

Medilink

Medical Professionals' direct link
to programs and services at The Wesley

The Wesley Hospital has one of the largest gastroenterology facilities in Australia

Gastroenterology

Articles in this issue include:

- + The difficult patient with bloating and the difficulty with bloating
- + Colorectal cancer screening and prevention
- + Small bowel capsule endoscopy (Pillcam)
- + Vaccination recommendations in inflammatory bowel disease
- + Food bolus obstruction of the oesophagus
- + Barrett's Ablation: How, when and why!
- + Endoscopic ultrasound: past, present and future
- + Colonoscopy: not the same as a blood test
- + Welcome to our new specialists

Welcome

Dr Luis Prado

Director of
Medical Services

Welcome to the Winter edition of Medilink. This edition of Medilink is focussed on gastroenterology and features articles from nine of the Wesley's Gastroenterologists. The articles are focused on information I hope is of interest and relevance to General Practice. The Wesley has a large gastroenterology program with more than 13 Gastroenterologists practicing at the hospital.

A state-of-the-art digital Endoscopy Unit with four suites was opened in 2010 and is now one of the busiest in Queensland, performing more than 1,000 cases each month.

You will notice we have refreshed the look of Medilink. This layout has allowed us to include more clinical articles from our specialists.

I am also pleased to advise that the Wesley has launched its new website, www.wesley.com.au. The site was developed to meet the needs of patients, visitors, GPs, Visiting Medical Practitioners (VMPs) and the community. The Wesley's key services and programs have been highlighted and linked to listings of our specialists to assist users to find the content they are seeking. The new website includes contact details and profile information for accredited specialists at the Wesley. I would welcome your feedback on the new website and on Medilink's new format.

Phone 07 3232 7926

Email dmsoffice.wesley@uhealth.com.au



The Wesley's gastroenterology program

Gastroenterologists at the Wesley provide a full range of services relating to the diagnosis, treatment and prevention of disorders of the oesophagus, stomach, small bowel, colon, gall bladder, liver and pancreas.

The Wesley has one of the largest facilities in Australia, and specialists work with some of the latest endoscopic equipment for all forms of endoscopy. Our services include 'routine' day patient and in-patient diagnostic and treatment gastroscopy and colonoscopy as well as many challenging interventional procedures such as luminal and biliary stent placement, ERCP and EUS (endoscopic ultrasound), capsule endoscopy and balloon enteroscopy. ■

FAST FACTS

Wesley Endoscopy Unit

Performs both diagnostic and therapeutic procedures for day and hospital patients.

Four fully integrated procedure rooms, including electronic reporting systems and image capture devices.

Fully integrated endoscopy management and image filing report system. The system captures pictures and information recorded on the computer in the procedure room and passes these via the computer network to the recovery area.



Fostering General Practitioner education in regional areas



Vicki Goss

Business Development Manager

A core part of our GP education program is our commitment to fostering GP education in

regional areas. As part of this we have four regional GP education events planned for

2012 in Rockhampton, Cairns, Mt Isa and Mackay.

Our Rockhampton event was on Tuesday 27 March with many of local GPs attending to hear presentations from Wesley Urologist Dr Troy Gianduzzo and Urologist, Dr Antonio Vega Vega, who is based in Rockhampton. Regional CPDs are a great opportunity for doctors outside of Brisbane to interact with our specialists and further develop their contacts in Brisbane.

As part of our collaborative position with local practice, a local specialist is

also invited to speak at all of our regional events.

If you're based in a regional area and would like to be involved with a regional CPD, please contact me on the contact details below. We are always looking at new ways to expand our GP education program. ■

Phone 07 3232 7258

Email vicki.goss@uchealth.com.au

Upcoming clinical education events

The Wesley's CPD events have been awarded four **Category 2** points by the RACGP for the 2011–2013 triennium. Full program details are sent out before each event. Registration is required prior to each event.

CLINICAL EVENTS FOR WESLEY DOCTORS

Date	Event	Topic*	Location
11 Aug	Active Learning Module	Women's Health	The Wesley Hospital
21 Aug	Continued Professional Development	Paediatric Emergency	The Wesley Hospital
29 Aug	Continued Professional Development (Rural)	Prostate Surgery	Mt Isa
18 Sep	Continued Professional Development	Infectious Diseases	The Wesley Hospital
13–14 Oct	Active Learning Module (Clinical Weekend)	Orthopaedics and Cardiology	The Wesley Hospital
8 Nov	Continued Professional Development (Rural)	Prostate Cancer	Mackay
20 Nov	Continued Professional Development	Neurology and Stroke	The Wesley Hospital

NOTE* Topics are subject to change

The Wesley Hospital's new website

The site includes a comprehensive list of services for both General Practitioner's and patients, with a detailed list of our Visiting Medical Practitioners including profiles and contact details.

www.wesley.com.au



Correction from Medilink Spring Edition

Please note there was an error in the Spring edition of Medilink. Orthopaedic Surgeon, Dr Alok Jhamb is a hand, wrist and shoulder specialist. He can be contacted at Queensland Combined Orthopaedic Specialists (QCOS) on 07 3721 8600.





**Dr Gautam
Ramnath**

Gastroenterologist

The difficult patient with bloating and the difficulty with bloating

Bloating is one of the more common, if 'unsexy' symptoms in gastroenterology and can be quite troublesome to manage. This is an aspect of gastroenterology that is often shoved under the IBS banner, and fills trainees and consultants with a tedious dread; but this blind approach has several traps. I took the opportunity to look at the process of my approach to patients with bloating, as well as a qualitative overview of data. This is not intended to be a review of current data.

1. Getting the patient to explain exactly what they mean by bloating is critical.

This is a subjective sensation. Location, the precise symptoms not just the term, and triggers should be defined. In many cases though this can be tedious, a discrete physical process such as dyspepsia or biliary disease becomes apparent as the people often struggle to describe visceral sensation and latch on to common terms. The trick is to separate subjective bloating, from distension.

2. Distension, which is the visible/measurable increase in girth, should be separated from the sensation of bloating.

I often ask if clothes need to be loosened through the day, if others can see this, and often if this is the case, people will have photos of the distension. My approach to distension is to follow extraluminal, wall, then intraluminal/mucosal process. In other words, follow the gut from the outer to mucosal surface, in terms of differentials and exclude/consider sinister pathology as this is often what drives the patient to the review.

(i) Exclude obstruction (especially if vomiting is an issue): this can be due to adhesions (multiple operations, past appendiceal abscesses), peritoneal metastatic disease (especially ovarian), inflammation, luminal tumours (classically colorectal cancer), and sometimes foreign bodies. A plain AXR at the peak of symptoms can be very informative. Depending on the history obtained at this point, further imaging

Getting the patient to explain exactly what they mean by bloating is critical

studies, correlation with Hb, Iron levels, specific symptoms of neoplasia, and tumour markers can be useful.

(ii) Constipation and meals:

constipation can be associated with distension as can a large meal.

Neither is particularly dangerous (but troublesome) – however do not be distracted from the possibility of obstruction, and the consideration of neoplasia, by these factors.

(iii) Ascites: this can be insidious and is easily identified on US. Ascites is also often associated with an increase in tumour markers associated ovarian cancer, and sometimes pancreatic cancer, so take care not to make this association immediately in the absence of visible pathology. In some cases laparoscopy is needed. My last patient with ascites and a high CA125/HE4, had portal hypertension from cirrhosis – control of the portal hypertension resolved the ascites and the tumour markers.

(iii) Mucosal: coeliac disease, and specific malabsorption/inflammatory processes are the main culprits here. In some cases (often the history of symptoms is shorter) infections/bacterial overgrowth is responsible.

3. Bloating in IBS: this really implies that other cause and effect pathology has been excluded. In the purest form the problem is one of altered sensory function in the gut. Often this results in an excess of symptoms from what most people would consider normal stimuli. Bloating in IBS is multifactorial. But there has been interest in recent times over specific prokinetics, modulation of sensation with SSRI and TCA antidepressants among others, probiotics, and modification of diet especially FODMAP.

(i) FODMAP stands for fermentable, oligosaccharides, disaccharides (think lactose and sucrose), monosaccharides (fructose), and polyols (sugar alcohols including sorbitol, mannitol, stone fruits, apples and pears, mushrooms, cauliflower, snow peas, maltitol, and xylitol). A trial of a high FODMAP diet increased symptoms of IBS patients in particular pain and bloating. Other studies of restricting FODMAPs decreased these symptoms.

Be careful: even with obstructive pathology, a FODMAP diet will often decrease symptoms. This is one of the reasons to take care that physical pathology is not overlooked even if the presentation is taxing. Don't forget that patients with antibody negative coeliac disease do exist. So if symptoms persist, but TTG Ab is negative, coeliac disease should still be considered.

Thinks simple foods first: especially lactose and fructose. Restriction of these agents is simple to achieve though absolute avoidance is almost impossible. Symptoms should resolve rapidly if these substances are responsible. ■

Dr Gautam Ramnath is a Gastroenterologist with a special interest in management of acute bleeding and anaemia, complex presentations, Irritable Bowel Syndrome, endoscopy and colonoscopy and liver disease. He has been practicing at the Wesley since 2007.

Dr Ramnath completed his undergraduate training in the University of Queensland followed by a year in Darwin. He then spent ten years of post-graduate training in gastroenterology and with the Liver Transplant team at the Flinders Medical Centre, South Australia. He is a Fellow of the Royal Australian College of Physicians and the Gastroenterology Society of Australia.



