

Specialty area: PET/MR

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Highlights:

With the advent of the new PET/MRI systems, the potential clinical upside of this integration has been discussed widely. Little has however been said about the devil in the detail of implementing these new hybrid imaging systems in departments who may have little or no exposure to one or the other of the integrated modalities. This talk will discuss the difficulties experienced by staff running these systems, including safety, patient handling and workflow issues. It will describe the implementation of work on these new imaging platforms from the perspective of the speaker's experience in both pre-clinical and clinical arenas. To draw on a wider international perspective, a questionnaire has been distributed, providing additional data to further broaden the discussion.

TALK TITLE: PET/MR from a MRI Technologists perspective

TARGET AUDIENCE – MD's, Researchers, Radiographers and Technologist naive to working in a center with PET/MRI.

OUTCOME and Learning OBJECTIVES –

To understand the issues faced by technologists when working on new hybrid PET/MRI systems. To discuss the general issues and to offer suggestions of possible methods for integration into the normal working environment of a research department. By the end of this talk the participant will have a deeper understanding of the following aspects of hybrid PET/MRI imaging:

- To understand some of the regulatory issues concerning both MRI and ionizing radiation pertaining to the installation of a hybrid PET/MRI system.
- To understand the implication of staff and patient safety in a MRI and PET environment.
- Patient/subject handling, e.g. the contrast between the sometimes necessary 'hand holding' and cajoling of subjects undergoing MRI and the need for distance and speed of patient handling in PET.
- Scheduling, timing and integration of workflow the challenges in organization. The coordination of cyclotron production and or delivery of different half-life radiopharmaceuticals for preparation of patients. The cross scheduling of this on multiple scanners for both incubated and dynamic studies.
- Study and protocol design and optimization the integration on a simultaneous PET/MRI system.
- Image evaluation and interpretation to ensure adequate visualization of pathology by understanding the limitations and restrictions of MRI derived attenuation correction.
- Staff mix and work force management.
- Training and cross training of staff.
- Some site-specific issues encountered by the author in the setting up of a completely new center incorporating PET/MRI.