

## A NOTE FROM MATT KELLY

### REGIONAL MANAGER AND GOSFORD PRIVATE HOSPITAL CEO

As a private hospital operator the impact of the global pandemic has been enormous. The announcement by the Prime Minister in March regarding the cessation of all elective surgery had a significant impact on all three of our businesses in the region. All surgery was consolidated to Gosford Private with Tuggerah Lakes Private having to close their doors for several weeks. This was a very stressful time for our staff, Doctors and patients until the state government came forward with a viability guarantee.

We are now back to 100% of normal activity at our three hospitals. We are working with our surgeons to get through any backlog of patients they have as a result of the restrictions. We are even operating on Saturdays in some centres. The safety of patients, staff and the community remains our focus, all three sites continue to screen at entry points for COVID-19 and we continually monitor our PPE holdings across the group.

We have had to make some very hard decisions to ensure the company survives the financial impact of the pandemic. We have had an executive restructure in Health Care and locally this has meant that the executive teams at Brisbane Waters and Tuggerah Lakes have been affected. We have recently appointed Andrew Mereau as the new CEO/DON of Tuggerah Lakes and Debra Ritter as the CEO/DON of Brisbane Waters. This means that we will be saying goodbye to Kathy Beverley, Glen Auld and Aaron Cannon from these hospitals. These executives have performed an excellent job in their roles and we will miss them.

We plan to have education up and running again very soon. This will look different to our usual method of engaging with Referrers but hopefully it will be just as educational. Use of platforms such as Zoom has enabled us to keep contact at many levels and we look forward to being able to use this technology with you all.



Building work continues at Gosford Private and we are currently looking at having our new theatres, recovery, day surgery, maternity and surgical beds up and running by July next year. It will be a busy 12 months and we ask for people coming to the hospital to have patience with access whilst we improve the hospital.

I look forward catching up again soon.



### Petrina Waddell

Petrina Waddell is Health Care's Regional GP & Community Relationship Manager for the Central Coast. Petrina helps to raise the profile of the Specialists and admitting VMO's across our three private hospitals. She is available to support local GPs, Referrers and the business community in learning more about the services we offer, any new procedures, and to facilitate meet and greet opportunities with our new and experienced Specialists. Petrina also coordinates our RACGP accredited education events. For more information, contact Petrina on 0459 988 236 or at [petrina.waddell@healthcare.com.au](mailto:petrina.waddell@healthcare.com.au)



# BREAST IMPLANT ASSOCIATED ANAPLASTIC LARGE CELL LYMPHOMA (BIA-ALCL)

– with Plastic, Reconstructive and Cosmetic Surgeon, Dr Vlad Illie

Breast Implant Associated Anaplastic Large Cell Lymphoma (BIA-ALCL) is a rare form of non-Hodgkin's lymphoma associated with textured breast implants. A recent review by the Therapeutic Goods Administration (TGA) has seen the suspension of some implants, while other implant manufacturers have voluntarily withdrawn their highly textured implants from market. Details of suspended products can be found on the TGA website.

It is paramount for GPs to be aware of this pathology to guide patients appropriately. Timely investigation, referral and management of patients with late seromas will ensure early detection of BIA-ALCL. Recognition of disease in incipient phases and surgical intervention is key to curative treatment.

The main symptom of BIA-ALCL is painless swelling of the breast related to a delayed spontaneous seroma, in a patient who has a history of textured surface breast implants for cosmetic or reconstruction purposes. This develops more than 1 year post implantation, with a median of 8-10 years. Other symptoms can include asymmetry, breast pain, skin rash and less commonly a breast mass or lymphadenopathy.

Ultrasound scan is the main method of investigation for these patients and if peri-prosthetic effusion is confirmed, fluid should be sent for M/C/S, cytology, flow cytometry for T cell clone and immunohistochemistry for CD30 and ALK. Among patients with delayed seromas risk of BIA-ALCL is estimated at 10%. Positron emission tomography/computed tomography (PET/CT) scans and magnetic resonance imaging (MRI) are reserved for confirmed cases.

Curative treatment for most women is complete capsulectomy, including complete resection of any mass associated with the capsule and removal of the implant. A new round, smooth surface implant or autologous reconstruction is an option for women with early stage disease.

Scant CD30 positive lymphocytes, with normal morphology is considered a normal finding and does not require further investigation. The patient should be referred to a plastic surgeon for management as a benign seroma.

Although there is no standard practice for patients with indeterminate diagnosis, close observation with clinical review by a plastic surgeon every 3 months is indicated.

There should be a low threshold for repeating the ultrasound and aspiration if sufficient fluid persists or recurs. Every implant will likely have a scant or minimal amount (5-10 mL) of surrounding fluid, and this incidental finding in an otherwise asymptomatic patient does not require further investigation. Referral to a haematologist who specialises in lymphoma, with experience in diagnosis BIA-ALCL should be considered.

As with any other pathology, other common aetiologies for a delayed seroma should be investigated and excluded: infection, recent trauma, implant rupture. As general rule, implant ruptures do not increase the overall volume of a breast.

Medicare rebates covering consultations, investigations and management, are available to patients with a clinical indication for breast implant removal. Under the usual Medicare benefits arrangements, the cost of new implants is not covered.

There is no recommendation for screening, testing or prophylactic surgery for removal of TGA suspended breast implants in asymptomatic patients, beyond regular mammograms as part of standard breast cancer screening.



**Dr Vlad Illie** is an Australian trained Specialist in Plastic and Reconstructive Surgery with appointments at Gosford and St Vincent's Hospitals, both public and private. In his practice Dr Illie undertakes a broad range of procedures spanning between microsurgical reconstructions (with a focus on breast reconstruction), skin cancer surgery and cosmetic surgery.

