



# RESONANCE

NEWSLETTER of the New Zealand Branch of the Royal Australian and New Zealand College of Radiologists

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PAGE 02

FROM THE COALFACE

Ben Wilson



Chris McKee



PAGE 03

FROM THE VIEWBOX

Komputer Korner

A Kiwi Story



From the who, what and where archives?

## CHAIRSPACE

*Bell, Roentgen, Steve Jobs, the Beatles and Teleradiology*

It's easy to be dazzled by technology isn't it?

Sleek new gadgets and technologies can be seductive. Take the i-phone for instance. They aren't just cool, they ooze coolness. The i-phone is a transcendent, boundary crossing device that simultaneously covers all of your communications and entertainment needs. For a generation of compulsive communicators and social networkers it is a light sabre that they're naked without. Of course as you bathe in its reflected brilliance, you too are imbued with its coolness and cachet as a fashion accessory. Yes it's easy to get swept away and light-headed just thinking about it.

Most radiologists would consider that the ascent of man began in 1895 with Roentgen's famous discovery. However, 20 years earlier both the dour Scotsman Alexander Graham Bell and the now forgotten American Elisha Gray were both inventing the telephone. (Like the Beatles first drummer, Gray was destined for historical obscurity through being an also-ran). But Bell's name became synonymous with telecommunications ever after.

Who would have thought that just over a century later "teleradiology" would become the love child of Roentgen and Bell? Telemedicine got an early break in the NASA manned space programme in the form of telemetric monitoring of the astronauts' various physiological parameters. Then there were various false dawns with attempts to send images via television links. The epoch making move from analogue film to digital imaging systems would create the sexual chemistry that would ultimately get Roentgen and Bell together. PACS, DICOM and plenty of bandwidth were all aphrodisiacs in the mix.

Other drivers of change have created a milieu where Teleradiology is the answer, whatever the question. 24/7 demand for services, the challenges of rural and remote areas and the perceived need for subspecialist reporting are all driving us towards teleradiology. Why wouldn't you want it? It's sleek, seductive and has the cachet of thinking globally but acting locally. The business managers would argue that "we're leveraging our investments in infrastructure to provide seamless service delivery within a vertically integrated environment..." Huh? The hippies can see it's like the Beatles joining hands around the world in 1967 and singing "All you need is Love" to a worldwide television audience, being the first example of telemusic.

Anyway, teleradiology is the new black, and the clock-punching local radiologist is just "the fool on the hill".



Being Johnny on the spot and getting out of bed when you're on call will soon be as alien to us as employing small children to clean chimneys. But is it really that simple?

The RANZCR Council position statement from March 2007 on Teleradiology sheds light on where we need to be on this subject. This document makes 10 key points about what characterises a quality teleradiology system. First and foremost of these is that any arrangement should be in the best interests of patient care. Other major areas addressed are the qualifications and credentials of the radiologist; quality and security of image transfer; and the timeliness and clarity of communication of results.

The Medical Council of New Zealand has recently called for submissions on a proposed new registration pathway for radiologists intending to practise offshore in this way. Our bottom-line was to mandate that anyone practising radiology this way in NZ should be registered here, and be held to at least the same standards of credentialing, audit and peer review that resident radiologists are. Perhaps most importantly, patients need to be assured that complaints related to imaging should be able to be pursued with the same level of accountability, regardless of which time zone the radiologist happens to be in.

The final form that the MCNZ registration pathway takes remains to be seen, but let's hope they don't get too dazzled by this new bright shiny thing.

"She told me she worked in the morning and started to laugh, I told her I didn't and crawled off to sleep in the bath" (Norwegian Wood).

Mark Leadbitter



## DUNEDIN HOSPITAL RADIOLOGY *by Ben Wilson*

I've been Clinical Leader in Radiology at Dunedin Hospital for just over two years now. Having read with interest the articles written by our colleagues in Christchurch and Wellington in the last couple of issues of *Resonance* what strikes me is the similarity of issues we all face as we try to provide a high quality imaging service in the face of increasing demand and limited resources.

The department here has undergone a few changes in the last couple of years. Staffing levels have improved (though still far from ideal) and we've welcomed back a couple of consultants upon their return from fellowships this year. A new consultant starts with us in February.

Equipment-wise we've seen the installation of a 64 slice CT scanner, new US machines, a new gamma camera and a further upgrade recently of our MRI scanner. Probably our most important new facility is an upgraded radiology conference

room, which has meant we can hold clinical meetings, MDMs and teaching sessions in a modern facility with adequate seating and viewing capabilities, and up-to-date projection facilities. Yes, the days of the overhead projector so loved by generations of radiologists, registrars and referrers are finally over.

PACS went live in our hospital in August after some delays. Certainly the feedback from our referrers has been very positive and that obviously is one of the major aims of the project. From the point of view of those of us inside the department the PACS project has highlighted how important a well-integrated RIS/PACS is.

