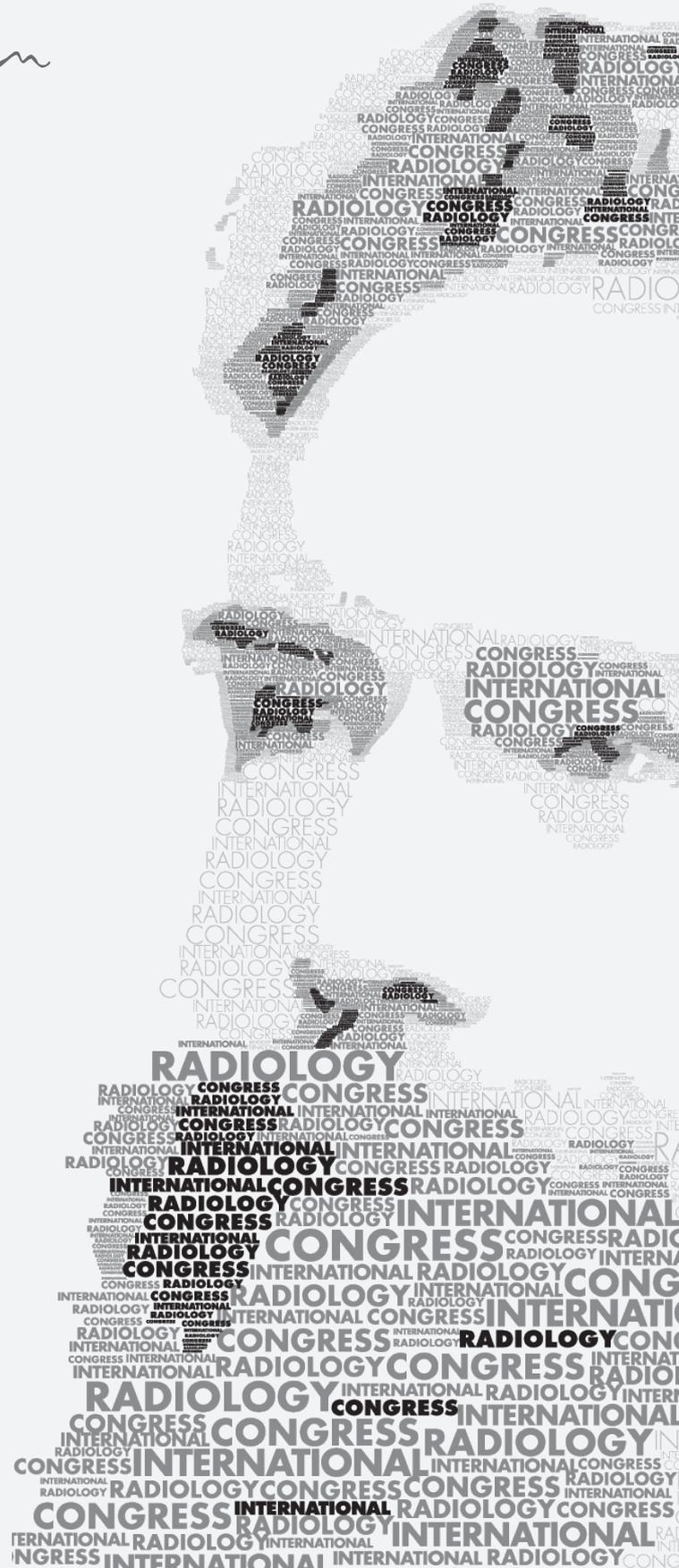


# WORKSHOPS

## Preliminary Program



[www.icr2016.org](http://www.icr2016.org)



## ROOM 10

### Neuroradiology

18:15 - 19:45

#### **Evaluation of the cerebral cortex, white matter fibers and eloquent areas Part I**

Coordinators: Eduardo González Toledo (USA), Jorge Docampo (ARG), Federico Biafore (ARG)

##### **Descriptions**

In recent years, several types of free access software have become available (3D-SLICER, BRAINSUITE, SPM) and allow us to get information about the brain in a comprehensive way using different MRI sequences. This way, both qualitative and quantitative anatomical information (volume and cortical thickness, white matter integrity among others) becomes available as well as the location of eloquent areas (functional information).