Dr Andrew Bryant

Gastroenterologist

Colorectal cancer

Screening and prevention

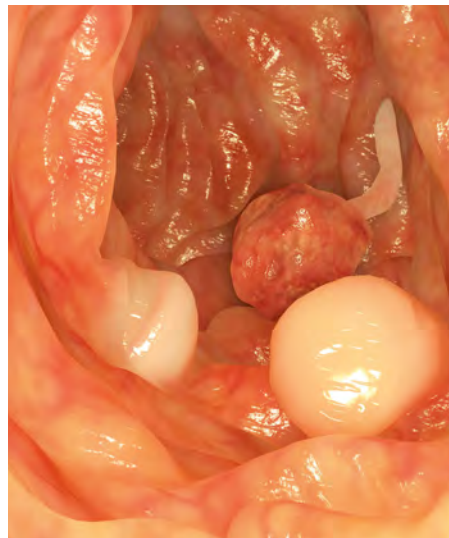
The National Bowel Cancer Screening Program in Australia sends faecal occult blood tests (FOBTs) to all Australians turning 50, 55 and 65. When positive results are followed with colonoscopy, polyps and occasionally early bowel cancers are frequently found. While this is better than no program at all there are shortcomings. Firstly not everybody sent a test will go through with it. The other problem is that the studies that show FOBTs prevent bowel cancer and reduce the mortality rate are based on two yearly testing. Nevertheless it is good we have a national program. Some otherwise socially advanced nations such as the Netherlands do not. More frequent FOBTs are possible privately through general practices but the uptake is highly variable and dependent on the enthusiasm of individual GPs.

The other issue to remember is that screening is for the asymptomatic (by definition). Those patients who report bleeding or are iron deficient should be assessed by appropriated testing that should usually include a colonoscopy. FOBTs are not appropriate for these people.

FOBTs are only for those patients with an average risk of colorectal cancer (CRC). Those with first degree relatives with CRC or polyps (advanced or multiple) should be going directly to a colonoscopy. Similarly those with a personal history of polyps or CRC should be in regular colonoscopic screening programs. Other high risk groups include patients with IBD.

Colonoscopy is an operator dependent test and steps are currently underway to improve quality and training focusing on adenoma detection rates and completion.

Studies have confirmed the impact of colonoscopy on CRC mortality. A report published in *Cancer* (7 Dec 2009) has shown a progressive reduction in CRC incidence since 1985 in the USA. This has accelerated from 1997 with an annual decline in CRC mortality of 2.7% per year. Half of the 22% reduction in CRC incidence from 1975 to 2000 was due to screening



Typical forms of intestinal polyps

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with reduction of lifestyle risk factors explaining the other half. CRC mortality has declined by 26% from 1975 to 2000. It is thought that 35% of this reduction is due to lifestyle factors while 12% is due to improved treatment. If current trends continue a 36% overall decline in CRC mortality could occur by 2020. If screening accelerates however a 50% reduction in mortality could be achieved in that time

On the other side of the coin however a German group has reported similar data to a Canadian group's report that colonoscopy is much better at reducing the incidence of left sided cancer than right sided ones. It is essential that the colonoscopist is able to identify sessile serrated adenomas as these are often right sided and subtle. I feel this lesion is better understood here in Australia than overseas judging by the reports from overseas meetings. It seems that the US gastroenterologists are only

lately accepting the importance of removing these polyps.

I would advise strong consideration of endoscopic rather than surgical management of even large and right sided polyps. In recent times the need for surgery for nonmalignant neoplasia in the colon has reduced due to improvements in technique, particularly lifting with saline to reduce the risk of full thickness bowel wall damage or perforation. I would advocate discussion of endoscopic resection options prior to committing to surgery.

Finally, whatever the reason people are having colonoscopies, polyps are frequent incidental findings. The more people who are either found to be free of polyps or who

have their polyps removed, the more people will not progress to cancer. The major limiting factor is the initial participation rate in screening. The word is slowly getting out to the community but it must be said that public education programs in CRC prevention have not been as successful as other malignant diseases such as prostate, breast and cervical cancer. The most important determinant for success is education within general practice. ■

Dr Andrew Bryant is a Gastroenterologist with a special interest in endoscopy, hepatology, Barrett's EMR and the removal of large polyps. He holds a Bachelor of Medicine and a Bachelor of Surgery from The University of Queensland and has a Diploma of Aviation Medicine from the University of Otago.



Dr Andrew Pascoe

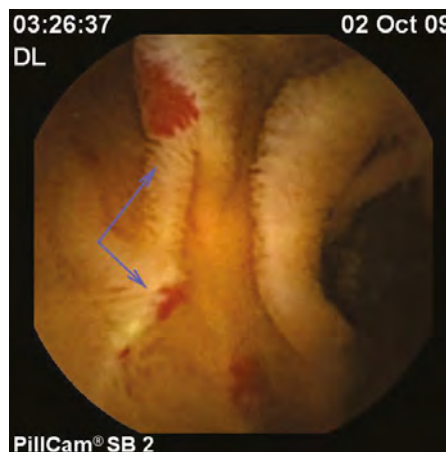
Gastroenterologist

Small bowel capsule endoscopy (Pillcam™)

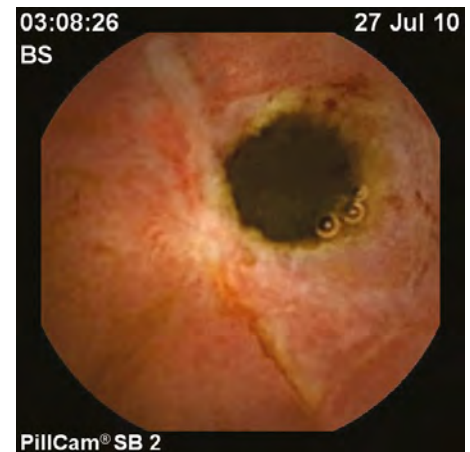
Pill camera's allow high quality diagnostic imaging of the small intestine and are generally used after gastroscopy and colonoscopy to investigate a patient for a source of gastrointestinal bleeding (i.e. acute haemorrhage or iron deficiency anaemia). Pillcam has to a large extent replaced small bowel enema x-ray examination of the small bowel. There is an evolving use of capsule endoscopy in gastrointestinal polyposis syndromes and Crohn's disease.

Image resolution is 1:8, higher than conventional endoscopes. The Pillcam is 11 x 26mm, has internal batteries and is single use. Gut peristalsis propels the Pillcam through the small bowel to the colon. Images are transmitted two per second by radiofrequency captured by an abdominal sensor belt which connects to a data recorder, storing images in jpeg format. The study takes about 9 hours, usually an outpatient setting. Patients need to have a normal swallow. Patients who have dysphagia, a large hiatal hernia, gastroparesis, pyloric stenosis, some of those who have had a fundoplication and all of those with a Lapband in place will have the Pillcam deployed into the duodenum with an endoscope.

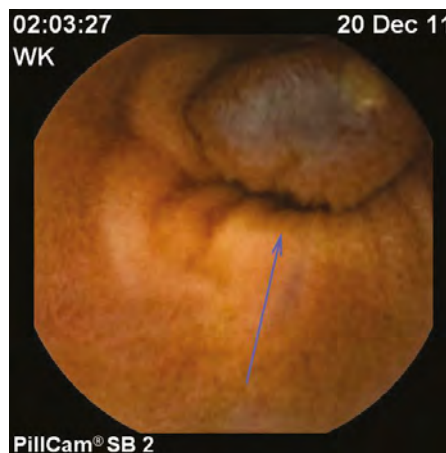
Patients need to be off oral iron for a week prior and need to be on a clear fluid diet for about 18 hours before having the study. Colonoscopy prep is usually not needed. Images are in time sequence allowing a reasonable estimate of the site of the pathology, determined by the "number of minutes" an abnormality is from the stomach or colon.



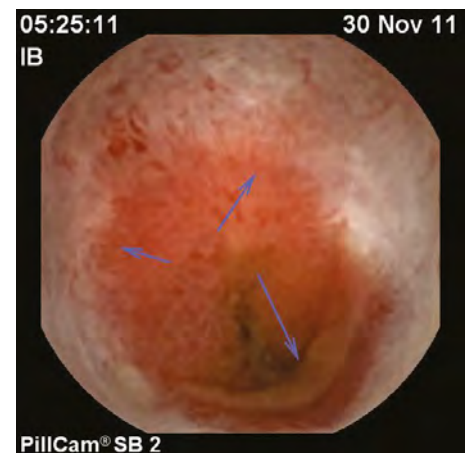
AVM (arteriovenous malformation, angioectasia)



Crohn's or NSAID's Disease stricture/ulcer



Metastatic Melanoma, ulcer



Radiation Enteritis with ulcerated stricture

Pill camera's allow high quality diagnostic imaging of the small intestine and are generally used after gastroscopy and colonoscopy to investigate a patient for a source of gastrointestinal bleeding

Pillcam is well established as the gold standard investigation for obscure small bowel pathology.

The images above demonstrate examples of pathology identified by Pillcam. ■

Dr Pascoe, BPharm, BSc(Hons), MBBS, FRACP, has been a Gastroenterologist at The Wesley Hospital since 1999. He is a Brisbane University of Queensland graduate, post

Fellowship studies two years in Oxford at the John Radcliffe Hospital working for a large multicentre colon cancer screening trial.

