

Mayneord Phillips Trust

Multi-modality Routine Image Quality Assessment: QC/QA and Standards

14 October 2014

28 Portland Place, London, UK

- “The clinicians complain about the images but the system passes my tests”
- “Task based assessment of image quality”
- “Two hours to test everything?...I’ll do my best!”
- “What about image processing – how do we disable that?”

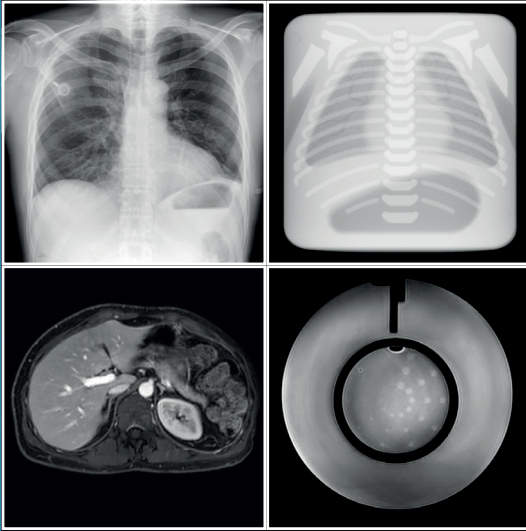
The Mayneord-Philips Trust is organizing a one day scientific meeting with the aim of exploring the potential disjoin in radiological imaging between the typical physics test object assessment of image quality and clinical image quality. The meeting is cross modality, with contributions covering standard projection x-ray imaging (diagnostic, mammography), dynamic x-ray imaging (fluoroscopy, DSA), CT, Nuclear Medicine, MRI and ultrasound.

What are we to believe about image quality and QA? Are physicists measuring clinically relevant image quality and disagreements between physics quality and clinical quality rare? Perhaps simple physics test objects in routine use can show significant changes in component performance, but lack the sophistication to identify specific systems settings for a given clinical task. In the worst case, we are not measuring clinically relevant parameters and the test objects are barely sensitive to changes in performance. To what extent should we rely on the clinical users’ impression (as well as their expectations and pre-conceptions) of image quality?

- Within the time constraints imposed by clinical reality, and given the richness and complexity of many clinical tasks, can we hope to measure a clinically relevant ‘system’ image quality with any precision?
- Should we stick to a focused set of tests that characterize component performance?
- If dose-quality trade-off is absent, as in ultrasound and MR, then do these modalities require a different approach?

This meeting hopes to explore these ideas, with the aim of clarifying the relationship between “test object image quality” and clinical image quality, what’s achievable, what we should aim for in the future.

First Announcement



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Invited speakers

Dr David Collins, The Institute of Cancer Research
& The Royal Marsden NHS Foundation Trust

Dr Tony Evans, University of Leeds

Prof Alejandro Frangi, University of Sheffield

Prof Paul Marsden, King's College London

Dr Nick Marshall, UZ Leuven, Belgium

Programme organisers

Dr Tony Evans

Dr Nick Marshall

Registration

The fee to attend this meeting is £50 which includes refreshments, lunch and course material. Online registration is NOW available. The registration deadline is 3 October 2014.

For further information, visit the website at

<http://www.m-pss.org/event2014>

Programme

09.30 Coffee and Registration

Welcome and Overview of the workshop

- **The diagnostic X-ray perspective**
Dr Nick Marshall
- **Image Quality assessment in Nuclear Medicine**
Prof Paul Marsden
- **What we know, or think we know, about ultrasound image quality**
Dr Tony Evans
- **MRI Image Quality assessment**
Dr David Collins
- **Modality- free image quality parameters**
Prof Alejandro Frangi

Mixed modality group discussions – what common ground can we find?

16.00 Finish