. Kopans, MD*

C. Proficiency in Mammography:  
Interpretive Skills, Computer-  
aided Detection, and Double  
Reading

*Linda Warren-Burhenne, MD*

### RC316

Responding to the Needs of Radiologic Education in Developing Countries (Sponsored by the RSNA Committee on International Relations and Education)

*Barry B. Goldberg, MD, Moderator*  
*George S. Bisset III, MD*  
*Miguel E. Stoopan, MD*  
*Paul Dubbins, MBBS, FRCR*  
*Maurice M. Reeder, MD*

### RC317

Probe Design II

- A. Sensitivity and Specificity Concerns  
*A. Gregory Sorensen, MD*
- B. Development of Radionuclide Imaging Probes  
*Rikki N. Waterhouse, PhD*
- C. MR and Optical Probes for Molecular Imaging  
*Umar Mahmood, MD, PhD*

### RC318

Lymph Node Assessment in Oncologic Patients (An Interactive Session)

- A. Lymphatic Anatomy, Normal Appearances, and Patterns of Spread  
*Janet E. Husband, FMedSci, FRCP, FRCR*
- B. Techniques, Pitfalls, Clinical Relevance, and Advances in Imaging  
*Mukesh G. Harisinghani, MD*
- C. Lymphatic Contrast Agents  
*Jelle O. Barentsz, MD, PhD*

### RC319

Imaging and Head and Neck Cancer Radiation Treatment Planning

*Weining K. Zhen, MD*  
*Suresh K. Mukherji, MD*

### RC320

Image-guided Adaptive Radiation Therapy

*Patrick Kupelian, MD, JD*  
*Dale Litzenberg*

### RC321++

Update Course in Diagnostic Radiology Physics: Advances in Breast Imaging—Physics, Technology, and Clinical Applications: Digital Mammography—Detector Technology, Image Quality, and Physics Audits

- A. Image Quality Metrics in Mammography  
*Robert M. Nishikawa, PhD*
- B. Digital Mammography Image Acquisition Technology  
*Andrew Karellas, PhD*
- C. Quality Control Techniques for Digital Mammography Systems  
*Srinivasan Vedantham, PhD*

### RC322

Intensity-modulated Radiation Therapy Patient Safety and Error Reduction

*Peter B. Dunscombe, PhD*  
*Geoffrey S. Ibbott, PhD*  
*Marcus E. Randall, MD*

### RC323

Minicourse: From Image to Decision—Science and Technology for Effective Interpretation of Medical Images: The Radiologist and Computer-aided Detection (CAD)

*Ehsan Samei, PhD, Co-Director*  
*Elizabeth A. Krupinski, PhD, Co-Director*

- A. Perceptual Effect of CAD in Reading Chest Images  
*Matthew T. Freedman, MD, MBA*
- B. Perceptual Effect of CAD in Reading Mammograms  
*Michael J. Ulissey, MD*
- C. A Radiologist's Perspective on Using CAD for Reading CT and MR Images  
*Ronald M. Summers, MD, PhD*

### RC325\*\*

Categorical Course in Diagnostic Radiology Physics: From Invisible to the Visible—The Science and Practice of X-Ray Imaging and Radiation Dose Optimization

- A. Computed Radiography/Digital Radiography: Adult  
*J. Anthony Seibert, PhD*
- B. Computed Radiography/Digital Radiography: Pediatric  
*Charles E. Willis, PhD*
- C. Computed Radiography/Digital Radiography: Radiologist Perspective of Controlling Dose and Study Quality  
*Cornelia Schaefer-Prokop, MD*

### RC326

Introduction to Imaging Information (Basic Imaging Informatics)

(In Conjunction with the Society for Imaging Informatics in Medicine)

*Katherine P. Andriole, PhD, Moderator*

- A. What Is Imaging Informatics?  
*Katherine P. Andriole, PhD*
- B. DICOM Basics  
*Steven C. Horii, MD*
- C. Information Technology Basics  
*Richard L. Morin, PhD*

### RC327

Tracking Radiologist Productivity: Is It Necessary and How Should It Be Done (An Interactive Session)

*Fred Gaschen, MBA*  
*Stephen Chan, MD, MBA, MPH*  
*Richard Duszak, Jr, MD*

### RC328

Minicourse in Oncologic Imaging: Imaging Opportunities in Clinical Trials—Imaging as a Clinical Biomarker: Importance of Technique

*Edward Jackson, PhD*  
*Paul Kinahan, PhD*  
*Larry Clarke, PhD*

# Refresher Course Schedule (continued)

## RC329

Minicourse: Optimize Your Body MR Practice—From Safety to Protocol Design: New Hardware and Software Applications to Body MR

A. Three Tesla: How to Use the Extra Signal

*Christiane K. Kuhl, MD*

B. Parallel Imaging Made Easy

*Vivian S. Lee, MD, PhD*

C. Cutting Edge: Real-time, Functional, and Whole-Body MR

*J. Paul Finn, MD*

## RC330

Building Systems for Business Continuity (Advanced Informatics)

*Paul G. Nagy, PhD, Moderator*

A. Disaster Recovery (DR)

*Paul G. Nagy, PhD*

B. High Availability (HA) + DR = BC (Business Continuity)

*Steve G. Langer, PhD*

## RC332+++

Update Course in Diagnostic Radiology Physics: Multidimensional Image Processing, Analysis, and Display—Visualization, Navigation, and Quantitation

A. Strategies for Navigating and Interpreting Large Volumetric Data Sets in the Clinical Environment

*Geoffrey D. Rubin, MD*

B. Navigating the Fifth Dimension

*Osman Ratib, MD, PhD*

C. Computer-aided Measurement and Analysis of CT Images of the Lungs

*Anthony P. Reeves, PhD*

## RC350

Intraarterial Acute Ischemic Stroke Therapy (How-to Workshop)

*John D. Barr, MD*

*Michael N. Brant-Zawadzki, MD*

## RC351

Inferior Vena Cava Interventions (How-to Workshop)

*Joseph M. Stavas, MD*

*Matthew A. Mauro, MD*

*Robert G. Dixon, MD*

*Stephan Moll, MD*

## RC352

Musculoskeletal Ultrasound with Focus on Peripheral Nerves (Hands-on Workshop)

*Carlo Martinoli, MD*

*Marnix T. van Holsbeeck, MD*

*Gerd Bodner, MD*

*Antonio J. Bouffard, MD*

*Etienne Cardinal, MD*

*Ruth Y. Ceulemans, MD*

*Joseph G. Craig, MD*

*David P. Fessell, MD*

*Wayne W. Gibbon, MD*

*Moshe Graif, MD*

*Ghiyath Habra, MD*

*Joseph H. Introcaso, MD*

*Jon A. Jacobson, MD*

*Matthieu J. Rutten, MD*

## RC353

How to Configure and Tune a PACS: Advanced (Hands-on Workshop)

*Claudine Martin, BS*

## RC354

Getting Images into Your PC (Hands-on Workshop)

*David M. Lionetti, BA*

## Tuesday, November 28

4:30 PM – 6:00 PM

## RC401 S

Imaging of Obstructive Lung Disease: Emphysema and Large and Small Airways Disease

*Ella A. Kazerooni, MD, MS*

*Eric J. Stern, MD*

*David A. Lynch, MD*

## RC402

Mentoring Medical Students, Residents, and Faculty (An Interactive Session)