He continues his sub-specialty interest in colon cancer along with coeliac disease and other small intestine disorders. Dr Pascoe consults in the Evan Thomson Medical Centre and has regular endoscopy sessions at the Wesley Hospital Endoscopy Unit. Dr Andrew Pascoe has provided high quality capsule endoscopy services across Queensland since 2004.



Dr Daniel Burger

Gastroenterologist

Vaccination recommendations in inflammatory bowel disease

The management of inflammatory bowel disease (IBD; Crohn's disease and ulcerative colitis) involves altering an individual's immune response to gut microbiota. Increasingly, immunomodulators (azathioprine, mercaptopurine or methotrexate) are used early in the disease course and often in combination with anti-TNF therapy (infliximab or adalimumab). Whilst this leads to improved symptom control, quality of life, reduced hospitalisation and surgery, clinicians need to be alert to possible side effects including infective complications.

IBD in isolation does not place an individual at risk of infections, however medical therapy is clearly implicated. Data from large global trials with anti-TNF therapy indicate serious sepsis occurs in 6.6 per 100 patient-years^[1]. In practical terms, this means that if you treat 15 patients (100/6.6) with Crohn's disease for a year with biologics, then you can expect one serious infection^[2]. Case-control studies indicate that the relative risk of infections increased with any one of steroids, azathioprine or infliximab (OR 2.9; 95% CI 1.5–5.3)^[3]. Furthermore, the combination of two or more of these drugs dramatically increases the risk of infection (OR 14.5; 95% CI 4.9–43), as does age greater than 50 (OR 3; 95% CI 1.2–7.2)^[3].

Vaccine-preventable illness provides an opportunity to reduce infective complications associated with medical therapy. As up to half of newly diagnosed Crohn's disease or ulcerative colitis patients will need immunomodulators, a cumulative dose of >700mg of prednisolone or anti-TNF therapy, and can thereby be considered immunocompromised, prevention is best started before such agents are needed.

IBD in isolation does not place an individual at risk of infections, however medical therapy is clearly implicated

International recommendations for patients with inflammatory bowel disease are presented in Table 1^[4]. It is important to remember that live-attenuated vaccinations (Measles–Mumps–Rubella, Oral Typhoid, Varicella, Yellow fever, Polio, BCG) are contra-indicated in patients on immunosuppression (including prednisolone).

The implementation and uptake of these recommendations by patients and clinicians has been examined and recently presented at an international meeting^[5]. In this study, a vaccination checklist was introduced for routine clinic consultations, with a copy given to each of the patient, general practitioner and hospital notes. Over 60% of the 182 patients reviewed during a 3 month period where

treated with either immunomodulators or anti-TNF therapy. Vaccine uptake varied with 82%, 47% and 35% of patients receiving influenza, pneumococcal and hepatitis B vaccinations, respectively. The introduction of this routine checklist led to a significant increase in the recommendation of appropriate vaccinations by gastroenterologists.

The management of IBD is increasingly complex with potent medications, exposing patients to a small but real risk of infective complications. Prevention through vaccination strategies is achievable and should be incorporated into routine clinical care. ■

Dr Burger joined the Wesley Gastroenterology and Liver Group in 2012 and has a sub-specialty interest in inflammatory bowel diseases (IBD), Crohn's and ulcerative colitis. Along with expertise in IBD, his practice encompasses general gastroenterology, liver diseases, high quality colonoscopy and training. He is a staff specialist at Princess Alexandra Hospital, establishing a comprehensive IBD service including research and specialist registrar training. Dr Burger consults in the Sandford Jackson Building with regular endoscopy sessions at the Wesley Endoscopy Unit.

TABLE 1
Vaccination strategy at diagnosis of IBD, or when first seen*

At Diagnosis of IBD*	Varicella vaccine (if no history of chicken pox and negative VZV serology) Hepatitis B (if HBV serology negative) Pneumococcal vaccine Influenza (trivalent inactivated) +/- H1N1 Human papilloma virus (in young women, if not already given as of national vaccination strategy)
Annually	Influenza (trivalent, inactivated)
Booster	Pneumococcal polysaccharide vaccine (3–5 years)
Discretionary	Travel vaccines: take advice from appropriate specialist; live vaccines (e.g. Yellow fever, oral poliomyelitis) should be avoided if on immunomodulators* Chest X-ray, interferon release assay (Quantiferon Gold) or tuberculin skin test (mantoux) prior to anti-TNF therapy

* Assuming no current immunomodulators (defined as prednisolone >20mg/day for >2 weeks, or azathioprine/mercaptopurine, or methotrexate, or anti-TNF therapy within 3 months). Adapted from Rahier et al, J Crohn's Colitis 2009;3:47–91.^[4]

References:

- Burmester GR, Mease P, Dijkmans BA, et al. Adalimumab safety and mortality rates from global clinical trials of six immune-mediated inflammatory diseases. *Ann Rheum Dis* 2009;68:1863–9.
- Rahier JF, Yazdanpanah Y, Colombel JF, et al. The European (ECCO) Consensus on infection in IBD: what does it change for the clinician? *Gut* 2009;58:1313–5.
- Toruner M, Loftus EV, Jr., Harmsen WS, et al. Risk factors for opportunistic infections in patients with inflammatory bowel disease. *Gastroenterology* 2008;134:929–36.
- Rahier JF, Ben-Horin S, Chowers Y, et al. European evidence-based Consensus on the prevention, diagnosis and management of opportunistic infections in inflammatory bowel disease. *J Crohn's Colitis* 2009;3:47–91.
- Burger DC, Bald W, Walsh A, Travis S. Uptake in the UK of vaccination recommendations in inflammatory bowel disease. *J Crohn's Colitis*, 2012;6 S1–S108

Food bolus obstruction of the oesophagus

Acute food bolus obstruction of the oesophagus is a common emergency in gastrointestinal practice. After upper and lower gastro-intestinal haemorrhage, foreign body impaction is the third most common non-biliary endoscopic emergency. Management by flexible endoscopy is possible in most instances.

In a recent prospective study of adults peptic oesophageal stricture and half had eosinophilic oesophagitis (EE) (See Figure 1^[1]). EE is increasingly recognised as a cause of dysphagia and chest pain in children and young adults. It is an atopic disease involving ingested and inhaled allergens.

A pathological eosinophilic infiltrate is diagnosed by finding >15 eosinophils per H.P.F. on oesophageal mucosal biopsy. The infiltrate can result in a narrowed oesophageal lumen (narrow bore oesophagus).

Children can present with abdominal pain, vomiting and dysphagia. Presentation with adults is with dysphagia, heartburn, chest pain or impaction of a food bolus in the oesophagus. There is often a history

Major causes of food bolus obstruction of the oesophagus

	Eosinophilic oesophagitis	Peptic stricture
Age/Gender	Young males	Males and females mean age 68 years
Endoscopy	Furrows, rings, etc	Peptic oesophageal stricture
Level of obstruction	Proximal oesophagus	Distal oesophagus
Prior bolus obstruction	Yes	Yes
Oesophageal biopsy	Eosinophils++	No eosinophils
Treatment	Flixotide	Dilatation

Figure 1

of allergy (asthma, hay fever, eczema). A male predominance (70%) is unexplained.

Distinctive endoscopic features are linear furrows, mucosal rings and white papules, and the narrowed lumen may be appreciated (see Figure 2^[2]). Although EE and gastro-oesophageal reflux are separate entities there is a significant overlap of the conditions.

The food bolus may be held up in the proximal oesophagus in EE and the distal oesophagus in patients with peptic oesophageal stricture. Endoscopic

EE is an exciting “new” oesophageal disease. It usually presents in atopic young males.

management is by the “push technique” which involves air insufflation and gentle pressure to advance the bolus to the stomach. An endoscopic snare can reduce the size of the bolus and a retrieval net can be used to allow oral recovery without compromising the airways.

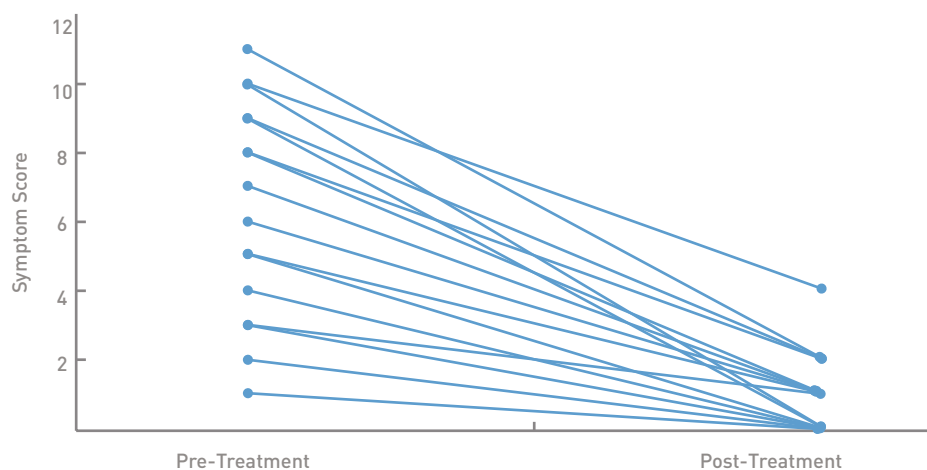


Figure 3. Symptom score before and after treatment with swallowed Flixotide. Cumulative symptom score based on the presence and frequency of dysphagia, chest pain, heartburn, regurgitation, vomiting and abdominal pain (each scored 0 to 3).



