

Centennial Showcase

Miscellaneous

Sat, Nov 29 12:00 PM - 5:00 PM Location: Centennial Pavilion, Learning Center

ABSTRACT

Explore an onsite experience to see, hear, and discover the advancements that shaped radiology. The Showcase will feature a historical timeline and a special welcome from a virtual Wilhelm Roentgen. Visitors can explore the Centennial Gallery featuring the stories behind RSNA, and the Cases of the Century, which gives attendees a chance to try their hand at diagnosis using only "vintage" images. Attendees will also have an opportunity to view striking images in the Art and Science gallery and contribute their favorite RSNA memories or celebratory messages in the Memory Book. The Centennial Showcase will be open: November 29, 12:00pm-5:00pm November 30 - December 4, 7:30am-6:00pm December 5, 7:30am-12:30pm

SPPH01

AAPM/RSNA Physics Tutorial for Residents: Multi-spectral and Volumetric Imaging

Special Courses



AMA PRA Category 1 Credits™: 2.00

ARRT Category A+ Credits: 2.00

Sat, Nov 29 12:00 PM - 2:00 PM Location: E351

Participants

Moderator

Richard J. Massoth PhD : Nothing to Disclose

LEARNING OBJECTIVES

1) Describe the underlying physics of multi-spectral volumetric imaging and advanced applications that can increase the effectiveness of this emerging imaging technology. 2) Understand imaging artifacts resulting from hybrid imaging techniques and the limitations of the technology. 3) Describe dual imaging techniques used in diagnostic imaging.

Sub-Events

SPPH01A

Physics Overview of Multi-spectral and Volumetric Imaging

Richard J. Massoth PhD (Presenter): Nothing to Disclose

LEARNING OBJECTIVES

View learning objectives under main course title.

SPPH01B

Multi-spectral CT Imaging

Mark Patrick Supanich PhD (Presenter): Research agreement, Siemens AG

LEARNING OBJECTIVES

View learning objectives under main course title.

SPPH01C

Hybrid Imaging in Nuclear Medicine

Osama R. Mawlawi PhD (Presenter): Research Grant, Siemens AG Research Grant, General Electric Company

LEARNING OBJECTIVES

View learning objectives under main course title.

SPGW01

NIH Grantsmanship Workshop

Special Courses



Participants

Moderator

Gayle E. Woloschak PhD : Nothing to Disclose

LEARNING OBJECTIVES

1) Gain greater understanding of the NIH grants process: a. understand the process for preparing a research or training grant application. b. learn the elements of a competitive grant application. 2) Gain insight into the new features of the NIH review process. 3) View the review process in action through a mock study section.

Sub-Events

SPGW01A

Welcome and Introductory Remarks

Gayle E. Woloschak PhD (Presenter): Nothing to Disclose

LEARNING OBJECTIVES

View learning objectives under main course title.

SPGW01B

Preparing an R01 Research Application

Pratik Mukherjee MD, PhD (Presenter): Research Grant, General Electric Company Medical Advisory Board, General Electric Company

LEARNING OBJECTIVES

View learning objectives under main course title.

SPGW01C

Preparing K Awards

Ruth C. Carlos MD, MS (Presenter): Nothing to Disclose

LEARNING OBJECTIVES

View learning objectives under main course title.

SPGW01D

Clinical Trials in Applications

Michael Walter Vannier MD (Presenter): Nothing to Disclose

LEARNING OBJECTIVES

View learning objectives under main course title.

SPGW01E

Program Perspectives

William Heetderks MD, PhD (Presenter): Stockholder, General Electric Company Stockholder, Zimmer Holdings, Inc Stockholder, The Procter & Gamble Company Stockholder, Bristol-Myers Squibb Company

LEARNING OBJECTIVES

View learning objectives under main course title.

SPGW01F

The Process of Review

Gayle E. Woloschak PhD (Presenter): Nothing to Disclose

LEARNING OBJECTIVES

View learning objectives under main course title.

SPGW01H

Questions to the Faculty

Gayle E. Woloschak PhD (Presenter): Nothing to Disclose

LEARNING OBJECTIVES

View learning objectives under main course title.

SPGW01I

Summary and Evaluation Form

Gayle E. Woloschak PhD (Presenter): Nothing to Disclose

LEARNING OBJECTIVES

View learning objectives under main course title.

