

2013 RSNA (Filtered Schedule)

Sunday, December 01, 2013

10:45-12:15 PM • [SSA11](#) • Room: S403A • ISP: Informatics (Education and Research)
02:00-03:30 PM • [RC102](#) • Room: E350 • What's New from the Radiology Residency Review Committee: Milestones, New for 2013
02:00-03:30 PM • [RC116](#) • Room: S102D • RSNA Educational Programs Around the World: An International Forum (Sponsored by the RSNA Committee on Interna...
02:00-03:30 PM • [RC123](#) • Room: N229 • Minicourse: Current Topics in Medical Physics-Clinically Focused Physics Education: Principles to Practice

Monday, December 02, 2013

08:30-10:00 AM • [RC202](#) • Room: S502AB • Teaching Leadership Strategies to Residents for Future Health Care Challenges
08:30-10:00 AM • [RC230](#) • Room: S102D • Technologies for Creating Educational Content and Teaching Files
08:30-10:00 AM • [RC230](#) • Room: S102D • Technologies for Creating Educational Content and Teaching Files
10:30-12:00 PM • [ICIW21](#) • Room: S401AB • Creating, Storing, and Sharing Teaching Files Using RSNA's MIRC®: A Hands On Course
10:30-12:00 PM • [SSC08](#) • Room: S102D • ISP: Health Service, Policy and Research (Radiology Education)
01:30-04:30 PM • [SPRP21](#) • Room: E271A • Program to Enhance Relational and Communication Skills for Radiologists (PERCS:Radiology)
04:30-06:00 PM • [SPSI23](#) • Room: N228 • Special Interest Session: Planning for the Future Radiology Workforce: Too Many or Too Few?

Tuesday, December 03, 2013

08:30-10:00 AM • [RC302](#) • Room: S403B • Strategies for ABR Core Exam and ACGME Resident Performance Evaluations
02:30-04:00 PM • [ICIW33](#) • Room: S401AB • Creating, Storing, and Sharing Teaching Files Using RSNA's MIRC®: A Hands On Course
04:30-06:00 PM • [RC402](#) • Room: E353A • Resident Interviewing: Skills that Work!
04:30-06:00 PM • [RC424](#) • Room: E352 • Publishing in Radiology: What You Always Wanted to Know and Never Asked

Wednesday, December 04, 2013

08:30-10:00 AM • [RC502](#) • Room: E353A • What's New from the American Board of Radiology
10:30-12:00 PM • [ICIW41](#) • Room: S401AB • Creating Radiology eBooks for the iPad: A Hands-on Introduction to iBooks Author
01:30-03:30 PM • [MSRP41](#) • Room: E451B • RSNA Resident and Fellow Symposium 2013: Career 101: Planning for Success After Residency (An Interactive Ses...
04:00-05:45 PM • [MSRP42](#) • Room: E451B • RSNA Resident and Fellow Symposium 2013: Career 102: Survival Skills for Your Job (An Interactive Session)

Thursday, December 05, 2013

08:30-10:00 AM • [RC602](#) • Room: S404AB • How To Evaluate Resident Milestones Effectively and Efficiently: Practical Ideas Will Help Program Directors a...
10:30-12:00 PM • [ICIW51](#) • Room: S401AB • Creating, Storing, and Sharing Teaching Files Using RSNA's MIRC®: A Hands On Course
04:30-06:00 PM • [RC702](#) • Room: S404AB • Mind Your Own Business! Required Business Skills for Your First Job
04:30-06:00 PM • [RC724](#) • Room: S403A • Professionalism and the Radiology Trainee
04:30-06:00 PM • [RC730](#) • Room: S103AB • Leveraging Imaging Informatics to Improve Radiology Education: Beyond the Teaching File (An Interactive Sessio...

Friday, December 06, 2013

08:30-10:00 AM • [RC802](#) • Room: E353B • How to Be the Speaker Everyone Wants You to Be (An Interactive Session)

Breast Case of the Day

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LL-EDE3001

Moderator

Colleen H Neal, MD *
Deborah O Jeffries, MD

Breast Case of the Day

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LL-EDE3001

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Breast Case of the Day

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LL-EDE3001

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Breast Case of the Day

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LL-EDE3001

Moderator

Colleen H Neal, MD *
Deborah O Jeffries, MD

Cardiac Case of the Day

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LL-EDE3002

Moderator

Matthew D Cham, MD

Gregory Kicska , MD, PhD *
Dorith Shaham , MD
Ronen Durst , MD
Yelena Bekker-Milovanov , MD

PURPOSE/AIM

1) Review the diagnosis of a specific condition by using either a singly-modality or multi-modality approach. 2) Identify state-of-the-art imaging and methods of treatment for various pathologic conditions. 3) Assess new research on applications of various imaging and therapeutic modalities.

Cardiac Case of the Day

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LL-EDE3002

Moderator

Matthew D Cham , MD
Gregory Kicska , MD, PhD *
Dorith Shaham , MD
Ronen Durst , MD
Yelena Bekker-Milovanov , MD

PURPOSE/AIM

1) Review the diagnosis of a specific condition by using either a singly-modality or multi-modality approach. 2) Identify state-of-the-art imaging and methods of treatment for various pathologic conditions. 3) Assess new research on applications of various imaging and therapeutic modalities.

Chest Case of the Day

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LL-EDE3003

Moderator

Eric T Goodman , MD
Andrew C Yen , MD
Sharon S Brouha , MD, MPH
Masoud Shiehorteza , MD
Michael E Hahn , MD, PhD
David S Heister , MD
Quinn C Meisinger , MD
Gregory A Shaw , MD

PURPOSE/AIM

1) To analyze interesting chest cases. 2) To understand appropriate differential diagnosis. 3) To understand the clinical significance of the diagnosis presented.

Chest Case of the Day

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LL-EDE3003

Moderator

Eric T Goodman , MD
Andrew C Yen , MD
Sharon S Brouha , MD, MPH
Masoud Shiehorteza , MD
Michael E Hahn , MD, PhD
David S Heister , MD
Quinn C Meisinger , MD
Gregory A Shaw , MD

PURPOSE/AIM

1) To analyze interesting chest cases. 2) To understand appropriate differential diagnosis. 3) To understand the clinical significance of the diagnosis presented.

Chest Case of the Day

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LL-EDE3003

Moderator

Eric T Goodman , MD
Andrew C Yen , MD
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David S Heister , MD
Quinn C Meisinger , MD
Gregory A Shaw , MD

PURPOSE/AIM

1) To analyze interesting chest cases. 2) To understand appropriate differential diagnosis. 3) To understand the clinical significance of the diagnosis presented.

Chest Case of the Day

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LL-EDE3003

Moderator

Eric T Goodman , MD
Andrew C Yen , MD
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Michael E Hahn , MD, PhD
David S Heister , MD
Quinn C Meisinger , MD

Gregory A Shaw , MD

PURPOSE/AIM

1) To analyze interesting chest cases. 2) To understand appropriate differential diagnosis. 3) To understand the clinical significance of the diagnosis presented.

Emergency Radiology Case of the Day

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LL-EDE3004

Moderator

Guillermo P Sangster , MD
Maureen G Heldmann , MD
Alberto A Simoncini , MD
Carlos H Previgliano , MD
Justin W Skweres , MD
Kevin C Cormier , MD

PURPOSE/AIM

1) Participants will test their diagnostic skills on the imaging findings of challenging cases in Emergency Radiology. 2) Key radiologic signs will be shown and discussed to generate a list of differential diagnoses.

Emergency Radiology Case of the Day

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LL-EDE3004

Moderator

Guillermo P Sangster , MD
Maureen G Heldmann , MD
Alberto A Simoncini , MD
Carlos H Previgliano , MD
Justin W Skweres , MD
Kevin C Cormier , MD

PURPOSE/AIM

1) Participants will test their diagnostic skills on the imaging findings of challenging cases in Emergency Radiology. 2) Key radiologic signs will be shown and discussed to generate a list of differential diagnoses.

Gastrointestinal Case of the Day

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LL-EDE3005

Moderator

Kevin J Chang , MD
Nicholas C Monu , MD
Anna Ellermeier , MD
Elizabeth H Dibble , MD
Joseph L Farnam , MD
Robert C Ward , MD

PURPOSE/AIM

1) Each GI case of the day will be taken from disorders of the luminal GI tract as well as the liver, spleen, pancreas, and biliary system. The findings may be uncommon manifestations of common diseases or common manifestations of uncommon diseases.

Gastrointestinal Case of the Day

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LL-EDE3005

Moderator

Kevin J Chang , MD
Nicholas C Monu , MD
Anna Ellermeier , MD
Elizabeth H Dibble , MD
Joseph L Farnam , MD
Robert C Ward , MD

PURPOSE/AIM

1) Each GI case of the day will be taken from disorders of the luminal GI tract as well as the liver, spleen, pancreas, and biliary system. The findings may be uncommon manifestations of common diseases or common manifestations of uncommon diseases.

Genitourinary Case of the Day

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LL-EDE3006

Moderator

Frederico F Souza , MD
Shannon A Milbourne , MD
Patrick J Robbins , MD
Katherine L Ragland , MD
Keith P Russell , MD
Timothy J Ragland , MD
John T McCarty , DO
Jason H Williams , MD
Tracy C Marchant , DO
Cody Branch , BS
Andrew D Smith , MD, PhD *

Genitourinary Case of the Day

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LL-EDE3006

Moderator
Frederico F Souza , MD
Shannon A Milbourne , MD
Patrick J Robbins , MD
Katherine L Ragland , MD
Keith P Russell , MD
Timothy J Ragland , MD
John T McCarty , DO
Jason H Williams , MD
Tracy C Marchant , DO
Cody Branch , BS
Andrew D Smith , MD, PhD *

Genitourinary Case of the Day

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LL-EDE3006

Moderator
Frederico F Souza , MD
Shannon A Milbourne , MD
Patrick J Robbins , MD
Katherine L Ragland , MD
Keith P Russell , MD
Timothy J Ragland , MD
John T McCarty , DO
Jason H Williams , MD
Tracy C Marchant , DO
Cody Branch , BS
Andrew D Smith , MD, PhD *

Genitourinary Case of the Day

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LL-EDE3006

Moderator
Frederico F Souza , MD
Shannon A Milbourne , MD
Patrick J Robbins , MD
Katherine L Ragland , MD
Keith P Russell , MD
Timothy J Ragland , MD
John T McCarty , DO
Jason H Williams , MD
Tracy C Marchant , DO
Cody Branch , BS
Andrew D Smith , MD, PhD *

Interventional Radiology Case of the Day

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LL-EDE3007

Moderator
Paula Novelli , MD

PURPOSE/AIM

For a set of challenging cases, the viewer is asked to: 1) Identify and analyze normal and abnormal findings on multi-modeling interventional radiology studies. 2) Develop a DDX based on imaging findings and clinical information. 3) Discuss important aspects of image-guided treatment.

Interventional Radiology Case of the Day

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LL-EDE3007

Moderator
Paula Novelli , MD

PURPOSE/AIM

For a set of challenging cases, the viewer is asked to: 1) Identify and analyze normal and abnormal findings on multi-modeling interventional radiology studies. 2) Develop a DDX based on imaging findings and clinical information. 3) Discuss important aspects of image-guided treatment.

