HSS NEWS FOR GPs

HOSPITAL FOR SPECIALIST SURGERY QUARTERLY NEWSLETTER

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Above: L to R: Professor Howard Lau and Dr Mohan Arianayagam with the new prostate biopsy equipment at HSS

IN THIS ISSUE

PATIENTS FIRST

Latest prostate biopsy equipment to benefit patients

By Professor Howard Lau and Dr Mohan Arianayagam

Prostate cancer is the most commonly diagnosed cancer in Australian men and the second most common cause of cancer related death. Diagnosis and treatment is constantly evolving and there have been several refinements in this area. In this article we discuss the new prostate biopsy equipment available at Hospital for Specialist Surgery (HSS) and the new and updated system for grading prostate cancer.

While PSA screening has its detractors there is high level evidence to show that screening saves lives (European randomised study of screening for prostate cancer – erspc.org). The RACGP does not advocate general population screening, however there has been an increase in awareness in the community for both PSA screening and men's health in general. To provide guidance in this matter, the Cancer Council and Prostate Cancer Foundation released an evidence based guideline on PSA screening (http://www.cancer.org.au/health-professionals/clinical-guidelines/prostate-cancer.html).

A summary of recommendations is listed below:

- The PSA testing guideline recommendations are approved by NHMRC
- Men should be offered the opportunity to discuss the benefits and harms of PSA testing before making the decision to be tested
- Men at average risk of prostate cancer who decide to be tested should be offered PSA testing every two years from age 50 to 69
- The harms of PSA testing may outweigh the benefits for men aged 70 and older
- Men with a family history of prostate cancer who decide to be tested should be offered PSA testing every two years from age 40/45 to 69 with the starting age depending on the strength of their family history
- Digital rectal examination is not recommended in addition to PSA testing in the primary care setting

If a man is screened and PSA readings are elevated then further evaluation is needed. This usually takes the form of a digital rectal exam (DRE) and multiparametric magnetic resonance imaging (mpMRI) which is followed by prostate biopsy.

What techniques exist for prostate biopsy?

There are two main approaches for prostate biopsy – historically this was done via the transrectal route. While lying in a left lateral position, an ultrasound probe was inserted into the rectum

and the periprostatic tissues were infiltrated with local anaesthetic. About 12 needle cores were taken of the prostate. This has the benefit of being quick and relatively easy, however there was often discomfort during the biopsy, inadequate sampling of the anterior prostate as well as a risk of sepsis; an uncommon but often serious complication.

Over the last few years, transperineal biopsy (figure 1) has emerged addressing some of the shortcomings of the transrectal approach. Very specialised equipment is required. HSS has invested in the special ultrasound probe as well as the stepper required to hold the ultrasound and grid in place. This equipment is displayed in figure 2. At the time of printing, HSS is the only hospital in North West Sydney that has this equipment.

Under general anaesthesia the patient's legs are placed into an extended lithotomy position. The ultrasound probe is inserted into the rectum. A special arm holds the probe and a grid in place. The prostate is visualised with ultrasound (figure 3) and the needle is then used to take systematic biopsies of the entire prostate. This is sometimes known as a template biopsy.

A large number of samples are taken to ensure the entire prostate has been sampled. Figure 3 demonstrates the ultrasound image with the grid overlaid. Each urologist has a template that they use to ensure that entire prostate has been adequately sampled. If the MRI identified an abnormal area in the prostate then extra biopsies are taken of this area as well to increase the rate of detection.

What are the advantages of transperineal biopsy?

From a cancer detection perspective, transperineal biopsy allows systematic biopy of the entire prostate. A series of samples is usually taken at the apex, midzone and base to ensure the entire gland has been sampled. There is also much better access to the anterior prostate compared to transrectal biopsy. Critically, the sepsis rate is also negligible compared to transrectal biopsy, as the needle does not pass through the rectal wall. Patients will have a degree of perineal bruising, haematuria and also haematospermia. Patients are usually discharged a few hours after their prostate biopsy to ensure that they are voiding appropriately as there is a small risk of urinary retention.