SPRW01

RSNA/ARR Study Section Reviewers Workshop What It Takes to Be an Expert Reviewer for the NIH: The Peer Review Process Demystified

Special Courses

RS

AMA PRA Category 1 Credits™: 3.75

ARRT Category A+ Credits: 4.00

Sat, Nov 29 1:00 PM - 5:00 PM Location: E253CD

Participants

Elizabeth Anne Krupinski PhD (Presenter): Nothing to Disclose

Carolyn C. Meltzer MD (Presenter): Board of Directors, ACR Image Metrix

Kathryn A. Morton MD (Presenter): Nothing to Disclose

LEARNING OBJECTIVES

1) Identify the different grant mechanisms available within the NIH and the requirements for submitting to a particular mechanism. 2) List the criteria used in the evaluation of NIH grants and what happens prior to and during a study section review meeting. 3) Articulate the benefits of being a reviewer for the NIH and the different ways that one can be a reviewer. 4) Observe a mock study section presented by the NIH with experienced reviewers evaluating at least two grant mechanisms.

SPSP01

Nuevos Horizontes en Diagnostico por Imagen Desde el CIR: Sesión del Colegio Interamericano de Radiología (CIR) en Español/New Horizons in Diagnostic Imaging from CIR: Session of the Interamerican College of Radiology (CIR) in Spanish

Special Courses

NM MR CT VA NR MK GU GI CH BR V

AMA PRA Category 1 Credits™: 3.75

ARRT Category A+ Credits: 4.00

Sat, Nov 29 1:00 PM - 5:00 PM Location: E451A

LEARNING OBJECTIVES

1) To review advances or new horizons in imaging in major subspecialties from experts from different CIR (Interamerican College of Radiology) countries. 2) To use a practical approach including case-based learning. 3) To seek audience participation with presentation of unknown clinical examples related to the organ system presentations.

Sub-Events

SPSP01A

Introducción/Opening Remarks

Gloria Soto Giordani MD (Presenter): Nothing to Disclose

LEARNING OBJECTIVES

View learning objectives under main course title.

SPSP01B

Primera Parte/Part 1

Moderator Pablo Riera Ros MD, PhD : Medical Advisory Board, Koninklijke Philips NV Medical Advisory Board, KLAS Enterprises LLC Medical Advisory Committee, Oakstone Publishing Departmental Research Grant, Siemens AG Departmental Research Grant, Koninklijke Philips NV Departmental Research Grant, Sectra AB Departmental Research Grant, Toshiba Corporation

LEARNING OBJECTIVES

View learning objectives under main course title.

SPSP01C

Sistema Nervioso Central: Correlación Entre Marcadores Genéticos e Imágenes en Astrocitomas/Central Nervous System: Imaging-Genetic Markers Correlation in Astrocytomas

Mauricio Castillo MD (Presenter): [Nothing to Disclose](#)

LEARNING OBJECTIVES

1) To become familiar with the traditional biochemical/genetic markers of astrocytomas and how their presence or absence correlate with imaging findings. 2) To understand the biological changes, as reflected by MR advanced imaging techniques, that astrocytomas go through when malignant transformation occurs.

ABSTRACT

In this lecture we will use advanced MR imaging techniques, perfusion (both contrast enhanced and arterial spin labelled), permeability, diffusion, and spectroscopy to understand the biological behavior of astrocytomas. Low grade astrocytomas may not show high choline on MRS but show high myoinositol which correlates with low perfusion values. Anaplastic astrocytomas produce metalloproteases and thus VEGF and PDGF can stimulate angiogenesis resulting in high perfusion with gadolinium and ASL. Lastly, hypoxia induces formation of permeability factors leading to edema and contrast enhancement in glioblastomas. Necrosis, seen as lipids on MRS is a marker of glioblastoma. Presence of MGMT promoter and alterations in the IDH1 gene (present in most secondary glioblastomas) confer a better survival pattern to glioblastoma patients and these findings are seen predominantly in temporal and deep tumors and in those with little contrast enhancement and high signal on T2 and DWI images. Thus, the initial transformation in all low grade astrocytomas is ischemia that can be seen as the presence of lactate on MRS, while markers of higher grades such as angiogenesis, permeability, and necrosis can be identified with perfusion, K-trans maps, and MR spectroscopy. Lack of myoinositol on MRS indicates its consumption for production of metalloproteases and thus it is also an early marker of angiogenesis. Many of these changes occur before anatomical images may suggest them.