Interventional Radiology Case of the Day

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LL-EDE3007

Moderator
Paula Novelli , MD

PURPOSE/AIM

For a set of challenging cases, the viewer is asked to: 1) Identify and analyze normal and abnormal findings on multi-modeling interventional radiology studies. 2) Develop a DDX based on imaging findings and clinical information. 3) Discuss important aspects of image-guided treatment.

Interventional Radiology Case of the Day

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LL-EDE3007

Moderator
Paula Novelli , MD

PURPOSE/AIM

For a set of challenging cases, the viewer is asked to: 1) Identify and analyze normal and abnormal findings on multi-modeling interventional radiology studies. 2) Develop a DDX based on imaging findings and clinical information. 3) Discuss important aspects of image-guided treatment.

Musculoskeletal Case of the Day

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LL-EDE3008

Moderator

Jonelle M Petscavage-Thomas , MD, MPH *

Stephanie A Bernard , MD

Eric A Walker , MD *

Pamela L Brian , MD

PURPOSE/AIM

Participants will test their diagnostic skills and become familiar with the imaging findings of a variety of challenging and interesting musculoskeletal cases.

Musculoskeletal Case of the Day

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LL-EDE3008

Moderator

Jonelle M Petscavage-Thomas , MD, MPH *

Stephanie A Bernard , MD

Eric A Walker , MD *

Pamela L Brian , MD

PURPOSE/AIM

Participants will test their diagnostic skills and become familiar with the imaging findings of a variety of challenging and interesting musculoskeletal cases.

Neuroradiology Case of the Day

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LL-EDE3009

Moderator

Yoshimi Anzai , MD

Jayson L Benjert , DO

James R Fink , MD *

Gisele E Ishak , MD

Mahmud Mossa-Basha , MD

Judith Luckman , MD

PURPOSE/AIM

1) To identify, characterize and analyze abnormal findings on multimodality neuroimaging. 2) To develop concise differential diagnosis based on available clinical information and imaging findings.

Neuroradiology Case of the Day

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LL-EDE3009

Moderator

Yoshimi Anzai , MD

Jayson L Benjert , DO

James R Fink , MD *

Gisele E Ishak , MD

Mahmud Mossa-Basha , MD

Judith Luckman , MD

PURPOSE/AIM

1) To identify, characterize and analyze abnormal findings on multimodality neuroimaging. 2) To develop concise differential diagnosis based on available clinical information and imaging findings.

Nuclear Medicine Case of the Day

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LL-EDE3010

Moderator

Murray D Becker , MD, PhD

Puneet Belani , MD

Richard K. J. Brown , MD *

Daniel J Wale , DO

Anjani P Naidu , MD

Pranay C Uppuluri , MD

Jeffrey S Kempf , MD

PURPOSE/AIM

1) To recognize perfusion patterns on renal scintigraphy that indicate acute renovascular abnormalities. 2) To understand the incidence and etiologies of acute renal thrombosis in a newborn.

Nuclear Medicine Case of the Day

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LL-EDE3010

Moderator

Murray D Becker , MD, PhD

Puneet Belani , MD

Richard K. J. Brown , MD *

Daniel J Wale , DO

Anjani P Naidu , MD

Pranay C Uppuluri , MD
Jeffrey S Kempf , MD

PURPOSE/AIM

1) To recognize perfusion patterns on renal scintigraphy that indicate acute renovascular abnormalities. 2) To understand the incidence and etiologies of acute renal thrombosis in a newborn.

Nuclear Medicine Case of the Day

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LL-EDE3010

Moderator

Murray D Becker , MD, PhD
Puneet Belani , MD
Richard K. J. Brown , MD *
Daniel J Wale , DO
Anjani P Naidu , MD
Pranay C Uppuluri , MD
Jeffrey S Kempf , MD

PURPOSE/AIM

1) To recognize perfusion patterns on renal scintigraphy that indicate acute renovascular abnormalities. 2) To understand the incidence and etiologies of acute renal thrombosis in a newborn.

Nuclear Medicine Case of the Day

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LL-EDE3010

Moderator

Murray D Becker , MD, PhD
Puneet Belani , MD
Richard K. J. Brown , MD *
Daniel J Wale , DO
Anjani P Naidu , MD
Pranay C Uppuluri , MD
Jeffrey S Kempf , MD

PURPOSE/AIM

1) To recognize perfusion patterns on renal scintigraphy that indicate acute renovascular abnormalities. 2) To understand the incidence and etiologies of acute renal thrombosis in a newborn.

Nuclear Medicine Case of the Day

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LL-EDE3010

Moderator

Murray D Becker , MD, PhD
Puneet Belani , MD
Richard K. J. Brown , MD *
Daniel J Wale , DO
Anjani P Naidu , MD
Pranay C Uppuluri , MD
Jeffrey S Kempf , MD

PURPOSE/AIM

1) To recognize perfusion patterns on renal scintigraphy that indicate acute renovascular abnormalities. 2) To understand the incidence and etiologies of acute renal thrombosis in a newborn.

Nuclear Medicine Case of the Day

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LL-EDE3010

Moderator

Murray D Becker , MD, PhD
Puneet Belani , MD
Richard K. J. Brown , MD *
Daniel J Wale , DO
Anjani P Naidu , MD
Pranay C Uppuluri , MD
Jeffrey S Kempf , MD

PURPOSE/AIM

1) To recognize perfusion patterns on renal scintigraphy that indicate acute renovascular abnormalities. 2) To understand the incidence and etiologies of acute renal thrombosis in a newborn.

Obstetrical Imaging Case of the Day

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LL-EDE3011

Moderator

Genevieve L Bennett , MD

PURPOSE/AIM

1) The five submitted Obstetrical Imaging cases will offer challenging ultrasound and MR images to practice visual interpretation skills, promote medical knowledge review, and enhance ability to summarize important findings to achieve a diagnosis.

Obstetrical Imaging Case of the Day

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LL-EDE3011

Moderator

Genevieve L Bennett , MD

PURPOSE/AIM

1) The five submitted Obstetrical Imaging cases will offer challenging ultrasound and MR images to practice visual interpretation skills, promote medical knowledge review, and enhance ability to summarize important findings to achieve a diagnosis.

Obstetrical Imaging Case of the Day

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LL-EDE3011

Moderator

Genevieve L Bennett , MD

PURPOSE/AIM

1) The five submitted Obstetrical Imaging cases will offer challenging ultrasound and MR images to practice visual interpretation skills, promote medical knowledge review, and enhance ability to summarize important findings to achieve a diagnosis.

Obstetrical Imaging Case of the Day

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LL-EDE3011

Moderator

Genevieve L Bennett , MD

PURPOSE/AIM

1) The five submitted Obstetrical Imaging cases will offer challenging ultrasound and MR images to practice visual interpretation skills, promote medical knowledge review, and enhance ability to summarize important findings to achieve a diagnosis.

Pediatric Case of the Day

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LL-EDE3012

Moderator

Lynn A Fordham , MD
W. Dean Bidgood , MD, MS
Tae Il Han
Cassandra M Sams , MD

PURPOSE/AIM

1) Challenge yourself with unknown pediatric cases. 2) Review test cases and similar cases. 3) Increase depth of knowledge in Pediatric imaging.

Pediatric Case of the Day

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LL-EDE3012

Moderator

Lynn A Fordham , MD
W. Dean Bidgood , MD, MS
Tae Il Han
Cassandra M Sams , MD

PURPOSE/AIM

1) Challenge yourself with unknown pediatric cases. 2) Review test cases and similar cases. 3) Increase depth of knowledge in Pediatric imaging.

Pediatric Case of the Day

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LL-EDE3012

Moderator

Lynn A Fordham , MD
W. Dean Bidgood , MD, MS
Tae Il Han
Cassandra M Sams , MD

PURPOSE/AIM

1) Challenge yourself with unknown pediatric cases. 2) Review test cases and similar cases. 3) Increase depth of knowledge in Pediatric imaging.

Pediatric Case of the Day

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LL-EDE3012

Moderator

Lynn A Fordham , MD
W. Dean Bidgood , MD, MS
Tae Il Han
Cassandra M Sams , MD

PURPOSE/AIM

1) Challenge yourself with unknown pediatric cases. 2) Review test cases and similar cases. 3) Increase depth of knowledge in Pediatric imaging.

Physics Case of the Day

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LL-EDE3013

Moderator

Charles E Willis , PhD

William D Erwin , PhD
William R Geiser , MS
Ryan F Fisher , PhD
Robert L Dixon , PhD *
Dustin K Ragan , PhD

Physics Case of the Day

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LL-EDE3013

Moderator
Charles E Willis , PhD
William D Erwin , PhD
William R Geiser , MS
Ryan F Fisher , PhD
Robert L Dixon , PhD *
Dustin K Ragan , PhD

Physics Case of the Day

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LL-EDE3013

Moderator
Charles E Willis , PhD
William D Erwin , PhD
William R Geiser , MS
Ryan F Fisher , PhD
Robert L Dixon , PhD *
Dustin K Ragan , PhD

Physics Case of the Day

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LL-EDE3013

Moderator
Charles E Willis , PhD
William D Erwin , PhD
William R Geiser , MS
Ryan F Fisher , PhD
Robert L Dixon , PhD *
Dustin K Ragan , PhD

Physics Case of the Day

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LL-EDE3013

Moderator
Charles E Willis , PhD
William D Erwin , PhD
William R Geiser , MS
Ryan F Fisher , PhD
Robert L Dixon , PhD *
Dustin K Ragan , PhD

Physics Case of the Day

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LL-EDE3013

Moderator
Charles E Willis , PhD
William D Erwin , PhD
William R Geiser , MS
Ryan F Fisher , PhD
Robert L Dixon , PhD *
Dustin K Ragan , PhD

Ultrasound Case of the Day

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LL-EDE3014

Moderator
Jeanne M Horowitz , MD
Lori A Goodhartz , MD
Maneesh Gupta , MD, BEng
Ravi Guttikonda
Joseph A Meranda , MD
Nicholas Morley , MD
Meghan F Single , MD

PURPOSE/AIM

- 1) Recognize the diagnosis and differentiate specific conditions using Ultrasound. 2) Learn characteristic imaging findings for the diagnosis.
- 3) Learn about clinical implications and treatment of the diagnosis.

Ultrasound Case of the Day

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LL-EDE3014

Moderator
Jeanne M Horowitz , MD
Lori A Goodhartz , MD

Maneesh Gupta , MD, BEng
Ravi Guttikonda
Joseph A Meranda , MD
Nicholas Morley , MD
Meghan F Single , MD

PURPOSE/AIM

- 1) Recognize the diagnosis and differentiate specific conditions using Ultrasound. 2) Learn characteristic imaging findings for the diagnosis.
- 3) Learn about clinical implications and treatment of the diagnosis.

Ultrasound Case of the Day

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LL-EDE3014

Moderator

Jeanne M Horowitz , MD
Lori A Goodhart , MD
Maneesh Gupta , MD, BEng
Ravi Guttikonda
Joseph A Meranda , MD
Nicholas Morley , MD
Meghan F Single , MD

PURPOSE/AIM

- 1) Recognize the diagnosis and differentiate specific conditions using Ultrasound. 2) Learn characteristic imaging findings for the diagnosis.
- 3) Learn about clinical implications and treatment of the diagnosis.