Dr Illie's areas of specialty include:

- Breast Reconstruction (Microsurgery, Free flap reconstruction)
- Breast Revision Surgery
- Cosmetic Breast Surgery
- Facial Plastic Surgery (Rhinoplasty)
- Body Contouring
- Skin Cancer Surgery (total and subtotal nasal reconstruction)

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# AN OVERVIEW OF ORAL & MAXILLOFACIAL SURGERY

– with Oral & Maxillofacial Surgeon, Dr Nigel Curtis

The following Oral & Maxillofacial services are provided locally, many are covered within the Medicare Schedule:

- 1 Management of bony and soft tissue facial trauma. If a patient with facial trauma presents to your practice, we do take direct referrals for these injuries to our rooms, and these may be processed through either the public and private sectors.
- 2 Management of temporomandibular joint disorder. Temporomandibular joint dysfunction can cause restrictive jaw pain plus can cause ear pain and tinnitus. The simple procedure of arthrocentesis of the temporomandibular joints, for example, will usually resolve this pain caused by TMJ dysfunction. (see Photo 1: Arthrocentesis) This treatment is often followed up with some occlusal splint therapy.
- 3 Management of orofacial pathology including cysts, tongue ties and tumours. Many oral surgical procedures are carried out through the oral mucosa but we do also remove skin lesions and perform wedge resections with flap repairs. (see Photo 2: Haemangioma).
- 4 Treatment of major salivary gland disorders including cysts, calculi and tumours.

- 5 Management of orofacial nerve injuries. Microsurgical nerve repair may be required to improve paraesthesia that has occurred following facial trauma or difficult dental extractions. This was the subject of my PhD and the procedure can be carried out as either a hospital or office procedure.
- 6 Associated antral and sinus procedures.
- 7 Orthognathic and cosmetic facial surgery is usually carried out in conjunction with orthodontic treatment. It is indicated for the correction of an open bite, prognathic or retrognathic jaw, including genioplasty's carried out in the proper way rather than the poorer alloplastic approach. (see Diagram 1 - Orthognathic surgery)
- 8 Oral surgical procedures including orofacial infections, wisdom teeth and dental implant surgery, plus associated bone grafting. These procedures can be carried out under general anaesthesia within a hospital environment or within the office under local anaesthesia, usually with some sedation, including nitrous oxide.

Other procedures such as major facial trauma, resections and reconstructions are generally provided in a hospital setting, at Gosford Private, Brisbane Waters Private and the new Tuggerah Lakes Private Hospital.



Photo 1: Arthrocentesis



Photo 2: Haemangioma

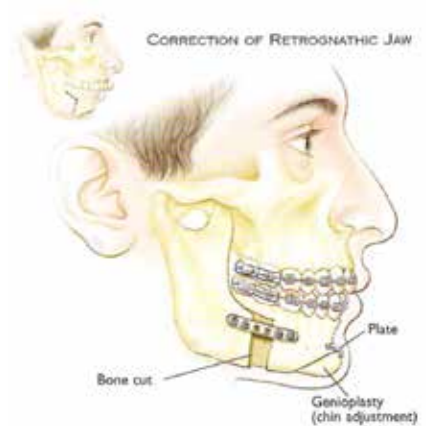


Diagram 1: Orthognathic Surgery

**Dr Nigel Curtis** is a Specialist Oral & Maxillofacial Surgeon, and a Fellow of both the Royal College of Surgeons of Edinburgh and the Royal Australasian College of Surgeons, in the Specialist Field of Oral & Maxillofacial Surgery. Dr Curtis also has a PhD in microsurgical nerve repair.

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# TRANSCATHETER AORTIC VALVE REPLACEMENT FOR SEVERE AORTIC STENOSIS

– with Interventional Cardiologist, Dr Roberto Spina

Aortic Stenosis (AS) is the third most common cardiovascular disease globally after hypertension and coronary artery disease. Although degenerative calcific disease accounts for most AS presentations, rheumatic heart disease is an important cause in Aboriginal and Torres Strait Islander people.

Symptoms of severe aortic stenosis include asthenia, exertional dyspnoea, exertional chest discomfort, pre-syncope, syncope, and sudden death. The appearance of symptoms portends a poor prognosis, with a two year survival shorter than most forms advanced-staged cancer.

Examination reveals an ejection systolic, crescendo-decrescendo murmur in the right second intercostal space that radiates to the carotids and loudens with expiration is a hallmark of AS. A longer and later peaking murmur suggests increasing severity.

Aortic stenosis is usually diagnosed with transthoracic echocardiography (TTE). The diagnosis of severe aortic stenosis requires one of the following:

valve area of under 1cm<sup>2</sup>, peak velocity of blood flow across the valve of greater than 4 metres per second, and a mean transvalvular gradient greater than 40mmHg. Transoesophageal echocardiography, cardiac-gated contrast-enhanced multi-detector computed tomography (MDCT), or invasive cardiac catheterisation may help in confirming the diagnosis.

Traditionally, severe aortic stenosis was treated with open heart surgery requiring cardiopulmonary bypass. Innovation in minimally invasive techniques means that patients previously deemed inoperable are now eligible for transcatheter aortic valve implantation (TAVI) and there is new evidence that TAVI is an excellent alternative to surgery in those at intermediate and even low risk of complications from open heart surgery.

