



The Royal Australian and New Zealand College of Radiologists®

Stakeholder Consultation Paper: Recognising Interventional Radiology as a field of specialty practice within Radiology in Australia

About RANZCR

The Royal Australian and New Zealand College of Radiologists (RANZCR) is committed to improving health outcomes for all, by educating and supporting clinical radiologists and radiation oncologists. RANZCR is dedicated to setting standards, professional training, assessment and accreditation, and advocating access to quality care in both professions to create healthier communities.

RANZCR creates a positive impact by driving change, focusing on the professional development of its members and advancing best practice health policy and advocacy, to enable better patient outcomes.

RANZCR members are critical to health services: radiation oncology is a vital component in the treatment of cancer; clinical radiology is central to the diagnosis and treatment of disease and injury, and in providing minimally invasive medical procedures and treatments.

Accredited by the Australian Medical Council and the Medical Council of New Zealand, the College is responsible for establishing and managing training programs for specialist doctors to be admitted into the professions of clinical radiology and radiation oncology, the assessment of overseas-trained specialists to enter these professions, and the continuing professional development of its members.

RANZCR Is Inviting your Feedback

The Royal Australian and New Zealand College of Radiologists (RANZCR) is applying for recognition of Interventional Radiology as a separate field of specialty practice within the specialty of Radiology in Australia.

Fields of specialty practice define specialty medical health services in Australia, for example, Cardiology and Rheumatology are recognised Physician fields of specialty practice while Neurosurgery and Urology are fields of specialty practice within Surgery. Existing fields of specialty practice within Radiology include Diagnostic Ultrasound, Diagnostic Radiology and Nuclear Medicine.

Currently there is no recognition of Interventional Radiology by the Medical Board of Australia (MBA) and the Australian Health Practitioner Regulation Agency (AHPRA). This inadvertently restricts patient access to these specialist services and reduces visibility to the wider community, which limits patient choice and the ability to consistently offer cutting edge minimally invasive technologies that have been proven to improve patient health outcomes. The flow on effects of the current status means that these services are not reliably included nor considered in health service and infrastructure decisions made by various health departments and other relevant authorities. This impedes the ability to plan flexible health services that meet community demands and expectations. Australian health consumers expect a health system that offers contemporary and future focused technologies and procedures that are cost-effective, minimally invasive to the patient and have low impact on their daily activities and lives.

RANZCR wishes to formalise recognition of specialist practice for Interventional Radiology to ensure equitable patient access to Interventional Radiology services and its workforce across Australia, which has been shown to result in significant benefits in other jurisdictions¹. Designating Interventional Radiology as a field of specialty practice within the specialty of Radiology will not impact the scope of practice for other medical specialties.

As a key stakeholder, we are seeking your comments and feedback to support the submission of an application from RANZCR to the Medical Board of Australia to recognise Interventional Radiology as a field of specialty practice within Radiology (see Appendix A). All feedback gathered during this process will be fully considered and inform the College's application.

About Interventional Radiology

Interventional Radiology is at the forefront of modern medicine and represents a rapidly growing area of contemporary radiology. Radiologists who practice Interventional Radiology possess an advanced and unique body of knowledge and skills that are over and above those required for generalist diagnostic radiology practice² and separate from other specialties. The use of minimally invasive techniques that are guided by imaging technologies is the foundational practice of Interventional Radiologists.

Interventional Radiology uses minimally invasive, radiological image guided technologies such as ultrasound, X-ray fluoroscopy, computed tomography (CT) and magnetic resonance imaging (MRI) to diagnose and treat diseases in many organs and organ systems throughout the body,^{3,4,5,6} in both adults and children.

A wide and ever-expanding range of disease processes (spanning vascular, oncology, gastrointestinal, genitourinary, hepatobiliary, pulmonary, musculoskeletal conditions) can be successfully treated using these techniques.^{7,8,9,10,11}

Interventional Radiology provides both elective and emergency patient care,¹² and includes essential services for trauma, surgical, medical, pain management and organ transplant programs,^{13,14} among others.

Like most specialties Interventional Radiology is a critical part of multidisciplinary team environments, and interventional radiologists work closely with a range of other medical and surgical specialties. Interventional Radiologist are also supported by dedicated medical imaging technologists and nurses who have completed additional training to deliver specialist care to patients.