Histology findings

It usually takes a few days for the pathology report to become available. The pathologist reports on several findings:

- How many cores were positive for cancer out of all cores taken
- What percentage of involved cores was replaced with cancer
- What was the highest gleason grade
- Location of the positive cores
- Gleason sum
- Grade group (since 2015/16)

The main goal is to place the patient into a category or risk grouping that guides treatment and provides information about prognosis. The Gleason scoring system was first introduced in the 1960s and has been refined over the years by the International Society of Urologic pathology (ISUP). The Gleason score is the sum of the most common pattern and the second most common pattern. The Gleason pattern ranges from 3 to 5. Pattern 3 is considered low grade disease while pattern 4 & 5 are high grade.

Using the Gleason score we then categorise patients into low, intermediate and high risk disease as illustrated in table 1. Despite revisions the three categories are not ideal – low risk (Gleason 6) disease can be misunderstood as a cancer in the middle of the grading scale. This can impact on patients being considered for observational rather than active interventions. Gleason scores 3+4 and 4+3 are also considered to be in the same prognostic group when the disease free survival rates are quite different. Hence, in 2015 the group grading system was introduced. It is currently in use within Australia and most labs already have added the grade group to their histology reports (usually located right at the end after the synoptic report).

Category	Gleason Score	Grade Group
Low risk	3+3=6	1
Intermediate risk	3+4=7	2
	4+3=7	3
High risk	4+4=8	4
	4+5=9, 5+4=9, 5+5=10	5

Table 1

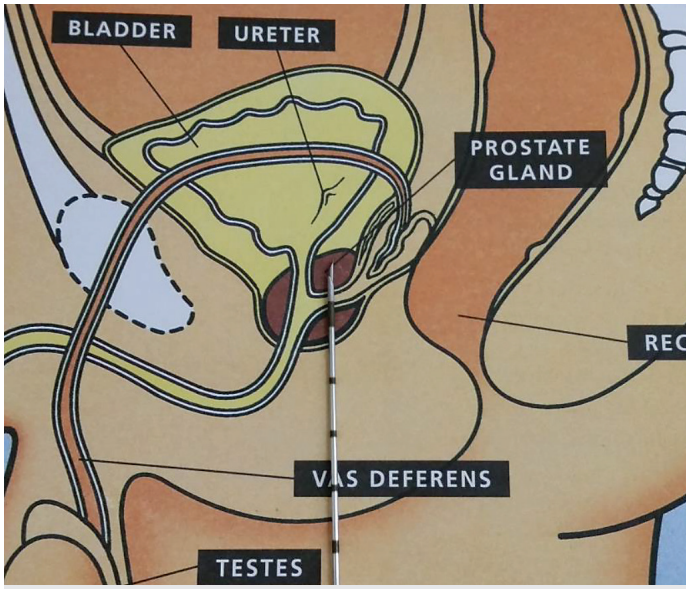


Figure 1 - Schematic showing a cross sectional view of the male pelvis. The prostate is clearly visible (burgundy colour) and the biopsy needle traverses the perineum to sample the prostate. We use an 18 gauge biopsy needle that removes a core of tissue.

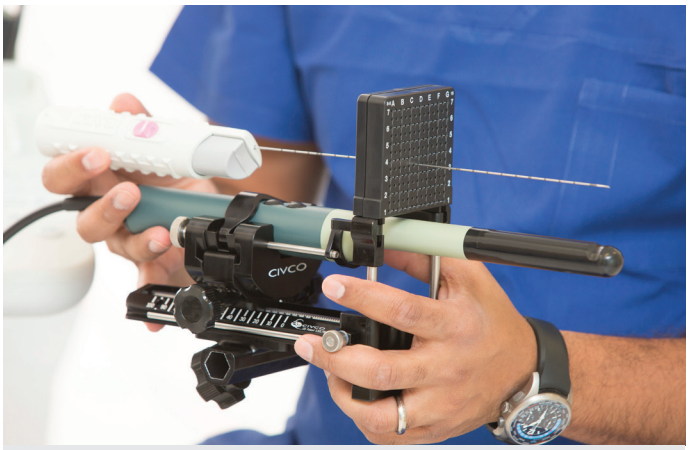


Figure 2 - The ultrasound probe is green with a black end that is inserted into the rectum. The black stepper is attached to a special arm that attaches to the bed. The grid is visible above the probe and the core biopsy needle passes through the grid. At the time of biopsy the grid sits up against the perineum.