Ultrasound Case of the Day

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LL-EDE3014

Moderator

Jeanne M Horowitz , MD
Lori A Goodhart , MD
Maneesh Gupta , MD, BEng
Ravi Guttikonda
Joseph A Meranda , MD
Nicholas Morley , MD
Meghan F Single , MD

PURPOSE/AIM

- 1) Recognize the diagnosis and differentiate specific conditions using Ultrasound. 2) Learn characteristic imaging findings for the diagnosis.
- 3) Learn about clinical implications and treatment of the diagnosis.

Molecular Imaging Case of the Day

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LL-EDE3015

Umar Mahmood , MD, PhD
David A Mankoff , MD, PhD
Hannah M Linden , MD
David M Schuster , MD
Katja Pinker-Domenig , MD
Edwin L Palmer , MD
Mukesh G Harisinghani , MD
Pedram Heidari , MD

PURPOSE/AIM

- 1) Participants will gain a better understanding, through example cases, of cutting edge clinical applications of molecular imaging using novel techniques.

Molecular Imaging Case of the Day

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LL-EDE3015

Umar Mahmood , MD, PhD
David A Mankoff , MD, PhD
Hannah M Linden , MD
David M Schuster , MD
Katja Pinker-Domenig , MD
Edwin L Palmer , MD
Mukesh G Harisinghani , MD
Pedram Heidari , MD

PURPOSE/AIM

- 1) Participants will gain a better understanding, through example cases, of cutting edge clinical applications of molecular imaging using novel techniques.

ISP: Informatics (Education and Research)

Sunday, 10:45 AM - 12:15 PM • S403A

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SSA11 • *AMA PRA Category 1 Credit*™:1.5 • *ARRT Category A+* Credit:1.5

Moderator

Gary H Danton , MD, PhD

Moderator

Ayis T Pyrros , MD *

SSA11-01 • Informatics Keynote Speaker: Informatics and Education

SSA11-02 • An Anonymized Radiological Database with Open-source Search Engine and Image Request System for Biomedical Researchers

Michael D Torno DSc (Presenter) ; Nicholas P Grusauskas PhD ; Roger Engelmann MS * ; Adam Starkey ; Paul J Chang MD * ; Samuel G Armato PhD

CONCLUSION

Software which de-identifies and indexes clinical data for a queryable research database was created. Users have the ability to save radiology reports and request de-identified medical images via the system's web interface. Additionally, the opt-out paradigm provided a substantial number of consented patients and maximized the amount of data available to researchers. Autonomous operation of our dedicated research system resulted in minimal PACS performance degradation.

Background

A system to mine, organize, anonymize, and request de-identified images from a radiological database was required to fulfill the needs of biomedical researchers. The system must function autonomously from a clinical PACS to minimize its impact on performance during clinical use. Independent operation allows keyword queries of anonymized radiology reports through a web interface; this interface also functions as a database creation and de-identified image request system. A custom database interface was designed to fill this need.

Evaluation

The software includes (1) Perl and VB apps to extract data from a clinical PACS and anonymize PHI in accordance with IRB and HIPAA standards; (2) an indexing search engine that allows keyword queries via a web browser; (3) PHP-based exporting of queried radiology reports with an option to request associated de-identified images through the Human Imaging Research Office at our institution. An opt-out IRB paradigm was created: outpatients in radiology reception areas are presented with an opt-out form to establish consent for use of clinical images and associated data for research.

Discussion

The opt-out paradigm began in October 2008; to date 128,000 patients are enrolled and de-identified image data is available for query via our database interface. 1,324 patients have declined the study resulting in a 1% withdrawal rate. Previous opt-in paradigms resulted in an enrollment of less than 3,000 patients over a 5 year period. Over 1.2 million radiology reports encompassing over a decade of data were anonymized and indexed from our PACS and are available for use in medical research.

SSA11-03 • Workflow, Standards and Database of Quality Control in Multi-institutional Clinical Trials of Cancer Imaging at the Alliance Imaging Corelab

Jun Zhang PhD (Presenter) ; David Poon BS ; Preethi Subramanian ; Richard Jacko BS ; Nathan C Hall MD, PhD * ; Michael V Knopp MD, PhD ; Kristin Sullivant ; Ajay Siva ; Stephanie Telek ; Andrea Markowitz ; Talha Saif ; Michael Finneran ; Katherine Binzel BS ; Joe Milacek

PURPOSE

To introduce and evaluate the workflow, standard and database established at the Alliance Imaging Corelab for cancer imaging quality control in multi-institutional clinical trials

METHOD AND MATERIALS

The imaging Corelab (ICL) established an overall clinical trial implementation pipeline from trial initiative to trial closure. Along the roadmap, workflows of data quality control were defined with more than 15 individual sub-components integrated (site credentialing, virtual site visit, automatic quality check, real-time image remote review and so on). Quality control standard in 15 items under 4-level categories (timing, imaging, data and patient) was established with SOP driven. (Semi)-automatic softwares were developed enabling mega-data processing and database management in 10 important steps and audit process.

RESULTS

A total of 2992 patients with 8246 studies (PET/CT, CT, MR, NM) from 27 clinical cancer trials over 300 participating sites within USA were included in this assessment. The established thin-client real-time image review approach enables off-site reviewers performing remote image review with no data transfer required; a success rate of better than 91% in adaptive trials has been achieved in evaluating over 1500 real-time central reviews of which 75% enabled

CONCLUSION

Quality control is critical component of cancer imaging clinical trials to assure appropriate executions and the success of clinical trial. The study proposed and evaluated our established workflow, standards and database of quality control in 10-yr multi-institutional clinical trials implementations experiences at the imaging corelab with efforts in helping people better understand the components, challenges and strategies of doing quality control for clinical trials.

CLINICAL RELEVANCE/APPLICATION

Conducting multi-institutional clinical trials requires a set of standards and workflows in quality control defined for professional trial implementations making sure trials to be valid and successful

SSA11-04 • Implementation and Clinical Evaluation of Content-based Searching Engine in RIS-integrated PACS

Jianguo Zhang PhD (Presenter) ; Tonghui Ling MS ; Jianyong Sun ; Suo Li ; Yuanyuan Yang MS ; Kai Zhang BS

PURPOSE

We had designed a searching engine combining semantic space searching and CBIR techniques to search lung CT images with solitary pulmonary nodules (SPN) in PACS environment, and presented this prototype system in scientific presentation in 2009 RSNA Conference. In this presentation, we present new approach to extend this searching engine to cover more organs and lesions, gave an implementation of this searching engine in RIS-integrated PACS, and discussed its clinical evaluation.

METHOD AND MATERIALS

The studies of cardiology CT images with coronary heart disease, brain CT and MR images with stroke, and abdomen CT with colorectal cancer as well as lung CT images with SPN, were included in our research. The diagnostic reports of the studies with findings of lesions are first analyzed by a NLP engine and then indexed in an inverted index. The contents of images of related to the reports are identified by their low level features extracted from the ROIs of images containing the lesions and indexed in a specified high-dimensional database. The first step in using this search engine uses the inverted index to search for relevant radiology report matching the symptoms or diagnoses specified by users as query criteria. The second step searches and retrieves the features of images from the high dimensional database associated with each report returned in the first step and computes the feature similarities between user query image and the retrieved images. The final search results are then sorted by similarities computed on the second step.

RESULTS

The developed searching engine was integrated a clinical RIS-integrated PACS, and operated for two years in Huadong hospital in Shanghai. There were about more than 30 cases averagely being searched and retrieved by using this searching engine daily. But the usages of this search engine for the purposes of decision support, research, and education were quite different.

CONCLUSION

The developed content-based searching engine can be easily integrated with a clinical RIS-integrated PACS and has been operating for two years in a hospital. The evaluation results showed that searching engine can be used for the purposes of decision support, research, and education.

CLINICAL RELEVANCE/APPLICATION

The presented search engine is extremely useful to assist radiologists, medical researchers and students to mine meaningful information from PACS and RIS for their decision support, research and case-

SSA11-05 • Development of a Dedicated Workstation to Facilitate Rapid Performance of Observer Studies in Low-dose CT

David R Holmes PhD (Presenter) ; **Rickey Carter** PhD ; **Kurt E Augustine** MS ; **Yu Liu** MD ; **Maria Shiung** ; **Lifeng Yu** PhD ; **Phillip Edwards** ; **Cynthia H McCollough** PhD * ; **Joel G Fletcher** MD *

PURPOSE

While numerous CT noise reduction methods have been developed, it is difficult to directly measure the clinical impact of each approach. We have developed an open source computer workstation to efficiently conduct observer studies of low dose CT protocols to determine the superiority or non-inferiority of new reconstruction methods.

METHOD AND MATERIALS

The workstation allows a user to conduct lesion detection and characterization, and image quality assessment in a time-efficient manner. The user is required to identify the location and size of all lesions in a dataset by delineating the long axis of the lesion. Both manual and automatic software tools have been developed to match corresponding lesions between an observer and routine dose FBP reference standard. The automatic matching algorithm computes correspondence by determining if the reference ROI overlaps with an observer ROI. Matching rules are employed to insure lesions are appropriately characterized (e.g., benign/malignant) if they are detected. The algorithm reports true positives (TP), false positives (FP), and false negatives (FN) to a back-end database for export and JAFROC analysis.

RESULTS

The automated matching algorithm was validated using ten radiologist observers ♦ each reviewing 10 datasets. The study PI created the reference standard based on correlative imaging, follow-up and pathology reports. Observers required an average of 5.6 minutes (range 0.5 ♦ 25.4) min to review each case. The PI completed semi-automated visual matching of observer and reference marks and diagnoses. The observers delineated a combined 644 lesions (including TP, FP, and FN) across all 10 observers. Automated matching required < 1 second and correctly matched 94.7% of the lesions (compared to the manual matching). Incorrect responses by the algorithm included 11 overmatched (e.g. multiple overlapping ROIs) detections and 23 mis-matches between reference and observer ROIs.

CONCLUSION

A system for interactively evaluating CT denoising methods must minimize radiologist effort, accurately match reference detections and classifications with observer markings using automated and manual visual tools, and create a streamlined workflow and statistical analysis.

CLINICAL RELEVANCE/APPLICATION

Dedicated workstations for observer performance in low dose CT minimize radiologist effort with streamlined workflow and provide automated and visual tools for reference standard matching.

SSA11-06 • Compression of Radiology Reports Using a Semi-static Dictionary and Directed Pseudoforest

Naveen Garg MD (Presenter) * ; **Peter Kamel** ; **Sarfraz Sadruddin** MD ; **Jorge Herskovic** MD, PhD ; **David J Vining** MD * ; **Kevin W McEnery** MD *

PURPOSE

A radiologist will generally dictate a normal chest the same way every day, and usually describe the same pathology in a consistent style. Speech recognition systems rely on these recurring patterns of reporting style to develop statistical language models for improving. Because of this, we hypothesized that radiology reports would be highly compressible using static dictionaries. The more commonly used compression algorithms such as gzip obtain approximately 4x compression, but lose random access of the compressed data. In this work, we report on the compression ratios achieved on a large corpus of radiology reports using static dictionaries. We also present a novel method of compressing the static dictionary itself using a directed pseudoforest.