A. Mentoring Medical Students

*Donald R. Yandow II, MD*

B. Mentoring Radiology Residents

*Martha B. Mainiero, MD*

C. Mentoring Radiology Faculty

*Ann N. Leung, MD*

## RC403

How to Perform and Interpret Cardiac MR Imaging: A Primer

*Scott D. Flamm, MD*

*Steven D. Wolff, MD, PhD*

## RC404

MR Imaging of the Postoperative Knee and Shoulder with Orthopedic and Radiologic Correlation

*Lynne S. Steinbach, MD, Moderator*

*Christine B. Chung, MD, Moderator*

*C. Benjamin Ma, MD*

*Robert A. Pedowitz, MD*

*William B. Morrison, MD*

*Timothy G. Sanders, MD*

## RC405

Spine Imaging: Degenerative Disease

*Jeffrey G. Jarvik, MD, MPH*

*Michael T. Modic, MD*

## RC406

Sinonasal Imaging

A. Normal Anatomy, Anatomic Variants, and Inflammation

*Vijay M. Rao, MD*

B. Evaluation Following Functional Endoscopic Sinus Surgery

*Michelle A. Michel, MD*

C. Nasal Obstruction and Sinonasal Masses

*C. Douglas Phillips, MD*

#### RC407\*

Categorical Course in Diagnostic Radiology: Genitourinary—Imaging in Gynecologic Malignancies

- A. Adnexal Mass Evaluation: Aiming for a More Specific Diagnosis  
*Caroline Reinhold, MD, MSc, Coordinator*
- B. Imaging Uterine and Cervical Malignancy: Why, When, and How  
*Rodney H. Reznek, MD*
- C. PET in Genitourinary Malignancies: Current Application and Future Possibilities  
*Homer A. Macapinlac, MD*

#### RC408

Imaging of Spine Trauma

- A. Cervical Spine Trauma  
*C. Craig Blackmore, MD, MPH*
- B. Thoracic and Lumbar Spine Trauma  
*Georges Y. El-Khoury, MD*

#### RC409

Imaging of the Gastroesophageal Junction

- A. Cancers and Other Abnormalities about the Gastroesophageal Junction  
*Marc S. Levine, MD*
- B. Hernias and Funduplications  
*Cheri L. Canon, MD*
- C. Bariatric Surgery  
*Laura R. Carucci, MD*

#### RC410

Gynecology: Improving Your Practice of Ultrasound (An Interactive Session)

*Ted Lyons, MD, Moderator*

- A. Difficult Cases in Gynecological Ultrasound  
*Douglas L. Brown, MD*
- B. The Premenopausal and Postmenopausal Endometrium  
*Mostafa Atri, MD*
- C. The Inhomogeneous Myometrium  
*Ted Lyons, MD*

#### RC411

PET and PET/CT Imaging of the Extracranial Head and Neck

*Val J. Lowe, MD*  
*Richard L. Wahl, MD*

#### RC412

Challenging CT Angiographic and MR Angiographic Cases: Interactive Interpretation with the Experts (An Interactive Session)

*Geoffrey D. Rubin, MD, Moderator*  
*Carlo Catalano, MD*  
*W. Dennis Foley, MD*  
*Stefan G. Ruehm, MD, PhD*  
*Jeffrey H. Maki, MD, PhD*

#### RC414

Interventions in the Biliary System

*Andy Adam, MD*  
*Mario Bezzi, MD*  
*Peter R. Mueller, MD*

#### RC415+

Update Course in Diagnostic Radiology: Breast Imaging—Breast Ultrasound: Performance and Interpretation

- A. Performance, Anatomy, Pitfalls, and BI-RADS  
*Ellen B. Mendelson, MD*
- B. Benign and Probably Benign Lesions  
*Wendie A. Berg, MD, PhD*
- C. Soft and Hard Sonographic Findings of Malignancy  
*Anthony T. Stavros, MD*

#### RC416

Hot Topics in Neuroradiology and Musculoskeletal, Gastrointestinal, and Gynecologic Radiology: Practical Points and Pitfalls

*Ronald L. Eisenberg, MD, JD*  
*Alexander R. Margulis, MD*  
*Hedvig Hricak, MD, PhD*  
*Donald L. Resnick, MD*  
*Richard M. Gore, MD*  
*William P. Dillon, MD*

#### RC417

Imaging Modalities and Instrumentation

- A. Nuclear Imaging  
*Benjamin M. Tsui, PhD*
- B. MR Imaging  
*Dmitri Artemov, PhD*
- C. Optical Imaging  
*Brad Rice, PhD*

#### RC418

MR Imaging in Evaluation of Musculoskeletal Neoplasms

*Mark Davies, MD*  
*Murali Sundaram, MD*  
*David M. Panicek, MD*

#### RC419

Imaging and Breast Cancer Radiation Treatment Planning

- A. Imaging  
*Lonie R. Salkowski, MD*
- B. Therapy  
*J. Frank Wilson, MD*  
*Julia R. White, MD*

#### RC420

Enhancing Radiation Treatment with Molecular Targeted Therapies

*Ralph R. Weichselbaum, MD*  
*Adam P. Dicker, MD, PhD*

#### RC421++

Update Course in Diagnostic Radiology Physics: Advances in Breast Imaging—Physics, Technology, and Clinical Applications: Digital Mammography—Digital Subtraction, Display Image Quality, and Clinical Perspective

- A. Digital Mammography Display and Visualization  
*Ehsan Samei, PhD*
- B. Digital Mammography in the Clinical Practice  
*Carl J. D'Orsi, MD*
- C. Advances in Digital Mammography: Image Processing, Digital Subtraction, and Dual-Energy Techniques  
*Martin J. Yaffe, PhD*

# Refresher Course Schedule (continued)

## RC422

Quality Assurance for Treatment Planning (IEC 62083 and IAEA Report)

*Jacob Van Dyk*

*Geoffrey S. Ibbott, PhD*

## RC423

Minicourse: From Image to Decision—Science and Technology for Effective Interpretation of Medical Images: Perception and the Clinic

*Ehsan Samei, PhD, Co-Director*

*Elizabeth A. Krupinski, PhD,*

*Co-Director*

A. Effect of Ergonomic Factors on Medical Image Perception  
*Eliot L. Siegel, MD*

B. Perceptual Issues in Reading Digital Mammograms  
*Margarita L. Zuley, MD*

C. Ergonomic Factors for the Radiologist's Workspace  
*Carl J. Zylak, MD*

## RC425\*\*

Categorical Course in Diagnostic Radiology Physics: From Invisible to the Visible—The Science and Practice of X-Ray Imaging and Radiation Dose Optimization

A. Fluoroscopy (Gastrointestinal): Dose  
*Edward L. Nickoloff, DSC*

B. Fluoroscopy (Gastrointestinal): Image Quality  
*Phillip L. Rauch, MS*

C. Fluoroscopy (Gastrointestinal): Clinical Practice—Controlling Dose and Study Quality  
*Marta Hernanz-Schulman, MD*

## RC426

Basic Radiology Workflow Using Integrating the Healthcare Enterprise (IHE®) (Basic Imaging Informatics) (In Conjunction with the Society for Imaging Informatics in Medicine)

*David S. Channin, MD, Moderator*

A. The IHE Workflow Model  
*David S. Channin, MD*

B. How to Buy and Implement IHE  
*Nogah Haramati, MD*

## RC427

Important Health Policy Issues Affecting Radiology: Surviving the Present, Predicting the Future, and Preserving the Specialty (In Conjunction with the American College of Radiology)  
*William T. Thorwarth, Jr, MD*  
*Brian J. Silverstein, MD*  
*John A. Patti, MD*  
*A. Van Moore, MD*