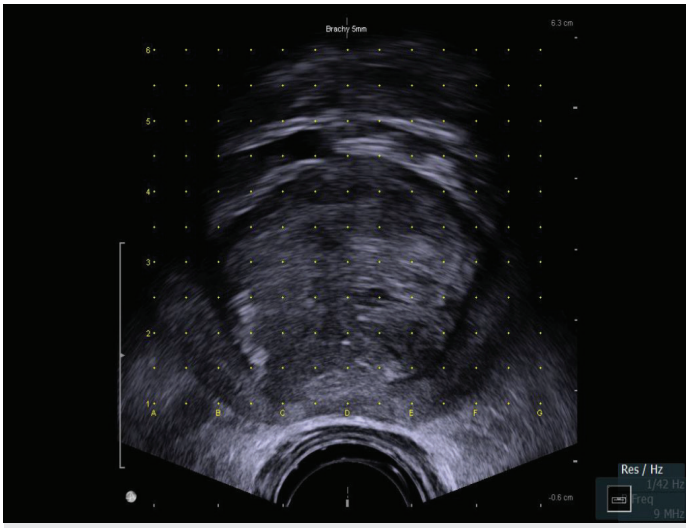
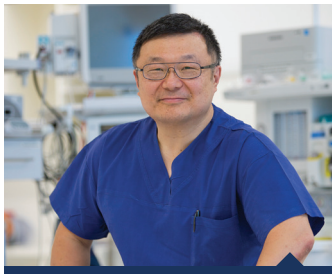


Figure 3 – Ultrasound image of prostate with grid overlaid. The probe is in the rectum. The prostate is clearly visible and the yellow dots correspond to the grid visible in figure 2. There is 5mm between each grid mark. Using this grid samples are taken on both the left and right sides of the gland, usually posterior, middle and then anterior. This process is repeated at the apex, middle and base of the prostate, thus ensuring the entire gland has been sampled.

The main advantage of the Grade group system is that it allows more accurate prognostication. It separates 3+4 and 4+3 and places them in different categories as they have significantly different disease free survival rates. It also makes it easier to put patients with low risk disease onto Active Surveillance protocols when they are told their cancer is grade 1 of 5 (Epstein et al, European Urology 69 (2016) 428-435).

While it is a definite improvement, the new group grade does not take into account the volume of disease, number of cores or the percentage of cores filled with cancer. Clinical judgement and patient factors/desires need to be considered. Options for treatment include Radical Prostatectomy, radiotherapy or brachytherapy. Some of these options will be explored in later editions of this newsletter.

For clarification or referrals both Prof H Lau and Dr Arianayagam are happy to be contacted at any time.



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What's new in breast surgery?

By Dr James French, Dr Elisabeth Elder and Dr Farid Meybodi

As would naturally be expected there have been many advances made in all areas of general surgery over the past decade. This era of rapid expansion, however is almost unparalleled in the now recognised subspecialty of breast surgery, commonly referred to as Oncoplastic Breast Surgery (OPBS).

As recently as seven years ago, most women faced with a diagnosis of breast cancer encountered two basic surgical options: 1. Some form of basic breast conserving surgery that frequently resulted in significant deformity of the operated breast to be followed by radiotherapy or 2. Mastectomy. In some centres a third option of breast reconstruction was also accessible, but in reality this was only a minority of patients. Each of these options could be combined with an axillary dissection.

More recently the standard of care for assessing the clinically node negative axilla has become sentinel lymph node biopsy. This technique is now established as an accurate test with minimal risk of developing lymphoedema, one of the major concerns following full axillary dissection.

Oncoplastic Breast Surgery

For patients undergoing breast conserving surgery there are now a wide variety of surgical options aimed at obtaining local resection of the breast cancer with adequate surgical margins while minimising the resulting defect in the breast. In essence, OPBS is a philosophy that underpins all modern breast cancer operations. It has dual aims: 1. *Onco* To locally resect cancer to an adequately negative margin, 2. *Plastic* to re-shape the remaining breast tissue in the setting of breast conserving surgery to minimise any distortion of shape, size and contour of the operated breast (and/or the contralateral breast), or in the setting of mastectomy, the use of a variety of reconstructive techniques to obtain symmetry.