**Professor
Paul Kerlin**

Gastroenterologist

Histology is essential for the diagnosis of EE. A minimum of four biopsies are required to obtain a diagnostic sensitivity of 94%. The endoscopic appearance can be normal in 10% of patients with EE. Routine blood tests may show peripheral eosinophilia and an elevated serum IgE although not reliably so.

Both swallowed Fluticasone (Flixotide) and Budesonide solution (not yet available in Australia) have been used as topical therapy for EE. Studies on swallowed Fluticasone (250mcg, two puffs twice daily, swallowed/not inhaled with mouth rinse and spit at thirty minutes) is continued for four weeks. Studies have confirmed the symptomatic and histological response in EE. (see Figures 3 and 4) Recurrence is common and estimated at 50% by twelve months. We use swallowed Flixotide (on demand) for two to four weeks for further episodes. Oral candidiasis is infrequent.

Aerial allergens and food allergens have been considered. (Ref 3) A six food elimination diet has been evaluated in children eliminating cow's milk protein, wheat, soy, egg, seafood and peanuts. Resolution of the eosinophilic infiltrate was reported in 77% in one series.

EE is an exciting "new" oesophageal disease. It usually presents in atopic young males. It is increasingly diagnosed and represents one of the most common indications for out-of-hours emergency endoscopy. Safe and effective endoscopic techniques are available to manage the bolus without compromising the airway. Current topical swallowed corticosteroids are the mainstay of therapy in paediatric and adult patients with EE. ■

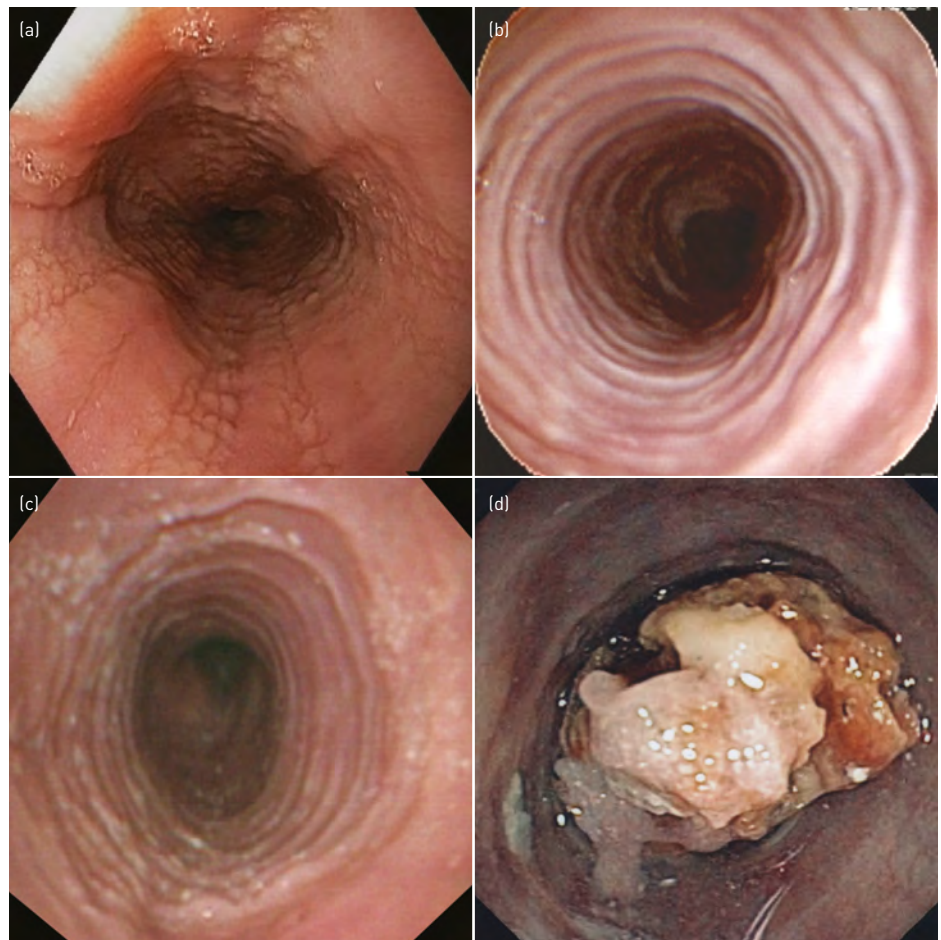


Figure 2. Endoscopic photographs showing common features of eosinophilic oesophagitis (a) Linear furrows (b) Concentric mucosal rings (c) White papules representing eosinophilic abscesses in the oesophageal mucosa (d) Meat bolus obstructing the oesophageal lumen.

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Professor Paul Kerlin is a member of the Wesley Gastroenterology and Liver Group. He graduated from The University of Queensland (Honours) and trained in gastroenterology in Australia, at The University of Southern California (Los Angeles) and at the Mayo Clinic (Rochester, Minnesota). Prior to developing his practice at Wesley, he was Director of Gastroenterology and Hepatology at Princess Alexandra Hospital.

References:

- 1 Kerlin P., Jones D., Remedios M. and Campbell. C. Prevalence of Eosinophilic Esophagitis in adults with food bolus obstruction of the esophagus. J. Clin. Gastroenterol 2007;356-61.
- 2 Remedios M., Campbell C., Jones D. and Kerlin P. Eosinophilic esophagitis in adults: clinical, endoscopic, histologic findings, and response to treatment with fluticasone propionate. Gastrointest. Endoscopy 2006;63:3-12.
- 3 Remedios M., Jones D. and Kerlin P., Eosinophilic Oesophagitis: Epidemiology, Pathogenesis and Management. Drugs 2011;71(5):1-14

Barrett's Ablation: How, when and why!

Barrett's oesophagus (oesophageal mucosal intestinal metaplastic change) with implications on management and surveillance is a common referral to gastroenterology practice. Barrett's oesophagus is not uncommon affecting 0.5–1% of the adult Australian population, 6% of patients over age 40 and up to 12% of the population with gastro-oesophageal reflux. There is the suggestion of both an increasing incidence and prevalence with increasing diagnosis at routine gastroscopy.

The concern is progression to oesophageal adenocarcinoma; a cancer of increasing incidence (perhaps driven by lifestyle factors) with a dismal 5 year survival of 15%. The risk of Barrett's oesophagus dysplastic progression to high grade dysplasia is 0.9%/patient/year and to carcinoma 0.5%/patient/year. It should be remembered that the majority of patients will never experience progression of their Barrett's to malignancy. There are parameters that may suggest higher progression risk including obesity, smoking, excess alcohol and male sex.

Prevention of oesophageal carcinoma by vigilant screening is the ideal. The current recommendation for screening intervals for Barrett's oesophagus (if the patient is appropriate for a screening program caveated by co-morbidity) is:

- 1. Non-dysplastic metaplasia:** endoscopic surveillance every 1–3 years to detect progression to dysplasia or adenocarcinoma.
- 2. LGD (low grade dysplasia):** endoscopic surveillance every 6–12 months to detect progression to HGD or adenocarcinoma.
- 3. HGD (high grade dysplasia) and CIS (carcinoma in-situ):** treated like invasive adenocarcinoma with previous standard of care being oesophagectomy but now including endoscopic staging and therapy.

There have been rapid advances in the endoscopic management of pre-cancerous dysplastic Barrett's and early

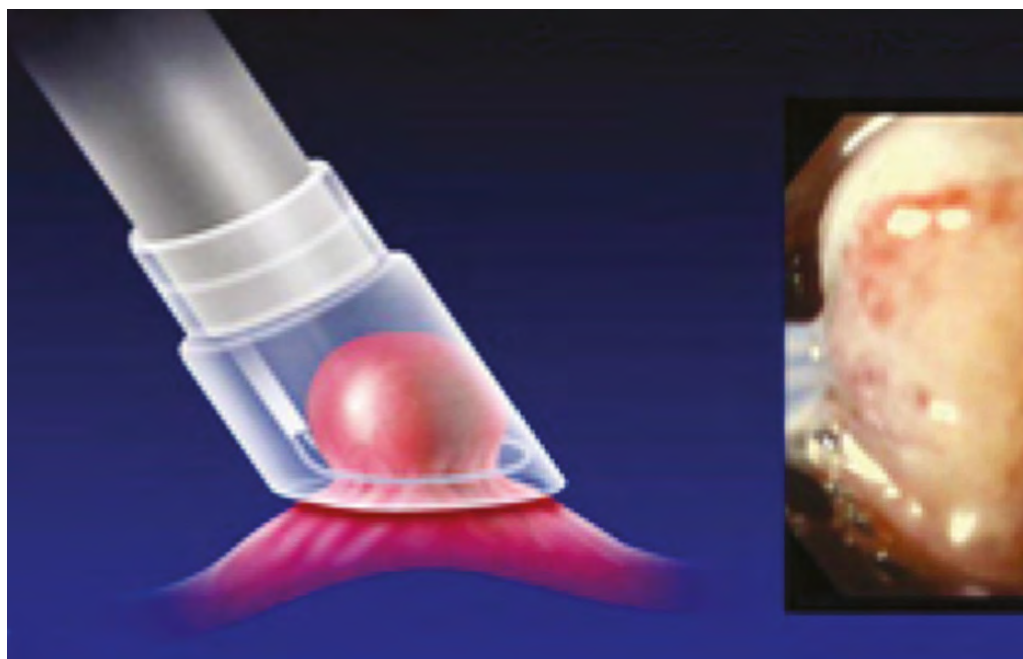


Figure 1. Endoscopic Mucosal Resection Cap Method (a) High Grade Dysplasia (b) Endoscopic Mucosal Resection

mucosal cancer, with the potential of "cure" and reducing requirement for oesophagectomy, a procedure not without morbidity and mortality. No longer is oesophagectomy the only curative option. A multi-disciplinary team approach is now part of the management paradigm. Endoscopic options for dysplastic Barrett's, specifically for high grade dysplasia and for early adenocarcinoma limited to the oesophageal mucosae include:

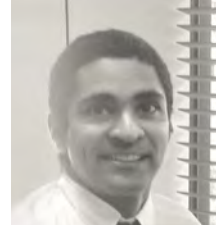
was published in the New England Journal of Medicine in 2009. In a sham controlled study of 127 patients low grade dysplasia was eradicated in 90.5% of cases and high grade dysplasia in 81% with reduced risk of progression to carcinoma. There have been subsequent publications supporting the utility of HALO RFA in the management of Barrett's oesophagus.

Although these techniques are exciting and have changed how we manage dysplastic

The concern is progression to oesophageal adenocarcinoma; a cancer of increasing incidence (perhaps driven by lifestyle factors) with a dismal 5 year survival of 15%.

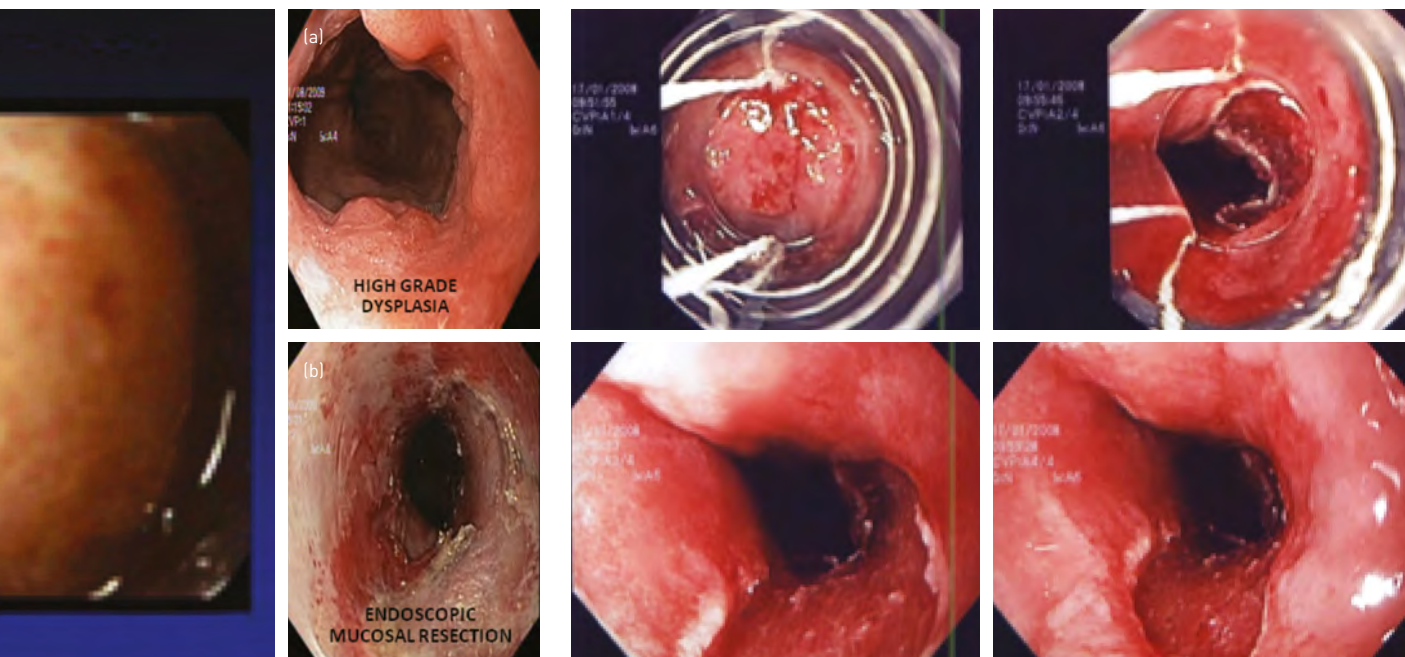
- 1. Endoscopic mucosal resection:** see Figure 1.
- 2. Radiofrequency ablation:** see Figure 2. HALO Radiofrequency Ablation (RFA) is the newest development in the dysplasia eradication armamentarium, entering clinical practice in 2007. The sentinel paper

Barrett's oesophagus their use should be limited to an endoscopist with expertise in the field. Close clinical and endoscopic follow-up is essential including close liaison with appropriate surgical and oncology colleagues. ■



Dr Matthew Remedios

Gastroenterologist



Dr Matthew Remedios is a Gastroenterologist specialising in interventional endoscopy with a private practice based at The Wesley Hospital and has a staff specialist appointment at the Royal Brisbane and Women's Hospital. He has been a member of the Wesley Gastroenterology and Liver Group since 2006 after completing his advanced training in gastroenterology at the Townsville General Hospital and Princess Alexandra Hospital, Brisbane.

He completed postgraduate training in interventional endoscopy at St Michael's Hospital, Toronto, Canada furthering and developing his interest in Barrett's endotherapy (endoscopic mucosal resection and HALO radiofrequency ablation), ERCP, small bowel balloon enteroscopy and large gastrointestinal polyp resection. Dr Remedios performs endoscopic therapy for dysplastic Barrett's including HALO RF ablation at the Wesley Endoscopy Unit.

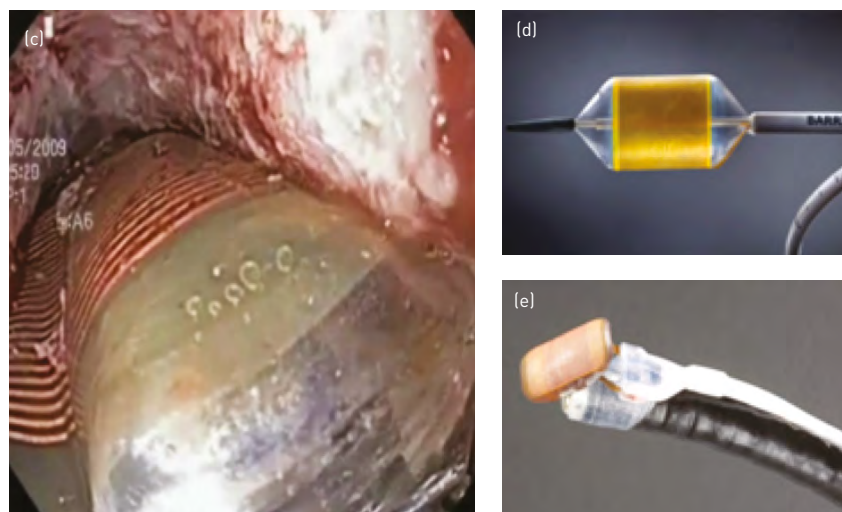


Figure 2. Halo Radiofrequency Ablation
(c) Halo 360 Ablation (d) Halo 360 RFA Balloon
(e) Halo 90 RFA Catheter



Endoscopic ultrasound: Past, present and future

Endoscopic ultrasound (EUS) was developed in the 1980s, and has come a long way since the initial cumbersome mechanical array instruments. The present generations of endosonoscopes allow exquisite high resolution images of anatomy and pathology within the gastrointestinal tract and the adjacent structures. Advances in scope design, capability and training have also enabled endosonographers to offer patients a wide range of novel therapeutics. EUS is a minimally invasive and well-tolerated procedure, performed under monitored sedation. The Wesley Hospital has recently acquired the Pentax Hitachi Preirus, the first hospital in Australia to offer this state-of-the-art EUS system.

Cancer diagnosis and staging remains the workhorse of EUS within the gastrointestinal tract – the oesophagus, stomach, pancreas and rectum – as well as the mediastinum and nodal staging of non-small cell lung cancer. EUS is also invaluable in the assessment of submucosal lesions, thickened gastric folds, and a variety of benign disorders, including choledocholithiasis, microlithiasis, and chronic pancreatitis.

Pancreatic cancer

Despite a relatively low prevalence, pancreatic cancer is one of the biggest “cancer killers”. The poor survival rates (3% 5-year survival in the UK^[1]), reflects the generally late presentation and limited treatment modalities for advanced disease; the average survival time after diagnosis is 6–10 months. Surgery is the only potential curative treatment, therefore early and accurate diagnosis of solid masses as cancer is vital. A recent meta-analysis of the utility of EUS guided fine needle aspiration (FNA) in early diagnosis of pancreatic cancer reviewed 33 studies, including 4984 patients found a combined sensitivity of 91%, with a specificity of 94%^[2]. The reason for these excellent results is better detection of lesions <3cm in size when compared with CT3, and the ability to collect specimens through FNA.

