



# MIAP1

2011

MEDICAL IMAGING ADVISORY PANEL 1

## Policies & Procedures Manual

*Magnetic Resonance Imaging &  
Computed Tomography*

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# Magnetic Resonance Imaging

## Introduction

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Magnetic Resonance Imaging (MRI) is an imaging modality within Medical Radiation Science. MRI employs the use of high strength homogenous magnetic fields and pulsed radio frequencies. When the human body is placed within this magnetic field, processing hydrogen protons align in the field direction. Radio frequency waves are introduced to alter this alignment and as the hydrogen protons realign with the main magnetic field, a signal is produced. This signal is received by radiofrequency coils and converted via a computer into high resolution diagnostic images.

The ability to create anatomical, pathological and functional images with this non-ionising radiation modality has led to rapid expansion and development of this modality. The increasing availability and constant evolution of MRI has intensified the community and professional demand for high levels of technology and professional standards.

The MRI practitioner is required to make decisions regarding the nature and extent of individual procedures, and when requested, to provide medical practitioners with informed opinions regarding the results of these procedures. The MRI practitioner is responsible for the welfare of patients whilst they are in their care and must be familiar with all emergency procedures associated with MRI.

A variety of imaging systems are available world-wide and within Australia. The Australian Institute of Radiography (AIR) expects that all MRI systems be equipped with fast imaging techniques and that equipment is appropriately upgraded maintained and monitored.

The AIR supports that all MRI performed on humans whether in clinical or research centres, be undertaken by AIR accredited MRI practitioners.

### **Accreditation of the MRI Practitioner**

In early 1997, an initial steering committee of radiographers practicing MRI, under the auspices of the AIR began formulating accreditation levels for those radiographers working in this imaging modality. In January 1998, this clinical specialist committee became a formal advisory panel of the AIR, under the Memorandum and Articles of Association of this body, and in September of that year the first Level 1 Accreditation examinations were conducted throughout Australia. The first Level 2 Accreditations were awarded in March 1999.

The Medical Imaging Advisory Panel 1 now set and maintains the standards for accredited MRI and CT practitioners.

### **MIAP1**

The Medical Imaging Advisory Panel 1 is made up of 10 volunteers who donate their time, knowledge and experience to the AIR and the progression and development of medical imaging.

# Accreditation Policies

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## Accreditation Eligibility

### Level 1

Level 1 accreditation encompasses theoretical and clinical components. To be eligible for MRI accreditation, applicants must hold a current Validated Statement of Accreditation issued by the AIR.

#### *Criteria*

Level 1 accreditation is available to practitioners who have attained a grade exceeding 75% in an examination set by the Medical Imaging Advisory Panel 1 (Part A) and performed the required clinical component as outlined below (Part B).

**Part A** The formal examination will involve a paper not exceeding 200 multiple choice questions covering topics such as - Safety , Patient Screening , Equipment , Pulse sequences , Basic theory of NMR, MRI anatomy and Pathology.

The approximate percentage of questions related to each module are listed below

- Anatomy and MR Pathology 20%
- Pt Care and Safety 15% (including contrast media)
- Physical Principles / Hardware 30%
- Pulse sequences / Artifacts 35%

The formal examination is held twice a year in each state. Practitioners who live in a rural area or at great distance from the hosting city may request to sit the exam under the Supervision of a Chief Radiographer at their practising hospital.

**Part B** The clinical component requires the candidate's Supervisor to acknowledge completion of the required clinical examinations (300 examinations in a 12 month period) within a 3 year period of completing Part A. The practitioner must maintain this clinical component for reaccreditation.

### Level 2

Practitioners are eligible to apply for Level 2 accreditation only when Level 1 accreditation has been awarded by the AIR and the radiographer holds a current Validated Statement of Accreditation.

#### *Criteria*

Level 2 accreditation is available to practitioners who have accrued a minimum of 100 MR-related CPD credits (Part A) and had 3 years equivalent full time MRI experience (Part B).