URL

<https://sites.google.com/site/castilloneuroradiology/>

Active Handout

http://media.rsna.org/media/abstract/2014/14002958/SPSP01C_sec.pdf

SPSP01D

Cardiovascular: Cambios Desde el TAC y RM Hacia la Imagen Funcional y Molecular/Cardiovascular: CT and MRI Changes towards Functional and Molecular Imaging

Antonio Luna MD (Presenter): [Nothing to Disclose](#)

LEARNING OBJECTIVES

1) Revisar las indicaciones actuales del TC y RM en el diagnóstico cardiovascular. 2) Ensalzar las nuevas aproximaciones técnicas en TC y RM del sistema cardiovascular. 3) Esbozar el papel potencial de la imagen funcional y molecular en enfermedades cardiovasculares. 1) Review the current clinical indications of CT and MRI in cardiovascular diagnosis. 2) Highlight the new technical approaches in CT and MRI of the cardiovascular system. 3) Outline the potential role of functional and molecular imaging in the management of cardiovascular diseases.

SPSP01E

Mama: Integración de Medicina Nuclear en las Imágenes Diagnósticas de Mama/Breast: Nuclear Medicine Integration in Breast Imaging

Maria Victoria Velasquez MD (Presenter): [Nothing to Disclose](#)

LEARNING OBJECTIVES

1) Present the current indications for Molecular Breast Imaging and Positron Emission Mammography. 2) Describe imaging protocols, radiation exposure and benefits for both techniques. 3) Outline the most common findings of benign and malignant breast lesion on MBI and PEM with correlation with other breast imaging studies. 4) Navigate through the different steps of PEM guided biopsy. 5) Describe alternative management and follow up with these techniques.

ABSTRACT

Integration of Nuclear Medicine in Breast Imaging In the last decade the introduction of Nuclear medicine as Molecular imaging of the breast had a significant development in the diagnosis of breast abnormalities. Positron Emission Mammography (PEM) and Molecular Breast Imaging (MBI) have been successful in the detection of benign, atypical and malignant breast conditions. PEM have been proven to represent a very helpful staging tool in patients with contraindications to breast MRI. MBI is a valuable technique for screening of high risk patients and as for problem solving for patients with inconclusive clinical or imaging findings. This presentation will review the main indications of these Nuclear Medicine studies and will detail the findings and the correlation with conventional breast imaging. The breast imager will have a better understanding of the anatomic, functional and molecular breast imaging techniques.

SPSP01F

Tórax: Hallazgos de la Resonancia Magnética en Enfermedades del Parénquima/Chest: Magnetic

Resonance Findings in Lung Parenchymal Disease

Arthur Soares Souza MD, PhD (Presenter): [Nothing to Disclose](#)

LEARNING OBJECTIVES

1) To show the value of thoracic MRI for assessment of parenchymal lung disease. 2) To demonstrate the value of diffusion weighted MRI (DWI) for differentiating benign from malignant lung neoplasms.

ABSTRACT

In this lecture we will show the clinical ability of thoracic MRI to depict the most common patterns of parenchymal lung diseases, and do the correlation with CT findings. MRI seems to be a valuable tool, without radiation exposure, for management of parenchymal lung disease. We will, also, address the importance of diffusion weighted MRI (DWI) for differentiating benign from malignant lung lesions.

URL

<http://www.ultrax.com.br/chest>

SPSP01G

Conferencia del Colegio Interamericano de Radiología/Interamerican College of Radiology Lecture

Dante R. Casale Menier MD (Presenter): [Nothing to Disclose](#)

LEARNING OBJECTIVES

View learning objectives under main course title.

SPSP01H

Segunda Parte/Part II

Moderator Miguel E. Stoopen MD : [Nothing to Disclose](#)

LEARNING OBJECTIVES

View learning objectives under main course title.

ABSTRACT

N/a

URL

www.webcir.org

SPSP01I

Musculoesqueletico: Imágenes Avanzadas del Cartílago Articular y "Chemichal Shift" de Médula Ósea/Musculoskeletal: Advanced Imaging of the Articular Cartilage and Bone Marrow Chemical Shift Imaging

Gonzalo Javier Delgado MD (Presenter): [Nothing to Disclose](#)

LEARNING OBJECTIVES

View learning objectives under main course title.

SPSP01J

Abdomen e Hígado: Contrastes Hepatoespecíficos y Elastografía por Resonancia Magnética/Abdomen and Liver: Liver Specific Contrast Agents and Hepatic MR Elastography

Luis Antonio Sosa MD (Presenter): [Nothing to Disclose](#)

LEARNING OBJECTIVES

View learning objectives under main course title.

