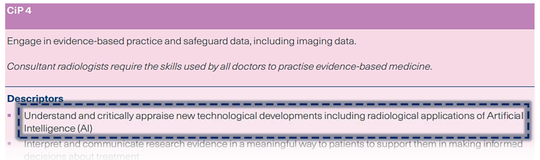
# SHAPING AI EDUCATION IN IMAGING AND HARNESSING LEARNING OPPORTUNITIES: INITIAL PERSPECTIVES FROM RADIOLOGY TRAINEES

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## Background:

- Artificial intelligence (AI) has emerged as a transformative force in the field of radiology, with a wide range of existing and potential applications across image acquisition, processing, analysis and interpretation.
- The increasing incorporation of these technologies into radiology workflows impacts the roles and responsibilities of radiologists, who will likely need to be equipped to appraise, commission, use and supervise AI tools.
- The Royal College of Radiologists (RCR) specialty training curriculum[1] acknowledges this within Capability in Practice (CiP) 4:




## Aims:

- Assess the prior exposure to AI education of radiology trainees in our local training scheme.
- Summarise trainee perspectives on the need for AI education, the preferred formats for this, and how it should be integrated in radiology training and assessment.
- Evaluate the impact of an introductory teaching module on trainee confidence in meeting the curriculum standard with regards to AI.

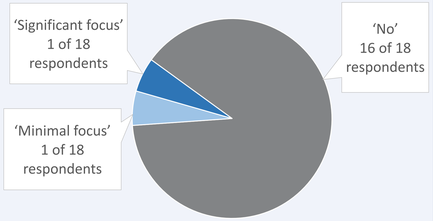
## Methods:

- An initial survey was disseminated to radiology trainees in the local training scheme, with respondents answering questions on their previous exposure to AI education and preferences for integration of AI into radiology training and assessment.
- A 45-minute introductory teaching session was delivered to trainees to explain basic terms and concepts, and discuss future opportunities and challenges for AI as applied to clinical radiology.
- A pre- and post-teaching survey assessed the confidence of attending trainees in satisfying RCR CiP 4 curriculum requirement.

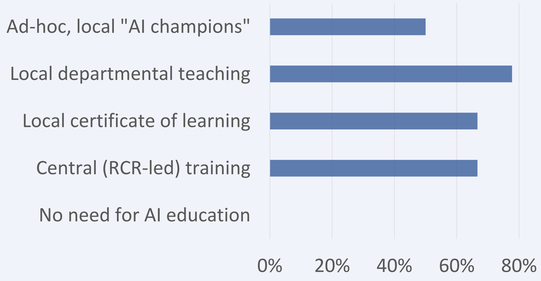
## Results:

- 18 trainees responded to the initial survey. Most (89%) reported having no previous training in AI in their university or foundation training.
- All expressed a desire for AI education in radiology training, with split preferences across different possible formats.
- Most (83%) felt that AI should form part of the core curriculum and be integrated into the FRCR examinations.
- Of those, the majority (73%) thought incorporation into the FRCR Part 1 examination would be most appropriate.

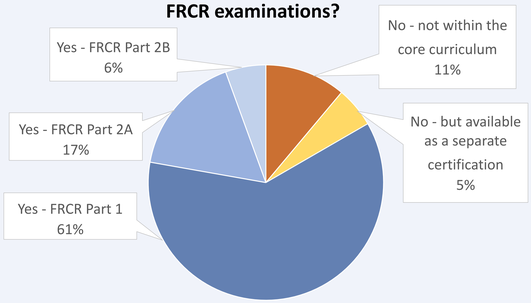
**Was AI part of any training you received during your university degree/foundation medical training?**




**What would be the best approach towards data science/AI education in imaging?**



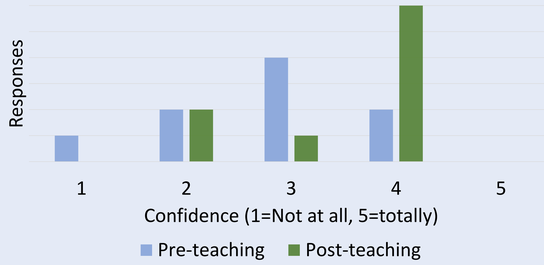

**Should data science/AI be part of the mandatory core curriculum & integrated into FRCR examinations?**

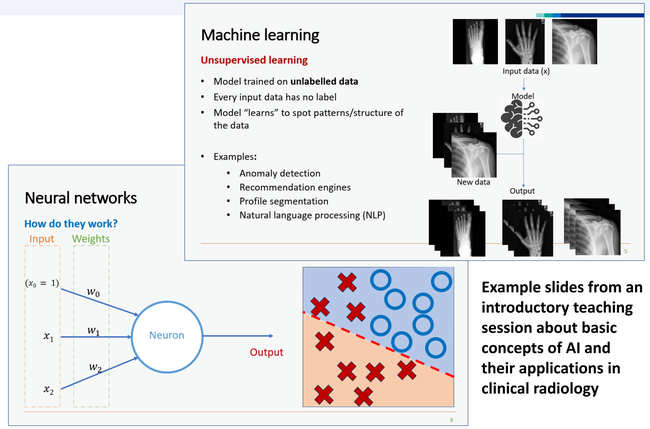



## Impact of an introductory teaching session:

- 9 trainees attended the session and assigned a Likert scale response to their confidence in meeting curricular requirements ranging from 1 to 5, where 1 was 'Not confident at all' and 5 was 'Totally confident'.
- The majority (78%) reported neutral or lacking confidence in their ability to meet the curriculum standard prior to the session.
- This improved following the session, with 66% reporting a confidence score greater than 3 out of 5.

**To what extent are you confident that you will meet the requirements for CiP 4 during your training?**




**Example slides from an introductory teaching session about basic concepts of AI and their applications in clinical radiology**

## Conclusion:

- Radiology trainees report limited exposure to AI prior to specialty training and low baseline confidence in satisfying curriculum requirements, suggesting an unmet educational need.
- All trainees surveyed felt that there is a need for AI education in radiology, and the majority felt that it should form part of the core curriculum and be incorporated into examinations.
- A single introductory teaching session had a positive impact on trainee confidence, demonstrating potential value in simple, reproducible and low-cost local educational interventions.
- Currently there is minimal guidance on how AI education should be incorporated into radiology training, likely resulting in a varied picture nationally. Further research is warranted to validate these findings across the UK.
- The authors advocate for increasing engagement with local and national stakeholders to explore approaches to the integration of AI education in radiology training that best equip the future radiology workforce with the skills required in a rapidly evolving field.

## References:

[1] RCR. (2023). *Clinical Radiology Specialty Training Curriculum*. Royal College of Radiologists. https://www.rcr.ac.uk/sites/default/files/clinical_radiology_curriculum_update_150523.pdf