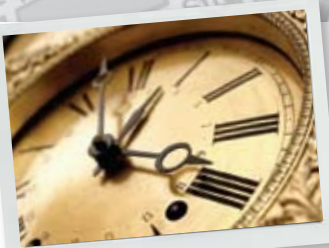
Like all departments we face increasing demand for our services, particularly in respect of MRI and CT imaging. However the increase in waiting times that inevitably occurs with this over time led us to develop a Diagnostic Imaging Review project to look at various modalities, to analyse what we currently do and to investigate how we can improve our service by looking at all facets

of the imaging process, from initial referral to a verified report being sent. We have quite deliberately started with our CT imaging service and the outcomes have been quite dramatic. As expected these reviews take much longer than anticipated but the effort put in by various groups in the department so far has been shown to pay off. Further modality reviews will soon start.

From a clinical leadership point of view the electronic CL forum that was recently established by Chris Griffin in Wellington has proved to be a useful tool for discussing departmental issues, benchmarking and developing closer ties with other departments. As I said above, we all share similar issues, perhaps just different in degree. Knowledge-sharing is useful and stops us tackling issues in isolation.

Otago Harbour

Dunedin



## TEMPUS FUGIT *by Nick Kenning*

...was written beneath the main clock at my school, and loosely translated it means 'time flies'. And it does, and unfortunately, it appears to fly faster as we age. Not that this is news to any of you, especially those in whom the 'small vessel ischaemic changes and cerebral volume loss' changes are taking hold!

Five years ago, I was working as a locum in busy emergency department in a small town in Australia where it was always sunny and never windy, and my job included interpreting urgent CT scans in the middle of the night while the radiologist slept ... Now, having nearly completed my radiology training in Wellington, I am far more comfortable

(and hopefully better) at reading CT scans, but have all but lost any clinical skills I once had!

And not only does time fly, but things change! In my short career in radiology we've moved from hard copy X-rays and images to CR/DR with PACS, from single slice CT to 320+slice, and with the aid of a good sonographer we can actually see things on ultrasound, sometimes even in 3D (or 4D if you believe the hype!). The list goes on. And it will continue. And that for me is one of the many great things about radiology – it is so dynamic.

As well as keeping pace with the new technologies in imaging – all of which require the accumulation of new knowledge, as a registrar there are a number exams to sit. Something like 20 hours worth in fact, even if you are fortunate enough

to pass them all on you first attempt. And to pass or fail, there is the several hundred hours of studying. All the while we are working in a world where the expectations of both our patients and our referrers is ever increasing. Sometimes I wonder whether teaching medical students how to perform a clinical examination will be required for much longer....why bother?

I now have the realisation as I am about to finish my training, that my learning is far from complete, and or nor will it ever be. In such a fast paced and dynamic specialty as radiology there will always more to learn. And that is not a bad thing.

## Letters to the Editor...

### *A note to Private Practice Radiologists*

Radiologists who are contractors or sole traders or who have a small business structure are charged an ACC levy to cover work-related accidents.

The levy is calculated according to the "Industry Classification Unit" the ACC thinks applies to you. Now, if you go on to their website and download ACC4110 which is the 2007-08 Industry Classification list and go to page 71 you will see that Radiologists get charged ACC Workplace Cover of \$0.18c/\$100 earned. If you go up to page 70 you will note that essentially

EVERY OTHER Medical or Surgical Specialist gets charged \$0.06c/\$100 earned.

In reality this will only mean we are overpaying by \$100-\$200 per year but I think it is a bit rude to discriminate against us. It is hard to see how what we do is more risky (Accident-wise) than say Orthopaedic Surgery or Gynaecological or bowel surgery. Logically what we do is far less likely to generate an ACC claim.

Luckily, it is possible to ask ACC, on a case by case basis to review your Industry Classification. This would be an interim solution. Perhaps the NZ Branch could take this issue up on our behalf.

Of course this will not worry you if you are a DHB employee full-time or are a salaried Radiologist at a private clinic.

*Dr Gavin Davis  
Radiologist  
HAMILTON, NZ*



*That recently famous artist, Kermit the Frog is quoted as saying (well actually singing) "It's not that easy, being green".* In our own fashion as Radiologists we are evolving and becoming more "green". I don't mean we will be sitting around a sustainable horse-dung campfire eating raw asparagus as frankly some of our slightly potty greenie politicians would have us do (the asparagine in the urine would be too much to contemplate).

X-Ray film is a fantastic image transport medium. The image is permanent for all clinical intents and purposes. It is light and transportable and can accompany the patient and is available to anyone to hold up in front of a viewbox (or a beeswax candle if you are a super-greenie). But, it is not "green" –except for the occasional case when the washtank fails.