The first TAVI was performed in 2002 via a transvenous, transeptal, antegrade approach and was followed a few years later by a transfemoral arterial approach. Technology has since evolved, with a variety of balloon-

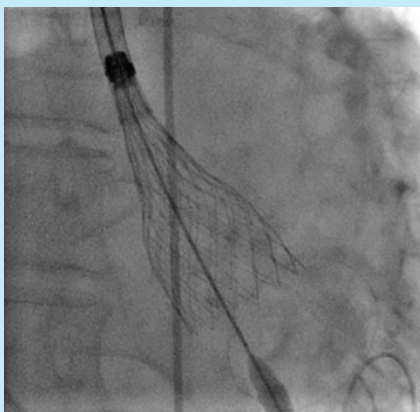
expanding and self-expanding valves available in Australia. With advances in MDCT and transoesophageal echocardiography, valves are more accurately sized and placed, leading to improved outcomes for patients.

The Placement of Aortic Transcatheter Valves (PARTNER) trials have been pivotal in showing that TAVI is non inferior to open heart surgery in patients with severe, symptomatic AS deemed inoperable, and more recently noninferior in patients deemed at low, moderate and high surgical risk. Overall, compared with surgery, transcatheter aortic valve replacement results in less stroke, less bleeding and less atrial fibrillation, but increased risk of vascular complications, significant paravalvular leak and need for permanent pacing. Recovery time is much faster with TAVI than with surgery. On economic analyses, the overall societal cost of TAVI is largely similar to SAVR.

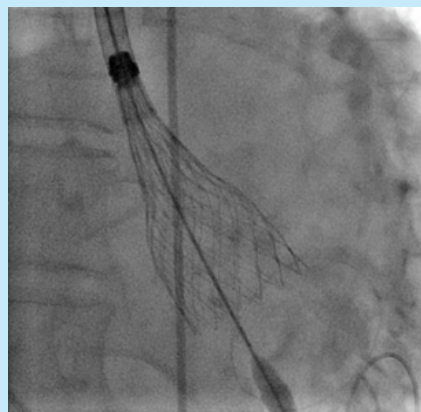
The long-term durability of TAVI valves is currently unknown. On machine testing, TAVI valves are expected to

## Medtronic Evolut Pro Transcatheter Valve Positioning and Deployment

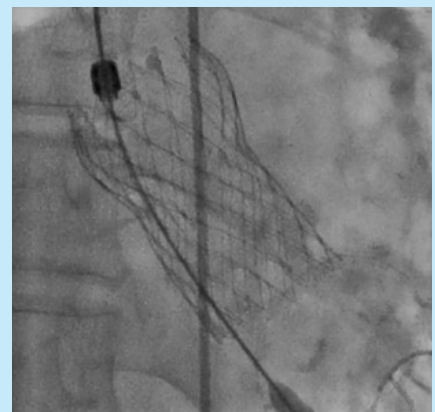
Deployment of a Medtronic Evolut Pro 26mm aortic bioprosthesis.



The transcatheter heart valve is advanced across the aortic valve.



The valve is positioned such that the inferior edge of the valve frame is 2-6mm inferior to the non-coronary cusp (on the left of the picture).



After slow and gradual deployment, the valve appears fully expanded.

Images courtesy of Dr George, Columbia University Medical Center, NYC, USA.

## New and Emerging TAVI Devices



**Portico valve**  
Abbott, Lake  
Bluff, IL, USA



**Lotus valve**  
Boston Scientific,  
Natick, MA, USA



**Acurate Neo**  
Boston Scientific,  
Natick, MA, USA



**Centera**  
Edwards  
Lifesciences,  
Irvine, CA, USA



**Medtronic Evolut  
Pro valve**  
Medtronic  
Corporation,  
Minneapolis,  
MN, USA



**Edwards Sapien  
3 valve**  
Edwards  
Lifesciences,  
Irvine, CA, USA

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last 15 to 20 years, but we do not have clinical follow-up that extends to that time frame yet. As with surgical bioprosthetic valves, TAVI valves are likely to be less durable than metallic valves; therefore, valve deterioration and subsequent re-intervention is more likely. Valve deterioration would previously have meant open surgical replacement; however, transcatheter valve-in-valve TAVI procedure is possible, sparing the patient from repeat open heart surgery when the bioprosthetic valve fails.

A 'heart team', typically comprised of an interventional cardiologist, a cardiothoracic surgeon, an imaging specialist, a geriatrician and an anaesthetist, discuss the best treatment for each patient based

on surgical risk. In preparation for the procedure, patients undergo invasive coronary angiography and cardiac-gated contrast-enhanced multi-detector computed tomography. MDCT is essential in planning the procedure, selecting the correct valve size, and identifying high-risk features.

The procedure is typically performed in the cardiac catheterisation laboratory by a team comprising an interventional cardiologist and a cardiac surgeon. The procedure is usually performed under moderate anaesthesia, without the need for orotracheal intubation, but it is sometimes performed under general anaesthesia. The valve is crimped onto a catheter and advanced to the aortic root via the femoral artery. It is deployed under fluoroscopic (X-ray)

guidance. Alternative vascular access approaches, such as transapical, trans-subclavian, suprasternal, and others, exist for patients who are not candidates for transfemoral TAVR due to severe iliofemoral disease or extreme body habitus. The procedure typically lasts around one hour and patient recovers in the coronary care unit. Average hospital stay is 2-4 days. Patients require three months of dual antiplatelet therapy, and undergo a TTE four weeks post procedure. Prior to any subsequent invasive procedure, TAVI patients should receive antibiotic prophylaxis. TAVI is currently not offered in the Central Coast hospitals. It is performed in a few select centres in Sydney and Newcastle.