Oesophageal cancer

From 1973 to 1992 the incidence of oesophageal adenocarcinoma has increased fourfold^[4]. Superficial disease is being identified more frequently due to rigorous surveillance of Barrett’s oesophagus, the largest risk factor for oesophageal adenocarcinoma in the developed world. The prognosis of oesophageal cancer depends on the depth of invasion (T-stage) as well as the presence of lymph node metastases (N-stage). EUS can accurately define the

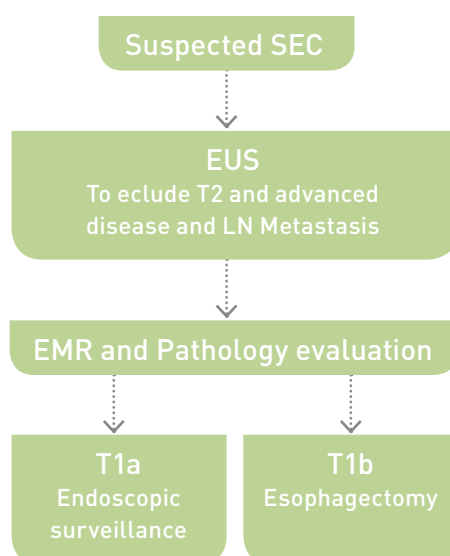


Figure 1. Proposed diagnostic algorithm for suspected superficial esophageal cancer (SEC). LN, lymph node^[4].

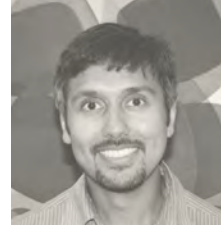
wall layer structure of the oesophagus and potentially differentiate between superficial mucosal cancers which have <5% rate of lymph node metastases and deeper submucosal lesions where the rate of nodal involvement ranges from 19–44%^[5]. Early lesions are considered for endoscopic mucosal resection rather than major surgery. This degree of assessment does however require specific high-frequency ultrasound mini-probes that are generally not widely available. Thus the role of EUS is determination of more advanced disease and local nodal metastases.

EUS FNA of loco-regional nodes is safe and highly accurate, and can assist surgeons and oncologists with tailoring treatment for these patients. A practical algorithm I follow is indicated in Figure 1.

The future for EUS

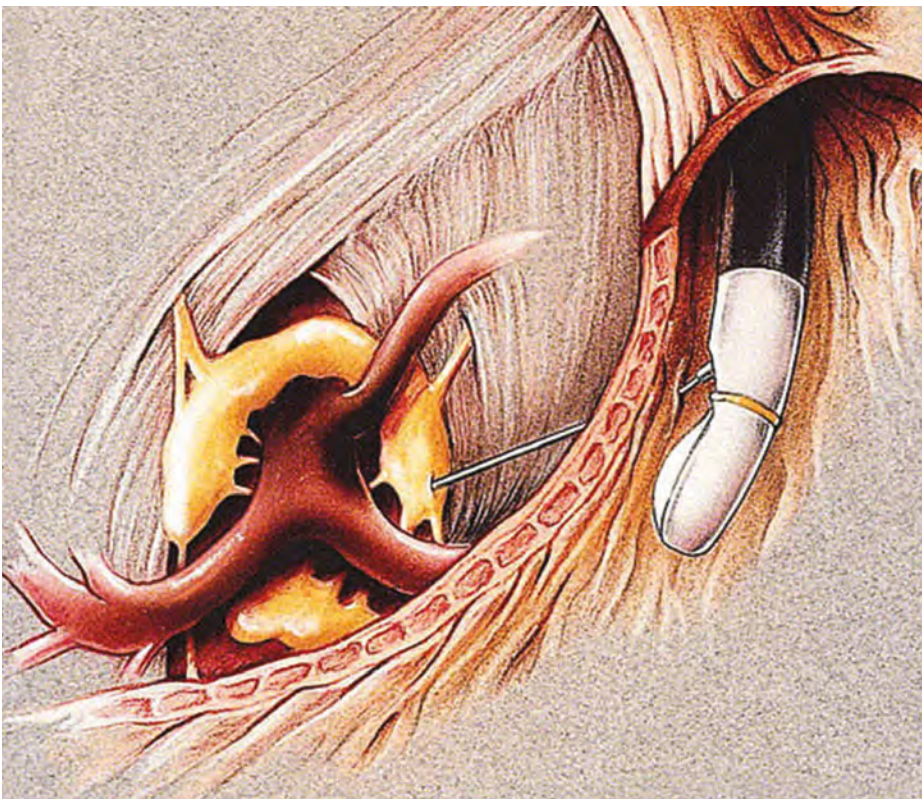
Therapeutic EUS, even though relatively new, has grown into mature technology. Single step, transgastric drainage and stenting is a minimally invasive alternative which has largely replaced surgery and radiologic drainage as standard treatment for peripancreatic fluid collections. This technique has further evolved where one can now pass therapeutic endoscopes through the stomach into the retroperitoneum to debride pancreatic necrosis. Pancreatic cancer pain has previously required radiologic neurolysis of the coeliac ganglia via a percutaneous approach with the patient in a prone position, but this can now be performed more comfortably and with equal efficacy under sedation with EUS^[7]. As for other procedures, cases reports and series have allowed us a glimpse of future potential applications, such as cyst and tumour ablation, delivery of anti-tumour agents and biliary drainage. Expanding technology with scope design and enhanced ultrasound imaging including 3D ultrasound, tissue elastography and contrast enhanced ultrasound also offer wide scope for research. ■

Dr Saurabh Gupta graduated in Medicine from UNSW, and after completing his Gastroenterology Fellowship in Sydney in 2007 he undertook two years of advanced endoscopy training in Brisbane and then at Duke University in the United States. He works as a consultant gastroenterologist and interventional endoscopist at both the Princess Alexandra Hospital and the Wesley Hospital where he consults from rooms in the Evan Thomson Building. His main focus relates to gastrointestinal oncology – with a special interest in endoscopic ultrasound and ERCP, along with endoscopic therapy of early malignancy.



Dr Saurabh Gupta

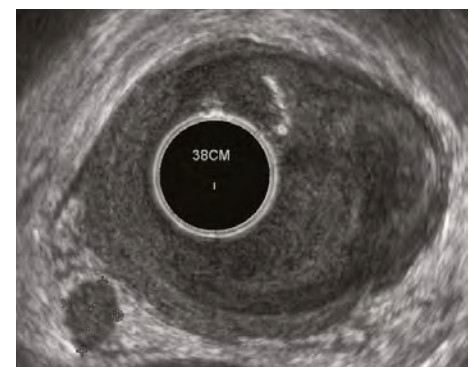
Gastroenterologist
and Therapeutic
Endoscopist



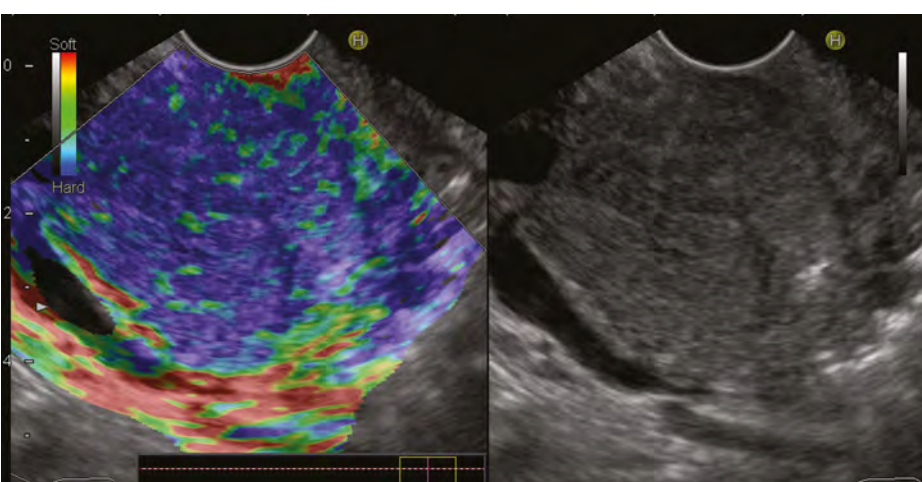
EUS guided Coeliac Plexus Block



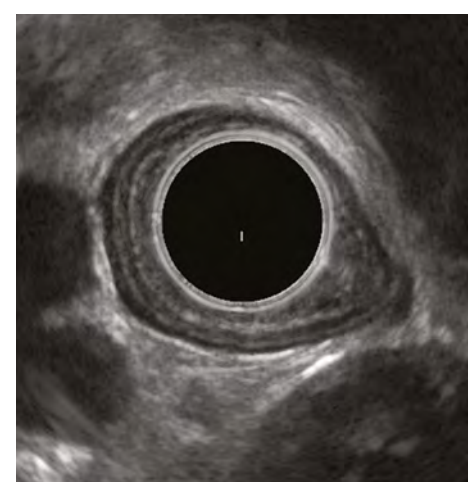
FNA Performed



N1 oesophageal cancer



'Hard' pancreatic lesion consistent with ductal adenocarcinoma



Normal oesophagus

- Walters S, Rachet B, Westlake S, et al. Cancer survival, England, patients diagnosed 2001–2006 and followed up to 2007: one year and five year survival for 21 common cancers, by sex and age. London: Office for National Statistics; 2009.
- Hewitt MJ, McPhail MJW, Possamai L et al. EUS guided FNA for diagnosis of solid pancreatic neoplasms: a meta-analysis. *Gastrointestinal Endoscopy* 2012
- Gress F, Gottlieb K, Sherman S, et al. Endoscopic ultrasonography guided fine-needle aspiration biopsy of suspected pancreatic cancer. *Ann Intern Med* 2001;134:459–64.
- Holmes RS, Vaughan TL. Epidemiology and pathogenesis of esophageal cancer. *Semin Radiat Oncol* 2007;17:2–9.5 The Paris endoscopic classification of superficial neoplastic lesions: esophagus, stomach, and colon: November 30 to December 1, 2002. *Gastrointest Endosc* 2003
- The Paris endoscopic classification of superficial neoplastic lesions: esophagus, stomach, and colon: November 30 to December 1, 2002. *Gastrointest Endosc* 2003
- Thosani N, Singh H, Kapadia A et al. Diagnostic accuracy of EUS in differentiating mucosal versus submucosal invasion of superficial esophageal cancers: a systematic review and meta-analysis. *Gastrointestinal Endoscopy* 2012
- Arcidiacono PG, Calori G, Carrara S et al. Celiac plexus block for pancreatic cancer pain in adults. *Cochrane Database Syst Rev* 2011