## RC428

Minicourse in Oncologic Imaging: Imaging Opportunities in Clinical Trials—Interventional Oncology Therapies: From Concept to Delivery  
*Gary S. Dorfman, MD*  
*Keyvan Farahani, PhD*  
*Erez Nevo, MD, PhD*  
*Nahum Goldberg, MD*  
*David Alsop, PhD*  
*John Haaga, MD*

## RC429

Minicourse: Optimize Your Body MR Practice—From Safety to Protocol Design: MR Contrast Media—Safety and Clinical Applications in Body MR

A. Gadolinium Chelates  
*Jeffrey C. Weinreb, MD*

B. Hepatobiliary Contrast Agents  
*Stefan O. Schoenberg, MD, PhD*

C. Ultrasmall Superparamagnetic Iron Oxide Particles  
*Jelle O. Barentsz, MD, PhD*

## RC430

Image Processing and 3D Imaging (Advanced Imaging Informatics)  
*Bradley J. Erickson, MD, PhD,*  
*Moderator*

A. Three-dimensional Display and Processing  
*Richard Robb, PhD*

B. Three-dimensional for Diagnosis  
*Elliot K. Fishman, MD*

C. Enterprise 3D Tools to Enhance Your Practice  
*Gary J. Wendt, MD*

## RC432+++

Update Course in Diagnostic Radiology Physics: Multidimensional Image Processing, Analysis, and Display—Computer-aided Diagnosis in Breast Imaging

A. Clinical Applications of Image Analysis and Visualization for 3D Breast Imaging  
*Mitchell D. Schnall, MD, PhD*

B. Computer-supported Analysis of Breast MR Imaging in 4D: Why, When, and How?  
*Kenneth G. Gilhuijs, PhD*

C. Two-dimensional and 3D Multimodality CAD for Breast Cancer Diagnosis  
*Karla J. Horsch, PhD*

## RC450

Problematic Central Venous Access (Dos and Don'ts) (How-to Workshop)  
*Philip D. Orons, DO*  
*Clement J. Grassi, MD*  
*George G. Hartnell, MD*

## RC451

Utility of MR Imaging in Diagnosing Elbow and Wrist Pathology (How-to Workshop)  
*Nancy M. Major, MD*  
*Mark W. Anderson, MD*

## RC452

Dynamic Musculoskeletal Ultrasound (Hands-on Workshop)  
*Marnix T. van Holsbeeck, MD*  
*Ximena L. Wortsman, MD*  
*Antonio J. Bouffard, MD*  
*Nathalie J. Bureau, MD*  
*Etienne Cardinal, MD*  
*Ruth Y. Ceulemans, MD*  
*Joseph G. Craig, MD*  
*David P. Fessell, MD*  
*Wayne W. Gibbon, MD*  
*Ghiyath Habra, MD*  
*Joseph H. Introcaso, MD*  
*Jon A. Jacobson, MD*  
*Carlo Martinoli, MD*  
*Matthieu J. Rutten, MD*

#### RC453

Speech Recognition (Hands-on Workshop)

*James A. Brunberg, MD*

#### RC454

Getting Started with PowerPoint: Building a Basic Slide (Hands-on Workshop for Radiologists)

*Ken L. Schreibman, PhD, MD*

### Wednesday, November 29

8:30 AM – 10:00 AM

#### RC501

Lung Nodules: Detection, Characterization, and Biopsy/Radiofrequency Ablation

*Ioannis Vlahos, MBBS*

*Jeffrey S. Klein, MD*

*Jo-Anne O. Shepard, MD*

#### RC502

Use of the Audience-Response System in Radiology Education and Item-Writing Guidelines (An Interactive Session)

A. Guidelines for Writing Good Multiple-Choice Questions

*Jannette Collins, MD, MEd*

B. Use of the Audience Response System in Radiology Education

*George Mejicano, MD*

#### RC503

Adult Congenital Heart Disease: Pre- and Postoperative Evaluation with MR Imaging and CT

*Robert M. Steiner, MD*

*Charles S. White, MD*

*Laureen M. Sena, MD*

#### RC504

New Concepts in Knee MR Imaging

*Donald L. Resnick, MD*

*Christine B. Chung, MD*

#### RC505

Comprehensive Imaging for Acute Stroke Treatment (An Interactive Session)

*Vincent P. Mathews, MD*

*Howard A. Rowley, MD*

#### RC506

Thyroid Nodules and Cancer: Evaluation and Imaging

A. Clinical Evaluation of Nodules

*Susan Mandel, MD*

B. Indications for Ultrasound and Fine Needle Aspiration

*Jill E. Langer, MD*

C. Role of CT and MR in Evaluating Thyroid Cancer

*Laurie A. Loevner, MD*

#### RC507\*

Categorical Course in Diagnostic Radiology: Genitourinary—Adrenal, Retroperitoneum, and Transplant Evaluation

A. Contemporary Adrenal Imaging: Making a More Specific Diagnosis

*Evan S. Siegelman, MD,*

*Coordinator*

B. The Retroperitoneum: Anatomy

*Susan Hilton, MD*

C. The Retroperitoneum: Pathology

*Nicholas Papanicolaou, MD*

D. Imaging Evaluation of Renal Transplants

*Myron A. Pozniak, MD*

#### RC508

Evaluating High-Energy Extremity Injuries with Radiography and CT

A. Lower Extremity

*Anthony J. Wilson, MBChB*

B. Upper Extremity

*Thurman Gillespy III, MD*

#### RC509

Imaging of Pancreatic Neoplasms: State of the Art

A. Optimal CT and MR Techniques

*Desiree E. Morgan, MD*

B. Staging Pancreatic Adenocarcinoma

*Joel G. Fletcher, MD*

C. Diagnosing and Managing Cystic Pancreatic Neoplasms

*Alec J. Megibow, MD, MPH*

#### RC510

Abdominal Ultrasound: Improving Your Practice of Ultrasound (An Interactive Session)

*Stephanie R. Wilson, MD,*

*Moderator*

A. Abdominal Ultrasound in the Era of Fast CT and MR Imaging: Part I

*Stephanie R. Wilson, MD*

B. Abdominal Ultrasound in the Era of Fast CT and MRI: Part II

*Anthony E. Hanbidge, MD*

C. Abdominal Ultrasound in the Era of Fast CT and MR Imaging: Part III

*Philip W. Ralls, MD*

#### RC511

Role of Lung Scanning and CT Angiography in the Diagnosis of Pulmonary Embolism in the PLOPED II Era

*Alexander Gottschalk, MD*

*H. Dirk Sostman, MD*

*Paul D. Stein, MD*

#### RC512

Variants, Vasculitis, and Other Borderlands of Vascular Diagnosis

A. Important Vascular Anatomy and Variants

*Eric E. Williamson, MD*

B. Arterial Occlusive Disease

*Tim Leiner, MD*

C. Aneurysmal Disease

*Stefan O. Schoenberg, MD, PhD*

#### RC513

Imaging of Lower Extremity Disorders in Children

A. Screening for Developmental Dysplasia of the Hip

*Marc S. Keller, MD*

B. Imaging of Disorders of the Knee in Children

*Tal Laor, MD*

C. Imaging of Hip Disorders in Children beyond Infancy

*Diego Jaramillo, MD, MPH*

# Refresher Course Schedule (continued)

## RC514

### Percutaneous Treatment of Liver Tumors

*Michael C. Soulen, MD*  
*Steven C. Rose, MD*  
*Debra A. Gervais, MD*

## RC515+

### Update Course in Diagnostic Radiology: Breast Imaging—Breast Ultrasound: Screening, Biopsy, and Staging

- A. Current Status of Screening Ultrasound  
*Stephen A. Feig, MD*
- B. Ultrasound-guided Interventional Procedures  
*Christopher E. Comstock, MD*
- C. Imaging the Extent of Breast Cancer: A Multimodality Approach  
*Ellen Shaw de Paredes, MD*

