



University
of Glasgow

School of Medicine,
Dentistry & Nursing

Title: Should Interventional Radiology gain
specialty status within the Royal College of
Radiologists?

Name: Lucy McGuire

Medical School: University of Glasgow

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During the 2019 Annual Scientific Meeting of the British Society of Interventional Radiologists, 80% of members voted in favour of interventional radiology (IR) becoming a specialty in its own right.¹ IR is a relatively new but rapidly growing area of medicine. Although it was only declared a subspecialty in 2010, procedures increased by over 50% from 2007-2011 with demand skyrocketing as the technology advanced.^{2,3} Minimally invasive image-guided procedures have transformed the treatment of many diseases, often offering a safer, more tolerable alternative to laparoscopic surgery with decreased morbidity, mortality, and recovery time.⁴

The biggest issue currently facing the field of IR is a workforce shortfall, which according to the Royal College of Radiologists (RCR) 2019 census is an undersupply of 386 doctors or 37%.³ Currently 46% of UK health boards are unable to provide a 24-hour IR service, which by the RCR's own admission puts patients at risk.³ The shortage in Scotland is particularly worrying as interventional radiologist numbers have fallen by 16.6% since 2014.³ IR achieving specialty status has the potential to address the root causes of this shortage.

Distinct Remit

Although the principles of clinical radiology are integral to IR, the field requires skills and responsibilities that liken it more to a surgical specialty. The primary focus is treatment, rather than diagnosis. The interventional radiologist takes on a more patient-facing role than the diagnostic radiologist and must be responsible for a multitude of aspects of periprocedural care, from obtaining consent to follow-up.⁴ Interventional radiologists assess and advise treatment options for their patients through consultations in outpatient clinics and wards.⁴ They must also achieve proficiency in techniques and equipment that are ever evolving in this novel field. The RCR appears to recognise the distinct skillset and remit of the interventional radiologist, as in the 2019 workforce census they recorded the provision of diagnostic and interventional radiologists separately for the first time.³ However, despite their key differences, both the diagnostic and interventional disciplines are fundamentally based in radiological imaging. It therefore follows that IR should be considered a specialty within the RCR, similar to the status of clinical oncology.

Awareness

Gaining specialty status would increase awareness amongst both medical professionals and the general public of the importance of the work done in IR. IR was recognised as a specialty by the American Board of Medical Specialties (ABMS) in 2012 and by 2018 it was considered amongst the most competitive specialties applied to by US medical students.⁵ A survey of final year medical students in the UK showed that 81.4% had not received any IR teaching.⁶ 33.2% of students not considering IR as a career cited lack of knowledge as the reason.⁶ This demonstrates that poor exposure to IR in the undergraduate curriculum contributes to the lack of interventional radiologists. Specialty status would increase the awareness of IR amongst medical students, attracting them to the specialty. Additionally, it would improve recognition of the role of IR amongst doctors in general, thereby optimising multidisciplinary care.

Patient and public awareness of IR is generally poor.^{7,8} It has been hypothesised that this lack of health literacy may result in worse patient outcomes as decisions are not fully informed.⁸ Patients unaware of the benefits of IR over surgery may elect to have the more familiar but riskier treatment, resulting in prolonged hospital stays and recovery times.⁸ Specialty status would bring visibility to IR, enabling patients to make informed health decisions regarding minimally invasive procedures.

Workforce Retention

Another route to increasing the IR workforce is to retain existing interventional radiologists. 4% of consultants leave the workforce each year, predominantly due to retirement, and this trend is expected to increase over the next 5 years.³ The median retirement age for a consultant clinical radiologist in 2019 was 60.³ Burnout and work-life balance are significant factors in the decision of NHS doctors to take early retirement.⁹ A recent study showed that 71.9% of interventional radiologists experience burnout.¹⁰ Contributing factors included workload, hours, diagnostic responsibilities and a lack of recognition and respect from other specialties.¹⁰ Specialty status would mitigate these issues through increased training numbers and spreading awareness of the role of interventional radiologists amongst medical professionals.

Training and Curriculum

Recognition as a specialty would give IR the autonomy to improve the structure and quality of the training curriculum. IR training currently takes place over ST1-ST6, with ST1-ST3 consisting of clinical radiology training identical to that of trainees pursuing diagnostic radiology. Specialist training takes on average 9 months longer to complete for full-time IR trainees than non-IR trainees due to the current necessitation of ST6.³ The structure of IR training has proven confusing, as a survey of foundation year doctors found that 33% believed that IR required core surgical training and only 20.5% knew that IR required 6 years of training.¹¹

Although core IR is included in the ST1-ST3 curriculum, there is very little exposure for trainees until entering IR subspecialty training.¹² IR procedures are typically classed as “experience” or “specialist” skills.¹³ Therefore, only the theory of the procedure is required whereas proficiency in fully independent practice is not.¹³ Additionally, on-call experience of IR it is not a requirement during core training.⁴ The ST1-ST3 clinical radiology curriculum contains 6 specialty-specific Capabilities in Practice (CiPs) which are required to achieve certification, only one of which (CiP11) relates to IR.¹² IR subspecialty training in ST4-ST6 contains only two CiPs.¹³ Specialty status would allow IR to break away from diagnostic clinical radiology and establish a curriculum centred on image-guided procedures from ST1. This focused curriculum would have comprehensive outcomes specifically detailing the standard of knowledge and skills required. Teaching IR procedures earlier and in greater depth would streamline the structure of training, potentially reducing the duration whilst improving quality.

Specialty status would allow greater control over the number of IR trainees in response to workforce requirements, which the RCR have only recently begun to measure.³ A dedicated IR specialty curriculum would issue IR specific National Training Numbers therefore guaranteeing progression into IR when proficiencies are met. Three years of majority diagnostic training, a competitive application to subspecialty training at ST3 and an additional year of training are all barriers to the recruitment and high-quality training of the IR workforce. The RCR are aware of these issues and have recommended that IR training programme directors should supervise the progression of trainees interested in IR from ST1.⁴ Specialty status would allow clearer and more effective pathways for IR training and careers.

Evidently, the field of IR can only flourish if allowed the room to grow that specialty status under the umbrella of the RCR would provide. This newfound self-determination would enhance patient care by delivering and sustaining a greater number of highly qualified interventional radiologists that possess the conditions, visibility, and respect within the medical profession to work effectively.

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