METHOD AND MATERIALS

We constructed dictionaries from a variable number of radiology reports. Dictionaries were constructed using a variation of a generalized suffix tree pruned by a threshold frequency of the suffixes. The dictionary was then itself compressed using a directed pseudoforest, taking advantage of the shared structure between phrases in the dictionary. Source documents were then compressed using the integer indices into the dictionary, coded with a prefix-free entropy code. The algorithm was coded in c++11 with no platform specific dependencies.

RESULTS

Compression ratios improved with increasing number of reports. A million reports compressed to 18.7% of original size including the compressed reports, and dictionary. These randomly accessible compressed reports were further compressible by gzip, bringing compressed size to 13.7 %. Pruning the dictionary of less frequently used n-grams substantially decreased the size of the dictionary with only a minor increase in the size of the compressed reports. On a million reports, limiting the dictionary to n-grams that occur at least 30 times in the corpus results in overall better compression than allowing n-grams that occur 10 or more times.

CONCLUSION

Static dictionaries with directed pseudoforests can compress radiology reports with a very high efficiency while retaining random access capability.

CLINICAL RELEVANCE/APPLICATION

Better compression of radiology reports and other medical records can be used to enable data mining applications to retain more data in memory allowing faster analytics.

SSA11-07 • Detailed Comparison of Average Journal Impact Factors of Oral and Poster Abstracts Presented at Scientific Session that Achieved Publication at 2009 Radiological Society of North America Scientific Assembly and Annual Meeting

Hiroyuki Takaoka MD, PhD (Presenter) ; **Nobusada Funabashi** MD, PhD ; **Naoko Mizuno** ; **Koya Ozawa** MD ; **Yoshio Kobayashi**

PURPOSE

To determine the average journal impact factors of oral and poster abstracts presented at the scientific sessions of the 2009 Radiological Society of North America (RSNA) 95th scientific assembly and annual meeting that achieved publication for each category using Pubmed.

METHOD AND MATERIALS

From the 2009 RSNA meeting program (total of 1509 oral abstracts, and 684 poster abstracts), authors♦ names and abstract titles were entered into PubMed. Publication consistent with abstract content was confirmed by PubMed in March 2013.

RESULTS

Percentages of all oral and poster abstracts in the scientific sessions achieving publication were 18.4 and 11.4% and that of oral abstracts was significantly higher than that of poster abstracts. The percentage of oral abstracts achieving publication was significantly higher than the poster abstracts in Breast (26.3 vs 10.0%, $P < 0.05$), Nuclear Medicine (20.6 vs 3.2%, $P < 0.05$), Musculoskeletal (29.0 vs 14.0%, $P < 0.05$), and Radiation Oncology categories (12.7 vs 0.1%, $P < 0.05$). Even though impact factors were significantly higher for the oral abstracts that achieved publication (3.3 ± 1.8) than for the poster abstracts that achieved publication (2.6 ± 1.3) in all categories ($P < 0.04$), but there were no significant differences in average Impact factors achieving publication between oral and poster abstracts in each category.

CONCLUSION

Although the percentages of oral abstracts to achieve publication were significantly higher than poster abstracts in all, Breast, Nuclear Medicine, Musculoskeletal, and Radiation Oncology categories, both oral and poster abstracts at the 2009 RSNA 95th scientific assembly and annual meeting were similar in achieving publication in terms of average journal impact factor in each category.

CLINICAL RELEVANCE/APPLICATION

Both oral and poster abstracts presented at the scientific sessions of the 2009 RSNA annual meeting were similar in achieving publication in terms of average journal impact factor in each category.

SSA11-08 • Developing a Computer Game for Problem Based-learning (PBL) of Radiology for Undergraduate Medical Education (MEDGAME)

Salvador Pedraza MD, PhD (Presenter) * ; Joan C. Vilanova MD, PhD ; Elda Balliu MD ; Carles Munoz ; Enric Marti ; Jordi Arnal ; Pere Nolla ; Joan Domenech ; Albert Ramon ; Luis Branda

CONCLUSION

In response to the need to improve the learning of radiology in medical schools using PBL, we have created MEDGAME. We discuss the task to build a computer educational game and thorough radiological aspects involved

Background

Problem-based learning (PBL) is a recognized and implemented educational strategy in the learning of radiology. In this project we developed and validated a learning tool radiological computer game (MEDGAME) of image interpretation in order to improve the effectiveness of PBL applied to radiology and its associated disciplines.

Evaluation

The study population was composed of 150 second-year medical students at the Medical School of the University of Girona during the 2012-2013 academic year. MEDGAME has been developed under Mac Platform with the Unity3D Engine which allows deployment for Mac and Windows standalone application. 3D Studio MAX program was used to create 3D characters and environments models. Images of five scenarios of typical radiology departments were obtained: a reporting room, a plain-film X-ray room, a sonography room, a computed tomography room, and a magnetic resonance imaging room. It was decided to include only three roles: a) The player requests a radiological examination and then must answer the questions asked by the senior radiologist; b) senior radiologist, who asks the player; c) patient, whose avatar is different in each challenge. Summarizing picture is shown in Figure 1. On the other hand, four challenges have been developed into the game: Cervical trauma, appendicitis, pulmonary embolism, and acute stroke. Each challenge contains several questions about the patient's radiological diagnoses.

Discussion

This project will make it possible to examine the degree of relevance of a specific computer game dedicated to PBL radiology education. Each student trained with MEDGAME is completing a written survey about the knowledge and skills acquired in the Educational program. Currently, we are analyzing the preliminary results for demonstrating whether this new tool is improving students' motivation and their learning of radiology.

SSA11-09 • A Diagnostic Problem? Think www.diagnologic.com!

Raphael E Khayat MD (Presenter)

PURPOSE

Diagnologic.com is a free innovating medical database allowing a unique computer assisted diagnosis in radiology. The website has several goals:

- To provide a quick and reliable computer assisted diagnosis in radiology using more than 500 gamuts.
- To educate radiologists by showing more than 150 000 images, Diagnologic.com publishes cases of radiology everyday on Facebook with the account Diagnologic Radiology

METHOD AND MATERIALS

After 4 years of collaboration between radiologists, and experts in database, a Diagnostic Decision Support System has been developed.

The website has more than

- 100 000 images,
- 2500 diagnostics,
- 200 anatomical locations,
- 500 gamuts

RESULTS

Three search modes are available:

- A search mode by gamuts, which allows the user to make a diagnosis in just a few clicks, through the use of more than 500 gamuts
- A search mode by anatomy, which lists all diagnoses present in database according to a simple but comprehensive anatomic classification
- A keyword search, which works like a conventional search engine, for which the user enters the name of diagnosis, allowing access to many images of the same diagnosis. Diagnologic is present on social networks, and presents the 'case of the day' commented by radiologists worldwide.

CONCLUSION

www.diagnologic.com is a simple, rapid, and complete website, to solve diagnosis problems, even the most complex one

CLINICAL RELEVANCE/APPLICATION

Diagnologic.com is a free radiologic website to help and educate radiologists.

What's New from the Radiology Residency Review Committee: Milestones, New for 2013

Sunday, 02:00 PM - 03:30 PM • E350

PR **LM** **ED**

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RC102 • AMA PRA Category 1 Credit™: 1.5

Lynne E Meyer, PhD, MPH
Lawrence P Davis, MD

LEARNING OBJECTIVES

- 1) The attendee will learn about new program requirements.
- 2) The attendee will learn how the NAS will be used for program accreditation.
- 3) The attendee will be made aware of various issues pertaining to resident education with which the RRC is grappling and the outcomes of several pressing issues, such as the milestones initiative, and the prerequisite training requirements for entering ACGME-accredited core residency and fellowship programs.

ABSTRACT

Sunday, 02:00 PM - 03:30 PM • S102D

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RC116 • AMA PRA Category 1 Credit™:1.5

Coordinator

Teresita L Angtuaco, MD
Melissa L Rosado De Christenson, MD *
Marco A Alvarez, MD
Laura W Bancroft, MD
Omolola M Atalabi, MBBS
Norran H Said, MD, FRCR
Chamaree Chuapetcharasopon, MD
Savvas Andronikou, MBBS

LEARNING OBJECTIVES

1) To familiarize the learner with the existing RSNA educational programs in other countries. 2) To discuss the past activities of RSNA in other countries in improving knowledge of radiology and application of latest technical radiology innovations. 3) To receive feedback from representatives of four selected countries (Nigeria, South Africa, Egypt and Thailand) on the impact of the RSNA educational programs both on a personal and national level.

ABSTRACT

This refresher course presents a summary of the existing RSNA educational programs around the world: International Visiting Professor (IVP) program, Derek Harwood Nash (DHN) fellowship, Introduction to Research for International Young Academics (IRIYA) and Educational Material and Journal awards (EMJA) program. These programs address radiology education in many levels: junior radiologist (IRIYA) the more senior radiologist (DHN), the institution (EMJA) and the national radiology organizations (IVP). RSNA committee members familiar with the programs will discuss the history and unique features of each that make them ideal for international outreach initiatives. Four international representatives from Nigeria, South Africa, Egypt and Thailand will provide feedback on how the various programs have impacted radiology education and practice in their country as a whole and the personal careers of those who participated in the DHN or IRIYA programs. A panel discussion will then be conducted at the end of the session to explore other educational opportunities and future directions that will maximize the resources provided by the RSNA.

Minicourse: Current Topics in Medical Physics-Clinically Focused Physics Education: Principles to Practice

Sunday, 02:00 PM - 03:30 PM • N229

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RC123 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:1.5

Moderator

Perry Sprawls, PhD *

LEARNING OBJECTIVES

ABSTRACT

URL's
<http://www.sprawls.org/clinphys>

RC123A • Clinically Focused Physics Education: Principles to Practice-Part A

Perry Sprawls PhD (Presenter) *

LEARNING OBJECTIVES

1) Describe the general characteristics of mental knowledge structures of physics and technology that are required for effective clinical applications. 2) Describe conditions and activities that contribute to the formation of effective knowledge structures. 3) Identify the different levels of learning that can occur and relate them to specific actions that can be performed and potential outcomes. 4) Analyze learning activities for effectiveness and efficiency in producing desired outcomes with available human effort and resources. 5) Identify the opportunities to use digital technology to enhance human performance for both learners and learning facilitators. 6) Identify resources that can be used to optimize the effective-efficiency relationship of learning activities. 7) Provide effective learning activities.

RC123B • Clinically Focused Physics Education: Principles to Practice-Part B

Debra L Monticciolo MD (Presenter)

LEARNING OBJECTIVES

1) To review the need for updated physics education in the clinical setting. 2) To review the use of computer-based learning in the clinical setting for physics education of radiology residents.

ABSTRACT

Teaching Leadership Strategies to Residents for Future Health Care Challenges

Monday, 08:30 AM - 10:00 AM • S502AB

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RC202 • AMA PRA Category 1 Credit™:1.5

Vijay M Rao, MD
Richard E Sharpe, MD, MBA
Carol M Rumack, MD

LEARNING OBJECTIVES

1) Describe specific ways that residents can participate in important radiology leadership and advocacy opportunities in order to enhance the future of radiology. 2) Appreciate the potential power of leveraging technology to provide leadership and further the specialty of radiology. 3) Understand relevant leadership skills that radiology residents must learn in order to address emerging challenges in the current and future practice of radiology. 4) Develop an appreciation for the role of organized radiology as a means to shape the future of our specialty. 5) Articulate the challenges facing radiology as a specialty in the era of new healthcare delivery models and healthcare reform.