These re-shaping techniques have been adapted and modified from various breast reduction operations that are established in the plastic and reconstructive surgery sphere. Progressively, breast surgeons are now also utilising so called "volume replacement" procedures for suitable patients who are requesting minimal change in their current breast shape and volume. Typically these volume replacement options rely on moving a vascularised piece of tissue from outside the breast cone to fill in the space left by the breast cancer excision. There have been a variety of flaps described, a typical example of which is the LICAP flap (Lateral intercostal artery flap) .

Case 1

Mrs JB presents with 5cm palpable cancer which on mammogram has an associated area of 90mm of microcalcifications consistent with high nuclear grade DCIS. See Figure 1 and Figure 2.

Traditionally this extent of disease would have dictated that she be treated by mastectomy. Due to her DD cup breast size, see Fig 3 she could be offered breast conserving surgery in form of a therapeutic

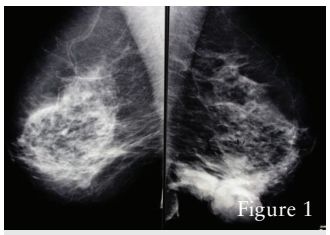


Figure 1 MLO film showing extent of disease in inferior part of left breast.

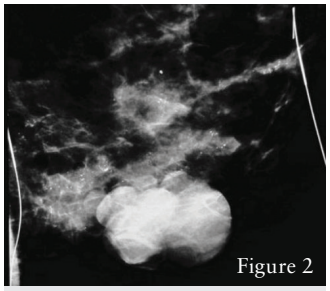


Figure 2 Mammogram showing bracketed hookwires, used to mark out the extent of associated malignant microcalcifications.

mammoplasty combined with a synchronous contralateral reduction mammoplasty to maintain symmetry. See Figure 4.

Mastectomy with reconstruction

Despite the many recent advances in breast conserving surgery options there are still some patients who will either require and or actively choose to be treated by some form of mastectomy with or without breast reconstruction. Increasingly women are opting for a skin sparing, or total skin sparing mastectomy otherwise know as a nipple sparing mastectomy (NSM). This facilitates an immediate reconstruction often with a permanent implant placed at the time of mastectomy in a so called direct-to-implant (DTI) reconstruction. This is not uncommonly combined with lipofilling, a procedure in which liposuction is performed of the tummy or thighs and fat transferred to the breast area resulting in a more natural feel to the new breast shape. There are some technical limitations as to which patients are suitable for this option and sometimes using a two stage approach with a tissue expander first is a better option and some women are better suited to having a tissue based reconstruction. Increasingly, breast surgeons are now trained to be able to perform implant based immediate breast reconstruction. The surgeons at HSS currently have an immediate reconstruction rate of 50 per cent, which is significantly higher than the national average of 12 per cent. This is largely due to the fact that they offer a variety of implant based reconstructions and work closely with a number of plastic and reconstructive surgeons in the area to be able to offer women the full range of reconstructive options.

The aim of all these new techniques is to give women as a good aesthetic and functional result as possible after breast cancer treatment to help patients get back to normal life after treatment with as little long term side effects as possible. The specialist breast surgeons working at HSS will assess patients not only from a cancer treatment / social perspective, but also from a sympathetic aesthetic angle for those patients for whom this is important and take into account the patient's wishes and individual circumstances.

Neoadjuvant chemotherapy (NACT)

While the concept of using NACT has been around for more than 30 years, its use in Australia has traditionally been restricted to women who presented with either inoperable cancer or inflammatory / locally advanced breast cancer. Early expectations that NACT may lead to a better systemic result by delivering the chemotherapy earlier and thus potentially eradicating any micrometastatic disease proved not to be true and this coupled with early reports of increased rates of local recurrence in the breast meant that apart from the above indications the use of NACT fell out of favour.

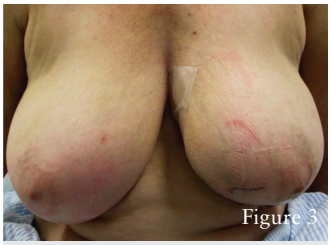


Figure 3 pre op photo with localising wires insitu.