**Dr Roberto Spina** is an Interventional Cardiologist trained in Australia and the USA and is a Fellow of the Royal Australasian College of Physicians. He is a staff specialist at Gosford and Wyong Hospitals and Director of the Cardiac Catheterisation Laboratories in Gosford Hospital. Dr Spina trained in medicine for at the Royal Prince Alfred Hospital and in cardiology at St Vincent's Hospital, both in Sydney, followed by a 2-year interventional cardiology fellowship at St Vincent's Hospital, and a one-year full-time paid TAVI fellowship at the New York Presbyterian Hospital/Columbia University Medical Center in New York, USA. He performs the TAVI procedure on Central Coast patients at St Vincent's Hospital.



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# THE MANAGEMENT OF KELOIDS

– with Plastic, Reconstructive and Aesthetic Surgeon, Dr Mohammad Mohaghegh

Keloids are scars that grow outside the boundaries of a surgical incision, cutaneous injury, inflammation, or burn. They are exclusive to humans. They occur in 5% to 15% of wounds and are seen 5 to 15 times more frequently in non-white individuals.

Although they may be asymptomatic, keloids are often aesthetically unpleasant, painful, and/or pruritic. These can be anywhere on the body, however mostly involve the earlobes, shoulders, mid-chest and upper back, and rarely on the hands, feet, axillae, or scalp.

Wounds that cross the skin tension lines, in thick skin or in susceptible locations such as presternal, and deltoid regions, are more prone to abnormal healing.

As there are no animal models to study, the etiology of keloids is uncertain, however they appear most often in dark-skinned individuals.

## Precipitating Events

Cutaneous viral and bacterial infections, inflammatory skin conditions, such as varicella, Bacille Calmette-Guerin vaccination, folliculitis, and acne may lead to the formation of keloids. Thermal and chemical burns, ear-piercing and tattooing are other culprits.

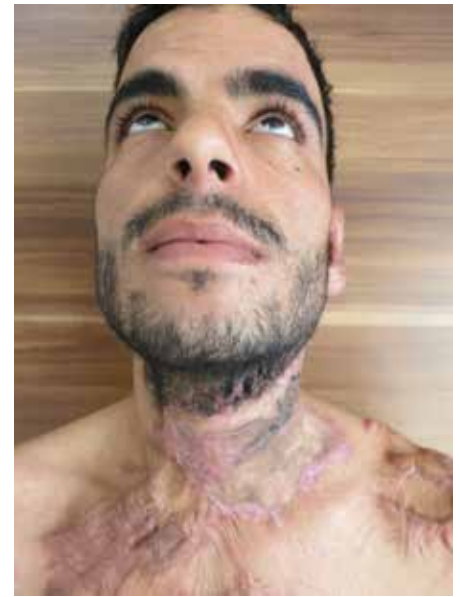
## Diagnosis

Excessive deposition of collagen in the dermis beyond the boundaries of the wound characterise the keloid, whereas hypertrophic scars stay within those boundaries.

Unlike keloids which typically grow for several years and then become stable, hypertrophic scars usually regress in a year or two and respond well to therapy.

## Preventive Measures

Before offering surgical treatment for keloids, it should be known whether the patient, or his/her immediate family, has a history of keloid formation.



A large keloid scar on left neck and ear following thermal injury in a 25-year-old man (a). Early results after excision and skin graft (b). patient was referred for adjunct radiation therapy

Earlobe keloids are common and may occur without the presence of a positive family history. They do not necessarily indicate that the individual is susceptible to keloid formation.

Other major risk factors that the patient and the physician must be conscious of, are the type of precipitating injury (especially thermal or chemical burns) and a history of infected operative sites.

Physicians should advise at-risk patients not to get their ears pierced, get tattoos, or undertake any non-essential cosmetic surgery.

## Treatment

Though there is no single treatment effective on all keloids, the standard treatment is intralesional corticosteroids and/or topical corticosteroids, which inhibit the alpha-2-macroglobulin. The active form of alpha-2 macroglobulin, normally inhibits collagenase.

Collagenase could be considered to be the best treatment, although, in a study by Kang et al<sup>1</sup>, they found the ineffectiveness of intralesional collagenase in treating keloids.

One of the potential side effects of corticosteroid injection is that the sites may become hypopigmented and/or atrophic for 3 to 6 months.

## Steroid injection

A thick coating of a topical anesthetic cream such as EMLA should be applied to the keloid an hour before injection and cover with plastic wrap. Then, by using a 27- to 30-gauge needle, 10-40 mg/mL triamcinolone, should be injected every 2 to 3 weeks (Note: larger needles will clog more often when inserted into hard keloids).

The needle is introduced into the papillary dermis, where collagenase is produced. Then, the needle should be placed more superficially into the dermal-epidermal plane, where the triamcinolone will insert more easily.

The contents of the needle should be injected while withdrawing. One easy way to inject triamcinolone is to use half 10 mg/mL and half 40 mg/mL. This ratio delivers an adequate strength of triamcinolone and ease of injection without blocking the needle. Surgery is recommended, if the keloid has not begun to regress or got softer after four injection sessions.

## Surgical Excision

To prevent keloid, the physician should avoid making incisions on mid-chest sternum, crossing joint spaces, and always follow the skin creases where possible and the wound should be closed with the least tension.

Constant pressure is an effective way in preventing the recurrence of keloids after surgical excision. An elastic garment covering the postoperative site should be worn 16 to 20 hours a day, beginning immediately after complete wound healing. Macroglobulins, which normally would inhibit the collagenase breakdown of collagen appeared to be decreased by pressure. Pressure also decreases mast cells, which are increased in keloids.