ABSTRACT

Leadership skills will be essential to the successful careers of all radiology residents and fellows. Ten key points aimed at improving your success in academic medicine will help you in planning your career and gaining effective mentoring as you start your career.

Technologies for Creating Educational Content and Teaching Files

Monday, 08:30 AM - 10:00 AM • S102D

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RC230 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:1.5

Moderator
Kitt Shaffer, MD, PhD

LEARNING OBJECTIVES

RC230A • Podcasting and Screencasting for Teaching

Mahesh M Thapa MD (Presenter)

LEARNING OBJECTIVES

1) Identify the utility of podcasts and screencasts. 2) List major software packages available for creating podcasts and screencasts. 3) Understand the steps required to create a podcast or screencast.

RC230B • e-Publishing in Radiology

Michael L Richardson MD (Presenter)

LEARNING OBJECTIVES

1) Know the pros and cons of publishing electronic books. 2) Know the two main formats for publishing electronic books. 3) Be aware of several strategies for converting one's book to electronic form. 4) Know the pros and cons of several software packages used for electronic book conversion.

RC230C • Incorporating the iPad in Resident Education: Using Mobile Technology to Improve the Way We Teach

Harprit S Bedi MD (Presenter)

LEARNING OBJECTIVES

1) Identify techniques to incorporate mobile technology into your teaching program. 2) Appraise your current teaching practices in light of the new pedagogical approaches introduced in the lecture.

Technologies for Creating Educational Content and Teaching Files

Monday, 08:30 AM - 10:00 AM • S102D

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RC230 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:1.5

Moderator
Kitt Shaffer, MD, PhD

LEARNING OBJECTIVES

RC230A • Podcasting and Screencasting for Teaching

Mahesh M Thapa MD (Presenter)

LEARNING OBJECTIVES

1) Identify the utility of podcasts and screencasts. 2) List major software packages available for creating podcasts and screencasts. 3) Understand the steps required to create a podcast or screencast.

RC230B • e-Publishing in Radiology

Michael L Richardson MD (Presenter)

LEARNING OBJECTIVES

1) Know the pros and cons of publishing electronic books. 2) Know the two main formats for publishing electronic books. 3) Be aware of several strategies for converting one's book to electronic form. 4) Know the pros and cons of several software packages used for electronic book conversion.

RC230C • Incorporating the iPad in Resident Education: Using Mobile Technology to Improve the Way We Teach

Harprit S Bedi MD (Presenter)

LEARNING OBJECTIVES

1) Identify techniques to incorporate mobile technology into your teaching program. 2) Appraise your current teaching practices in light of the new pedagogical approaches introduced in the lecture.

Creating, Storing, and Sharing Teaching Files Using RSNA's MIRC®: A Hands On Course

Monday, 10:30 AM - 12:00 PM • S401AB

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ICIW21 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:1.5

Krishna Juluru, MD
Frederick E Weiss, MD
Tessa S Cook, MD, PhD

LEARNING OBJECTIVES

1) Learn how easy it is to install the new and improved RSNA teaching file software with the one-click installer. 2) Learn how to create, organize, and share teaching files, create conference documents and save interesting cases for yourself, your group or your department.

ISP: Health Service, Policy and Research (Radiology Education)

Monday, 10:30 AM - 12:00 PM • S102D



SSC08 • *AMA PRA Category 1 Credit*™:1.5

Moderator

Paul P Cronin, MD,MS

Moderator

Pia Maly Sundgren, MD *

SSC08-01 • Health Service, Policy and Research Keynote Speaker: Radiology Education

Paul P Cronin MD,MS (Presenter)

SSC08-02 • Radiation Safety Knowledge and Perception among Residents: A Potential Improvement Opportunity for Graduate Medical Education in the United States

Gelareh Sadigh MD (Presenter) ; **Michael T Kassin** MD ; **Ramsha Khan** ; **Kimberly E Applegate** MD, MS

PURPOSE

To investigate residents' knowledge and perception of ionizing radiation adverse effects, frequency of their education on radiation safety and their use of radio-protective equipment.

METHOD AND MATERIALS

Residents from 15 residency programs at Emory University received an invitation email to complete Resident Radiation Safety Survey through SurveyMonkey in September 2012. The associations between residents' knowledge and use of radio-protective equipment with residents' specialty and year of training were investigated.

RESULTS

173/532 residents responded to the survey (response rate of 32%). 39% reported radiation safety is discussed in their residency curriculum at least every six months. This rate was significantly higher among Radiology residents (84% vs. 20% in Medicine, 19% in Surgery and 30% in OB/GYN; P

CONCLUSION

A large proportion of residents are unaware of the adverse effects of ionizing radiation, especially during pregnancy and childhood.

CLINICAL RELEVANCE/APPLICATION

Increased education of non-radiology residents by Radiology faculties on radiation safety may lead to more informed ordering of imaging tests and commitment to use of radio-protective equipment.

Arguing Your Way to an Education: An Effective Method of Teaching Residents Health Economics" class="eventlink" id="13043866"> SSC08-03 • Arguing Your Way to an Education: An Effective Method of Teaching Residents Health Economics

Stephen J Hunt (Presenter) ; **Saurabh Jha** MD

PURPOSE

The study compares a new method of teaching residents health policy and economics, using faculty-moderated point-counterpoint resident debates, with traditional didactic lectures.

METHOD AND MATERIALS

A new method of resident-driven conference comprising an Oxford-style debate moderated by faculty was employed for the curriculum in economics and health policy. The debate involves a motion that highlights a basic principle of economics with one resident arguing for the motion and the other against, with questions thrown to the wider audience. The residents then vote for or against the motion. In concluding, the moderator summarizes the key issues of economics and policy and the points of tension. The study compares the resident ratings of the debates to traditional lectures in the economics and policy curriculum. Residents assign a score for all lectures on a point scale ranging from (1) to (5) with a score of 5 expressing maximum effectiveness and a score of 1 the least.

RESULTS

In 2012, 285 lectures received mean rating of 4.49 +/- 0.02. Each lecture was, on average, rated by 16 residents. Amongst the nine subspecialties, there was essentially a bimodal distribution with the highest garnering mean ratings of 4.64 +/- 0.06 and the lowest a mean of 4.26 +/- 0.12. The mean score of the didactic economics and health policy lectures in 2011 was 4.0 +/- 0.38, placing it below the lowest of the subspecialty. In 2012 there were ten lectures in the economics and health policy curriculum, with six delivered in the traditional didactic format, and four utilizing debates.. The didactic lectures in 2012 received a mean rating of 3.94 +/- 0.12 (N=90). The moderated debates demonstrated a 20% higher mean rating, with an average of 4.71 +/- 0.07 (N=60), scoring higher on average than any of the nine clinical subspecialty. There was statistical significance in the difference in ratings between the new format and both the concurrent 2012 didactic lectures and historic 2011 lectures.

CONCLUSION

The moderated point-counterpoint debate is an effective adjunct to didactic lectures in teaching radiology residents issues in health economics and health policy. We make a case for this model to be adopted by other residency programs.

CLINICAL RELEVANCE/APPLICATION

Literacy in economics, often dubbed as the dismal science, is becoming increasingly important to optimally manage finite healthcare resources to increase net health benefits.

SSC08-04 • Emergency Department Musculoskeletal Study Interpretation: Can Performance on a Musculoskeletal Curriculum Predict Error Frequency When on Call?

Kevin B Hoover MD, PhD (Presenter) *

PURPOSE

Errors in initial radiologic interpretation can significantly effect patient management in the emergency department (ED). This retrospective study investigated test results and work parameters that could be helpful in predicting resident errors.

METHOD AND MATERIALS

A curriculum for residents during their first and second musculoskeletal radiology (MSK) rotations was began in July 2010. During both rotations, textbook reading, chapter specific slide presentations and chapter specific quizzes were assigned. The quiz results for each resident were placed into quartiles, based on the results so far obtained. The number of studies interpreted by a resident on service was also calculated and compared to like postgraduate year (PGY) residents and placed in a quartile. ABR written exam results and ACR inservice results for MSK were also tabulated for the residents in quartiles. Correlation between the percentage of minor and significant discrepancies on MSK studies when on call and the quartile of the above parameters was interrogated. Significant discrepancies were defined as those that could cause an important change in patient management.

RESULTS

A total of 13,296 adult MSK studies were reviewed by 23 PGY3-5 residents out of which there were 458 discrepancies (3.4%), 380 of which were minor (2.8%) and 78 significant (0.6%). Out of these 23 residents, 15 completed the ABR written exam, 22 completed the ACR inservice at least once, 17 completed the curriculum and the number of cases per interpreted per day on service was calculated in 21 residents. Out of these variables, the only result to correlate with the minor and significant discrepancies was the quartile score on the curriculum. The quartiles for the first and second rotation curriculum together were negatively correlated with minor discrepancies

(Spearman's rho coefficient -.511, p
CONCLUSION

Residents rotating through MSK have an assigned curriculum that guides them through the basics of orthopedic radiology including MRI. The resident performance on the curriculum was the only parameter investigated that correlated retrospectively with the number of errors in the emergency department on MSK studies.

CLINICAL RELEVANCE/APPLICATION

Resident performance in a novel MSK curriculum demonstrated correlation with the frequency of errors when interpreting MSK studies on call and may be a predictor of performance.

SSC08-05 • What Makes a Great Radiology Review Course Lecture? The Ottawa Radiology Resident Review Course Experience

Lily Cao MD, PhD (Presenter) ; Matthew D McInnes MD, FRCPC ; John G Ryan MD

PURPOSE

To objectively determine qualities of radiology review course lectures that are associated with positive audience evaluation.

METHOD AND MATERIALS

57 presentations from the Ottawa Resident Review Course (2012) were analyzed by a PGY4 radiology resident blinded to the result of audience evaluation. Objective data extracted were: slides per minute, lines of text per text slide, words per text slide, cases per minute, images per minute, images per case, number of audience laughs, number of questions posed to the audience, number of summaries, inclusion of learning objectives, ending on time, use of pre/post test and use of special effects. Subjective data extracted were: speaker spontaneity, speaker tone and image quality. Mean audience evaluation scores for each talk from daily audience evaluations (up to 60 per talk) were standardized out of 100. Correlation coefficient was calculated between continuous variables and audience evaluation scores. Student T test was performed on categorical variables and audience evaluation scores.

RESULTS

Strongest positive association with audience evaluation scores was for image quality ($r=0.57$), followed by the speaker tone ($r=0.47$) and number of times the audience laughed ($r=0.3$). Strongest negative association was between images per case and audience scores ($r=-0.25$). Talks with special effects were rated better (mean score 94.3 vs. 87.1, p

CONCLUSION

Many factors go into making a great review course lecture. At the University of Ottawa Resident Review Course, high quality images, dynamic speaker tone, use of special effects, use of pre/post-test and humor were most strongly associated with high audience evaluation scores. High image volume per case may be negatively associated with audience evaluation scores.

CLINICAL RELEVANCE/APPLICATION

Resident review course lectures are challenging to give; this study identifies several strategies to improve these lectures and better educate residents.