## RC516

### Lung Cancer Screening and Coronary Artery Disease Screening: The Present and the Future (In Conjunction with the American Association for Women Radiologists)

*Judith K. Amorosa, MD, Moderator*  
*Denise R. Aberle, MD*  
*Claudia I. Henschke, PhD, MD*  
*Martine J. Remy-Jardin, MD, PhD*

## RC517

### Molecular-Genetic Imaging

- A. Reporter Systems in Molecular Imaging: A Comparative Analysis  
*David R. Piwnicka-Worms, MD, PhD*
- B. Imaging of Cellular Networks and Protein-Protein Interaction  
*Sam Gambhir, MD*
- C. Molecular-Genetic Imaging in Oncology  
*Juri G. Gelovani, MD, PhD*

## RC518

### PET/CT in Oncology II

*Val J. Lowe, MD*  
*Richard L. Wahl, MD*  
*David A. Mankoff, MD, PhD*

## RC519

### Imaging and Gastrointestinal Cancer Radiation Treatment Planning

*Lisa A. Kachnic, MD*  
*Brian C. Lucey, MBCh*

## RC520

### Radioimmunotherapy *Wade L. Thorstad, MD*

## RC521++

### Update Course in Diagnostic Radiology Physics: Advances in Breast Imaging—Physics, Technology, and Clinical Applications: Emerging Tomographic Techniques in Mammography

- A. Breast Tomosynthesis: Methods and Applications  
*Tao Wu, PhD*
- B. Breast CT: Its Prospect for Breast Cancer Screening and Diagnosis  
*John M. Boone, PhD*
- C. Digital Mammography Image Management: DICOM, PACS, and the National Digital Mammography Archive  
*Mitchell D. Schnall, MD, PhD*

## RC522

### Minicourse: Image Optimization for Radiation Therapy Treatment Planning—Brain, Head and Neck, and Extremities

*Debra Brinkmann, PhD, Director*

- A. Brain  
*John H. Suh, MD*
- B. Head and Neck  
*C. Rasch, MD*
- C. Extremities  
*Zhiheng Wang, PhD*

## RC523

### Minicourse: Innovations and Advances in Medical Imaging Technology—Innovations and Advances in CT Technology *Willi A. Kalender, PhD, Director* *Willi A. Kalender, PhD*

## RC525\*\*

### Categorical Course in Diagnostic Radiology Physics: From Invisible to the Visible—The Science and Practice of X-Ray Imaging and Radiation Dose Optimization

- A. CT: Dose  
*Dianna Cody, MD*
- B. CT: Image Quality  
*Michael F. McNitt-Gray, PhD*

## RC526

### Practical and Operational Issues in Picture Archiving and Communication Systems and Radiology Information Systems (Basic Imaging Informatics) (In Conjunction with the Society for Imaging Informatics in Medicine)

*Bradley J. Erickson, MD, PhD, Moderator*

- A. Problem Detection, Reporting, and Resolution in Picture Archiving and Communication Systems and Radiology Information Systems  
*Paul G. Nagy, PhD*
- B. Security  
*Paul J. Chang, MD*
- C. Outside Materials  
*Bradley J. Erickson, MD, PhD*

## RC527

### Current Issues in Radiology Liability: Will Saying “I’m Sorry” Prevent a Malpractice Lawsuit?

*Leonard Berlin, MD*  
*Keith A. Hebeisen, JD*  
*Timothy G. Nickels, JD*  
*Daniel T. Saunders*

## RC530

### The State of Computer-aided Diagnosis (CAD): Are You Ready to Move? (Advanced Imaging Informatics)

*C. Daniel Johnson, MD, Moderator*

- A. Mammo CAD  
*Maryellen L. Giger, PhD*
- B. Colon  
*C. Daniel Johnson, MD*
- C. Chest  
*Heber MacMahon, MD*

### RC531

#### Small Parts Interventional Ultrasound (Hands-on Workshop)

*William E. Shiels II, DO*  
*Brian D. Coley, MD*  
*Alda F. Cossi, MD*  
*Nathalie J. Bureau, MD*  
*Kenneth H. Cho, MD*  
*Kevin M. Baskin, MD*  
*Robin D. Kaye, MD*  
*Caroline L. Hollingsworth, MD*  
*Paula B. Gordon, MD, FRCPC*  
*Veronica J. Rooks, MD*  
*Joseph A. Ronsivalle, DO*  
*Horacio M. Padua, Jr, MD*  
*Stephen D. Brown, MD*  
*Theodore T. Miller, MD*

### RC532+++

#### Update Course in Diagnostic Radiology Physics: Multidimensional Image Processing, Analysis, and Display—Computer-aided Diagnosis in Neuroimaging

- A. Three-dimensional Blood Vessel  
Trees: Clinical Needs and  
Applications  
*Elizabeth Bullitt, MD*
- B. Three-dimensional Analysis of the  
Cerebral Vasculature: Concepts  
and Applications  
*Kenneth R. Hoffmann, PhD*
- C. Quantitative Neuroimage  
Analysis: Tools and Techniques  
for Segmentation, Registration,  
and Validation  
*Simon K. Warfield, PhD*

### RC550

#### Hysterosalpingography and Selective Salpingography (Hands-on Workshop)

*David M. Hovsepian, MD*  
*Amy S. Thurmond, MD*  
*Antoine J. Maubon, MD*  
*Jean-Pierre G. Rouanet De Lavit, MD*  
*Lindsay S. Machan, MD*  
*Ronald J. Zagoria, MD*  
*James C. Bass, MD*  
*A. Van Moore, MD*

### RC551

#### Pneumonia for Radiologists: A Practical Approach (How-to Workshop)

*Christian J. Herold, MD*  
*Rosita M. Shah, MD*  
*Ann N. Leung, MD*

### RC552

#### Venous Doppler Sonography: Visceral and Extremity Applications (Hands-on Workshop)

*Mark E. Lockhart, MD, MPH*  
*Susan L. Voci, MD*  
*Nancy Carson, MBA, RDMS, RVT*  
*M. Robert DeJong, RDMS*  
*Vikram S. Dogra, MD*  
*Katherine W. Fong, MBBS*  
*Ulrike M. Hamper, MD, MBA*  
*Felix A. Hester, RDMS, RVT, RT*  
*Janis G. Letourneau, MD*  
*Mani Montazemi, RDMS*  
*Michelle L. Robbin, MD*  
*Deborah J. Rubens, MD*  
*Leslie M. Scoutt, MD*  
*John G. Strang, MD*