No, there is a considerable hydrocarbon resource that goes into making the thick plastic film, the manufacturing process, the mining of the silver, chemical conversion, chemical processing, transport around the globe to our practices. There are significant packaging costs, thick plastic, thick yellow (or orange or green) cardboard boxes all generating a large volume of waste that needs to be transported, sorted, recycled and partially dumped.

Then there are the moderately toxic chemical processes required to turn the latent image into a visible picture, chemical disposal and treatment, and finally ultimate disposal and recycling of the old film (and the energy required to do so).

However as we move rapidly into the digital era, and film becomes an historical oddity we are reducing our carbon footprint, using less energy and leaving behind less toxic waste. Now images are stored as a non-physical array of digital data in our PACS systems and called up on energy-efficient LCD monitors. And as we move away from patient CD discs to web-based secure PACS access systems for our referrers, we will consume even fewer resources.

So we can feel good about that. I know I do.

Of course, the hardware we use has a limited life, so it is not all roses. As technology inexorably advances, we can

not re-use the old equipment which currently is often dumped at the end of its short life. The components in our workstations and servers contain toxic chemicals and recycling is difficult and currently not used enough. The national E-Days held in October each year collect tonnes of used computer hardware and recycle or reuse much of it.

Now, we know that man-made CO2 emissions represent less than 0.3% of all greenhouse gas emissions (see [www.geocraft.com](http://www.geocraft.com)), meaning that 99.7% of greenhouse gas emissions are natural and beyond our control. We know that global warming in the current cycle has been under way for the last 100 centuries and ain't going to stop for us now. So changing over to digital technology is never going to save the planet –assuming it is actually in danger anyway.

However, as we realise the considerable economic and efficiency benefits of our change to digital imaging technology we can be happy that,



perhaps inadvertently we are being nicer to the planet at the same time. Who said Radiologists don't make a difference (however small)?

Gavin Davis, Hamilton



Photo – Conference Convenor: Chris McKee, and Invited Speakers: Bob Novelline, Suresh Mukherji and Clyde Helms.

## Bouquets!

*Since the first recorded scientific meeting held in Nelson in 1926 New Zealand radiology has come a long way as was evidenced by the very successful meeting held in Auckland last August. Along with the excellent line-up of world renowned speakers, Professors Bob Novelline, Suresh Mukherji and Clyde Helms, registrants will recall the excellent scientific programme and attention to detail. On behalf of New Zealand members we extend our thanks and congratulations to convenors Chris McKee, Phil Clarke, David Crane and Trevor Chan.*

## WAIKATO CANCER CENTRE FIRST IN NEW ZEALAND TO PROVIDE HIGH DOSE RATE BRACHYTHERAPY FOR PROSTATE CANCER PATIENTS – A KIWI STORY by Cris Hartoceanu

For many years the Waikato Cancer Centre was the only centre in the country with a High Dose Rate Brachytherapy Unit (HDR BRT) mainly to treat patients with cervical and endometrial cancers. As the incidence of these cancers declined steadily over the last decade or so the financial viability of our unit came under question from our administrators. If we wanted to continue to provide this type of service in the region as clinicians we had to come with a better plan.

Since we had a team of Physicists, Radiation Therapists and a clinician with basic training and knowledge in HDR we decided to further our expertise so that the Unit would not only be saved but could potentially become one of reference. We felt that versatility was crucial and therefore addressing other cancers like prostate, breast and head & neck should be part of our programme.

It was a hard sell to administrators. Eventually, with the support of our colleagues we managed to obtain permission to start the project. One clinician (myself) went to train for a few months under the supervision of Dr Martinez at William Beaumont Hospital, while a second one (Dr Tyrie) wished to join the effort and together we visited The Seattle Prostate Institute and Peter

McCallum Institute to further our knowledge and obtain accreditation for the specific procedure. Our Chief Physicist, Mr Coalter had a pivotal role in transforming the DXR bunker room into a proper operating room and providing all the necessary apparatus required for the procedures. Ms Donnell had to learn and shift from LDR based programmes to HDR bringing in invaluable experience with the first and the nursing team led by Ms Baylis helped to see our idea off the ground, never questioning the need to be in the hospital at very late hours.

After about 2 years of preparation and red tape hurdles (Dr Tyrie did a tremendous job to overcome those) we eventually started treating our first intermediate and high risk prostate cancer patients using HDR BRT as a method of dose escalation in combination with External Radiation to improve the outcome for this particular group of patients. Since this treatment approach was a first ever in New Zealand, it was done under both Ethics Committee approval as well as supervision from the Ministry of Health.

Now just over two years later we have treated well over 100 patients and our results are up there with any other centre in the world.

We were obviously pleased with our initial success but wanted to see further progress and therefore have also joined an international group of reputable centres to treat new low risk prostate cancer patients, using HDR BRT alone.