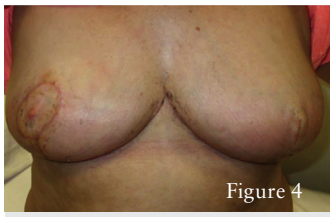
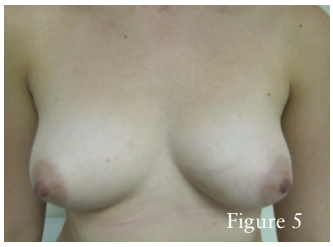


Figure 4 Post operative result from left therapeutic mammoplasty maintaining good volume, shape and size of the breast albeit without nipple preservation. Right side standard reduction mammoplasty done utilising a superomedial pedicle.



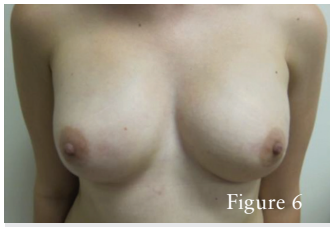


Figure 5 and Figure 6 show typical result from a bilateral NSM with DTI reconstruction.

More recently however, advances in agents such as Heceptin which targets the HER2 receptor have meant that in selected groups, up to 50 per cent of patients develop a complete pathological response, and up to 95 per cent of patients can expect to have some downsizing of the primary tumour. When this occurs in someone who was only operable via mastectomy it opens up the possibility of being able to offer breast conserving surgery and by reducing the size of the tumour the likelihood of achieving an excellent aesthetic outcome increases. Sometimes to achieve negative margins one of the more advanced breast reshaping

procedures or tissue replacement techniques may still need to be employed.

For women who are smokers who would otherwise be good potential candidates for a more complex surgery (eg NSM + DTI or reduction mammoplasty), using up front NACT is a potential opportunity for them to quit smoking with the aim of reducing their risk of surgical complications. All patients who are contemplating NACT will need to have a small marking clip or clips in their breast to mark the site of the primary so a post chemotherapy specimen can be accurately removed.

NACT does not negatively affect the final rates of survival.

Multidisciplinary care

With this "explosion" of surgical techniques that a modern breast surgeon now has at their disposal for treating women with breast cancer, patient selection is becoming increasingly important. While not all options are suitable for all women, most patients will now face a seemingly almost overwhelming choice of surgical options. For many women having access to this range of options can be very reassuring, while for others it can be daunting, resulting in some patients defaulting to "you're the expert, what would you recommend". Adding to the complexity of the surgical decision-making has been the corresponding increase in the use of neoadjuvant chemotherapy.

All of this complex decision-making and options requires that the treating team communicate well together and to the patients alike. Breast surgeons today not only have to be experts in the oncology side of treatment, they need to be experts in the aesthetic assessment of patients and have a deep understanding of various breast reconstruction and re-shaping techniques as well as being excellent communicators.

Now days patients are managed within multidisciplinary coordinated care teams so that patients receive combined specialist opinions regarding their breast cancer management.

At HSS, patients can be discussed both pre and post surgery depending on the patient's particular needs. In addition to the usual expected members of surgeon, radiation oncologist, medical oncologist, pathologist, radiologist and breast care nurse, patients treated at HSS have ready access to both clinical psychologists and lymphoedema specialists, resulting in the development of an individualised comprehensive care plan for each patient.

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You can read more about the Lakeside Specialist Breast Clinic team and what treatment options we offer at

www.lakesidespecialists.com.au

Coeliac Disease in 2016:

A shared care between general practitioners and gastroenterologists

Offer testing to patients with any of the following:	Consider testing in patients with any of following:
• Persistant unexplained abdominal or gastrointestinal symptoms • Faltering growth • Prolonged fatigue • Unexpected weight loss • Severe or persistent mouth ulcers • Unexplained iron, vitamin B12 or folate deficiency • Type 1 diabetes, at diagnosis • Autoimmune thyroid disease, at diagnosis • Irritable bowel syndrom (in adults) • First-degree relatives of people with coeliac disease	• Metabolic bone disorder (reduced bone mineral density or osteomalacia) • Unexplained neurological symptoms (particularly peripheral neuropathy of ataxia) • Unexplained subfertility or recurrent miscarriage • Persistently raised liver enzymes with unknown cause • Dental enamel defects • Down's syndrome • Turner syndrome

Coeliac disease is an autoimmune mediated disorder of the small bowel, precipitated by gluten exposure in genetically predisposed individuals[1]. It is characterised by an inappropriate immune response to dietary gluten with chronic inflammation and damage of the small bowel mucosa leading to bowel symptoms and nutrient deficiencies. Although classically thought of as a disease affecting younger individuals of European descent, coeliac disease is increasingly found in populations in North Africa, India, China and the Middle East[2] and the most common age for diagnosis is between 30 and 45. Coeliac disease is a common disorder in Australia, affecting one in 70 individuals, however, it is estimated that 80 per cent remain undiagnosed[3]. Coeliac disease can present with classical, overt symptoms but most patients present with atypical or subclinical disease. Primary care physicians have a critical role in recognising the diverse manifestations of coeliac disease and improving rates of diagnosis.