## Adjunct Therapy

Unfortunately, the recurrence rate is 50% by excision alone, so adjunct therapy is advised. The injection of triamcinolone acetonide 40mg/ml mL into the postoperative site every 2 to 3 weeks is the most common adjunct, which begins 1 week after suture removal.

Use a mixture of equal parts triamcinolone acetonide, 40 mg ml and 2% lignocaine and epinephrine, to anesthetize the site. Sutures should stay in place for 10 to 20 days as the steroid slows wound

healing. Intralesional triamcinolone should be readministered later, if the postoperative site begins enlarging.

## Cryosurgery

Cryosurgery can be used as a monotherapy or easier injection of intralesional steroids by creating mild edema of the keloid. The freeze time is 10 to 15 seconds when used before injections. As a monotherapy, use two courses of 15-20 second freeze-thaw cycles every 3 weeks.

The patient should be informed of the possibility of temporary hyperpigmentation or hypopigmentation which could occur after cryosurgery.

## Laser Therapy

The carbon dioxide laser monotherapy has a recurrence rate of 70%, but it can be used to debulk large lesions. According to Sherman<sup>2</sup> and Rosenfeld, the Nd: YAG 1064-nm laser was successful in improving keloids in 16 of 17 patients. A 585-nm flashlamp-pumped pulsed-dye laser has been used successfully in treating sternotomy scars, especially when used in conjunction with intralesional triamcinolone injected every 3 weeks.

## Radiation

Radiation as a monotherapy has not shown success in large doses. Though large doses can increase the risk of

squamous cell carcinoma at the treated site 15 or more years later.

Radiation is mainly successful when it used as an adjunct to surgery when the fibroblasts are proliferating which is during the first two weeks after excision. The usual dosage is either 300 rads (3 Gy) q.o.d. for five courses or 500 rads (5 Gy) q.o.d. for three courses starting immediately after surgery.

## Hydroquinone or other Bleaching Agents

Bleaching seems to be a promising therapy. The rationale is that keloids do not develop in albino patients and vitiligo often causes the underlying keloid to regress. Hydroquinone is most effective if used within the first 5 months of keloid formation. If considering an excision, treat the excision site and a 1 to 2cm margin to make sure to include the area of the suture line.

1. Kang N, Sivakumar B, Sanders R, et al: Intralesional injections of collagenase are ineffective in the treatment of keloid and hypertrophic scars. *J Plast Reconstr Aesthet Surg* 59:693-699, 2006

2. Sherman R, Rosenfield H: Experience with the Nd: YAG laser in the treatment of keloidal scars. *Ann Plast Surg* 21:231-235, 1988

**Dr Mohammad Mohaghegh** spent more than 20 years of rigorous general surgery and plastic surgery training, including a MPHil degree, before being awarded his FRACS in Plastic and Reconstructive surgery.

He has a strong interest in Rhinoplasty and breast surgery including aesthetic and reconstruction but his expertise covers a large variety of procedures in Plastic, Reconstructive and Aesthetic Surgery. Locally he operates at Gosford Private Hospital and Brisbane Waters Private Hospital.

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# BREAST CONSERVING SURGERY

– with Oncoplastic Breast Surgeon, Dr Eva Nagy

Data<sup>1</sup> collected on breast cancer in Australia since 1982 highlights two key trends:

- 1) **The incidence of breast cancer in women is increasing.** In 1982, 1-in-12 women were developing breast cancer before the age of 85. Today, that statistic has increased to 1-in-7 women. While we do not understand all the reasons for this trend, we know that the increased use of hormone-adjusting medication (for contraception or HRT) might explain some of this trend<sup>2-4</sup>.
- 2) **Survival rates are improving.** In the period of 1982 to 1987, the 5-year survival rate for a woman diagnosed with breast cancer was approximately 72%. Today, that figure is 91%. Early detection through screening and advances in treatment (e.g. chemotherapy) have contributed to this progress.

These trends have led to an increase in the number of women who have had breast cancer and have been successfully treated for it. While this is a good outcome, it compels the medical community to be increasingly mindful of

patients' quality of life post-cancer. This contrasts with priorities in the 1980s, where patient survival was typically the sole focus. Additionally, as Medicine has furthered its understanding of breast cancer and its treatments, we have continually sought ways to safely de-escalate treatment. Chemotherapy drugs and regimens have made significant progress towards reducing side effects on patients, radiotherapy is now performed with greater precision than previously possible, and surgeons now employ techniques that are far less invasive than the radical mastectomies of the 1980s.

Today, a commonly employed alternative to the mastectomy is breast conserving surgery (also known as lumpectomy, wide local excision, or partial mastectomy). It involves the excision of the breast cancer along with a surrounding rim of tissue. All remaining breast tissue is left in situ. It is appropriate for small cancer/s that affect a small region of the breast. When combined with radiotherapy, breast conserving surgery presents patients with recurrence risks equivalent to mastectomies<sup>5</sup> and new data indicates slightly superior comparative prognostic values<sup>6</sup>.

Studies found that patients who underwent breast conserving surgery were more satisfied with outcomes compared to patients who underwent mastectomies.

Multiple studies have been carried out to measure patients' satisfaction levels and psychological wellbeing after breast cancer treatment. Using Body Image Scales, these studies found that patients who underwent breast conserving surgery were more satisfied with outcomes compared to patients who underwent mastectomies. This was the case even for patients who underwent reconstruction following mastectomies<sup>7,8</sup>. This is not surprising given how many women perceive their breasts as an important part of their self-image and self-confidence.