SSC08-06 • The Role of Radiologists in Breast Cancer Medical Education: A Systematic Review of the Literature

Faezeh Sodagari MD ; Pedram Golnari MD (Presenter) ; Hamid R Baradaran MD, PhD

PURPOSE

To determine the role of radiologists in medical education research in the field of breast cancer

METHOD AND MATERIALS

A systematic search in bibliographic databases was performed using a sensitive search strategy with **breast cancer** and **medical education** as key words (from January 1 2000 to May 20 2011) without any language and/or methodological limitation. Medical education research was defined as any research study pertaining to the medical students, residents, fellows, faculty members, curriculum development, or program evaluation. Information regarding type of study, outcomes, and sample size (if applicable) were extracted using a checklist designed according to the coding sheet of Best Evidence in Medical Education (BEME) Collaboration. All citations stored and managed by EndNote X3. Descriptive data were produced by SPSS ver. 17 and also were qualitatively synthesized and reported.

RESULTS

The search strategy yielded 691 citations that 394 citations published after 2000 were reviewed. By title and abstract reviewing by two independent reviewers, 183 citations were excluded. Full-text articles for 211 citations were reviewed. Out of 161 studies in the field of breast cancer medical education, only 19 articles had radiologists as their subjects and were included in the review. The majority of the included studies (17 out of 19 studies), aimed to assess the capability of residents and radiologists in reading mammograms. Sample size of studies ranged from 3 to 364 with the median of 207 subjects. Only one study had an interventional design and most of studies (16 out of 19) were prospective cross-sectional studies. The majority of studies (15 out of 19 studies) assessed knowledge or skill of the participants. None of the studies considered a clinical outcome as an outcome of the medical education research.

CONCLUSION

Despite the paramount importance of radiology in screening, diagnosis and follow up of breast cancer, and different existing modalities and technologies, educational effort and evidence in the field of breast cancer seems lacking and is limited to interpreting mammography. Larger studies and experiments using controlled designs, and clinically relevant outcomes are needed.

CLINICAL RELEVANCE/APPLICATION

Radiologists should actively participate in improving medical education research activities in the field of breast cancer to play an active role in the future of diagnosis and management of this disease

SSC08-07 • Prevalence of Flawed Multiple-choice Questions in Major Radiology Journals' Continuing Medical Education

Andres R Ayoob MD ; Lindsay E Williams MD (Presenter) ; David J Disantis MD

PURPOSE

Maintenance of Certification (MOC) requirements, the advent of all-computer-based Board examinations, and the ubiquity of CME-offering platforms make multiple choice questions (MCQs) an inescapable part of contemporary radiology, and indeed all medical disciplines. The result has been a burgeoning demand for well-constructed MCQs. The purpose of this study was to determine whether the CME MCQs in 3 major radiology journals comport with standard question-writing principles.

METHOD AND MATERIALS

CME questions from the January 2013 editions of the American Journal of Roentgenology (AJR), RadioGraphics, and Radiology were evaluated. The month was chosen at random, based solely on the current CME offerings at the time of manuscript preparation. The journals offered 181 print or on-line multiple choice items for their 22 CME-designated articles. Each question was analyzed by three radiologists to assess its adherence to question writing guidelines; disagreements were settled by consensus. From 31 validated MCQ-writing guidelines, we chose the seven previously identified as frequent flaws in medical CME questions. Example flaws included unfocused questions, negatively worded questions and options, and heterogeneous options.

RESULTS

78 of the 181 questions contained flaws (43%). 45 questions had one flaw, while 24 questions had two, eight questions had three, and one had four. Specific flaws varied widely in prevalence, but an unfocused question and heterogeneous options were the two most frequently violated writing principles.

CONCLUSION

Nearly half of CME questions from three major radiology journals violated standard MCQ item writing principles.

CLINICAL RELEVANCE/APPLICATION

The high prevalence of flawed CME questions in three major radiology journals puts learners at risk of failing for reasons unrelated to their knowledge of the topic.

SSC08-08 • Potential Impact the American Board of Radiology's New Core Examination Will Have on Resident Training: Resident and Faculty Perspectives

Brian J Clark MD (Presenter) ; **Hima Prabhakar MD**

PURPOSE

Assess radiology resident and faculty perspectives on the potential impact the ABR's new core exam will have on resident training. Factors assessed include resident call schedule, protected time, fourth year focused training, and entering fellowship.

METHOD AND MATERIALS

A 5-point Likert scale survey was given to radiology residents and faculty at an academically-affiliated hospital radiology residency program. Question responses were: 5=strongly agree, 4=agree, 3=undecided, 2=disagree, and 1=strongly disagree. Faculty and resident responses were compared using the student's t-test and summary statistics were generated.

RESULTS

Most surveyed were undecided or disagreed if the new exam format would better prepare residents for practice (89%, rating =4) and all thought it would shift to the third year (100%, rating >=4). Most surveyed agreed third year residents should have protected study time (94%, rating >=4) and 69% thought 6 to 8 weeks or more was adequate. All surveyed agreed that residents should be relieved from call duties before the core exam (100%, rating >=4) and 50% thought 6 to 8 weeks appropriate. 63% surveyed disagreed with the APDR's recommendation of no time off from clinical duties before the core exam (rating =4). Residents agreed they were likely to pursue research during fourth year subspecialty training (mean=4, p=0.01) and faculty were undecided if this would occur. Most surveyed thought that residents would continue to pursue fellowship training (93%, rating >=4). Residents disagreed (mean=2.1, p=0.04) that the new exam format would affect fellowship choice while faculty were undecided.

CONCLUSION

Residents and faculty have similar views regarding the new board exam and were uncertain if it would better prepare residents. Board frenzy will likely shift to third year and most think 8 weeks of protected study time appropriate with fourth year residents taking more call to fill the gap. Residents are likely to pursue research during the fourth year and to continue to enter fellowships.

CLINICAL RELEVANCE/APPLICATION

With the ABR's new core examination, board frenzy will probably shift to third year and residency programs should address rotation scheduling and consider time off call duties prior to the exam.

SSC08-09 • Quality Improvement of Radiological Image Interpretation Skills Assessment through Digital MPR Images in Medical Education

Cecile Ravesloot MD ; **Anouk Van Der Gijp MD, PhD** (Presenter) ; **Marieke Van Der Schaaf** ; **Olle Ten Cate** ; **Jan P Van Schaik MD, PhD** ; **Christian Mol MSc** ; **Corinne Tipker** ; **Mario Maas MD, PhD** ; **Koen L Vincken PhD**

PURPOSE

Current radiology practice has become increasingly based on the digital interpretation of volumetric multi-planar-reconstruction images (MPR-images). Nevertheless, assessment of radiological image interpretation skills in medical education and postgraduate radiology training is still mainly based on two-dimensional (2D) images (only one or two slices of a stack are presented). Consequently, the assessment lacks authenticity, which negatively impacts its quality. We hypothesized that using MPR images increases the assessment quality as reflected in its validity (the test assesses what it is intended to measure) and reliability (the accuracy of the test results, its reproducibility and little measurement error). Our aim was to evaluate differences in validity and reliability of assessment with 2D image questions versus MPR image questions.

METHOD AND MATERIALS

In 2012, 246 medical students, trained with MPR images, took a digital radiology test. There were two versions (A and B), both containing twenty 2D and twenty MPR image questions, concerning anatomy on CT-scans. Participants filled out a questionnaire to judge the authenticity of the assessment as an indication of validity. They also gave their opinion on the difficulty of 2D and MPR image questions. Mean scores and reliabilities (estimated with Cronbach's alpha) of the 2D and MPR image subtests were compared.

RESULTS

Cronbach's alphas on 2D image questions were .49 (A), and .65 (B), and alphas of MPR image questions were .65 (A), and .71 (B). Scores on MPR image questions (M 15.6, SD 2.6; M 14.9, SD 2.9) were lower than scores on 2D image questions (M 15.8, SD 2.2; M 16.8, SD 2.4). This difference between 2D and MPR scores was significant for version B. Assessment based on MPR images was considered more authentic (t (56) = -7.1, p < .001), and less difficult (t (58) = -4.2, p < .001) by the participants.

CONCLUSION

According to the participants, assessment with MPR images increases authenticity, which can contribute to validity. MPR image questions showed higher reliability than 2D image questions. Scores on MPR image questions in one version were significantly lower, but considered less difficult by participants.

CLINICAL RELEVANCE/APPLICATION

Valid and reliable assessments of image interpretation skills of radiology trainees, adds to patient safety. MPR image assessment seems to contribute to its validity and to its reliability.

Program to Enhance Relational and Communication Skills for Radiologists (PERCS:Radiology)

Monday, 01:30 PM - 04:30 PM • E271A

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SPRP21 • AMA PRA Category 1 Credit™:3 • ARRT Category A+ Credit:3.5

Stephen D Brown, MD
Elaine C Meyer, PhD, RN
Michael J Callahan, MD

LEARNING OBJECTIVES

1) To improve radiology trainees' preparedness to communicate with patients about a new, unexpected or difficult diagnosis. 2) To enhance radiology trainees' success in discussing radiation safety with patients.

ABSTRACT

Expectations are rapidly evolving for how radiologists communicate with patients. Radiologists today face heightened responsibilities to discuss diagnostic information and to optimize communication about radiation exposure. These communication challenges require radiologists to convey cognitively complex information under emotionally charged conditions. Few educational opportunities exist to help radiologists acquire the skills necessary to approach these conversations effectively. PERCS-Radiology seeks to fill this gap and to enhance radiology trainees' confidence and skills when communicating with patients about these difficult topics. This 3 hour workshop will combine didactic and educational media presentations with realistic improvised enactments between workshop participants and professional actors.

Enactment participants will receive feedback from other course participants, faculty, and actors. Faculty facilitators include experts in healthcare communication pedagogy. The learning model emphasizes group collaboration among professionals from varying levels of experience, integration of perspectives from patient and family representatives, and a safe environment that respects multiple viewpoints. Radiology trainees are the core learning group.

Special Interest Session: Planning for the Future Radiology Workforce: Too Many or Too Few?

Monday, 04:30 PM - 06:00 PM • N228

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SPSI23 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:1.5

Director

Carolyn C Meltzer, MD *

LEARNING OBJECTIVES

1) Identify the current workforce distribution of radiologists in the US. 2) Examine the many variables that may influence future workforce planning for radiology. 3) Appraise the complexity of the effects of health care reform on radiology.

ABSTRACT

This workshop will provide attendees with a better understanding of the NIH grant review process from the perspective of those who have served on review committees in order to better prepare them for submitting and resubmitting proposals and to encourage them to serve as reviewers. If you think like a reviewer, you can be a better grant writer! Although there is a significant amount of information available on how to write NIH grants and how the review process works, many investigators (new and experienced) often have questions that are best answered directly in person by those who have first-hand experience.

SPSI23A • Introduction and Overview of Issues

Carolyn C Meltzer MD (Presenter) *

LEARNING OBJECTIVES

View learning objectives under main course title.

SPSI23B • ACR 2013 Workforce Survey

Edward I Bluth MD (Presenter)

LEARNING OBJECTIVES

View learning objectives under main course title.

ABSTRACT

The results of the ACR 2013 Workforce Survey will be presented and discussed.