What symptoms in my patient should make me consider coeliac disease as a diagnosis?

The clinical manifestations of CD can be classic, atypical or subclinical. Classic symptoms are more common in infants and young children and include diarrhea or steatorrhoea, flatulence, abdominal distension and weight loss. In the majority of adults, the presentation of coeliac disease is subtler with only mild non-specific gastrointestinal complaints. In a meta-analysis with 3383 subjects with coeliac disease, the prevalence of irritable bowel syndrome-type symptoms was 38 per cent[4]. These symptoms included erratic bowel habits, constipation, chronic abdominal pain and bloating. Some patients have subclinical disease with non-specific symptoms such as fatigue; have nutrient deficiencies (most commonly of iron) or are asymptomatic. Given the range of manifestations, the index of suspicion for coeliac disease required by the clinician is high. The 2015 NICE guidelines

on coeliac disease provide recommendations on when to offer testing and when to consider testing for coeliac disease in individuals[5]. These are summarised in Table 1.

How do I test for coeliac disease?

Serology is usually the first step in screening for coeliac disease. The following steps are recommended:

1) Is my patient currently on a gluten free diet? If no, proceed with serological testing. If yes, the patient must undergo a gluten challenge to avoid a false negative result. A gluten challenge consists of eating at least two slices of wheat-containing bread per day for at least four weeks[6]

2) The following tests should be ordered:

a. First choice: IgA anti-tissue transglutaminase (TTG) and total IgA

b. Use IgA endomysial antibodies (EMA) if IgA tTG is weakly positive (IgA endoysial antibodies are highly specific but less sensitive than TTG antibodies)

c. If IgA deficient, consider IgG based tests- IgG antiendomysial, IgG anti-gliadin, IgG-TTG

d. Note: most Australian laboratories will include the following tests when "coeliac serology" is requested:

i. Anti-gliadin (IgA and IgG)

ii. Anti-TTG (IgA and IgG)

How do I interpret coeliac serology?

Positive serology

If a patient's screening serological tests are positive, they need to be referred to a gastroenterologist for gastroscopy and confirmatory small bowel biopsies. Serology alone is insufficient to make a diagnosis of coeliac disease.

Negative serology

Consider the following reasons for potential false negative coeliac serology:

- IgA deficiency - affects two to three per cent of patients who have coeliac disease
- Gluten free diet - serology can be negative after being on gluten free diet for more than three months
- Children two years of age

It is important to recognise that two to three per cent of patients with coeliac disease have negative serology, have low antibody levels or have levels that fluctuate between positive and negative[1]. Therefore, if coeliac serology is negative but the clinical suspicion of coeliac disease is high, the patient should be referred to a gastroenterologist for definitive histological testing.

The role of genetic testing

HLA-DQ2/8 genetic testing is useful in specific circumstances. HLA-DQ2 and or 8 are found in almost all patients with coeliac disease. However, it is also found in almost 50 per cent of the general population but only 3 per cent of these patients will develop coeliac disease[1]. Therefore, the main utility of HLA-DQ2/8 testing is to rule out coeliac disease: ie given that 99 per cent of patients with coeliac disease carry one of these markers, a negative test effectively rules out coeliac disease. A positive test is less useful and cannot be used for diagnosis[7].

When do I refer to a gastroenterologist?

