

Medical Imaging Reform Service



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Overview

The organisational structure of Medical Imaging is designed to support research, with research and education being one of the pillars of the Department, along with quality of care and service work.

The Director of Medical Imaging endorses research and wholly supports the work of the Director of Research, who promotes research as a desirable and necessary activity across all streams.

Funding, acquired through the successful acquisition of service revenue, has been invested in research personnel with key posts including, a Research Development Officer, part-time Research Nurse and one SHO level researcher.

The research division is active in maintaining the culture of research in the Department with regular newsletters, research presentations, journal clubs and other educational activities, managed by a steering group including radiology, radiography, nursing and administration streams.

In addition the radiography stream has been successful in acquiring external funding for educational positions and activities.

Key achievements for 2011:

- 14 publications
- Extended DMI collaborative network. Research projects with QBI, UQCCR, UQ, CAI and QUT
- Coordinating site for INR National Research Collaborative
- Completion of the IVC Filter (Crux) and PERI (Bayer) studies
- 25 active studies
- 35 ongoing studies.

Executive and directing staff

- **Adj. Assoc. Prof. Noelle Cridland**
Executive Director
- **Dr John Clouston**
Director, Medical Imaging
- **Prof. Alan Coulthard**
Director, Research
- **Vanessa Clarke**
Director, Medical Imaging Services



Adj. Assoc. Prof. Noelle Cridland
Executive Director, Medical Imaging Reform Service



Dr John Clouston
Director, Medical Imaging



Prof. Alan Coulthard
Director, Research



Vanessa Clarke
Director, Medical Imaging Services

Research staff

Name	Qualifications	Position	Interests/specialities
Dr John Clouston	MBBS, FRANZCR	Director, Medical Imaging	interventional radiology
Prof. Alan Coulthard	MBBS, BMedSci, FRCS, FRCR, FRANZCR,	Director, Research; Prof. Neuroradiology and Head, Discipline of Medical Imaging, UQ	neuroradiology, neuro-intervention
Assoc. Prof. Karin Steinke	MD, MS, PD, FRANZCR	Staff Specialist	thoracic and breast imaging and intervention
Assoc. Prof. Peter Scally	MBBS, FRANZCR	Staff Specialist	medical student education, quality management in radiology, software development to teach critical analysis
Ms Karen Dobeli	MAppSci (MedRadSci), FIR	Senior Radiographer	computed tomography
Dr Liam Caffery	BIT, DipAppSci (DiagRad), PhD	Senior Systems Radiographer	picture archiving and communication systems, teleradiology
Dr Annah Lane	BSc, MBBS	Research SHO	neuroradiology research
Dr John Velkovic	BE (Med), MBBS	Radiology Registrar	neuroradiology research
Dr Jeanie Scott	BSc (Hons), PhD	Research Development Officer	research development
Dr Lawrence Josey	BSc (Med), MBBS	Radiology Registrar	neuroradiology research
Dr Nicholas Brown	BSc, MBBS, MPhil, GCSpMed	Radiology Registrar	MSK, interventional radiology, nuclear medicine, sports medicine
Dr Michael Curley	BAppSc, MBBS	Radiology Registrar	neuroradiology research
Matthew Gordon	BAppSci (Med Imaging)	Radiographer	emergency medical imaging, image interpretation
Carron Devaney	BAppSci (Med Imaging)	Radiographer	emergency medical imaging
Greg Edwards	BAppSci (Med Imaging)	Radiographer	theatre
Dr Craig Hacking	BSc, MBBS	Radiology Registrar	emergency medicine, MSK

Supervised postgraduate students

Name	Current studies	Research topic
Eastgate P	Masters (Radiography Research)	Can the radiographer go one step further?
Rawle M	Masters (Health Science)	Cost effectiveness of MRI exams for stroke detection: Are we doing too many sequences?
Eastgate N	Masters	Data security
Oughton J	PhD	The relationship of arterial stiffness and resistance to white matter hyperintensity distributions in aging women: The LAW Blood Flow and Brain Study
Nguyen G	PhD	Perfusion computed tomography in the evaluation of blood-brain barrier disruption in acute ischaemic stroke
Hassed P	Master (Health Science)	Radiographic interpretation