URL

SPSI23C • Our Changing Health Care World: Factors Influencing the Need vs Surplus of Radiologists

Cheri L Canon MD (Presenter) *

LEARNING OBJECTIVES

View learning objectives under main course title.

SPSI23D • Is Radiology Still an Attractive Field: A Program Director's Perspective

Mark E Mullins MD, PhD (Presenter)

LEARNING OBJECTIVES

View learning objectives under main course title.

SPSI23E • Going Forward: Is There a Formula for Success

Jocelyn D Chertoff MD (Presenter)

LEARNING OBJECTIVES

View learning objectives under main course title.

SPSI23F • Panel Discussion/Q and A

Carolyn C Meltzer MD (Presenter) * ; **Edward I Bluth** MD (Presenter) ; **Cheri L Canon** MD (Presenter) * ; **Mark E Mullins** MD, PhD (Presenter) ; **Jocelyn D Chertoff** MD (Presenter) ; **Shawn D Teague** MD (Presenter) *

LEARNING OBJECTIVES

View learning objectives under main course title.

Strategies for ABR Core Exam and ACGME Resident Performance Evaluations

Tuesday, 08:30 AM - 10:00 AM • S403B

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RC302 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:0.5

RC302A • Fresh from the First Core Exam: A Resident's Thoughts on Strategies That WORKED!

Christopher Stephens MD (Presenter)

LEARNING OBJECTIVES

1) Describe core exam preparation resources and better understand which resources are more effective. 2) Delineate alternative ways to prepare for the core exam during the first three years of residency. 3) Discuss successful strategies for the core exam physics preparation including the timing of the various components of the physics curriculum.

ABSTRACT

For several years now, program directors and residents have been planning the transition to the new curriculum and thinking about the new ABR core exam. This transition is now complete. The first core exam was administered in early October 2013 and the next exam is scheduled for June 2014. With so many resources available, trainees may feel overwhelmed by options on how to prepare for this exam.

This session will discuss various successful preparation strategies utilized by residents who recently took the first exam.

RC302B • Radiology Checklist Manifesto! How Will Program Directors Cope with New Semi-Annual ACGME Reporting Requirements?

Darel E Heitkamp MD (Presenter)

LEARNING OBJECTIVES

1) Understand the major requirements of the Next Accreditation System. 2) Visualize these requirements in a helpful timeline format. 3) Understand how the timing of new reporting data may differ significantly from your conventional paradigm of resident evaluation. 4) Understand strategies for meeting the reporting timelines established by the ACGME.

ABSTRACT

The transition to the Next Accreditation System (NAS) of resident evaluation is well underway. While much of this new paradigm has been designed to streamline burdensome administrative and process-oriented evaluation, there are many new features that the program director must be aware of. One very important issue worthy of discussion is the timing of all of the various moving parts. A checklist of the major components of the NAS and a timeline of due dates will bring program directors up to speed on just how exactly they will have to change their schedules to meet ACGME-imposed timetables.

RC302C • Beyond the Differential Diagnosis: How Will Developing Professionalism Skills Prepare You For Practice and Patient Safety?

Lori A Deitte MD (Presenter)

LEARNING OBJECTIVES

1) Describe ways to promote the development of professionalism skills during residency training. 2) Discuss the potential impact of unprofessional behavior on patient safety and the medical practice environment. 3) Describe the desirable professional attributes outlined in the Physician's Charter that can strengthen your application for a radiology position and enhance your performance as a radiologist.

ABSTRACT

The traditional radiology residency curriculum consisted primarily of the acquisition of medical knowledge, the recognition of radiological findings, and the development of an appropriate differential diagnosis. While these skills are important to becoming a competent radiologist, they are not enough. This session will examine the humanistic qualities and professional skills that distinguish a truly great (and desirable) colleague/physician from the others. The negative impact of unprofessional behavior on patient safety will also be reviewed.

Creating, Storing, and Sharing Teaching Files Using RSNA's MIRC®: A Hands On Course

Tuesday, 02:30 PM - 04:00 PM • S401AB

IN **ED**

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ICIW33 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:1.5

Mary R Wyers, MD

Frederick E Weiss, MD

LEARNING OBJECTIVES

1) Learn how easy it is to install the new and improved RSNA teaching file software with the one-click installer. 2) Learn how to create, organize, and share teaching files, create conference documents and save interesting cases for yourself, your group or your department.

ABSTRACT

Resident Interviewing: Skills that Work!

Tuesday, 04:30 PM - 06:00 PM • E353A

PR **ED**

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RC402 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:1.5

LEARNING OBJECTIVES

1) Describe basic interview skills appropriate to various levels. 2) Conduct an effective interview. 3) Avoid interview don'ts.

ABSTRACT

Interviewing is a critical part of the hiring process, often the decisive factor in hiring decisions. Additionally, virtually every radiologist will be required to be an interviewer or interviewee during his or her career. Despite the importance placed on interviews, candidates and interviewers rarely undergo training to either 1) present themselves in the most favorable light, or 2) optimize the interview to quickly and accurately assess a candidate's qualifications and personality fit for a particular job. Through didactic teaching and a series of vignettes, this course will review basic interview and interviewing skills for residents, fellows, and staff radiologists as well as for leadership positions at the department level and above (section chiefs, vice chairs, chairs, chief of staff, deans).

RC402A • Program Director, Chair, and Dean as Interviewers

Jonathan S Lewin MD (Presenter)

LEARNING OBJECTIVES

View learning objectives under main course title.

RC402B • Resident, Fellow, and Radiologist as Interviewees

Fred T Lee MD (Presenter) *

LEARNING OBJECTIVES

View learning objectives under main course title.

ABSTRACT

Interviewing is a critical part of the hiring process, often the decisive factor in hiring decisions. Additionally, virtually every radiologist will be required to be an interviewer or interviewee during his or her career. Despite the importance placed on interviews, candidates and interviewers rarely undergo training to either 1) present themselves in the most favorable light, or 2) optimize the interview to quickly and accurately assess a candidate's qualifications and personality fit for a particular job. Through didactic teaching and a series of vignettes, this course will review basic interview and interviewing skills for residents, fellows, and staff radiologists as well as for leadership positions at the department level and above (section chiefs, vice chairs, chairs, chief of staff, deans).

RC402C • Interview Role-Playing

Fred T Lee MD (Presenter) * ; **Jannette Collins MD, MEd** (Presenter) ; **Jonathan S Lewin MD** (Presenter)

LEARNING OBJECTIVES

View learning objectives under main course title.

ABSTRACT

Interviewing is a critical part of the hiring process, often the decisive factor in hiring decisions. Additionally, virtually every radiologist will be required to be an interviewer or interviewee during his or her career. Despite the importance placed on interviews, candidates and interviewers rarely undergo training to either 1) present themselves in the most favorable light, or 2) optimize the interview to quickly and accurately assess a candidate's qualifications and personality fit for a particular job. Through didactic teaching and a series of vignettes, this course will review basic interview and interviewing skills for residents, fellows, and staff radiologists as well as for leadership positions at the department level and above (section chiefs, vice chairs, chairs, chief of staff, deans). Interviewee during his or her career. Despite the importance placed on interviews, candidates and interviewers rarely undergo training to either 1) present themselves in the most favorable light, or 2) optimize the interview to quickly and accurately assess a candidate's qualifications and personality fit for a particular job. Through didactic teaching and a series of vignettes, this course will review basic interview and interviewing skills for residents, fellows, and staff radiologists as well as for leadership positions at the department level and above (section chiefs, vice chairs, chairs, chief of staff, deans).

URL's

<http://med.uc.edu/radiology/facstaff/collj4/index.html>

Publishing in Radiology: What You Always Wanted to Know and Never Asked

Tuesday, 04:30 PM - 06:00 PM • E352

PR **ED**

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RC424 • AMA PRA Category 1 Credit™:1.5

Moderator

Herbert Y Kressel, MD *

Deborah Levine, MD *

Alexander A Bankier, MD, PhD *

Elkan F Halpern, PhD *

David F Kallmes, MD *

LEARNING OBJECTIVES

1) Understand on what a manuscript submitted to RADIOLOGY is judged during the review and decision process. 2) Understand why it is important to clearly represent research results so that all parts of the written manuscript clearly reflect the research question. 3) Understand how to organize the inner logic of a manuscript submitted to RADIOLOGY. 4) Illustrate how graphs and charts can be best utilized to appropriately illustrate your results. 5) Understand the common statistical errors in manuscripts and how they can be avoided.

ABSTRACT

More than 2000 manuscripts per year are submitted to RADIOLOGY. Despite their variety in their subject matter and content, many manuscripts share common problems in the research design, description, and style which need improvement. The Publication Information for Authors is available on-line at <http://www.rsna.org/publications/rad/PIA/index.html>. This provides a basic set of guidelines for manuscript preparation and submission. This presentation will complement and extend beyond these guidelines by further illustrating points from the Publication Information for Authors with realistic examples and tangible scenarios based on our experience with the submission, review, and decision making process. The Editor, three Deputy Editors, and statistician of RADIOLOGY will provide practical tips as well as Do's and Don'ts for preparing the major elements of a RADIOLOGY manuscript. In addition, we will discuss the most common statistical problems we encounter in reviewing manuscripts, and discuss the issue of why many published research results turn out to be incorrect. At the end of the session, the registrants will gain an enhanced understanding of the required elements of an original submission, and have a better understanding of common author pitfalls encountered during manuscript review and the editorial process.

What's New from the American Board of Radiology

Wednesday, 08:30 AM - 10:00 AM • E353A

PR **LM** **ED**

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RC502 • AMA PRA Category 1 Credit™:1.5

Moderator

Duane G Mezwa, MD

James P Borgstede, MD

Dennis M Balfe, MD

Milton J Guiberteau, MD

Kay H Vydareny, MD

LEARNING OBJECTIVES

1) Explain the Core and Certifying Exams; describe the relationship to/evolving impact of the new exams on training and practices. 2) Describe the ABR Board Eligibility policy and how a hospital credentials committee might apply it. 3) Describe recent ABR MOC program changes including: efforts to align MOC with practice requirements and incentives, self-assessment CME, and Continuous Certification. 4) Plan and execute a practice-relevant PQI project. 5) List the meaningful participation criteria for individual MOC Part IV credit when doing a group Part IV project. 6) Explain how IR/DR primary certification differs from VIR subspecialty certification; describe a likely sequence and timeline for its full implementation.

ABSTRACT

Creating Radiology eBooks for the iPad: A Hands-on Introduction to iBooks Author

Wednesday, 10:30 AM - 12:00 PM • S401AB

IN **ED**

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ICIW41 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:1.5

Henry J Baskin, MD

Justin LaPlante, MD

Justin Cramer, MD

LEARNING OBJECTIVES

1) Become familiar with Apple's free ebook authoring tool, iBooks Author. 2) Create a sample radiology ebook during the course. 3) Learn how to freely share your ebook with others.

ABSTRACT

The iPad is rapidly becoming the de facto learning tool used by radiology residents and fellows. iBooks Author, a free authoring tool from

Apple, enables the creation of ebooks with a near-limitless number of high-resolution images, movies, and other interactive elements. Unfortunately, most radiologists lack the expertise to leverage the advantages of this application. This hands-on workshop will cover the basics of iBooks Author. During the course, attendees will create their own interactive radiology ebook and learn how to freely share it with anyone who has an iPad. iBooks author is only available for Mac OS and bringing your own Mac is required for the hands-on portion of the course. Attendees are encouraged to download iBooks Author prior to attending; the link is provided below. Attendees are also encouraged to come with an idea for their own iBook, ideally with a text file and folder of images they would like to turn into an ebook during the course. Sample text and images will be provided for those who do not bring their own material.