MRI volumetric analysis techniques allow us to measure and evaluate the volume of different brain structures, some of which may be altered by several pathologies such as dementia, MS, ALS, among others.

Diffusion tensor imaging (DTI) is a MRI technique which evaluates the integrity of white matter tracts in the brain by assessing regional fractional anisotropy (FA), the directional color map based on the dominant direction of the fibers and the 3D tract reconstruction for volume and topography analysis.

The paradigm-based fMRI is a non-invasive technique to localize the eloquent areas, including motor, language and sensory areas.

##### **Learning Objectives**

- Recognize the medical image formats (DICOM, nrrd, Analyze, Nifti) used by the software tools presented in the workshop.
- Ability to perform the DTI post-processing steps using 3D-SLICER to reconstruct the white matter tracts and the FA maps.
- Understand the capabilities of the BRAINSUITE tool to map the cortical thickness by means of T1 volumetric MRI sequences.
- Implement the fMRI post-processing steps using SPM8 to generate the cortical activation probability maps and find the eloquent areas guided by a statistical criterion.
- Illustrate some examples of paradigms used in fMRI to evaluate motor and language areas.

## ROOM 10

### Abdominal

08:30 - 10:00

#### **Acute abdomen. Computed Tomography evaluation**

Coordinator: Diego Haberman (ARG)

##### **Descriptions**

Abdominal pain is one of the most frequent causes of reference to emergency departments and includes a wide and diverse spectrum of pathologies that may involve different organs of the abdomen and pelvis.

Images, specially computed tomography have an essential role in the diagnosis approach to patients with suspected acute abdomen, being a widespread method due to availability, speed and efficacy.

CT is a method that allows a proper diagnosis, establish complications and assist in the election of the best therapy approach differentiating medical therapy pathologies of those who will require surgical treatment.

##### **Learning objectives**

- Understand the technical aspects of TC and appropriate protocols for the evaluation of patients with suspected acute abdomen.
- To be familiar with the different clinical settings and correlation with imaging semiology.
- To acquire the resources to precisely diagnose prevalent diseases, detect complications and collaborate in taking therapeutic decisions.

### Emergency

10:30 - 12:00

#### **Pelvic trauma imaging pitfalls**

Coordinator: Guillermo Sangster (USA)

##### **Learning objectives**

At the conclusion of this live activity, participants will be able to:

- Discuss potential imaging pitfalls and mimics that may be misinterpreted as traumatic pelvic injuries.
- Substantiate the advantages of Multidetector computed tomography (MDCT) for the screening of stable patients suspected to have traumatic pelvic injuries.
- Differentiate intra and extraperitoneal pelvic injuries in patients suffering blunt and penetrating trauma.

##### **Abstract**

Pelvis traumatic injuries range from the benign to life threatening conditions. MDCT is the imaging modality of choice for evaluation of hemodynamically stable patients with pelvic trauma. This live activity demonstrates the benefits of MDCT in the detection and pre-operative planning of patients sustaining pelvic injuries. Subtle signs should be recognized for timely diagnosis, and familiarity with potential mimics is key to avoid unnecessary procedures.

#### **Blunt trauma of lung, pleura, airways, and chest wall**

Coordinator: Guillermo Sangster (USA)

### **Learning objectives**

At the conclusion of this live activity, participants will be able to:

- Substantiate the advantages of multidetector computed tomography (MDCT) over Chest x-ray for the initial screening of chest trauma.
- Identify the MDCT imaging findings of the non-vascular traumatic thoracic injuries.