Interventional Radiology also plays a major role in cancer care – from biopsies for diagnosis, to primary cancer therapy and palliation.¹⁵ Interventional Oncology is a recognised pillar of Oncology care¹⁶ and image-guided interventional oncology techniques allow for improved localisation and targeting of tumours to increase curative options,¹⁷ improve quality of life, prolong survival and reduce the risk of more invasive or morbid treatments.^{18,19,20}

The significant increase in demand for minimally invasive, precision therapies, as well as the advent of personalised medicine, has resulted in a rapid expansion of Interventional Radiology services in recent years.^{21, 22}

Why Specialty Recognition?

RANZCR has long recognised Interventional Radiology as a progressive and innovative specialty that contributes to high-value patient care. Driven by the rapid evolution of minimally invasive, image-guided techniques and increasing clinical responsibilities,²³ Interventional Radiology has a central role in providing patient care and critical health services in hospital and in the community.

The need for specialty recognition of Interventional Radiology is increasingly being acknowledged globally²⁴– with Interventional Radiology formally recognised as a distinct and separate specialty from radiology in some countries, and as a subspecialty or part of radiology in others.²⁵

In 2009, the Union of European Medical Specialists recognised Interventional Radiology as a subspecialty.²⁶ In North America, Interventional Radiology is regarded as a distinct and separate

to diagnostic radiology with Interventional Radiology approved as a primary specialty by the American Board of Medical Specialties in 2012²⁷, and in 2013 was recognised as a distinct subspecialty of medical imaging in Canada.²⁸ Interventional radiology is also recognised by the United Kingdom's General Medical Council as a separate certification within radiology.²⁹ It should be noted that Australia does not formally recognise subspecialties and recognition in overseas jurisdictions are structured to the local health system and processes.

RANZCR's application to formalise Interventional Radiology as a field of specialty practice within Radiology will benefit patients, health practitioners and the broader health system. Specialty recognition will:

- Improve patient access to a wider range of treatment options that deliver high-value care and beneficial health outcomes, achieved through greater visibility and inclusion of Interventional Radiology into Australia's healthcare system.
- Reflect the specialist role of Interventional Neuroradiologists in delivering care to patients, within a multidisciplinary hospital environment, which is presently opaque to the general public.
- Ensure Interventional Radiologists are recognised as clinicians who not only have the required technical procedural skills, but who are also active partners in the longitudinal clinical care of patients^{30,31} – responsible for comprehensive pre-intervention patient assessment, obtaining consent, conducting the interventional radiology procedure and post-intervention follow-up.^{32,33,34}
- Raise standards of practice for all Interventional Radiologists to ensure delivery of high quality and safe care to patients.
- Assure patients and the broader community that they are receiving care from registered health practitioners who have the knowledge, skills and professional attributes necessary to offer specialist medical services.
- Ensure the systematic inclusion and consistent provision of essential Interventional Radiology services (elective, emergency inpatient and outpatient services), as part of a multidisciplinary team,^{35,36,37} delivering specialist care to patient.
- Raise awareness among the public, medical students, other medical disciplines, as well as allied health professionals – to improve patient access and referrals, strengthen clinical care algorithms and enhance the specialty career path.^{38,39,40}
- Ensure Interventional Radiology can occupy its rightful place in clinical practice, research and funding models – to maintain or increase quality and safety, best practice and patient benefit.

Establishing Interventional Radiology as a new field of specialty practice within radiology will help to consolidate its place within contemporary medical practice and fulfil its potential of delivering minimally invasive, cost effective and value-based health outcomes for patients, referrers and the broader health system.

The Value and Health Benefits of Interventional Radiology

The value of Interventional Radiology to individual patient care and for the wider healthcare system understood by other specialties and medical administrators who interact with these interventional radiology services^{41,42,43} and regularly benefit from their involvement.

Minimally invasive Interventional Radiology procedures can be conducted in both the inpatient and outpatient settings – typically resulting in:

- Improved patient experience^{44,45}
- Reduced use of general anaesthetic^{46,47}
- Decreased risk of hospital-based infections⁴⁸
- Reduced morbidity and mortality^{49,50,51,52}
- Improved efficiency of health resources^{53,54}
- Reduced in-hospital stays^{55,56,57,58,59,60,61}
- Shorter recovery times^{62,63,64,65,66,67}
- Fewer readmissions⁶⁸
- Reduced health care costs.^{69,70,71,72,73,74,75,76,77}

These favourable attributes of Interventional Radiology practice contribute to the growth of value-based healthcare and personalised medicine and illustrate the value that Interventional Radiology delivers to patient care. The evolution of Interventional Radiology procedures has also enabled diagnosis and treatment options for conditions that were not previously feasible, or where no other treatment options are currently available.^{78,79,80}

The benefits of image-guided interventions delivered by Interventional Radiologists were also evident during the COVID-19 pandemic, when patient medical treatments were restricted or deferred because of limited ward and intensive care bed capacities, many day and outpatient Interventional Radiology services continued, providing safe and effective clinical care to patients – helping to reduce waiting lists^{81,82} and considered an essential trauma service in the event of another wave or pandemic⁸³.