**Part A** Level 2 Accreditation requires practitioners to participate in and record the accrual of MR-related CPD activities. The credits can be accrued over a 5 year period immediately prior to the date of application. The credits allocated represent the maximum number of credits possible for each category and are subject to reclassification on a case by case review by MIAP1.

To be eligible for credits accrual all papers, courses attended and work submitted for consideration **must** be relevant to MRI. MIAP1 reserves the right to allocate credits based on type of presentation, course content and delivery method.

To remain current the Level 2 accredited MR Practitioner must accrue 15 credits per year averaged over a 3 year period. This does **not** include Clinical Experience credits and the credits must be accrued over a 3 year period immediately prior to the date of renewal.

## Accreditation Length

Level 1 and Level 2 accreditation certificates have a 3 year expiry from date of issue by MIAP1. Renewed Level 1 and Level 2 accreditation certificates will coincide with the original date of issue and have a 3 year expiry also.

Practitioners who pass the formal examination set by MIAP1 have 3 years to apply for their accreditation. Any applications for Level 1 accreditation received after this time frame will not be deemed as acceptable by MIAP1 and the candidate will be expected to re-sit the exam at the next available sitting.

## Accreditation Renewals

Notification of a forthcoming accreditation expiry will be given 1 month in advance of the need to renew. If the practitioner fails to return the renewal application form for Level 1 or 2, a final notice will be issued up to 4 months after the renewal was due.

If practitioners neglect to renew their accreditation for Level 1 or 2 within 6 months of the due date, their accreditation will be deemed lapsed by MIAP1. Practitioners will be notified of their lapsed accreditation.

Practitioners with a lapsed Level 1 or Level 2 accreditation are expected to follow the procedures outlined under Accreditation Eligibility. A lapsed accreditation cannot be re-instated without the candidate correctly following all of the outlined criteria for a Level 1 accreditation application.

### *Extensions*

Practitioners who are unable to fulfil the requirements of renewing their Level 1 or Level 2 accreditation, before the renewal due date, are able to apply for an MRI Accreditation Extension. Supporting documentation **must** be attached to the application for review by MIAP1 (Doctor's certificates, Letter from Employer, Statutory Declaration etc.)

Extension applications will be assessed on a case by case basis by MIAP1. The extension period granted is at the discretion of MIAP1.

## Accreditation Entitlements

Practitioners who progress to a Level 2 accreditation will have their Level 1 accreditation automatically renewed free of charge for the duration of their Level 2 accreditation.

Practitioners who fail to meet the requirements of their Level 2 accreditation renewal, or for any other circumstances decide not to continue renewing their Level 2 accreditation, will be eligible to apply for renewal of their Level 1 accreditation. This renewal will not be treated or assessed any differently to standard Level 1 renewals.

# Accreditation Procedures

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## Assessments

Level 1 accreditation applications and renewal applications are received by the Secretariat and given to the MIAP1 Chair for assessment. This process can take up to 3 weeks from the date that the Secretariat receives a practitioner's application. A Level 1 application will be dated from the date that the application was approved by the MIAP1 Chair. Level 1 renewal applications will be dated from the original date that the application was approved by the MIAP1 Chair.

Level 2 accreditation applications and renewal applications are received by the Secretariat and given to two voluntary members of MIAP1 for two individual assessments. This process can take up to 6 weeks from the date the Secretariat receives the practitioner's application. A Level 2 application will be dated from the date that the application was approved by the second MIAP1 volunteer. Level 2 renewal applications will be dated from the original date that the application was approved by the second MIAP1 volunteer.

Level 2 applications and renewal applications will not be processed unless the 'AIR Level 2 Credits Accrual' cover sheet has been filled in correctly and submitted with the supporting documents.

## Incorrect Applications

Practitioners that provide the incorrect information on any application form will have their application returned to them with notification querying the information provided and a list of information that needs to be reviewed by the practitioner and the Supervisor.

## Extension Applications

Applications for extensions to Level 1 and 2 are received by the Secretariat and given to the MIAP1 Chair for review and assessment. This process can take up to 3 weeks and practitioners will be notified by mail of the outcome and extension time granted.

# Computed Tomography

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**- Currently Under Review -**