### **Abstract**

Chest radiography has been the traditional screening technique to evaluate traumatic thoracic injuries. The information obtained is usually sub optimal for the diagnosis of non-vascular thoracic injuries. The benefits of MDCT for their diagnosis are discussed in this live activity. Images from our level I trauma center database are shown, including: A) Thoracic wall injuries: diaphragmatic rupture, sternum and scapular fractures, sterno-clavicular dislocation and flail chest. B) Pleuro-pulmonary injuries: contusion, laceration, herniation, pneumothorax, and hemothorax. C) Intrathoracic traqueo-bronchial laceration.

## **Education**

15:00 - 16:30

### **Radiological educational presentations: How can we avoid common mistakes?**

Coordinator: Sebastián Costantino (ARG)

#### **Description**

We take many decisions when planning, conducting and executing our presentations. The choice of topic, the extension and depth of the dissertation, the appropriate preparation of multimedia material and exhibition modality are some of the questions that we have to decide in the appropriate way to get the desired result in our teaching goals.

#### **Learning objectives**

- Identify sources of error in our educational radiological exposures.
- Recognize tools and attitudes that allow us to modify incorrect concepts when producing and introducing our educational material.
- Learn techniques for applying the right approach, effective planning and implementation of radiological presentations.

## **Abdominal**

16:45 - 18:15

### **CT Enterography: from theory to practice**

Coordinator: Alberto Seehaus (ARG)

#### **Description**

Evaluating the Small Bowel is always a challenge because optical direct images are difficult to obtain. CT enterography has become an important method of choice for evaluating small bowel disorders. It is noninvasive, easy to perform, and allows visualization of extraenteric structures as well as of the bowel wall.

CT enterography plays an important role in:

1. Persistent abdominal pain and US negative or non conclusive.

2. Localization of small bowel obstruction.
3. Detect and classify inflammatory small bowel disorders.
4. Evaluate occult bleeding, neoplasms, sprue or ischemia

### **Learning points**

- To discuss technique and protocol of CT enterography and its utility in the evaluation of small bowel diseases.
- To demonstrate usefulness of CT enterography when endoscopy or other methods are negative.
- To analyze clinical situations in which CT enterography can help in decision taking.

## **Neuroradiology**

18:30 - 20:00

### **Evaluation of the cerebral cortex, white matter fibers and eloquent areas Part II**

Coordinators: Eduardo González Toledo (USA), Jorge Docampo (ARG),  
Federico Biafore (ARG)

### **Descriptions**

In recent years, several types of free access software have become available (3D-SLICER, BRAINSUITE, SPM) and allow us to get information about the brain in a comprehensive way using different MRI sequences. This way, both qualitative and quantitative anatomical information (volume and cortical thickness, white matter integrity among others) becomes available as well as the location of eloquent areas (functional information).

MRI volumetric analysis techniques allow us to measure and evaluate the volume of different brain structures, some of which may be altered by several pathologies such as dementia, MS, ALS, among others.

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The paradigm-based fMRI is a non-invasive technique to localize the eloquent areas, including motor, language and sensory areas.

### **Learning objectives**

- Recognize the medical image formats (DICOM, nrrd, Analyze, Nifti) used by the software tools presented in the workshop.
- Ability to perform the DTI post-processing steps using 3D-SLICER to reconstruct the white matter tracts and the FA maps.
- Understand the capabilities of the BRAINSUITE tool to map the cortical thickness by means of T1 volumetric MRI sequences.
- Implement the fMRI post-processing steps using SPM8 to generate the cortical activation probability maps and find the eloquent areas guided by a statistical criterion.
- Illustrate some examples of paradigms used in fMRI to evaluate motor and language areas.