In parallel with the prostate projects we are trying to develop expertise in other areas as well such as complex gynaecological cancers, head & neck, etc. It is a long and challenging learning curve but we enjoy what we're doing and most importantly are happy to be of help to those patients where otherwise their options might be limited.

Treatment is also offered to patients referred by colleagues outside the region showing that the concept has been embraced by other centres. As a result HDR BRT will soon become available in other places in New Zealand.

In the end I wish to say a warm thank you to all those that were part of this effort (including the ones not mentioned here) and take this opportunity to acknowledge their efforts and support, and express my utmost gratitude to them.



# calendar

## NOVEMBER 2008

20: NZ Radiology  
Education Trust Fellowship  
applications due  
30 NOV – 5 DEC: RSNA

## DECEMBER 2008

11/12: Oncology Medical  
Statistics Course, Auckland CEC

## FEBRUARY 2009

24 – 26: Radiology  
Registrar Part 2 Intensive  
Course, Auckland  
TBA: Radiation  
Oncology Directors of Training  
Meeting, Wellington

## MAY 2009

15: Abstract Close-off

## JUNE 2009

19: NZ Branch ASM Early  
Bird Registration Close off

## JULY 2009

19: Radiology Directors of  
Training Meeting, Auckland  
20: Radiology Registrar  
Interviews, Auckland  
31 JULY – 2 AUGUST:  
NZ Branch ASM

Opinions expressed herein are  
those of the authors and do not  
necessarily reflect the view  
of the Royal Australian and  
New Zealand College of  
Radiologists (RANZCR).



### *Royal Australian and New Zealand College of Radiologists New Zealand Branch Annual Scientific Meeting*

Friday 31 July to Sunday 2 August 2009  
Te Papa, Wellington

#### *Keynote Speakers:*

**Regina Beets-Tan**, MD; PhD  
Professor of Radiology  
Maastricht University Medical Centre  
Maastricht, Netherlands

**W Dennis Foley**, MD  
Professor of Radiology  
Medical College of Wisconsin  
Milwaukee, USA

**Anthony E Hanbidge**, MD; FRCPC  
Associate Professor

Divisional Head – Abdominal Imaging  
University Health Network – Mount Sinai  
Hospital University of Toronto, Canada

#### *Please Contact the Conference Managers:*

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**Website:** <http://www.ranzcr2009.co.nz>

## *Musical Guide to Radiologists*

Gone are the days of quietly reporting in your own office. We all get to share and commune with our fellow man now. That welcome second opinion or fresh set of eyes are never far away in this cheek-by-jowl academic cauldron.

The modern communal reporting area is also something of a mosh-pit where we are exposed to our colleagues' foibles, habits, tics and idiosyncrasies. The following musical lexicon helps us to gain further insight into the complex dynamic, and classify our colleagues:

*Capriccioso* – the whimsical, disinhibited radiologist. Close to retirement, cashed up, nothing to lose and openly contemptuous of management, light classical, popera.

*Adagio* – pace themselves, normotensive, could do with a little extra thyroxine, blue chip shares, sensible Toyota, still listen to the Eagles.

*Largo* – slow, stately, large gaps between synapses, lots of commas in their reports. Talk about the war

a lot (which one?), cause registrar lid lag. Walnut dashboard in the car, doesn't trust e-mail, serious opera fan.

*Lamentoso* – whingers, heavily exposed to equities, unhappy marriage, leaky house. Still think the oral cholecystogram was a good test, fond of cello sonatas, the Cure and Joy Division.

*Sotto voce* – the typist's nightmare, conspiracy theorist, often on the cellphone, could be a snooker commentator, easy listening or string quartets.

*Vigoroso* – the young gun, drives a Porsche, babe magnet, super confident but wouldn't want him looking at your chest x ray. Loud reporter, i-pod, short attention span, heavily leveraged, Guns 'N Roses.

*Staccato* – like sitting next to a machine gun. Takes no prisoners, some collateral damage, partial to AC/DC but no tattoos.

## *Radiology and Radiation Oncology*

Examination Dates and Forms for 2009 are available on: [http://www.ranzcr.edu.au/educationandtraining/radiodiagnosis/examdetails/exam\\_dates\\_2009.cfm](http://www.ranzcr.edu.au/educationandtraining/radiodiagnosis/examdetails/exam_dates_2009.cfm)

## *Articles*

We welcome contributions to **FROM THE VIEWBOX**. We reserve the right to edit submissions.

Resonance will be published in March, July and November.

#### *2009 Deadlines are:*

4 March  
30 June  
30 October.

## *Next issue*

North Shore  
Lower Hutt.

## *Contact*

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*The New Zealand Committee  
wishes you a Merry Christmas  
and a relaxing and happy New Year*

Branch office Closed

23 December to 5 January 2009