### RC553

#### How to Use a PACS Workstation: Basic (Hands-on Workshop)

*James A. Brunberg, MD*

### RC554

#### Intermediate PowerPoint: Building Complex Slides (Hands-on Workshop for Radiologists)

*Ken L. Schreiber, PhD, MD*

### Thursday, November 30

**8:30 AM – 10:00 AM**

### RC601

#### Update on Thoracic Malignancies: Lung Cancer, Lymphoma, and Mesothelioma

*Suzanne L. Aquino, MD*  
*Caroline Chiles, MD*  
*Jeremy J. Erasmus, MD*

### RC602

#### Electronic Educational Aides in Radiology

- A. Electronic Evaluation Systems  
in Radiology  
*Phillip M. Boiselle, MD*

#### B. Educational Applications of Personal Digital Assistants

*James J. Choi, MD*

#### C. Web-based Radiology Education

*Michael P. D'Alessandro, MD*

### RC603

#### Cardiac MR and CT: Read Cases with the Experts (An Interactive Session)

*Jill E. Jacobs, MD*  
*Charles B. Higgins, MD*  
*Santiago P. Miro, MD*  
*Hajime Sakuma, MD*

### RC604

#### The Elbow: Sports Imaging

*Andrew H. Sonin, MD*  
*Joseph S. Yu, MD*  
*Theodore T. Miller, MD*

### RC605

#### Neurodegenerative Diseases: Parkinson Disease and Alzheimer Disease

*Micheal D. Phillips, MD*  
*Jeffrey R. Petrella, MD*  
*Carolyn C. Meltzer, MD*

### RC606

#### The Temporal Bone

- A. Sensorineural Hearing Loss  
*H. Ric Harnsberger, MD*
- B. Conductive Hearing Loss  
*Patricia A. Hudgins, MD*

### RC607\*

#### Categorical Course in Diagnostic Radiology: Genitourinary—Benign Disease in the Female Pelvis: Making a More Specific Diagnosis

- A. Acute Pelvic Pain: Distinguishing  
between the Diagnostic  
Possibilities  
*Jill E. Langer, MD*
- B. Pelvic Floor Imaging: When, Why,  
and How  
*Julia R. Fielding, MD*
- C. The Infertile Female: Imaging  
and Interventions  
*Parvati Ramchandani, MD,*  
*Coordinator*

# Refresher Course Schedule (continued)

## RC608

Trauma and Infections in the Face and Neck

- A. Facial Trauma  
*Robert A. Novelline, MD*
- B. Head and Neck Infection  
*Wayne S. Kubal, MD*

## RC609

Imaging of the Small Bowel: State of the Art (An Interactive Session)

- A. Multidetector CT Enterography  
*Amy K. Hara, MD*
- B. MR Enterography  
*Jeff L. Fidler, MD*
- C. Barium and Multidetector CT Enteroclysis  
*Dean D. Maglinte, MD*

## RC610

Thyroid, Parathyroid and Neck Nodes: Improving Your Practice of Ultrasound (An Interactive Session)

- J. William Charboneau, MD,*  
*Moderator*
- A. Thyroid  
*Carl C. Reading, MD*
  - B. Neck Nodes and Parathyroid  
*R. Brooke Jeffrey, Jr, MD*

## RC611

Advanced Single Photon Imaging of the Abdomen and Kidneys

*Harvey A. Ziessman, MD*  
*Raghuvier K. Halker, MD*

## RC612

Imaging of Peripheral Arterial Occlusive Disease

- A. Role of Digital Subtraction Angiography  
*John A. Kaufman, MD*
- B. Role of MR Angiography  
*Barry Stein, MD*
- C. Role of CT Angiography  
*Michael L. Martin, MD*

## RC613

Reflux and Congenital Obstruction of the Urinary Tract

- A. Vesicoureteric Reflux: Role of Imaging  
*Robert L. Lebowitz, MD*
- B. Sonographic Evaluation of Vesicoureteric Reflux  
*Kassa Darge, MD, PhD*
- C. New MR Imaging Technologies for Evaluation of the Urinary Tract in Children  
*John D. Grattan-Smith, MBBS*

## RC614

Neurointerventional Procedures

*Barry T. Katzen, MD*  
*John J. Connors III, MD*

## RC615+

Update Course in Diagnostic Radiology: Breast Imaging—MR Imaging: Performance, Interpretation, and Biopsy

- A. Performance, Pitfalls in Interpretation, and BI-RADS Reporting  
*Elizabeth A. Morris, MD*
- B. CAD, Kinetics, and Lesion Assessment  
*Robert A. Schmidt, MD*

- C. MR Imaging-guided Biopsy

*Laura Liberman, MD*

## RC616

Terrorism and the Radiologist

*John D. Statler, MD*  
*Jaime L. Montilla, MD*  
*Edward B. Lucci, MD*

## RC617

Clinical Translation

- A. Current and Near-term Applications of Molecular Imaging Research  
*Richard L. Wahl, MD*
- B. Training for Molecular Imaging  
*Robert F. Mattrey, MD*
- C. Involving Community Imaging Specialists  
*King C. Li, MD*

## RC618

Cancer Screening

- A. Principles of Screening  
*William C. Black, MD*
- B. Lessons Learned from Breast Cancer Screening  
*Daniel B. Kopans, MD*
- C. Colon Cancer Screening  
*Michael Macari, MD*

## RC621++

Update Course in Diagnostic Radiology Physics: Advances in Breast Imaging—Physics, Technology, and Clinical Applications: Computer-aided Diagnosis of Breast Disease

- A. Computer-aided Diagnosis Techniques for Screening Mammography  
*Heang-Ping Chan, PhD*
- B. Computer-aided Diagnosis in Diagnostic Mammography and Multimodality Breast Imaging  
*Maryellen L. Giger, PhD*
- C. Use of Computer-aided Diagnosis in Mammographic Interpretation: Detection versus Distraction  
*Edward A. Sickles, MD*

## RC622

Minicourse: Image Optimization for Radiation Therapy Treatment Planning—CT, MR, and PET Review  
*Debra Brinkmann, PhD, Director*

- A. CT Review  
*Dianna Cody, MD*
- B. MR Review  
*Edward F. Jackson, PhD*

- C. PET Review  
*Sasa Mutic, MS*

## RC623

Minicourse: Innovations and Advances in Medical Imaging Technology—Innovations and Advances in Radionuclide Imaging Technology  
*G. Donald Frey, PhD, Director*

A. Challenges in Nuclear Medicine Technology

*G. Donald Frey, PhD*

B. Radiopharmaceutical Development: Technology Implications

*Benjamin Franc, MD*

C. SPECT and SPECT/CT

*Bruce H. Hasegawa, PhD*

D. PET and PET/CT

*John R. Votaw, PhD*

RC625\*\*

Categorical Course in Diagnostic Radiology Physics: From Invisible to the Visible—The Science and Practice of X-Ray Imaging and Radiation Dose Optimization

A. Clinical Practice: Controlling Adult Radiation Dose and Study Quality

*James A. Brink, MD*

*T. Robin Goodman, MBBChir*

B. Clinical Practice: Controlling Pediatric Radiation Dose and Study Quality

*Donald P. Frush, MD*

RC626

Coping with Image Overload: What Can I Do Today?