## ROOM 10

### Chest

08:30 - 10:00

#### Lessions of the trachea

Coordinator: Seth Kligerman (USA)

The trachea is a fibromuscular tubular structure, consisting of 16 to 22 cartilaginous rings. Tracheal pathology is rare, and can be asymptomatic until the disease is advanced. MDCT is the imaging modality of choice for assessing tracheal pathology. Tracheal pathology can be divided into congenital, degenerative inflammatory, infectious, and neoplastic etiologies. The narrowing of the differential diagnosis is possible by assessing the extent of disease, if the trachea is narrowed, and what portions of the trachea are involved. The findings on CT will be correlated with the pathologic findings to better understand the correlated imaging findings. Some pathologic entities that will be discussed include tracheobronchopathia osteochondroplastica, relapsing polychondritis, Mounier-Kuhn, tracheomalacia, amyloid, sarcoid, granulomatosis with polyangiitis, tracheobronchial papillomatosis, squamous cell carcinoma, adenoid cystic carcinoma, and mucoepidermoid carcinoma.

#### Learning Objectives

- Describe the anatomy of the trachea by MDCT.
- Review the most frequent disease of the trachea.
- Perform a clinical interpretation – based on imaging cases.

10:30 - 12:00

#### Cardiopulmonary resuscitation training (RCP)

Coordinator: Carlos Montaldo (ARG)

A theoretical and practical course given under standards AIDER, Emergency Care & Safety Institute (ECSI), American College of Emergency Physicians (ACEP) - American Academy of Orthopaedic Surgeons (AAOS), with materials and practices that will give the attendant the requested knowledge to differentiate the various emergencies that threaten a person life and provide assistance until the arrival of emergency services.

### Education

15:00 - 16:30

#### Radiology educational leadership and success

16:45 - 18:15

Coordinator: Eric Stern (USA)

In this special workshop titled "Radiology Educational Leadership and Success", Dr. Eric Stern from Seattle USA, Chair of the ISR International Commission on Radiology Education, and co-organizer of the successful 2015 ACER SAR education program, will present a 3 hour workshop to help you build a successful career as an academic radiologist. Dr. Stern has been a national and international leader in radiology education for many years, sharing his passion for helping col-

leagues deliver amazing presentations. Have you ever attended a dispassionate lecture, where everyone is bored to death? Dr. Stern will show you how to create a better learning environment for your audience and improve your effectiveness as a teacher. In the second part of our workshop, Dr. Stern will share with you a vision for creating your own opportunities for career success, in a culturally competent, connected, academic environment.

### **Workshop Topics**

#### *Educational Focus*

Part 1: Optimizing your PowerPoint presentation and workshop

Part 2: Effective presentation skills and workshop

Part 3: How to effectively present to an international audience

#### *Leadership Focus*

Striving for Success

Striving for Cultural Competence

Success through Networking

## ROOM 10

### Genitourinary

08:30 a 10:00

#### **Interpretation of multiparametric MR of the prostate**

Coordinator: Mariano Volpacchio (ARG)

##### **Description**

Prostate cancer remains a relevant oncologic entity that poses major controversies regarding detection and management. Its variable and heterogeneous biologic behavior results in a wide array of treatment options that include from active surveillance to radical surgery.

The role of multiparametric MR has expanded in recent years due to the morphologic and functional information inherent to this modality.

T2 weighted sequences provides anatomic information that allows identification of the zonal architecture as well as capsule and periprotatic structures evaluation. This sequence is relevant in transitional zone cancer identification.

Functional sequences include: diffusion weighted imaging (dwi), dynamic contrast enhancement (dce) and metabolic evaluation provided by MR spectroscopy.

##### **Learning Objectives**

- To learn the relevant technical aspects of the MPMR of the prostate
- To learn strengths and limitations of MPMR of the prostate
- To be familiar with the use of PI-RADS v2.

10:30 - 12:00

#### **Cardiopulmonary resuscitation training (RCP)**

Coordinator: Carlos Montaldo (ARG)

A theoretical and practical course given under standards AIDER, Emergency Care & Safety Institute (ECSI), American College of Emergency Physicians (ACEP) - American Academy of Orthopaedic Surgeons (AAOS), with materials and practices that will give the attendant the requested knowledge to differentiate the various emergencies that threaten a person life and provide assistance until the arrival of emergency services.