

# Joint Symposium

**JS-I** ACAR *Abbreviated MR*  
(3 speakers, 90 min)

**JS-II** AOSR *MRI Safety Course*  
(5 speakers, 90 min)

**JS-III** TRS *Cardiac MR -Practical Tutorial*  
(8 speakers, 120 min)



Wing P. Chan,  
MD

陳榮邦 教授

# Time Table

Sunday, May 22, 2022  
Room 205

Time	Topics	Speakers	Moderators
08:30-08:33 (3mins)	Opening	Evelyn Ho	Li-Jen Wang Yu-Ting Kuo
08:33-09:03 (30mins)	Overview of MRI Safety: What the Radiologist Needs to Know	Leo Tsai	Li-Jen Wang Yu-Ting Kuo
09:03-09:33 (30mins)	MRI Safety: Metallic Implants and Devices	Scott B Reeder	Li-Jen Wang Yu-Ting Kuo
09:33-09:45 (12mins)	Survey of National MRI Safe Practices Guidelines in Taiwan	Wing P. Chan	Li-Jen Wang Yu-Ting Kuo
09:45-09:57 (12mins)	AOSR MR Safety Survey?	Rijo Mathew Choorakuttil	Li-Jen Wang Yu-Ting Kuo
09:57-10:00 (3mins)	Q&A		Li-Jen Wang Yu-Ting Kuo

# *MRI Safety Course*

**Organizer: Wing P. Chan, MD**

## **Overview:**

MRI examination is not completely safe. For MRI safety, healthcare providers need to consider three types of unsafe causes: the static magnetic field, the gradient magnetic field, and the radio-frequency field. For example, the hazard of projectiles, attracted by the static magnetic field, can be fatal. The gradient magnetic field create during image acquisition may affect implants, resulting to harmful injury. The radio-frequency field constitutes a possible heating risk, raising awareness of tattoos, for example. The first part of this session will review potential hazards during MRI examinations and how healthcare providers can minimize the risk of injury. In addition, two regional surveys on MRI safety during clinical practices will be reported.

# Opening



**Evelyn Ho, MD, MBBS, MMED,  
Malaysia**

- Consultant Clinical Radiologist, ParkCity Medical Centre, Kuala Lumpur, Malaysia
- President, Asian Oceanian Society of Radiology
- Chair, RSNA Regional Committee for Asia Oceania

# *Overview of MRI Safety: What the Radiologist Needs to Know*



**Leo L Tsai, MD, PhD, MSc, USA**

- Assistant Professor, Radiology, Harvard Medical School
- Clinical Director of MRI, Radiology, Beth Israel Deaconess Medical Center
- Director of Lymphatic Imaging, BIDMC

# *Overview of MRI Safety: What the Radiologist Needs to Know*

- **Synopsis:**
  - Clinical MRI systems pose unique and serious safety risks to patients, technologists, and radiologists. We will review the main hardware components of the MRI system and their potential hazards. We will also provide an overview of the procedures, protocols, and regulations that are commonly utilized to minimize the risk of injury.

# *MRI Safety: Metallic Implants and Devices*



**Scott B Reeder, MD, PhD, USA**

- President ISMRM 2022-23
- Vice Chair of Research, H.I. Romnes Faculty Fellow, Chief of MRI, and LIRP Director, University of Wisconsin
- Senior Vice Chair of Research and Chief of MRI in the Department of Radiology at the University of Wisconsin, Madison
- Director of the UW Liver Imaging Research Program

# *MRI Safety: Metallic Implants and Devices*

- **Synopsis:**

One of the most important and growing safety related issues in MRI are patients with metallic implants. This includes orthopedic hardware, and vascular, biliary, and GI stents, and implanted electronic devices. Many devices are safe under specific conditions, while others pose a safety hazard. Identifying implants prior to a patient entering the MRI environment is critical. However, patients often present with incomplete information, insufficient to identify the specific implant prior to MRI. I will review standard approaches to appropriate MRI safety screening, and focus on how to address the scenario where patients present with a metallic implant of unknown origin.



# *Survey of National MRI Safe Practices Guidelines in Taiwan*



- Professor and Chief, Department of Radiology, Wan Fang Hospital, Taipei Medical University
- President, Taiwan Radiological Society
- President, Asian Society of Magnetic Resonance in Medicine

**Wing P. Chan, MD, Taiwan**

# *Survey of National MRI Safe Practices Guidelines in Taiwan*

- **Synopsis:**

The challenge for healthcare providers is to ensure access to clinically valuable imaging in a safe, quality, and efficient manner. For example, projectile incidents are not uncommon during MRI examinations. This presentation will share our survey of the operational feasibility rates of the MRI safety operations guidelines in hospitals in Taiwan. If the subitem was less than 85% operational feasibility rate, it raised further feedback and needed discussion before implementation. A total of six items (23 subitems) was established and surveyed. These items include: 1) Safety Precautions Before Examination, 2) Absolute Contraindication for MRI Examination, 3) Relative Contraindication for MRI examination, 4) Safety Precautions During Examination, 5) Safety Precautions After Examination, and 6) General Safety Precautions. The document was sent to 35 hospitals, and 33 hospitals responded with feedback, with the survey response rate of 94.3%.

- **Key Reference:**

2014 Taiwan Hospital Radiation Safety Operation Reference (Draft) Feasibility Assessment Questionnaire — code 15.7  
MRI Safety Items

# *AOSR MR Safety Survey*



- Chairman & Chief Radiologist, Insta Speciality Hospitals, Kochi, Kerala
- Amma Scans - Centre for Diagnosis & Preventive Medicine, Kochi, Kerala
- Member, QSS COMMITTEE, AOSR

**Rijo Mathew Choorakuttil, MD, DNB, India**

# *AOSR MR Safety Survey*

- **Synopsis:**
- Magnetic Resonance Imaging (MRI), which provides opportunities for exceptional soft-tissue contrast and non-ionizing radiation exposure, is increasingly used in healthcare diagnostics. We designed an online AOSR-QSS survey focused on the status pertaining to MR safety regulations and practices in member countries of the AOSR. The results of the survey form a baseline to promote MRI safety awareness, educational videos or teaching materials in the Asia Oceania region. We present the baseline results of this AOSR-QSS Survey on MR Safety Practices.