Colonoscopy: not the same as a blood test

Colonoscopy is the best test for the detection and prevention of bowel cancer. However, it is not perfect.

Variation in the quality of colonoscopy threatens its effectiveness for the detection of bowel cancer and precursor adenomas, the major goal for most patients. It was thought that colonoscopy and polypectomy could prevent up to 90% of bowel cancer, yet data now suggest that the level of protection during real world application is much less, particularly in the proximal colon.^[1]

Colonoscopy is operator-dependent

Most patients, and their doctors, presume (not unreasonably) that colonoscopy offers a diagnostic test with fixed and uniform sensitivity for the detection of cancer. It is not often acknowledged that research consistently documents variation in the detection of precancerous polyps (adenomas) between endoscopists. Further, an important European study has shown that rates of detection of precancerous polyps predict the rate at which endoscopists miss cancers at colonoscopy.^[2]

Studies in which patients had two colonoscopies on the same day by different

Colonoscopy is the best test for the detection and prevention of bowel cancer. However, it is not perfect. The most significant improvements in the effectiveness of colonoscopy will come not from technical improvements, but from quality interventions...

operators, demonstrate convincingly that polyps are often missed at colonoscopy, with miss rates of 2% for large (10mm) adenomas and up to 26% for diminutive (5mm) adenomas. We also know that colonoscopic miss rates are operator-dependent, with significant variation in miss rates between endoscopists in the same practice, and clear differences in mucosal inspection technique between those with high and low miss rates. Detection studies in public and private practice show up to 10-fold variation in adenoma detection rates between endoscopists.

Other factors contribute to the imperfect protection against bowel cancer offered by colonoscopy. One is bowel preparation, which is typically worse in the proximal colon if patients take the entire preparation the day/night before their colonoscopy. This effect can be largely overcome by split-dosing, in which patients take half

of the preparation a few hours before the colonoscopy. Another factor is tumour biology. The serrated pathway of colorectal carcinogenesis is now known to be responsible for cancers arising from a subgroup of hyperplastic polyps that are easily missed at colonoscopy. These lesions (sessile serrated adenomas) are very flat and very subtle (Figure 1), and variation in their detection between endoscopists is well described.

Measuring the quality of your colonoscopist

Although improvements in colonoscopic technology may enhance lesion detection, their impact is modest compared with the potential improvements from removing individual variation among colonoscopists. Furthermore, variation in colonoscopist performance is compounded by payment structures that reward volume rather than quality.³

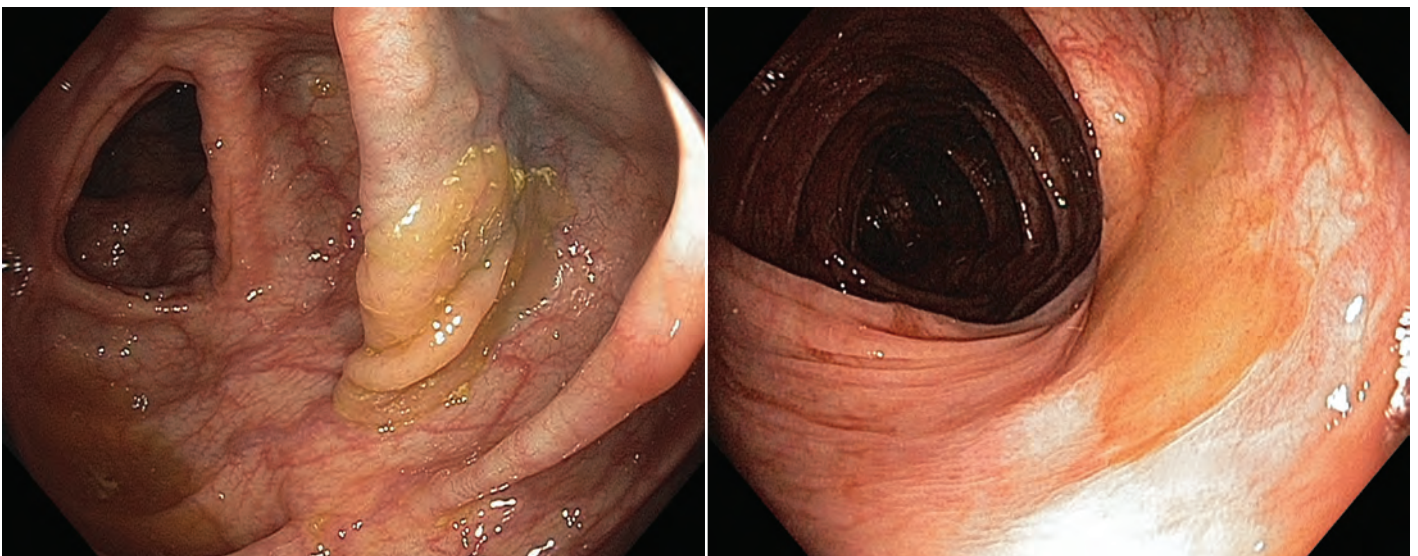


Figure 1. Sessile serrated adenomas in the proximal colon



Patients and referring doctors should be able to obtain information about the quality of their endoscopist. In Australia, re-certification of endoscopists on the basis of reported quality data will soon be introduced.

The new measure of quality of colonoscopy is the adenoma detection rate.^[3] Recommended benchmarks for adenoma detection in asymptomatic patients aged 50 years and older are 25% for men and 15% for women. These targets are easy to reach, as high-level adenoma detectors using high-definition colonoscopes with high-quality bowel preparation find adenomas in 50% or more of the screening population (Figure 2).

For verification of complete examination (insertion), caecal intubation should be documented by naming and photographing visualised caecal landmarks (terminal ileum, caecum with appendiceal orifice and ileocaecal valve). All colonoscopists should be measuring and reporting on these quality indicators during routine practice. Video recording and clinical audit are known to motivate improvements in endoscopist mucosal inspection technique.

The most significant improvements in the effectiveness of colonoscopy will come not from technical improvements, but from quality interventions that seek to standardise and enhance the performance of individual doctors performing colonoscopy. ■

Dr David Hewett is a Gastroenterologist and Therapeutic Colonoscopist, and an Associate Professor at The University of Queensland School of Medicine. Dr Hewett undertook his clinical and research training at the Royal Brisbane and Women's Hospital. Dr Hewett is involved in research focused on improving the effectiveness of colonoscopy for bowel cancer screening.

Take home messages

Colonoscopy is not a perfect test, and is highly operator-dependent.

Split-dose bowel preparation should now be the standard of care to assist protection in the proximal colon.

Adenoma detection rate is the main measure of colonoscopy quality, and is an independent predictor of missed cancers at colonoscopy.

All colonoscopists should be measuring and reporting on colonoscopy quality indicators.

Patients should seek information about the quality of their colonoscopist.

Further reading:

- 1 Hewett DG, Kahi CJ, Rex DK. Does colonoscopy work? J Natl Compr Canc Netw 2010;8:67-77.
- 2 Kaminski MF, Regula J, Kraszewska E, Polkowski M, Wojciechowska U, Didkowska J, Zwierko M, Rupinski M, Nowacki MP, Butruk E. Quality indicators for colonoscopy and the risk of interval cancer. N Engl J Med 2010;362:1795-803.
- 3 Hewett DG, Rex DK. Improving colonoscopy quality through health-care payment reform. Am J Gastroenterol 2010;105:1925-33.