RANZCR published a position statement during the pandemic⁸⁴ supporting the continued delivery of safe and effective minimally invasive Interventional Radiology services in hospitals and health care organisations.

To illustrate how these beneficial health outcomes have translated into helping the lives of real patients, please see Appendix B for a selection of local and international patient experience stories and journals featuring the role of Interventional Radiology.

The Evolution of Interventional Radiology

Since the first angioplasty procedure was performed by a radiologist in 1964, which heralded the era of endovascular treatments, Interventional Radiology has evolved significantly. Driven by the rapid progression of minimally invasive, image-guided techniques and increasing clinical demand, Interventional Radiology has become an essential part of modern health care⁸⁵ and plays a central role in the longitudinal care of patients. It has affirmed its place in modern medicine by establishing high-quality, evidence-based standards of care and providing critical health services to patients in hospitals and in the community. In addition to primary patient care, Interventional Radiology also plays an essential role in supporting other medical and surgical services within the hospital system.

Through a series of technical innovations, expanding scope and growing complexity, Interventional Radiology is changing the medical landscape and increasing value-based, patient-centred care that contributes to improved clinical outcomes, patient experience, patient safety and efficiency of health resources.^{86,87} What started as a procedure-based field 50 years ago has evolved into a clinical specialty of Interventional Radiology that integrates comprehensive patient care⁸⁸ spanning diagnosis (e.g. biopsy) to treatment (e.g. angioplasty and tumour ablation) and palliation (e.g. vertebroplasty for pain).⁸⁹

Australian Interventional Radiologists are also specialist radiologists and many practice both diagnostic and interventional radiology⁹⁰ – which is similar to the situation in many other countries.⁹¹ Interventional Radiologists, however, undertake a period of additional specialist training and develop clinical and technical skills over and above those required for a generalist diagnostic radiologist. Increased prevalence and incidence of cardiovascular, renal, venous, arterial and oncologic disease in the population will likely see the role of Interventional Radiologist expand further,^{92,93} and the increasing demand for Interventional Radiology services will see a growing need for more specialist trained Interventional Radiology practitioners.⁹⁴

The Road Towards Specialty Recognition

RANZCR established the Faculty of Clinical Radiology about a decade ago, in recognition of the increasingly clinical role of the radiologist. With the expanding footprint of clinical radiology, the RANZCR Board and the Faculty of Clinical Radiology Council established a standing committee to oversee and develop the spectrum of Interventional Radiology⁹⁵ just over five years ago. The Interventional Radiology Committee (IRC) is now responsible for advising the Faculty of Clinical Radiology Council on the educational, professional and practice aspects of Interventional

Radiology – to ensure that clinical radiologists are supported to deliver accessible, evidence-based, best practice interventional care to patients⁹⁶.

This led to the release of a RANZCR position statement in early 2020, outlining the current and long-term contextual environment for Interventional Radiology, as well as a road map towards achieving specialty recognition in Australia and New Zealand⁹⁷.

Interventional Radiology Training

All Radiologists in Australia are specialist medical practitioners who have undertaken medical training and completed RANZCR's 5-year Australian Medical Council accredited clinical radiology specialist training program.⁹⁸ Under this program, all prospective radiologists are trained to perform basic interventional procedures (including ultrasound and CT guided procedures such as biopsies, injections and drainages). However, additional training is required to obtain the advanced clinical knowledge, behaviour and skills to perform more complex image-guided diagnostic and therapeutic Interventional Radiology procedures,^{99,100} beyond those acquired during core diagnostic radiology training.

The ever-increasing range of conditions and complexity of procedures necessitated Interventional Radiologists to undertake post graduate training through a number of different avenues. After completion of the RANZCR training program, a 12 to 24-month fellowship may be undertaken. These Interventional Radiology fellowships currently vary in breadth and rigour, are unregulated and are not mandatory to practice Interventional Radiology in Australia.