(Basic Imaging Informatics)

(In Conjunction with the Society for Imaging Informatics in Medicine)

*Richard L. Morin, PhD, Moderator*

A. Data Management Techniques for High Data Volumes

*Richard L. Morin, PhD*

B. Interpretation Tools for CT and MR Today

*Khan M. Siddiqui, MD*

C. We're All Human, Aren't We? (Perception, Ergonomics)

*Nabile M. Safdar, MD*

RC627

Twenty-four-Hour Attending Radiology Coverage: Dealing with the Issues

*William G. Bradley, Jr, MD, PhD*

*Valerie P. Jackson, MD*

*Michael N. Brant-Zawadzki, MD*

RC630

New Profiles for Integrating the Healthcare Enterprise (Advanced Imaging Informatics)

*David S. Channin, MD, Moderator*

A. Inside Radiology

*David S. Channin, MD*

B. Outside Radiology

*Charles Parisot*

RC631

How to Optimize Benefit and Reduce Risk of Regional and Focal Ablative Treatment of Liver Cancers: Case Selection, Technical Details, and Integration of Methods (How-to Workshop)

*Steven C. Rose, MD*

*Charles W. Nutting, DO*

*Daniel Y. Sze, MD, PhD*

RC632+++

Update Course in Diagnostic Radiology Physics: Multidimensional Image Processing, Analysis, and Display—Computer-aided Diagnosis in Cardiothoracic Imaging

A. Understanding the Heart:

Methods for Display and Analysis of Cardiac Multidetector CT

*U. Joseph Schoepf, MD*

B. Image Processing and Computer-aided Detection in Lung Cancer: Detection, Diagnosis, and Treatment Evaluation

*Michael F. McNitt-Gray, PhD*

C. Normative Atlas of Lung Structure and Function for the Detection and Quantitation of Lung Pathology

*Eric A. Hoffman, PhD*

RC650

Vertebral Augmentation (How-to Workshop)

*A. Orlando Ortiz, MD, MBA*

*John M. Mathis, MD, MSc*

*Gregg H. Zoarski, MD*

*Bassem A. Georgy, MD, MSc*

RC651

CT of Coronary Artery Disease (How-to Workshop)

*Smita Patel, MBBS*

*Brian Hyslop, MD*

RC652

Ultrasound-guided Interventional Breast Procedures (Hands-on Workshop)

*Michael P. McNamara, Jr, MD*

*Alda F. Cossi, MD*

*Christopher E. Comstock, MD*

*Gary J. Whitman, MD*

*Alice S. Rim, MD*

*Michael N. Linver, MD*

*Paula B. Gordon, MD*

*Michelle D. McDonough, MD*

*Elizabeth R. DePeri, MD*

*Greg Neri, MD*

*Kelly A. McAleese, MD*

*Wesley S. Conwell, MD*

*Albert V. Porambo, MD*

*Ian D. McLoughlin, MD*

*Richard M. Chesbrough, MD*

RC653

Speech Recognition (Hands-on Workshop)

*James A. Brunberg, MD*

RC654

Getting Images into Your PC (Hands-on Workshop)

*David M. Lionetti, BA*

Thursday, November 30

4:30 PM – 6:00 PM

RC701

Pulmonary Infections: Tuberculosis, Atypical Mycobacteria, Immune-suppressed Hosts, and Emerging Infections (An Interactive Session)

*Melissa L. Rosado de Christenson, MD*

*H. Page McAdams, MD*

*Joel E. Fishman, MD, PhD*

*Loren H. Ketai, MD*

# Refresher Course Schedule (continued)

## RC702

Ethical Considerations in Radiology: Relationships with Industry

- A. The Meaning of Professionalism  
*Howard Mann, MD*
- B. Ethical Relationships with Industry  
*Jannette Collins, MD, MEd*

## RC703

One-Stop Shopping with Cardiac Imaging: CT or MR?

*Thomas J. Brady, MD*  
*J. Paul Finn, MD*

## RC704

The Foot: Sports Imaging

*Catherine C. Roberts, MD*  
*Joel S. Newman, MD*  
*Marnix T. van Holsbeeck, MD*

## RC705

Modern Pediatric Neuroimaging

*Pratik Mukherjee, MD, PhD*  
*Orit A. Glenn, MD*  
*A. James Barkovich, MD*

## RC706

Head and Neck: Pitfalls and Imaging Applications

- A. Pitfalls in Head and Neck Imaging  
*Lawrence E. Ginsberg, MD*
- B. Applications of CT, MR, and PET in Neck Imaging  
*Robert B. Lufkin, MD*

## RC707\*

Categorical Course in Diagnostic Radiology: Genitourinary—Renal Masses: Diagnosis, Biopsy, and Ablation

- A. Renal Mass Diagnosis: Opportunity Meets Reality  
*Raymond B. Dyer, MD,*  
*Coordinator*
- B. Renal Mass Biopsy in the New Millennium: An Important Diagnostic Procedure  
*Stuart G. Silverman, MD*

C. Renal Mass Ablation in the Era of Nephron-sparing Surgery: Indications, Technique, and Follow-up

*Ronald J. Zagoria, MD*

## RC708

Current CT Techniques for Imaging Medical Emergencies

- A. Thoracic Emergencies  
*Sanjeev Bhalla, MD*
- B. Abdominal and Pelvic Emergencies  
*Christine O. Menias, MD*

## RC709

Optimal Techniques for Multidetector CT and MR of the Liver (An Interactive Session)

- A. Multidetector CT  
*Rendon C. Nelson, MD*
- B. MR Imaging at 1.5 T  
*Donald G. Mitchell, MD*
- C. MR Imaging at 3.0 T  
*Diego R. Martin, MD, PhD*

## RC710

Problem Solving with Breast Ultrasound: To Biopsy or Not to Biopsy—Case-based Review—Improving Your Practice of Ultrasound (An Interactive Session)

*Nancy A. Wadden, MD*  
*Derek Muradali, MD*

## RC711

Advances in Cardiac Nuclear Imaging: SPECT, SPECT/CT, and PET/CT

*E. G. DePuey, MD*  
*Frank M. Bengel, MD*

## RC712

Topics in Aortic Imaging

- A. Acute Aortic Syndromes  
*Neil M. Rofsky, MD*
- B. Thoracic Aortic Aneurysms: From Anulus to Hiatus  
*Dominik Fleischmann, MD*
- C. Complications of Aortic Surgery and Endografting  
*Geoffrey D. Rubin, MD*

## RC713 S

Disorders of the Spine in Children

- A. Spinal Dysraphism in Children  
*Erin Simon Schwartz, MD*
- B. Imaging of Spinal Trauma  
*Len Swischuk, MD*
- C. Imaging of Scoliosis in Children  
*Molly E. Dempsey, MD*

## RC714

Musculoskeletal Interventional Procedures

*Jacques E. Dion, MD*  
*William E. Palmer, MD*

## RC715+

Update Course in Diagnostic Radiology: Breast Imaging—MR Imaging: Screening, Diagnosis, and Staging

- A. Problem Solving with MR Imaging  
*Gillian M. Newstead, MD*
- B. Staging and Assessment of Treatment  
*Robyn L. Birdwell, MD*
- C. Current Status of MR Imaging in Screening for Breast Cancer  
*Carol H. Lee, MD*

## RC716 S

Optimizing Radiation Dose in Body CT

*Sanjay Savini, MD, MSc*  
*Mannudeep K. Kalra, MD*  
*Donald P. Frush, MD*

## RC717

Opportunities from Industry and Government

- A. Academic-Industrial Collaborations  
*Raymond E. Gibson, PhD*
- B. Funding Opportunities: Imaging in the NIH Roadmap  
*Daniel C. Sullivan, MD*
- C. Obtaining Approval for Clinical Use of Molecular Imaging Probes  
*John Hoffman, MD*

## RC718

### Interventional Radiology in Oncologic Patients

*Karen T. Brown, MD*

*Anne M. Covey, MD*

*Riad Salem, MD, MBA*

## RC721++

### Update Course in Diagnostic Radiology Physics: Advances in Breast Imaging—Physics, Technology, and Clinical Applications: Ultrasound Imaging of the Breast—Emerging Trends

