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)

Chih-Horng Wu, MD, PhD
吳志宏 醫師

Time Table

Saturday, May 21, 2022
Room 202

Time	Topics	Speakers	Moderators
13:30-13:35 (5mins)	Introduction of the Symposium	Li-Jen Wang	Chih-Horng Wu
13:35-13:55 (20mins)	Abbreviated Prostate MRI	Antonio Westphalen	Li-Jen Wang
13:55-14:15 (20mins)	Abbreviated Breast MRI	Choi, Ji Soo	Chen-pin Chou
14:15-14:35 (20mins)	Abbreviated MRI for HCC and metastatic disease	Dow-Mu Koh	Chih-Horng Wu
14:35-15:00 (25mins)	Panelist discussion	Li-Jen Wang Antonio Westphalen Choi, Ji Soo Chih-Horng Wu Li-Jen Wang Chen-pin Chou Wen-pei Wu	

Abbreviated MRI

Organizer: Chih-Horng Wu, M.D. Ph.D.

Overview:

The abbreviated imaging protocol means using shorter/ fewer imaging sequences as basis for imaging. The challenges for clinical MRI include limited MRI capacity, longer examination time, increasing workload and staff shortage. The main goal is using limited sequences in specific clinical context without compromising diagnostic performance. However, the radiologist are asked at imaging console with option to recall patient. Furthermore, limited MRI sequences were used in specific clinical context without compromising diagnostic performance. In this section, we will discuss abbreviated MRI covers the field of prostate, breast and liver imaging.

Abbreviated prostate MRI

Organizer: Li-Jen Wang, M.D., M.P.H.

Overview:

PIRAD v2.1 have recently recommended the use of multiparametric prostate MRI (mpMRI) for treatment-naiive patients, which include T2 weighted images, diffusion weighted images and dynamic contrast enhanced images. Among the three pulse sequences, DCE is the solitary pulse sequence needing the use of gadolinium-based contrast agent but plays only a minor role of PIRADS v 2.1 as a score modifier. Thus, there is a growing interest regarding the use of bi-parametric prostate MRI (bpMRI) for diagnosing clinically significant prostate cancer (CsPCA) with the benefits of decreasing scanning time, increase patient flow and avoiding GBCA use. Whether bpMRI is comparable to mpMRI in the diagnosis of CsPCA, in reducing unnecessary prostate biopsies, in targeting biopsies for CsPCA, in intra-observer agreements as well as in different levels of reader experiences? Is there sufficient evidence now to support the use of bpMRI for patients undergoing prostate MRI in daily practice? This talk will provide an overview of bpMRI for prostate cancer.

Abbreviated prostate MRI

Antonio C. Westphalen, MD, PhD.

- Professor, Department of Radiology, University of Washington, Seattle, WA.
- Section Chief of abdominal imaging at the University of Washington
- research interests: advanced imaging technologies to diagnose and treat patients with prostate cancer.

Practical Tutorial of Abbreviated Breast MRI

Organizer: Chen-Pin Chou

Overview:

Breast MRI offers higher sensitivity over screening mammography in cancer detection due to the superior tissue contrast and the physiologic uptake of gadolinium contrast [1]. Clinical studies to date have shown that the high sensitivity and cost-effectiveness for breast MRI in both high-risk and intermediate-risk (1*5*%-20%) populations [2,3]. Due to the high cost and limited availability of breast MRI, only 1.5% of women with high lifetime risk have ever had a breast MRI [4].

Abbreviated breast MRI, in which acquires only a select number of sequences and postcontrast imaging, exploits the diagnostic accuracy of breast MRI comparable to a full protocol, while reducing table time and reading time to maximize availability and improve patient tolerance and accessibility of breast MRI [5]. This class will provide the protocols, to discuss the pros and cons of an abbreviated protocol and a full diagnostic protocol, the role of an abbreviated MRI in the setting of high-risk screening and other potential clinical indications, to highlight workflow and implementation issues, and to discuss the future of abbreviated protocols including advanced MRI techniques.

Practical Tutorial of Abbreviated Breast MRI

Organizer: Chen-Pin Chou

- **References:**

- Monticciolo DL, Newell MS, Moy L, Niell B, Monsees B, Sickles EA. Breast Cancer Screening in Women at Higher-Than-Average Risk: Recommendations From the ACR. J Am Coll Radiol. 2018;15(3 Pt A):408-14.
- Sung JS, Stamler S, Brooks J, Kaplan J, Huang T, Dershaw DD, et al. Breast Cancers Detected at Screening MR Imaging and Mammography in Patients at High Risk: Method of Detection Reflects Tumor Histopathologic Results. Radiology. 2016;280(3):716-22.
- Mann RM, Cho N, Moy L. Breast MRI: State of the Art. Radiology. 2019;292(3):520-36.
- Wernli KJ, DeMartini WB, Ichikawa L, Lehman CD, Onega T, Kerlikowske K, et al. Patterns of breast magnetic resonance imaging use in community practice. JAMA Intern Med. 2014;174(1):125-32.
- Kwon M-r, Choi JS, Won H, Ko EY, Ko ES, Park KW, et al. Breast Cancer Screening with Abbreviated Breast MRI: 3-year Outcome Analysis. Radiology. 2021;299(1):73-83.

The Role of Abbreviated Breast MRI

CHOI, JI SOO, MD, PhD, Korea

- Assistant Professor, Department of Radiology, Samsung Medical Center, Sungkyunkwan University School of Medicine
- Major publications of abbreviated breast MRI:

Abbreviated MRI for HCC and metastatic disease

Organizer: Chih-Horng Wu, M.D. Ph.D.

Overview:

The full liver MRI protocol include T1-weighted (in and opposed phases), diffusion-weighted, multiphase contrast enhanced T1-weighted, T2-weighted, hepatobiliary phase T1-weighted and magnetic resonance cholangiopancreatography. Among them, diffusion weighted imaging and gadoxetate-enhanced MRI with hepatobiliary phase result in the highest diagnostic accuracy for detecting small HCC and metastases. This class will provide the protocols, review recently published articles, and discuss the pros and cons of an abbreviated protocol and a full diagnostic protocol. The role of an abbreviated MRI in cost reduction, to highlight workflow and implementation issues, and to discuss the future of abbreviated protocols including AI-assisted techniques.

Abbreviated MRI for HCC and metastatic disease

Dow-Mu Koh MD, FRCP, FRCR

- Consultant Radiologist in Functional Imaging at the Royal Marsden Hospital and Professor in Functional Cancer Imaging at the Institute of Cancer Research
- Director of the National Institute of Health Research (NIHR) Clinical Research Facility at the Royal Marsden Hospital and Institute of Cancer Research.
- Research interest is in novel imaging techniques for tumour assessment, particularly in DWI-MRI, whole-body MRI, body MR fingerprinting, radiomics and AI.
- Associate editor for Radiology (2011-2018). Awarded the Barclay Medal in British Journal of Radiology. Gold Medal of the International Cancer Imaging Society (2018).