SPSP01K

Próstata: Resonancia Magnética de 3T y PET/CT con Colina/Prostate: 3T MRI and Choline PET/CT

Daniela Stoisa MD (Presenter): [Nothing to Disclose](#)

LEARNING OBJECTIVES

View learning objectives under main course title.

Handout: Daniela Stoisa

http://media.rsna.org/media/abstract/2014/14002966/cap_chicago_2014.ppt

SPSP01M

Clausura/Closing Remarks

Dante R. Casale Menier MD (Presenter): Nothing to Disclose , Pablo Riera Ros MD, PhD (Presenter): Medical Advisory Board, Koninklijke Philips NV Medical Advisory Board, KLAS Enterprises LLC Medical Advisory Committee, Oakstone Publishing Departmental Research Grant, Siemens AG Departmental Research Grant, Koninklijke Philips NV Departmental Research Grant, Sectra AB Departmental Research Grant, Toshiba Corporation , Miguel E. Stopen MD (Presenter): Nothing to Disclose

LEARNING OBJECTIVES

View learning objectives under main course title.

SPPH02

AAPM/RSNA Tutorial on Equipment Selection: Multi-Spectral and Volumetric Imaging

Special Courses

PH **US** **NM** **CT**

AMA PRA Category 1 Credits™: 2.00

ARRT Category A+ Credits: 2.00

Sat, Nov 29 2:15 PM - 4:15 PM Location: E351

Participants

Moderator

Jerry A. Thomas MS : Stockholder, General Electric Company Stockholder, Hologic, Inc Stockholder, Stryker Corporation
Speaker, Medical Technology Management Institute

LEARNING OBJECTIVES

1) Understand the advanced capabilities of multi-spectral volumetric imaging in the major modalities of Ultrasound, MRI, CT and Nuclear Imaging. 2) Appreciate the clinical capabilities of multi-spectral volumetric imaging and approach to utilizing advanced imaging applications with this technology.

Sub-Events

SPPH02A

Dual Energy Imaging in Diagnostic Radiology

Jerry A. Thomas MS (Presenter): Stockholder, General Electric Company Stockholder, Hologic, Inc Stockholder, Stryker Corporation Speaker, Medical Technology Management Institute

LEARNING OBJECTIVES

View learning objectives under main course title.

SPPH02B

Hybrid Imaging in Ultrasound

Evan Boote PhD (Presenter): Nothing to Disclose

LEARNING OBJECTIVES

View learning objectives under main course title.

ABSTRACT

Ultrasound imaging is a relatively inexpensive, low-risk application to patients, ubiquitously available in the health care setting. However, ultrasound presents a challenge to the novice user, particularly with regard to recognition of anatomic landmarks. In some situations, ultrasound imaging is not capable of resolving some structures, either due to spatial and/or contrast resolution limitations; in certain other situations, ultrasound offers a superior approach to visualizing abnormalities or the depiction of blood flow in the body. Hybrid ultrasound may be defined in a number of ways - the most likely definition would be what might be termed 'fusion' imaging, where a set of image data from a second modality is imported into the ultrasound system, anatomical landmarks are established, and a fused image is displayed in real-time. Hence the advantages of the other modalities would be gained during the use of the ultrasound system. Another definition of 'hybrid' may be the use of a device to depict a biopsy needle placement in real-time. A further extension of the word 'hybrid' might be to include real-time simultaneous imaging with another modality, even a non-traditional imaging modality. This presentation will review these variations of 'hybrid' ultrasound that are commercially available and in current clinical practice. However, the presentation will also cover those still in the development stage. The practical applications of these systems will be discussed, as will the limitations and restrictions on their use. Included in this will be an evaluation of cost of the system and a case-study on the use of hybrid imaging in a hospital setting.

SPPH02C

Commercially Available Multi-spectral and Volumetric Imaging Systems

Sarah Eva McKenney PhD (Presenter): [Nothing to Disclose](#)

LEARNING OBJECTIVES

View learning objectives under main course title.

ABSTRACT

The price of purchasing and maintaining the latest imaging systems is on the order of millions; tight budgets in health care necessitate the ability to make smart purchases. This work identifies important considerations when purchasing an advanced imaging system, specifically in the context of dual energy and multi-modality volumetric imaging. The roles of imaging stakeholders are examined including: administrators, radiologists, technologists, medical physicists, IT specialists, clinical engineers, and vendors. A general overview of the strengths and weaknesses of volumetric commercially available imaging systems is also provided. Learning Objectives • Identify the needs of the imaging cohort • Evaluate prospective systems for purchase

URL

<http://goo.gl/CB3Tgm>