Refer to a gastroenterologist in the following situations:

- A patient with positive coeliac serology for confirmatory small bowel biopsies
- A patient with negative coeliac serology but high index of suspicion of coeliac disease

Gastroscopy and histology

A gastroscopy with small bowel biopsies is the only definitive way to confirm the diagnosis of coeliac disease. Patients must be on gluten to avoid false negative results. Macroscopically, the duodenal folds may appear flattened with scalloping or fissuring. On histology, the most characteristic features of coeliac disease include blunted or atrophic villi, increased intraepithelial lymphocytes (IELs) and crypt hyperplasia[1]. Increased IELs in isolation is a common finding and most patients with this do not have coeliac disease. Increased IELs without structural change can be due to giardiasis, helicobacter pylori infection, crohn's disease and common variable immune deficiency[1].

Management of coeliac disease

Gluten-free diet

A strict gluten-free diet (GFD) lifelong is currently the only therapy for coeliac disease. All people with coeliac disease require a strict GFD, regardless of the severity of their symptoms. Initial referral to a dietitian with special interest in coeliac disease is highly recommended by local and international guidelines. A GFD reduces symptoms, improves morbidity, improves nutritional parameters and reduces the risk of long-term complications of coeliac disease including osteoporosis and lymphoma. Clinical symptoms usually abate within the first few weeks of commencing a strict GFD.

A GFD implies that all wheat, barley and rye products must be avoided. Coeliac Australia[3], recommends different groups of food that are suitable for those on a GFD. Naturally gluten-free foods includes fresh fruits and vegetables, legumes, milk, eggs, nuts and gluten-free grains such as rice and corn. Products labeled 'gluten-free' or have the 'Coeliac Australia' endorsement logo, also do not have gluten. It is important to avoid cross-contamination by avoiding products which 'may contain gluten'. It is important to ensure the patient has adequate fibre and B-group vitamins, as these are derived from gluten-containing grains[7]. Patients are encouraged to join Coeliac Australia for excellent resources and links.

Monitoring of coeliac disease

After initial diagnosis, the general physician has a critical role in monitoring for disease activity and assessing for complications of coeliac disease. At 6 months in the first year following diagnosis and annually thereafter, the following should be assessed:

- Coeliac serology
- FBC
- Folic acid, iron, B12, zinc
- Thyroid function
- Calcium, phosphate, vitamin D
- Liver function tests

A DEXA scan should also be organised within the first year following diagnosis. The gastroenterologist will usually organise a repeat gastroscopy and small bowel biopsies after 12 months to assess for persistent histological damage.

Non-dietary therapy and future directions

Non-dietary therapy such as corticosteroids and immune modulators, are restricted largely to refractory coeliac disease (1-2% of coeliac disease patients). Studies are underway on agents that prevent T cell activation, however only 2 at present are in phase 2 clinical trials[1].

Summary points

- General practitioners play a critical role in improving the detection rates of coeliac disease and for ongoing monitoring of patients with coeliac disease
- Coeliac disease needs to be considered in all age groups and in all ethnicities
- Coeliac serology is a useful screening tool for coeliac disease but a definitive diagnosis requires small bowel biopsies
- HLA-DQ2/8 testing has a high negative predictive value and is useful to exclude coeliac disease
- The only mainstay of management is a strict gluten-free diet lifelong

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Dr Farzan Bahin provides comprehensive clinical care and is committed to quality gastrointestinal endoscopy. He has undergone extensive training in advanced therapeutic endoscopy and has a strong academic background. Dr Bahin's clinical practice spans the breadth of gastroenterology, hepatology and gastrointestinal endoscopy. Interests include colorectal cancer screening, endoscopic resection, ERCP and stenting, inflammatory bowel disease and Barrett's oesophagus.

Dr Bahin aims to fast track clinical review and endoscopy access - all procedures are strictly no gap. Dr Bahin is accredited by the Conjoint Committee for the Recognition of Training in Gastrointestinal Endoscopy for gastroscopy, colonoscopy, ERCP and capsule endoscopy. He is also a member of the Gastroenterological Society of Australia and the American Society of Gastrointestinal Endoscopy; and is a fellow of the Royal Australian College of Physicians.

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Specialist Laparoscopic General Surgeon

Dr Richard Curran is a Specialist Laparoscopic General Surgeon. He graduated from the University of Sydney in 1995 and completed advanced training in general surgery on the NSW Western rotation. He was awarded his fellowship from the Royal Australasian College of Surgeons (FRACS) in 2008. He has clinical privileges at Hospital for Specialist Surgery, Westmead Hospital, Blacktown and Mount Druitt Hospitals, and Norwest Private Hospital.