Consequently, there is a preference from Breast Surgeons to perform breast conserving surgery where possible. Where the cancer is small, or where multiple cancers are concentrated in a particular region in the breast, breast

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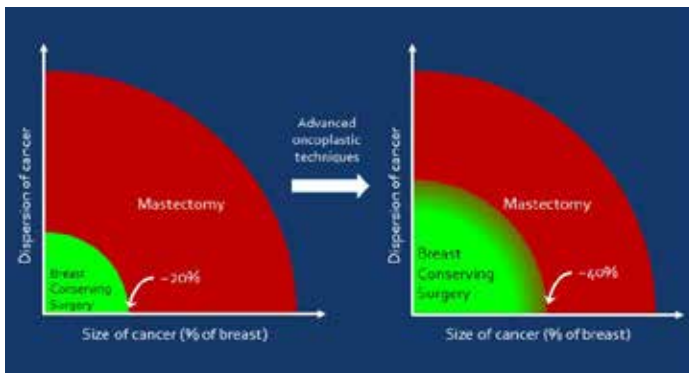


Figure 1



Figure 3

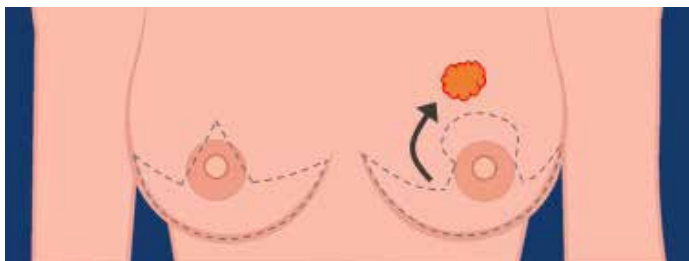


Figure 2

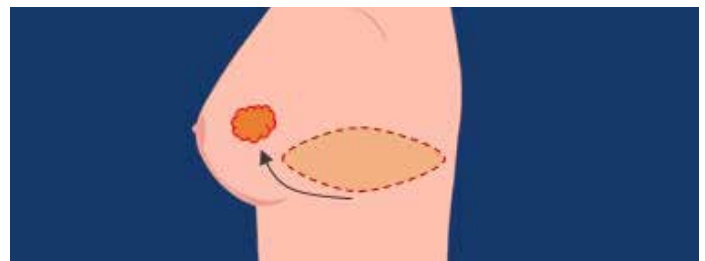


Figure 4



conserving surgery may be performed with oncological effectiveness without significantly affecting the appearance of the breast. Challenges arise when the cancer is large relative to the breast, or when multiple cancers are dispersed in the breast. Under such scenarios, even if the cancers could be removed via lumpectomies with oncological effectiveness, the cosmetic outcome would be unacceptably poor for the patient.

When a cancer exceeds ~20% of the size of the entire breast, its removal alone would leave a noticeable defect in the patient's breast, leading to significant deformity<sup>9</sup>. Fortunately, the field of oncoplastic surgery has defined new techniques that facilitate the safe removal of moderate-sized (up to 40% of total breast size) tumours while still producing cosmetically acceptable outcomes for patients (Figure 1). Two promising techniques are the therapeutic mammoplasty and the chest wall perforator flap reconstruction.

In a purely cosmetic context, the (reductive) mammoplasty typically involves the removal and reshaping of breast tissue and repositioning of the nipple, resulting in a smaller lifted breast<sup>10</sup>. In the oncological context, the typically-discarded tissue is now used to fill in the defect in a patient's breast where the cancer was originally located (Figure 2)<sup>11</sup>. This procedure is the therapeutic mammoplasty. It is most suited for large-breasted patients, leads to good cosmetic results (Figure 3), and allows the patient to avoid a mastectomy. A reductive mammoplasty may be performed on the other side to symmetrise the breasts.

For smaller-breasted patients, the chest wall perforator flap reconstruction employs tissue located on the patient's chest wall under the armpit or inframammary fold<sup>12</sup>. After the cancer is removed, subcutaneous tissue and dermis on the lateral chest wall is lifted (its blood supply is kept connected) and moved into the defect in the breast (Figure 4). In most cases, breast volume is maintained, with only a scar that is visible (but fades over time) when the patient's arm is lifted, and is typically hidden along the bra line. For the patient to which this reconstructive technique is suited, this procedure allows the patient to avoid a mastectomy, and still delivers good cosmetic outcomes.

It is important to note that the mastectomy remains relevant in breast surgery, particularly where cancers exceed 40% in size of the entire breast or where multiple cancers are dispersed in the breast. Reconstruction techniques available today in this context are also delivering good results to patients. In Australia, breast conserving surgery is performed in about 60% of breast cancer cases on average<sup>13</sup>. With the use of oncoplastic techniques, some Breast Surgeons have reported employing breast conserving surgery in 92% of their cases<sup>14</sup>. We can expect to see the frequency of breast conserving surgery used in Australia to increase as we advance surgical techniques in the specialty.

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2. Dumeaux, V., et al., *Previous oral contraceptive use and breast cancer risk according to hormone replacement therapy use among postmenopausal women*. *Cancer Causes Control*, 2005. 16(5): p. 537-44.
3. Morch, L.S., et al., *Contemporary Hormonal Contraception and the Risk of Breast Cancer*. *N Engl J Med*, 2017. 377(23): p. 2228-2239.
4. Collaborative Group on Hormonal Factors in Breast, C., *Type and timing of menopausal hormone therapy and breast cancer risk: individual participant meta-analysis of the worldwide epidemiological evidence*. *Lancet*, 2019. 394(10204): p. 1159-1168.
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**Dr Eva Nagy** is an Oncoplastic Breast Surgeon operating out of Gosford Private Hospital. Her offering includes:

- Surgical removal of breast cancer (mastectomies & breast conserving surgery)
- Breast reconstruction post cancer surgery
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# UNCOMMON ENT DIAGNOSES (Part 2)

– with Otolaryngology/Head and Neck Surgeon, Dr Tony Kuo

## Case 1: Epstein Barr Virus Mucocutaneous Ulcer – An Unexpected Diagnosis of a New Entity

A 23-year-old male presented with a 1 day history of progressive odynophagia, blood streaked sputum, unilateral neck pain and swelling and associated subjective fevers. He had no notable medical history including autoimmune disorders or cancer, and denied any regular medications.