#### A. Physics of Breast Ultrasound

*Paul L. Carson, PhD*

#### B. The Physics of Elasticity Imaging: A New Option on the Latest Ultrasound Systems

*Timothy J. Hall, PhD*

#### C. Ultrasound Imaging for Screening for, Diagnosing, and Staging Breast Cancer: Issues and Controversies

*Thomas M. Kolb, MD*

## RC722

### Minicourse: Image Optimization for Radiation Therapy Treatment Planning—Lung, Upper Abdomen, and Pelvis

*Debra Brinkmann, PhD, Director*

#### A. Lung

*Paul J. Keall, PhD*

#### B. Upper Abdomen (Gastrointestinal)

*Kristy K. Brock, PhD*

#### C. Pelvis (Genitourinary)

*Patrick W. McLaughlin, MD*

## RC723

### Minicourse: Innovations and Advances in Medical Imaging Technology—Innovations and Advances in MR Imaging Technology: Imaging at 3 T

*Richard Frayne, PhD, Director*

*M. Louis Lauzon, PhD*

*Joel P. Felmlee, PhD*

## RC725\*\*

### Categorical Course in Diagnostic Radiology Physics: From Invisible to the Visible—The Science and Practice of X-Ray Imaging and Radiation Dose Optimization

#### A. Special Procedures

(Angiography): Dose

*Louis K. Wagner, PhD*

#### B. Special Procedures

(Angiography): Image Quality

*Adam Workman, MD*

#### C. Special Procedures

(Angiography): Clinical Practice

*Robert G. Dixon, MD*

## RC726

### Quality Control in Picture Archiving and Communication Systems (Basic Imaging Informatics)

*John A. Carrino, MD, Moderator*

#### A. Image Quality Process

*Kevin W. McEnergy, MD*

#### B. Data Integrity

*John A. Carrino, MD*

#### C. Putting Display Quality Control into Practice

*Ehsan Samei, PhD*

## RC727

### Radiology by Nonradiologists: Problems and Solutions

*James P. Borgstede, MD*

*David C. Levin, MD*

*Vijay M. Rao, MD*

## RC730

### Change Management (Advanced Imaging Informatics)

*Richard H. Wiggins III, MD,*

*Moderator*

#### A. Everyday Patches and Fixes

*Walter F. Hruby, MD*

#### B. Vendor Changes with Minimal Ripple

*Richard H. Wiggins III, MD*

#### C. Data Migration How-To

*Frederick M. Behlen, PhD*

## RC731

### Common Spinal Injection Procedures for Diagnosis and Treatment of Back Pain (Hands-on Workshop)

*John M. Mathis, MD, MSc*

*Chi-Shing Zee, MD*

*Gregg H. Zoarski, MD*

*Douglas S. Fenton, MD*

*A. Orlando Ortiz, MD, MBA*

## RC732+++

### Update Course in Diagnostic Radiology Physics: Multidimensional Image Processing, Analysis, and Display—Three- and Four-dimensional Image Registration

#### A. Automatic Registration Methods

*Charles R. Meyer, PhD*

#### B. Image Registration in Radiation Therapy

*Charles A. Pelizzari, PhD*

#### C. Registration, Anatomy, and Morphometry

*Colin Studholme, PhD*

## RC750

### Radiofrequency Ablation: Principles, Techniques, Equipment, and Tricks of the Trade (Hands-on Workshop)

*Stephen G. Ho, MD*

*S. Nahum Goldberg, MD*

*Luigi Solbiati, MD*

*Damian E. Dupuy, MD*

*Fred T. Lee, Jr, MD*

*Michael C. Soulen, MD*

*Debra A. Gervais, MD*

*Riccardo A. Lencioni, MD*

*Steven C. Rose, MD*

*Patrick E. Sewell, Jr, MD*

*Kamran Ahrar, MD*

*John R. Kachura, MD*

## RC751

### Imaging and Intervention of Hemangiomas and Vascular Malformations (How-to Workshop)

*Charles A. James, MD*

*Sadaf T. Bhutta, MD, MBBS*

*Lonnie B. Wright, MD*

*Robert F. Buchmann, DO*

# Refresher Course Schedule (continued)

## RC752

### Real-Time Interventional US (Hands-on Workshop)

*Kent T. Sato, MD*  
*Terry D. Wilkin, MD*  
*Albert A. Nemcek, Jr, MD*  
*Gerard J. O'Sullivan, MBBCH*  
*Ellen M. Yetter, MD*  
*Virginia McDonald, MD*  
*Myra I. Rapoport, MD*  
*LeAnn S. Stokes, MD*  
*Steven McRae, MD*  
*David Leggett, MD*

## RC753

### How to Configure and Tune a PACS: Advanced (Hands-on Workshop)

*Claudine Martin, BS*

## RC754

### Beginning PowerPoint: The Joys of Presentation and Creating Standout Visual Designs

*Beverly P. Wood, MD, PhD*

## Friday, December 1

### 8:30 AM – 10:00 AM

## RC801

### Cardiac Imaging for the Thoracic Radiologist

*Suhny Abbara, MD*  
*Curtis E. Green, MD*  
*Charles S. White, MD*

## RC802

### Creating and Delivering Electronic Presentations for Science, Education, and Business

- A. How to Prepare Presentations  
*Franklin N. Tessler, MD*
- B. How to Deliver Presentations  
*Mark J. Kransdorf, MD*

## RC803

### What Every Radiologist Needs to Know about the Coronary Arteries

*David C. Levin, MD*  
*David A. Dowe, MD*

## RC804

### The Hand and Wrist: Sports Imaging

*Laura W. Bancroft, MD*  
*Jeffrey J. Peterson, MD*  
*Jon A. Jacobson, MD*

## RC805

### Brain Tumors: Conventional and Advanced Imaging Techniques

*Aaron S. Field, MD, PhD*  
*Meng Law, MD*  
*Andrei I. Holodny, MD*

## RC806

### The Skull Base: Cranial Nerves

- A. Orbit, Optic Pathways,  
and Vision Loss  
*Jane L. Weissman, MD*
- B. The Fifth and Seventh Cranial  
Nerves: Trigeminal Neuralgia and  
Facial Nerve Palsy  
*Jan W. Casselman, MD, PhD*
- C. Evaluation of Horner Syndrome  
*Deborah L. Reede, MD*

## RC807\*

### Categorical Course in Diagnostic Radiology: Genitourinary—Imaging in a Spectrum of Genitourinary Emergencies: Trauma, Acute Scrotum, and Acute Maternal Diseases

- A. Imaging in Upper and Lower  
Urinary Tract Trauma  
*Michael P. Federle, MD*
- B. Acute Scrotal Pain: Imaging  
Evaluation for a More Specific  
Diagnosis  
*Vikram S. Dogra, MD*
- C. Imaging of Acute Maternal  
Diseases  
*Andrew J. LeRoy, MD,*  
*Coordinator*

## RC808

### Easily Missed Findings in Emergency Radiology: A Case-based Session (An Interactive Session)

- A. Brain  
*Diego B. Nunez, Jr, MD, MPH*
- B. Spine  
*O. Clark West, MD*
- C. Extremities  
*Ronald M. Bilow, MD*

## RC809

### Imaging of the Gallbladder and Biliary Tree

- A. Optimal CT and MR Techniques  
*Elmar M. Merkle, MD*
- B. Diagnosing Benign Conditions  
*Robert K. Zeman, MD*
- C. Diagnosing Malignant Lesions  
*Dennis M. Balfe, MD*