Research grants

Investigators	Project title	Granting body	Amount awarded	Years of funding
Steinke K	Microwave ablation of lung tumours	Private Practice Trust Fund	\$71,000	2010-2011
Steinke K	Analysing dose reduction using iDose software and hardware	Private Practice Trust Fund	\$100,000	2010-2011
Coulthard A, Scott J	The Australia and New Zealand Interventional Neuroradiology Collaborative	ANZSNR and RANZCR	\$50,000	2010-2011
Scott J	Developing research in radiology	Private Practice Trust Fund	\$80,000	2010-2012
Shay F, Coulthard A, Danaher L.	Are curricula, teaching activities and assessment procedures for chest radiograph interpretation integrated across the continuum of medical training?	Centre for Medical Education Research and Scholarship	\$4,000	2010-2011
Steinke K, Coulthard A	High-end MR breast imaging diagnostic evaluation and interventional system	QPACT	\$324,825	2010-2011
Rose S, Crozier S, Salvado O, Coulthard A, Thomas P, Fay M	Improving assessment of brain tumour treatment outcome using 18F-FDOPA PET MRI	NHMRC	\$637,125	2010-2012
Taylor B, Van Der Mei I, Lucas R, Coulthard A, Blizzard C	Prognostic factors following a first episode of CNS demyelination suggestive of MS (Auslong)	NHMRC	\$689,575	2009-2011

Publications

- Barwood CHS, Murdoch BE, Whelan BM, Lloyd D, Riek S, O'Sullivan JD, Coulthard A, Wong A. Improved receptive and expressive language abilities in non-fluent aphasic stroke patients after application of rTMS: An open protocol case series. *Brain Stimul.* 2011. Apr 13. [e-pub ahead of print]
- Barwood CHS, Murdoch BE, Whelan B, Lloyd D, Riek S, O'Sullivan JD, Coulthard A, Wong A. Modulation of N400 in chronic non-fluent aphasia using low frequency repetitive transcranial magnetic stimulation (Rtms). *Brain and Language.* 2011;116(3):125-35.
- Barwood CHS, Murdoch BE, Whelan B-M, Lloyd D, Riek S, O'Sullivan J, Coulthard A, Wong A, Aitken P, Hall G. The effects of low frequency repetitive transcranial magnetic stimulation (Rtms) and sham condition Rtms on behavioural language in chronic non-fluent aphasia: Short term outcomes. *NeuroRehabilitation.* 2011;28(2):113-28.
- Barwood CH, Murdoch BE, Whelan BM, Lloyd D, Riek S, O' Sullivan JD, Coulthard A, Wong A. Improved language performance subsequent to low-frequency rTMS in patients with chronic non-fluent aphasia post-stroke. *Eur J Neurol.* 2011;18(7):935-43.
- Brown NB, Josey LB. Risky radiology: Not so black and white. Letter to the editor. *Med J of Australia.* 2011;194(8):428-429.
- Danaher LA, Howells J, Holmes P, Scally P. Is it possible to eliminate patient identification errors in medical imaging? *J Am Coll Radiol.* 2011;8(8):568-74.
- Fielding DI, Chia C, Nguyen P, Bashirzadeh F, Hundloe J, Brown IG, Steinke K. Prospective randomised trial of ebus guide sheath versus CT guided percutaneous core biopsies for peripheral lung lesions. *Intern Med J.* 2011 Dec 29. [E-pub ahead of print]
- Gardiner RA, Gwynne RA, Roberts SA. Perinephric abscess. *BJU Int.* 2011;107 Suppl 3:20-3.
- Hoenig MR, Cowin G, Buckley R, McHenery C, Coulthard A. Low density lipoprotein cholesterol is inversely correlated with abdominal visceral fat area: A magnetic resonance imaging study. *Lipids in health and disease.* 2011;10:12.
- Hughes AM, Lucas RM, Ponsonby AL, Chapman C, Coulthard A, Dear K, Dwyer T, Kilpatrick TJ, McMichael AJ, Pender MP, Taylor BV, Valery P, van der Mei IA, Williams D. The role of latitude, ultraviolet radiation exposure and vitamin D in childhood asthma and hay fever: An Australian multicenter study. *Pediatr Allergy Immunol.* 2011 May;22(3):327-33.
- Lucas RM, Ponsonby AL, Dear K, Valery P, Pender MP, Burrows JM, Burrows SR, Chapman C, Coulthard A, Dwyer DE, Dwyer T, Kilpatrick T, Lay ML, McMichael AJ, Taylor BV, van der Mei IA, Williams D. Current and Past Epstein-Barr Virus Infection in Risk of Initial CNS Demyelination. *Neurology.* 2011;77(4):371-9.
- Lucas RM, Ponsonby AL, Dear K, Valery PC, Pender MP, Taylor BV, Kilpatrick TJ, Dwyer T, Coulthard A, Chapman C, van der Mei I, Williams D, McMichael AJ. Sun exposure and vitamin D are independent risk factors for CNS demyelination. *Neurology.* 2011;76(6):540-8.
- Moesbergen TC, de Ryke RJ, Dunbar S, Wells JE, Anderson NG. Distal ureteral calculi: US follow-up. *Radiology.* 2011;260(2):575-80.
- Steinke K, Sanadgol B, Singh M. Mediastinal nodal angiomatosis: An unusual mass lesion in the superior mediastinum. *J Med Imaging Radiat Oncol.* 2011;55(2):195-8.