Additionally, RANZCR, the Interventional Radiology Society of Australasia (IRSA) and the [Cardiovascular and Interventional Radiological Society of Europe](#) (CIRSE) offer the [European Board of Interventional Radiology](#) (EBIR) exam as a diploma for Interventional Radiology training in Australia and New Zealand.¹⁰¹ While the diploma has been endorsed by the [European Society of Radiology](#) (ESR) and the Interventional Radiology Division of the [Union of European Medical Specialists](#) (UEMS)¹⁰² it is not accredited or recognised by any medical board in Australia and New Zealand. The diploma is still available for completion; however, it is not necessary to complete this in order to be able to practice Interventional Radiology in Australia.

Clinical competence of the Interventional Radiologist is the most important factor from a health consumer perspective.¹⁰³ Driven by a commitment to the safe delivery of health care, the College is developing a dedicated, contemporary and accredited Interventional Radiology training pathway that meets Australian training standards. This will ensure that the full range of Interventional Radiology practice and procedures are delivered by appropriately trained and highly skilled Interventional Radiology clinicians.

Practice Standards

The *RANZCR Standards of Practice for Clinical Radiology*¹⁰⁴ define the standards by which diagnostic and interventional radiology services in Australia are expected to be delivered. In recognition of the growing footprint of Interventional Radiology, the Interventional Radiology Standards Working Group¹⁰⁵ of the IRC, in consultation with key stakeholders,¹⁰⁶ is currently developing the first stand-alone version of Standards of Practice for Interventional Radiology and Interventional Neuroradiology in Australia. These standards define the minimum acceptable practice standards for facilities and staff providing Interventional Radiology services, to protect patient and practitioner safety and enable best quality care.

Stakeholder Engagement and Relationship Management

RANZCR, through the IRC, is engaging with its members and other key stakeholders – to facilitate networking and collegiality with other colleges and professional societies. One of RANZCR's main focus areas has been consultation and ongoing discussions with the [Interventional Radiology Society of Australasia](#) (IRSA) to facilitate collaboration towards a shared vision and

common goals for Interventional Radiology – which includes specialty recognition for Interventional Radiology in Australia.

Indicative Timeline

In Australia, the process for applying for a field of specialty practice is a multi-staged linked process. RANZCR intends to submit an initial application to the Medical Board of Australia in 2022. The assessment of this application to determine whether RANZCR has a case for recognition will take approximately 6 months and the outcome will determine the College's path for all related future activities.

The College intends on pursuing a similar path in New Zealand with the Medical Council of New Zealand in 2022/23.



The Royal Australian and New Zealand College of Radiologists®

APPENDIX A

The Australian Health Practitioner Regulation Agency list of medical specialties

The table below outlines RANZCR's existing medical specialties: Radiation Oncology and Radiology and the proposed new field of specialty practice: Interventional Radiology.

SPECIALTY	FIELDS OF SPECIALTY PRACTICE	SPECIALIST TITLE
Radiation Oncology	-	Specialist radiation oncologist
Radiology	Diagnostic radiology	Specialist radiologist
	Diagnostic ultrasound	Specialist radiologist
	Nuclear medicine	Specialist in nuclear medicine
	Interventional Radiology	Specialist Interventional Radiologist
	Interventional Neuroradiology*	Specialist Interventional Neuroradiologist*

*Please refer to the Interventional Neuroradiology briefing pack for this proposal





APPENDIX B

Interventional Radiology Patient Stories

To illustrate how these beneficial health outcomes have translated into helping the lives of real patients, please see below for a selection of local and international patient experience stories and journals featuring the role of Interventional Radiology.

- Cutting edge technology being used in Victoria on a cancerous liver lesion. [Microwave Ablation: Cutting edge technology in the north - Northern Health](#).
- Stephanie was successfully treated by an Interventional Radiologist for her painful uterine fibroids.

Stephanie's story

'If this is how other women live, I have not been living!': How uterine fibroid embolisation changed a young woman's life

Stephanie got used to managing difficult periods, so much so that it became the norm. "I was used to heavy bleeding and a lot of cramping during my periods," said Stephanie. "I was diagnosed with endometriosis when I was 20 and eventually had surgery for the condition 10 years later."