He presented with left sided tender level II/III lymph nodes and Grade II bilaterally erythematous palatine tonsils, with a white coating to the right inferior pole with mildly erythematous.

His bloods revealed a lymphocytosis of  $9.0 \times 10^9/L$ , a C-Reactive Protein (CRP) of  $10 \text{mg/L}$ . A serum monospot, added retrospectively to admission bloods was positive.

CT of his neck demonstrated a  $7 \times 8 \times 7 \text{mm}$  collection posterior to his left palatine tonsil. There was no evidence of deep neck space involvement. This was not drained due to the absence of clinical features of peritonsillar abscess. The patient was originally discharged with analgesia and advise, however represented the following day with worsening pain.

He was admitted with IV amoxicillin and clavulanic acid, analgesia and IV dexamethasone.

On day 3 of medical management he began to spike fevers to  $39^\circ\text{C}$ , and had ongoing, severe odynophagia. His lymphocytes increased to  $11.9 \times 10^9/L$ . Due to radiological collection and worsening pain, an emergency tonsillectomy was subsequently performed, and the excisional biopsy sent for histopathological analysis.

Following tonsillectomy, the patient remained in considerable post-operative pain – for which he was prescribed further dexamethasone. He was discharged postoperative day 2.

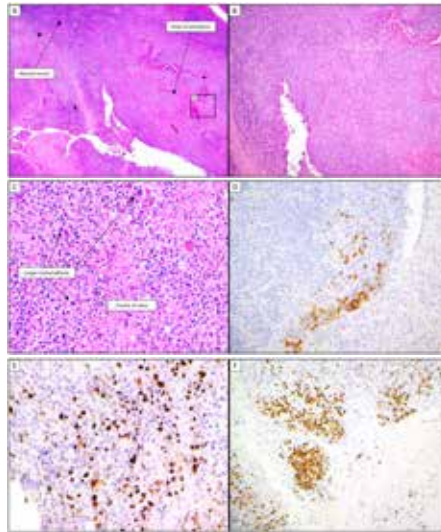


Figure 4 – Histopathology demonstrating the normal tonsillar tissue with areas of deep ulceration at 4x (A), and 10x magnification (B). At 40x magnification the large immunoblasts and the occasional Reed-Sternberg-like cell are demonstrated in the centre of the ulcer (C). The larger immunoblasts demonstrated positive staining for CD30 (D), EBV (EBERish) (E) and MUM-1 (F).

At 6 months there was no evidence of recurrent disease.

### Pearls:

1. Epstein Barr Virus (EBV) Mucocutaneous Ulcer (MCU) is a rare but underdiagnosed condition, presenting as solitary, sharply demarcated ulcerations of the oral cavities, gastrointestinal tract and skin.
2. New clinicopathological entity since its inclusion in the 2016 WHO Classification of Lymphoid Neoplasias.
3. Usually associated with immunosuppression.
4. Serum generally demonstrates a lymphocytosis and evidence of EBV infection. Polymerase chain reaction (PCR) quantification of EBV-DNA in peripheral blood may also be useful, and the diagnosis of EBV-MCU questioned if high titres are isolated.
5. EBV-MCU should be included in the differential for severe tonsillitis, particularly in the instance of failed medical management.

## Case 2: Isolated Soft Tissue Rosai Dorfman of the Paranasal Sinuses with Osseous Destruction

A 74-year-old gentleman of Chinese origin presented with an 8-year history of nasal stuffiness, rhinorrhoea, post-nasal drip and anosmia. His medical history was significant only for a previous CVA for which he was wheelchair bound.

Flexible nasoendoscopy demonstrated complete obliteration of bilateral nasal cavity with severe multiple nasal polyposis. Otologic examination demonstrated unilateral, left sided wax impaction with otitis media with effusion following aural toileting. Examination of the neck and axilla did not reveal palpable lymphadenopathy.

CT demonstrated widespread abnormal soft tissue density occupying the entire nasal cavity surrounding the inferior, middle and superior turbinates resulting in osteomeatal obstruction. The density extended posteriorly to involve the anterior oropharynx, with subsequent cortical breach of the anterior wall of the sphenoidal sinus.

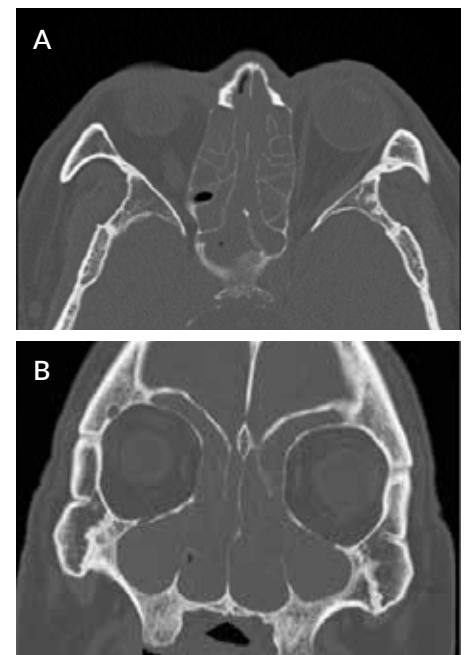


Figure 1 – Axial (A) and coronal (B) computed tomography scans of the patient demonstrating a widespread, abnormal soft tissue density, occupying the entire nasal cavity and resulting in osteomeatal destruction.