Dr Curran's specialist interests include minimally invasive (laparoscopic) gallbladder surgery, minimally invasive hernia surgery, particularly TEP (totally extraperitoneal) laparoscopic inguinal hernia repair, surgery for carpal tunnel syndrome and Workers Compensation surgery for inguinal and ventral hernia and carpal tunnel syndrome.

Dr Curran has fortnightly operating lists at HSS. Private patients can expect surgery within three to four weeks of consultation. Patients with severe pain secondary to gallstones, including acute severe cholecystitis, can expect surgery within one to two weeks of consultation at HSS.

Suite 5, Level 1, Hospital for Specialist Surgery, 17-19 Solent Circuit, Bella Vista 2153
Ph: 02 8711 0170

Dr Shadi Faraj

Surgical Oncologist, Breast And Endocrine Surgeon, General And Laparoscopic Surgeon

Dr Shadi Faraj is a General and Laparoscopic surgeon and a Fellow of the Royal Australasian College of Surgeons and a member of Breast Surgeons of Australia and New Zealand.

Areas of particular interest include: thyroid/parathyroid surgery; breast surgery; soft tissue tumours; and skin cancers. Dr Faraj also performs laparoscopic surgery (gallbladder, hernia), excision of lumps and bumps, and is GESA accredited to perform routine endoscopic diagnostic procedures (gastroscopy and colonoscopy). Dr Faraj is a Consultant Surgeon in both public and private hospitals. All new referrals (Private and Public patients) are seen within ten days.

Suite 1, Castle Hill Day Surgery, 72-74 Cecil Ave, Castle Hill Ph: 02 9899 7322

Dr Raghubinder Singh Gill

Gastroenterologist & Hepatologist, Interventional Endoscopist

Dr Gill is an Interventional Endoscopist with extensive clinical experience in endoscopic diagnosis and management of diseases of the gastrointestinal tract. His clinical practice is enhanced by his interest in evidence based treatment of disorders of the gastrointestinal tract, bile duct, pancreas and liver. Special interests include: endoscopic screening of Barrett's esophagus, pancreatic cysts, pancreatic and bowel cancer screening; endoscopic diagnosis, staging and treatment for gastrointestinal cancer. All privately performed procedures, including anaesthetic and pathology fees, are strictly 'no gap'.

Suite 6, Level 1, Hospital For Specialist Surgery, 17-19 Solent Circuit, Bella Vista 2153
Ph: 0432 250 591 E: docraghugill@gmail.com

Dr Thomas OH

General Surgeon, Breast & Endocrine Surgery, Trauma Surgery

Dr Thomas (Young Chul) Oh graduated from medical school at University of New South Wales and underwent surgical training at Westmead hospital. After receiving his fellowship from Royal Australasian College of Surgeons he undertook a fellowship in Trauma and Acute Care Surgery at Westmead Hospital, a level 1 trauma centre. This was followed by a Breast Endocrine Surgical fellowship at Centre for Breast Health, Royal Brisbane and Women's Hospital and at Concord Repatriation General Hospital.

Dr Oh has a special interest and experience in treatment of breast cancer and reconstruction and thyroid/parathyroid disorders. He works in close liaison with multidisciplinary teams to ensure a seamless integration of all treatments required for breast cancer.

Ph: 02 8812 5282
www.drthomasoh.com.au

Dr Joseph Rizk

Plastic and Reconstructive Surgeon

Dr Joseph Rizk is a Plastic and Reconstructive Surgeon based in Burwood, Sydney. Dr Rizk is an Australian-trained doctor who underwent rigorous specialist training. He also has undertaken additional surgical fellowship training at the prestigious Dutch Association of Facial Plastic and Reconstructive Surgery in the Netherlands. Furthermore, Dr Rizk was Postgraduate Fellow at The Children's Hospital Westmead.

Dr Rizk has undergone significant training to become a leader in the fields of breast, face and body surgery. These are his exclusive areas of clinical practice and that of special interest to him. He also has significant expertise in non-surgical cosmetic therapies, such as injections, chemical peels and skin rejuvenation laser treatments.

Suite 1, 448 Pacific Highway, Artarmon NSW 2064
& Ground Floor, 36-38 Victoria Street East, Burwood NSW 2136
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HSS
Hospital for Specialist Surgery

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