Several uterine fibroids about 5cms big were identified. "As the fibroids got bigger my symptoms intensified. Bleeding during my periods got even heavier and I could hardly stay awake during my cycle. I was completely exhausted."

The symptoms quickly altered the way Stephanie was able to live her life. "I was in constant pain. My stomach was so bloated that I looked like I was 6 months pregnant and even sitting down or tying up my shoes was excruciating".

"It eventually got to the stage where I needed to go to the toilet every 30 minutes. I had to plan my whole day around where and when I could get to a bathroom – which isn't easy when you have an hour commute just to get to work! I was a mess, feeling exhausted, in pain and hopeless so much of the time. I never felt rested, never felt energetic and most days took a huge amount of effort to get through."

"I considered getting a hysterectomy for about 6 months, but as a young woman, I couldn't believe that was my only option."

Stephanie sought out more information and during her research found an old YouTube video on uterine fibroid embolisation (UFE).

She said, "I found an interventional radiology clinic in Sydney who offered the procedure and I made an appointment as soon as I could. The doctor took me through the procedure and I knew this was the right option for me. To be honest, it seemed too good to be true, given the improvements that could be gained and avoiding a surgery under general anesthetic."

After the procedure, Stephanie's symptoms improved dramatically. "The bleeding during my first few periods was basically non-existent compared to how they had been before. I remember thinking, 'If this is how other women live, I have not been living!'"

"The relief and improvement in all my other symptoms were drastic – it was beyond worth it. I wanted to share my story so that other women who are suffering like I was can learn more about UFE and consider if it is the right treatment option for them. It gave me back my life and I am extremely grateful to my medical team for that. I couldn't recommend the team and the procedure enough, I haven't looked back since."

Did you know?

- UFE is an effective, minimally invasive treatment performed by specialist interventional radiologists to treat some types of symptomatic uterine fibroids.
- UFE is associated with fewer serious complications and shorter recovery times compared to surgery;^{107,108} patient-reported quality of life outcomes are similar for embolisation and surgical intervention, even 5 years after treatment.¹⁰⁹
- Hysterectomy may be overused in Australia for the treatment of benign conditions, including fibroids, with a high rate than in most other comparable OECD countries.¹¹⁰
- It is estimated that an average of 145 fibroid embolisation procedures are performed in Australia each year, compared to an estimated 6066 surgeries (hysterectomy or myomectomy) for fibroid disease.¹¹¹

Patient experience stories:

UK

<https://www.bsir.org/patients/patient-experiences-of-interventional-radiology/>

USⁱ

- Interventional Radiology treatment for Liver Disease
<https://www.youtube.com/watch?v=ezFYyJNy45w>
- Cancer Survivor finds relief from painful fractures
<https://www.massgeneral.org/interventional-radiology/approach/patient-stories/bobbie-dibattista.page>
- Cancer survivor finds relief after months of debilitating pain
<https://www.massgeneral.org/interventional-radiology/approach/patient-stories/albert-arillotta>

Patient experiences/satisfaction journal articles:

Cazzato, R.L., de Rubeis, G., de Marini, P. *et al.* Interventional Radiology Outpatient Clinics (IROC): Clinical Impact and Patient Satisfaction. *Cardiovasc Intervent Radiol* **44**, 118–126 (2021). <https://doi.org/10.1007/s00270-020-02677-1>

[Jessie Gil](#), [James H. Briggs](#), [Brenda Shanahan](#), [Mark Bratby](#), [Raman Uberoi](#). Patient satisfaction with day case provision of interventional radiology procedures, DOI: <https://doi.org/10.1016/j.crad.2014.05.084>

2021 Editorial

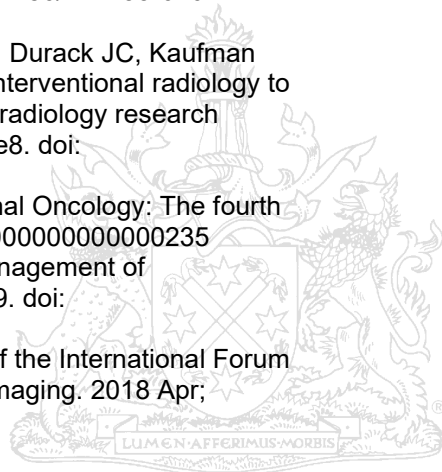
Interventional radiology: Leading the way to increased growth, reduced costs, and improved patient care <https://www.dotmed.com/legal/print/story.html?nid=54325>

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