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Image Interpretation Performance of Diagnostic Radiographers

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Introduction

- The ability of trained radiographers to interpret and make reliable decisions on images is well demonstrated in literature and this has a positive impact on patient's management. [1]
- However, Singapore hospitals have yet to embrace the need for radiographer image interpretation within the radiology department, therefore the provision of abnormality signalling service is not normally expected.

Aim

- To assess the ability of radiographers in Singapore General Hospital to identify normality and abnormality and provide a comment on an image.

Methods

- The evaluation of radiographer performance in image interpretation was performed via a computer PowerPoint based platform.
- One image test bank containing 30 blind double reported anonymised appendicular musculoskeletal images, in a similar format to FRCR Part B was used.
- 50% were normal and 50% contained fractures.
- The participants (n=48) included all general radiographers working in the department from various nationality, education background, clinical experience and image interpretation training (RADS).
- Participants were required to view all the images and select a series of 5 decision states; additionally commenting on appearances .

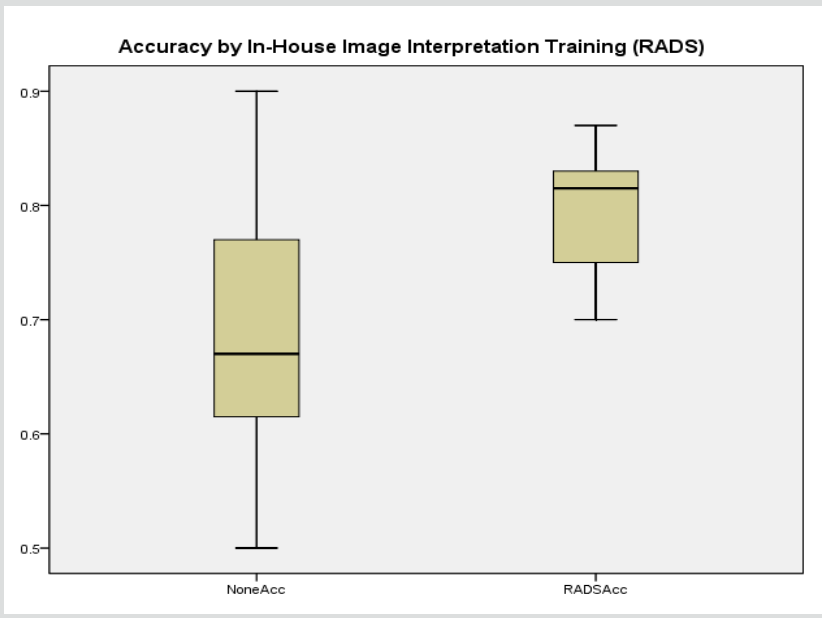

Figure 1: Box Plot – Accuracy by In-House Image Interpretation Training (RADS)

Results & Discussion

- Radiographers with in-house image interpretation training all scored 70% or above accuracy in the test as shown in Figure 1.
- Figure 2 shows clear evidence that the trained radiographers (n=8) are performing better than the non-trained radiographers (n=40).
- However, as only one of the participants met the 90% accuracy benchmark for image interpretation, this potentially has implication on the role extension. [2]

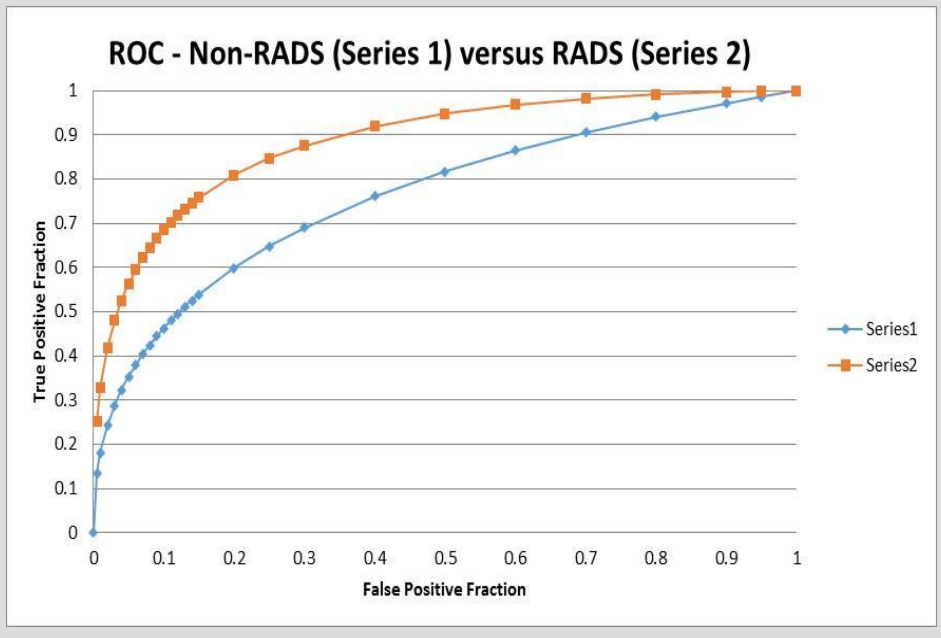

Figure 2: ROC – Non-RADS vs RADS

Conclusion

- The evidence from this research indicates that Singapore radiographers are capable of improving image interpretation accuracy through training.
- There are still questions about the current ability of Singapore radiographers to perform image interpretation at an acceptable practice level but this could be resolved through continuous professional development and better development of training plans.

[1] Wright, C. & Reeves, P., 2016. RadBench: Benchmarking image interpretation skills. *Radiography,* pp. 1-6.
[2] The Society and College of Radiographers, 2013. *The Society and College of Radiographers.* [Online]
Available at: http://www.sor.org/learning/document-library/preliminary-clinical-evaluation-and-clinical-reporting-radiographers-policy-and-practice-guidance
[Accessed 31 March 2016].