## RC810

### Doppler Ultrasound: Improving Your Practice of Ultrasound

*Anne R. Buckley, MBBCh,*  
*Moderator*

- A. Abdominal Doppler:  
Useful or Not?  
*Anne R. Buckley, MBBCh*
- B. Ultrasound Determination of  
“Significant” Carotid Stenosis  
*Edward G. Grant, MD*
- C. Venous Thrombosis of the Leg  
*John J. Cronan, MD*

## RC811

### Practical PET/CT of the Chest, Abdomen, and Pelvis

*Hans C. Steinert, MD*  
*David M. Schuster, MD*  
*Ora Israel, MD*

### RC812

CT Angiography and MR Angiography in Planning and Following Vascular Interventions and Surgery

- A. Endovascular Treatment of Occlusive Diseases  
*Stephen T. Kee, MD*
- B. Endovascular Treatment of Aneurysmal Disease  
*Johannes Lammer, MD*
- C. Common Surgical Procedures  
*Glenn A. Krinsky, MD*

### RC813

Current Perspectives in Pediatric Oncology

- A. Pediatric Bone Marrow Transplantation  
*Caroline L. Hollingsworth, MD*
- B. Experience as Bone Marrow Transplant Patient  
*Ryan Cook*
- C. Contemporary Imaging Evaluation of Metastatic Disease  
*Paul S. Babyn, MD*

### RC814

Sedation in Radiologic Practice

*Elwira V. Lang, MD*  
*Keira P. Mason, MD*

### RC815+

Update Course in Diagnostic Radiology: Breast Imaging—Clinical Practice Issues for Breast Imagers

- A. Tailoring Screening Guidelines: Ages and Frequency  
*Edward A. Sickles, MD*
- B. BI-RADS Guidance, Reporting, and Communications  
*Michael N. Linver, MD*
- C. Maintenance of ABR Certification for Breast Imaging Radiologists  
*Valerie P. Jackson, MD*

### RC816

CT (and MR Imaging) of Pancreatic Tumors (An Interactive Session)

*Alec J. Megibow, MD, MPH*  
*Mitchell E. Tublin, MD*

### RC817

In Vivo Cellular Imaging

- A. General Considerations: Choice of Method  
*Hisataka Kobayashi, MD, PhD*
- B. Cardiovascular Applications of Cellular Imaging  
*Frank M. Bengel, MD*
- C. Neurologic Applications of Cellular Imaging  
*Jeff W. Bulte, PhD*

### RC818

Imaging of Complications of Cancer and Its Therapy

*Lawrence E. Ginsberg, MD*  
*Michelle S. Ginsberg, MD*  
*Marc J. Gollub, MD*

### RC821++

Update Course in Diagnostic Radiology Physics: Advances in Breast Imaging—Physics, Technology, and Clinical Applications: MR Imaging of the Breast—Emerging Trends

- A. Physics of Breast MR Imaging  
*R. Edward Hendrick, PhD*
- B. Technology and Procedures in Breast MR Imaging  
*R. Edward Hendrick, PhD*
- C. Clinical Role of Breast MR Imaging  
*Gillian M. Newstead, MD*

### RC822

Minicourse: Image Optimization for Radiation Therapy Treatment Planning—Part IV: Brachytherapy, Image Registration, and Image Segmentation

*Debra Brinkmann, PhD, Director*

- A. Brachytherapy  
*Bruce R. Thomadsen, PhD*
- B. Image Registration  
*Marc L. Kessler, PhD*
- C. Image Segmentation  
*Arthur L. Boyer, PhD*

### RC823

Minicourse: Innovations and Advances in Medical Imaging Technology—Innovations and Advances in Ultrasound Imaging Technology

*James A. Zagzebski, PhD, Director*  
*James A. Zagzebski, PhD*  
*Jeffrey B. Fowlkes, PhD*  
*Thomas R. Nelson, PhD*

### RC825\*\*

Categorical Course in Diagnostic Radiology Physics: From Invisible to the Visible—The Science and Practice of X-Ray Imaging and Radiation Dose Optimization

- A. Mammography: Dosimetry  
*Lawrence N. Rothenberg, PhD*
- B. Mammography: Screen-Film  
*Robert J. Pizzutiello, Jr, MS*
- C. Mammography: Digital  
*Loren T. Niklason, PhD*

### RC826

Imaging Informatics Updates (Basic Imaging Informatics)

*Katherine P. Andriole, PhD,*  
*Moderator*

- A. The New DICOM Objects  
*David A. Clunie, MBBS*
- B. Implications of Modality Advances for Your Picture Archiving and Communication Systems  
*Katherine P. Andriole, PhD*
- C. New Display Technologies  
*Aldo Badano, PhD*

### RC827

Effective Negotiation Strategies for Radiologists (An Interactive Session)

*Jonathan W. Berlin, MD, MBA*  
*Frank J. Lexa VII, MD, MBA*

# Refresher Course Schedule (continued)

## RC830

Toward a Standard Language for Radiology: Terminologies and Resources for Radiologists, Educators, and Researchers (Advanced Imaging Informatics)

*Curtis P. Langlotz, MD, PhD,  
Moderator*

- A. Radiology Terminology: The RSNA RadLex® Project  
*Curtis P. Langlotz, MD, PhD*
- B. Ontologies and Intelligent Computer Applications  
*Daniel L. Rubin, MD*
- C. Utility of Terminologies/  
Ontologies I: Image Annotation and Retrieval  
*William J. Weadock, MD*
- D. Utility of Terminologies/  
Ontologies II: Analysis of Radiological Information  
*David L. Weiss, MD*

## RC831

Integrating Cancer Genomics and Radiological Imaging: Practical Answers to Complex Problems

*Michael Kuo, MD  
Maximilian Diehn, MD, PhD  
Albert Hsiao, PhD  
Christine Nardini*

## RC832+++

Update Course in Diagnostic Radiology Physics: Multidimensional Image Processing, Analysis, and Display—From Detector to Pixel: Signal Processing

- A. Sinogram Preprocessing for Artifact Reduction in CT  
*Patrick J. La Riviere, PhD*
- B. Ultrasound Beam Forming and Image Formation  
*Jeremy J. Dahl, PhD*
- C. k-Space Data Preprocessing for Artifact Reduction in MR Imaging  
*Sarah K. Patch, PhD*

## RC850

Image-guided Biopsy of the Spine (Hands-on Workshop)

*A. Orlando Ortiz, MD, MBA  
John L. Go, MD  
Gregg H. Zoarski, MD  
Chi-Shing Zee, MD  
Michele H. Johnson, MD*

## RC851

Body MR Imaging: Current Practice and Future Horizons (How-to Workshop)

*Richard C. Semelka, MD  
Diego R. Martin, MD, PhD  
Shahid M. Hussain, MD, PhD  
Numan C. Balci, MD*

## RC852

Techniques of Freehand Invasive Sonography with Thermal Ablation (Hands-on Workshop)

*William E. Shiels II, DO  
Brian D. Coley, MD  
Alda F. Cossi, MD  
John D. Lane, MD  
James S. Donaldson, MD  
Russell B. Midkiff, MD  
John M. Racadio, MD  
Neil T. Specht, MD  
Bradford Wood, MD  
Carlo Martinoli, MD  
Mauro Oddone, MD  
Clark L. Searle, MD  
Stephen D. Brown, MD  
Clifford R. Weiss, MD  
Jeong Min Lee, MD*

## RC853

How to Use a PACS Workstation: Basic (Hands-on Workstation)

*James A. Brunberg, MD*

## RC854

Intermediate PowerPoint: Tips to Jazz Up Your Presentation and Your Audience

*Beverly P. Wood, MD, PhD*