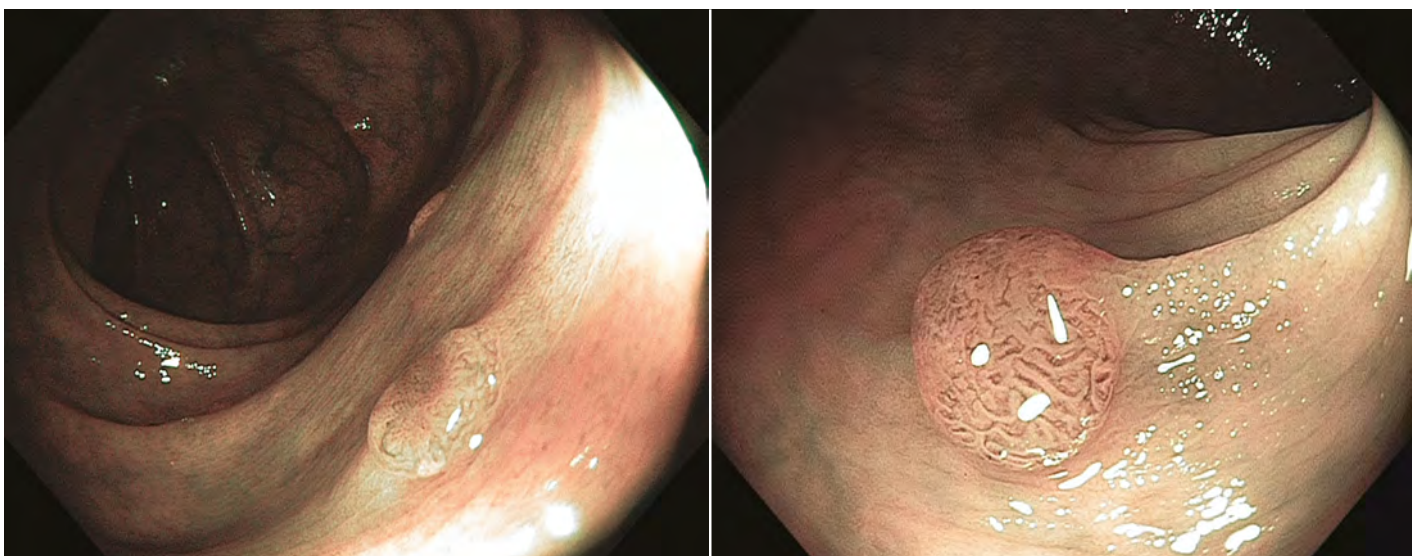


Figure 2. Detection of adenomas is the measure of quality at colonoscopy

Welcome to our new specialists

Dr Rohan Brunello

Orthopaedic Surgeon



Dr Rohan Brunello is an Orthopaedic Surgeon with special interest in hip and knee arthroplasty, pelvic and acetabular reconstruction

and trauma. He has a Bachelor of Applied Science (Human Movement Studies) and a Medical Degree (with honours), from The University of Queensland. He is a Fellow of the Royal Australasian College of Surgeons (Orthopaedics) and an Associate Member of the Australian Orthopaedic Association.

Dr Brunello has a Fellowship in Hip and Knee Arthroplasty and Pelvic and Acetabular Trauma and Reconstruction at St Georges Hospital, London 2011. During his Fellowship, he gained wide exposure and experience in all aspects of hip and knee arthroscopy. He subsequently went on to work in the UK's busiest pelvic and acetabular trauma unit under leading authority, Mr Martin Bircher.

Dr Brunello commenced practice at the Wesley Orthopaedic and Sports Injury Clinic in March 2012. He is also a staff specialist in orthopaedics at Prince Charles Hospital and the Royal Brisbane and Women's Hospital. He is a Senior Lecturer at The University of Queensland's School of Medicine and on the teaching faculty for the Diploma of Surgical Anatomy at Queensland University of Technology's Medical Engineering Research Faculty.

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Phone 07 3870 1900

Dr Daniel Burger

Gastroenterologist



Dr Burger joined the Wesley Gastroenterology and Liver Group in 2012, having returned from Oxford, UK, where he spent two years as the Senior

Clinical Fellow at the John Radcliffe Hospital. He completed a Bachelor of Science at The University of Queensland, before graduating with Honours and the Chancellors Letter of Recommendation from Flinders' Medical School in 2001. He undertook physician training at the Royal Brisbane and Women's Hospital (RBWH) and completed his gastroenterology specialist training at both the Mater Adult Hospital and RBWH. He has a sub-specialty interest in inflammatory bowel diseases (IBD), Crohn's and ulcerative colitis, and has published a number of articles in the area.

Along with expertise in IBD, his practice encompasses general gastroenterology, liver diseases, high quality colonoscopy and training. He is a staff specialist at Princess Alexandra Hospital, establishing a comprehensive IBD service including research and specialist registrar training.

Dr Burger consults in the Sandford Jackson Building with regular endoscopy sessions at the Wesley Endoscopy Unit.

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Mobile 0434 383 591

Dr David Shooter

Orthopaedic Surgeon



Dr David Shooter graduated from The University of Queensland in 1999 and did the majority of his training at Queensland's two premier public hospitals, the

Princess Alexandra Hospital and the Royal Brisbane and Women's Hospital. After working as a staff consultant at QEII Jubilee Hospital, including nine months as Director of Orthopaedic Surgery, he moved to the UK for twelve months, working at the Royal National Orthopaedic Hospital in London. There, he worked exclusively in the Bone Tumour and Joint Reconstruction Unit, gaining unique experience and expertise in the surgical evaluation and management of bone and soft tissue sarcomas, both adult and paediatric. Dr Shooter also trained extensively in revision arthroplasty and cartilage transplantation.

Dr Shooter's scope of practice includes orthopaedic oncology; primary and revision arthroplasty, including deformity (DDH etc); cartilage transplantation and trauma. He is also happy to treat most upper limb conditions, including traumatic tendon and nerve injuries; paediatric conditions; sports knee injuries, including ACL, meniscal and osteochondral pathology; and WorkCover injuries. However, Dr Shooter does not treat shoulders or spines.

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Dr David Hewett

Gastroenterologist and Therapeutic
Colonoscopist



Dr David Hewett is a Gastroenterologist and Therapeutic Colonoscopist, and Associate Professor and Head of Phase 2 (Years 3 and

4) at The University of Queensland School of Medicine. After graduating from UQ, A/Prof Hewett undertook clinical and research training at the Royal Brisbane and Women's Hospital, before completing post-doctoral studies at Indiana University, USA where he developed advanced skills in the technical performance of colonoscopy, including the resection of large colorectal polyps.

A/Prof Hewett's clinical research focuses on improving the effectiveness of colonoscopy for bowel cancer screening, and he has published widely on new colonoscopic techniques and methods. He has parallel interests in health systems research and medical education, including quality of care and procedural skills training. A/Prof Hewett is active in national colorectal cancer policy and training initiatives. He is a member of national advisory boards for the National Bowel Cancer Screening Program and for gastroenterology training with the Royal Australasian College of Physicians and the Australian Gastrointestinal Endoscopy Association.

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Dr Michaela Lee

Obstetrician and Gynaecologist



Growing up in Austria Dr Lee completed her medical degree in 1996 at Vienna University. Prior to starting her training in obstetrics and

gynaecology at the University Hospital, Vienna, in 1999, she worked in a well known fertility clinic where she was involved in clinical work and research.

After one and a half years of training Dr Lee took the opportunity to go overseas. She was appointed to work for Prof Larry Platt as a Research Fellow at the Maternal Fetal Medicine Centre at the Cedar Sinai Medical Centre, Los Angeles, USA; She participated in regular ultrasound clinics for high risk pregnancy, performing nuchal translucency ultrasounds, first trimester screening, and morphology ultrasounds. Dr Lee also performed research projects in 3D-Ultrasound.

Soon after her stay in the States, Dr Lee moved to Australia in 2003 following an invitation for a sabbatical for her husband. On arrival in Australia in 2004 Dr Lee secured the position of registrar at the Royal Brisbane Women's Hospital

(RBWH). During her six years at the RBWH Dr Lee became proficient in managing an extensive range of women's health issues and pregnancy complications. Dr Lee has spent the last 12 months at Redcliffe Hospital where she gained valuable experience in gynaecological surgery.

Dr Lee's areas of special interest in obstetrics include pregnancies complicated by: diabetes, thyroid function disorder, heart conditions, clotting disease, multiple pregnancies, external cephalic version with breech presentation. Her areas of special interest in gynaecology include menstrual abnormalities, post menopausal bleeding, management of abnormal PAP smear, early pregnancy complication, fertility counselling and management of incontinence.

Wesley Medical Centre
Level 2 Suite 30
40 Chasley Street
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Phone 07 3171 2244
07 3171 2246

New Generation of MRI system at The Wesley Hospital

The only radiology clinic in Australia to be operating two 3-Tesla MRI scanners

In line with our vision to provide the most advanced medical imaging and the highest quality healthcare for Queenslanders we are pleased to announce the installation of two new revolutionary 3T MRI scanners at Wesley Medical Imaging.

- 3-Tesla Siemens MAGNETOM (Skyra) in October 2011 and;
- 3-Tesla Siemens MAGNETOM (Skyra) in August 2012

The Siemens Skyra system represents the pinnacle of commercially available 3-Tesla MRI scanners

The co-location of two wide bore 48 channel 3T magnets in a private radiology clinic is a first for Queensland and Australia. It allows us to target the specific needs of all your patients and offer quick access to both funded and unfunded 3T MRI scans on the most advanced technology available.

What does this mean for your patients?

- Faster scanning times
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- Consistently superior diagnosis

The Skyra has several new features which will lead to improved patient comfort and diagnosis.

For more information regarding our medical imaging services, please contact:

Wesley Medical Imaging - The Wesley Hospital - 30 Chasley street - Auchenflower QLD 4066
PH: 07 3371 9588 - FX: 07 3871 1249 - www.wesleymedicalimaging.com.au

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