URL's
<https://itunes.apple.com/us/app/ibooks-author/id490152466?mt=12>

RSNA Resident and Fellow Symposium 2013: Career 101: Planning for Success After Residency (An Interactive Session)

Wednesday, 01:30 PM - 03:30 PM • E451B

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ED

MSRP41 • AMA PRA Category 1 Credit™:2

Moderator

Aparna Annam, DO

LEARNING OBJECTIVES

1) To prepare residents and fellows for the current job market and how to make the most of your first career steps.

ABSTRACT

MSRP41A • Future of the Radiology Job Market-Progress or Panic?

Aparna Annam DO (Presenter) ; Edward I Bluth MD (Presenter)

LEARNING OBJECTIVES

1) Understand the 2012 and 2013 ACR Workforce Survey Results. 2) Understand the types of practices and geographic locations where jobs appear to be potentially available in 2014 and 2016. 3) Understand the number and types of radiology subspecialists and generalists which employers appear to be interested hiring in 2014 and 2016.

MSRP41B • Negotiating a Tight Job Market-The Do's and Don'ts of Finding a Job

Anthony C Brown MD (Presenter) ; James P Borgstede MD (Presenter)

LEARNING OBJECTIVES

1) Assess the current job opportunities. 2) Analyze important metrics and demographics for job satisfaction. 3) Identify key questions which must be answered before signing a contract.

MSRP41C • Your First Job Isn't Your Last Job

Monique A Meyer MD (Presenter) ; Etta D Pisano MD (Presenter) *

LEARNING OBJECTIVES

1) To understand the impetus for job change across the career of radiologists in practice and academia. 2) To learn about nontraditional and traditional career opportunities open to radiologists. 3) To learn about the challenges, both professional and personal, of pursuing career path changes.

MSRP41D • Panel Discussion

LEARNING OBJECTIVES

View learning objectives under main course title.

RSNA Resident and Fellow Symposium 2013: Career 102: Survival Skills for Your Job (An Interactive Session)

Wednesday, 04:00 PM - 05:45 PM • E451B

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MSRP42 • AMA PRA Category 1 Credit™:1.75

Moderator

Aparna Annam, DO

LEARNING OBJECTIVES

1) To help recently graduated physicians make positive decisions to extend the scope and longevity of their individual careers as well as their professional communities.

ABSTRACT

MSRP42A • Fight for Your Right-The Importance of Advocacy

Aparna Annam DO (Presenter) ; James H Thrall MD (Presenter) *

LEARNING OBJECTIVES

View learning objectives under main course title.

MSRP42B • Stayin' Alive-Making Yourself Indispensable to Your Job

Richard E Sharpe MD, MBA (Presenter) ; Norman J Beauchamp MD (Presenter) *

LEARNING OBJECTIVES

View learning objectives under main course title.

MSRP42C • How To Dictate A Radiology Report-Is It What You Say or Don't Say?

Christina M Cinelli MD (Presenter) ; George S Bisset MD (Presenter)

LEARNING OBJECTIVES

View learning objectives under main course title.

MSRP42D • Panel Discussion

LEARNING OBJECTIVES

View learning objectives under main course title.

How To Evaluate Resident Milestones Effectively and Efficiently: Practical Ideas Will Help Program Directors and Residents To Know What Is Expected

Thursday, 08:30 AM - 10:00 AM • S404AB



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RC602 • AMA PRA Category 1 Credit™:1.5

Angelisa M Paladin, MD
Mary H Scanlon, MD, FACR
Todd S Miller, MD

LEARNING OBJECTIVES

1) Become familiar with each main milestone category. 2) Learn the constituent parts of each main milestone category and how they are structured into graduated sections organized by level of training. 3) Learn methods of gathering data for each milestone category, section, and level within each using the resources provided by the milestone committee. 4) Learn how to apply proven assessment strategies via review of lessons learned during successful and unsuccessful implementations undertaken by the milestone committee members.

Creating, Storing, and Sharing Teaching Files Using RSNA's MIRC®: A Hands On Course

Thursday, 10:30 AM - 12:00 PM • S401AB



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ICIW51 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:1.5

Moderator
Frederick E Weiss, MD
Krishna Juluru, MD
Mary R Wyers, MD

LEARNING OBJECTIVES

1) Learn how easy it is to install the new and improved RSNA teaching file software with the one-click installer. 2) Learn how to create, organize, and share teaching files, create conference documents and save interesting cases for yourself, your group or your department.

Mind Your Own Business! Required Business Skills for Your First Job

Thursday, 04:30 PM - 06:00 PM • S404AB



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RC702 • AMA PRA Category 1 Credit™:1.5

Jonathan R Medverd, MD
William P Shuman, MD *
Lukasz Babiarz, MD, MBA

LEARNING OBJECTIVES

1) Define for the applicant to an academic and private practice radiology job, the parameters critical to assessing the advantages and disadvantages of the potential employment opportunity. 2) Understand the value of creating a business strategic plan and its components. 3) Understand the importance and techniques of repetitive surveying of the various customer groups. 4) Understand the difference between marketing and advertising and how each is accomplished with high impact.

ABSTRACT

There are many factors that must be addressed prior to committing to an employment contract. The applicant must be skilled in assessing the health of the practice, identifying potential red flags in contracts and exclusion clauses, understanding the mission and vision of the practice and determining if goals and objectives are aligned, and determining if the practice has a high chance of satisfying the applicant. In some cases this requires a rudimentary understanding of legal, financial, strategic planning, and socioeconomic principles. These issues will be addressed. Once you become an employee, the strategic plan of your business is critical to its future. If there is no plan, how do you go about creating one? What are the key components of a good strategic plan? Data is critical in understanding your service, your market and your future business directions. Key data components are obtained from surveying - of patients, of referring physicians, and even of staff. The elements of a good survey and how you target each of these groups to produce useful data are discussed in depth. Once you have data and a strategic plan, how do you get the message out? Advertising is publishing your added value. Marketing is understanding the unique features and dynamics of your local and regional market place. The interplay of these two subjects will be critical to business and service success.

Professionalism and the Radiology Trainee

Thursday, 04:30 PM - 06:00 PM • S403A



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RC724 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:1.5

Director
Ronald L Eisenberg, MD, JD
Stephen D Brown, MD
Priscilla J Slanetz, MD, MPH *

LEARNING OBJECTIVES

1) To discuss effective strategies to address the issue of the impaired and/or incompetent colleagues. 2) To explain [how to handle unprofessional behavior within and across disciplines. 3) To formulate approaches to accountability, the unexpected outcome, and the role of apology.

ABSTRACT

Unprofessional behavior during medical school, residency, and fellowship training has been linked to subsequent disciplinary action by medical boards. Consequently, educational initiatives fostering professionalism are essential for residency and fellowship training in order to promote high quality patient care. Moreover, professionalism is now one of the six competencies that residents are required to achieve before completing their training and taking the new core examinations. Professionalism is one of the most challenging components of the core ACGME competencies to teach and evaluate during residency training. This interactive course will involve group participation using reflective practice, a technique that we have successfully incorporated into residency training at our institutions. These radiology-specific, case-based sessions will address the topics of (1) the clinically incompetent and/or impaired attending; (2) unprofessional behavior across

disciplines; and (3) managing the unexpected outcome, the role of apology, and accountability. Although primarily geared toward trainees, we welcome radiologists in practice who can share their practical experiences regarding these issues with residents and fellows. All three of the course facilitators have received RSNA Education Scholar Awards. Dr. Brown is a pediatric radiologist and bioethicist, Dr. Slanetz is a breast imager and residency program director, and Dr. Eisenberg is general radiologist, associate program director, and non-practicing lawyer.

Leveraging Imaging Informatics to Improve Radiology Education: Beyond the Teaching File (An Interactive Session)

Thursday, 04:30 PM - 06:00 PM • S103AB

IN ED

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RC730 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:1.5

Moderator
Marc D Kohli, MD *

RC730A • Simulation Systems in Radiology Education

Kitt Shaffer MD, PhD (Presenter)

LEARNING OBJECTIVES

1) Describe two professional systems that currently use simulation extensively for teaching. 2) List three teaching situations in radiology where simulation could be integrated. 3) Describe three levels of training in radiology where simulation could play a role.

ABSTRACT

This interactive session will explore the role of simulation in all types of professional training outside of radiology, as well as potential educational, training, evaluation and quality improvement settings within radiology where simulation may play a role in the future.

RC730B • Educational Tools for the Next Generation in Radiology

Richard E Sharpe MD, MBA (Presenter)

LEARNING OBJECTIVES

1) Explain factors that are changing the face of radiology education. 2) Contrast the educational tools used by past, present and future generations of radiologists. 3) Describe cutting edge innovative educational tools for diagnostic radiology training.

RC730C • Quality Improvement Tools in Education

Jason N Itri MD, PhD (Presenter)

LEARNING OBJECTIVES

1) Define standards for evaluating the quality of an assessment method. 2) List quality-related educational outcomes for radiology trainees. 3) Describe IT tools that can be used to assess trainee performance and the impact of interventions. 4) Discuss educational and training interventions that improve quality-related outcomes.

ABSTRACT

RC730D • Taking Audience Response to the Next Level

Lonie R Salkowski MD (Presenter)

LEARNING OBJECTIVES

1) Demonstrate the ability to set-up, prepare and incorporate a presentation into an audience response system. 2) Determine methods for exporting and analyzing data from an audience response session. 3) Identify differences of using audience response systems on PC versus Mac platforms. 4) Identify techniques where the audience response system can be applied to active learning environments.

ABSTRACT

This session will demonstrate ways to incorporate audience response devices into learning environments, and assist users how to use the data that is collected behind the scenes within audience response systems.

How to Be the Speaker Everyone Wants You to Be (An Interactive Session)

Friday, 08:30 AM - 10:00 AM • E353B

PR ED

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RC802 • AMA PRA Category 1 Credit™:1.5 • ARRT Category A+ Credit:1.5

Jannette Collins, MD, MEd

LEARNING OBJECTIVES

1) Apply adult learning principles. 2) Demonstrate effective presentations skills.

ABSTRACT

Effectiveness of an oral presentation depends on the ability of the speaker to communicate with the audience. An important part of this communication is focusing on two to five key points and emphasizing those points during the presentation. Every aspect of the presentation should be purposeful and directed at facilitating learners' achievement of the objectives. This necessitates that the speaker has carefully developed the objectives and built the presentation around attainment of the objectives. A presentation should be designed to include as much audience participation as possible, no matter the size of the audience. Techniques to encourage audience participation include questioning, brainstorming, small-group activities, role-playing, case-based examples, directed listening, and use of an audience response system. It is first necessary to motivate and gain attention of the learner for learning to take place. This can be accomplished through appropriate use of humor, anecdotes, and quotations. This course will review adult learning principles and effective presentation skills.

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URL's

<http://med.uc.edu/radiology/facstaff/collij4/index.html>

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