ISMRM Workshop on Ensuring RF Safety in MRI: Current Practices & Future Directions

McLean, VA, USA • 28 September – 01 October 2017

TARGET AUDIENCE:
The workshop is designed for physicians, physicists, physiologists, engineers, regulators, technologists/radiographers, students, and those involved in MR safety concerns.

“Our ability to better manage radiofrequency (RF) power deposition in a patient undergoing MRI allows for much longer MRI exams at higher SARs, if needed, improving safety, performance, and accessibility. Such RF power management requires the consideration of the combined experiences and expectations of clinicians, MR physicists, MR technologists, and patients along with the experiences and insights of thermal physiologists, engineers, and manufacturers. This workshop is an attempt to bring all of these ‘elements’ of the RF power management together to better understand and improve RF Safety in MRI for current and future applications.” — The Organizers

OVERVIEW
During this workshop, radiofrequency (RF) safety will be explored and explained from the perspectives of regulatory groups, clinical practice, science, and industry. The workshop will consider RF safety related to both the magnetic resonance (MR) scanners and the conductive medical devices that may be present in the MR environment. An up-to-date, comprehensive educational overview on the topic is the overall goal.

This workshop will feature presentations and discussions led by topic experts. Additionally, scientific and clinical abstracts will be accepted for poster and proffered presentations during the meeting. A diverse audience consisting of clinicians, physicists, physiologists, engineers, students, technologists/radiographers, and others interested in MR safety is anticipated.

EDUCATIONAL OBJECTIVES
Upon completion of this activity, participants should be able to:
- Evaluate current safety standards/guidelines proposed by regulatory bodies/other scientific groups;
- Explain the underlying thermo-regulatory response to MR-induced heating in humans;
- Analyze current state in thermo-physiological modeling to determine in vivo heating;
- Discuss the current state in determining adverse thermal effects in vivo;
- Summarize testing methods to evaluate/determine safety of conductive medical devices to be used in the MR environment; and
- Identify and interpret labeling associated with conductive medical devices to be used in the MR environment.