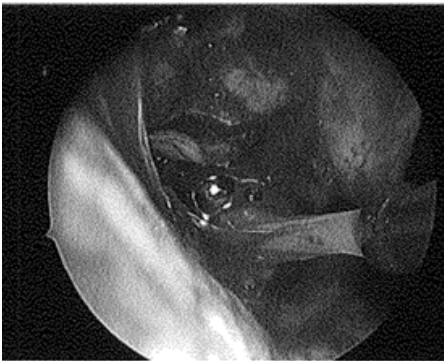
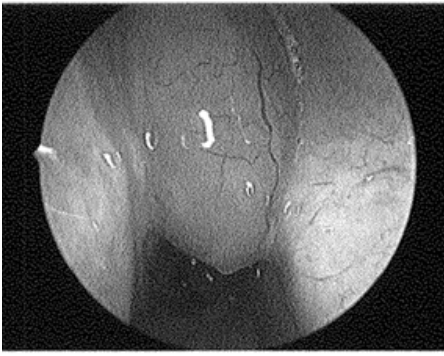


Figure 9 - Intraoperative endoscopic images of the upper (A) and lower (B) nasal septum, demonstrating complete of the nasal airway.

were sent for anatomical pathology and microbiological examination.

Culture of the specimen demonstrated moderate growth of coliform species. A fungal stain was negative.

Histological examination of the nasal polyps demonstrated marked submucosal oedema and gland dilatation with thick mucin was seen. The basement membrane was thickened, with an abundant inflammatory infiltrate composed largely of eosinophils noted. Immunohistochemistry demonstrated abundant histocytes expressing CD68. In regions, groups of histocytes are noted to have voluminous cytoplasm and exhibit emperipolesis, with their cytoplasm containing scattered mononuclear cells. The component histocytes demonstrated positive staining for S100 and were negative for CD1a, confirming Rosai-Dorfman type histocytes.

Follow up at three months demonstrated an improvement in his nasal symptoms. He had also noticed an improvement in his hearing. Nasoendoscopy revealed a patent nasal airway, with some early polypoid formation of the middle turbinates bilaterally. The left grommet was patent.

He was commenced on daily sinus irrigation with topical corticosteroids, with good effect. At 12 months, the patient was free from recurrence.

**Pearls:**

1. Rosai Dorfman disease (RDD) is a rare benign proliferative histolytic disorder.
2. Presents with bilateral painless lymphadenopathy and fever, with biochemical tests demonstrating increased ESR and hypergammaglobulinaemia.
3. Originally described as a disorder of the lymph organs, RDD is now recognised to present with any combination of nodal and extranodal disease.
4. The aetiology of RDD is considered idiopathic.
5. Paranasal sinuses being the most frequent site. An extensive literature search only demonstrated one other case involving osseous destruction, highlighting the rarity of this case.
6. Diagnosis relies histopathology which is characterised by histocyte proliferation and emperipolesis—the non-destructive phagocytosis of lymphocytes, plasma cells or erythrocytes, becoming visible inclusions within the cells themselves.
7. In symptomatic patients, surgical resection is the treatment of choice.

He was treated with oral azithromycin and intranasal corticosteroids and recommended surgical management.

He underwent polypectomy, septoplasty, bilateral turbinoplasty and full-house sinus surgery under image guidance, with left grommet insertion. Intraoperatively, the patient had bilateral nasal obstruction with polyps, and bilateral purulent discharge from his maxillary, ethmoid and sphenoid sinuses (Figure 1). The specimens

**Dr Tony Kuo** is a Senior Otolaryngologist working at Gosford Public/ Private Hospital since 2011 after being awarded the Fellowship of the Royal Australasian College of Surgeons in Otolaryngology/Head & Neck Surgery in 2009 and completed 2 years Fellowship in Head and Neck Reconstruction with Professor Fu-Chan Wei. Dr Kuo is a Conjoint Lecturer for Macquarie University and Newcastle University Medical School and has published numerous medical research papers in addition to the authorship of a Head and Neck textbook.



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# NERVE ENTRAPMENT SYNDROMES – DIAGNOSIS, INVESTIGATIONS AND TREATMENT PARADIGMS

– with Neurosurgeon, Dr Michael Biggs

## Carpal Tunnel Syndrome

Classic symptoms include nocturnal pins and needles/numbness in the hand, especially 1-4th fingers. Symptoms may also occur driving a car or reading a book. There is often pain in palm of the hand, extending up the volar aspect of forearm and arm as far as the shoulder.

The diagnosis is confirmed on Nerve Conduction Study (NCS).

Treatment includes conservative management with hand splints, cortisone injection into the carpal tunnel (particularly useful during pregnancy when symptoms can be severe and often resolve after the pregnancy), or surgical decompression. Surgery can be done open or endoscopic. Whilst endoscopic employs a slightly smaller incision and is associated with an earlier return to work, it is also associated with a significantly increased risk of nerve damage, particularly when there is aberrant anatomy with the thenar branch running directly across the carpal ligament – see intra-operative photo below). Patients should be referred for surgical management before numbness is constant, as once it is constant, it may not resolve despite successful decompression.

## Ulnar nerve entrapment

Symptoms include nocturnal pins and needles/numbness in 5th finger and split 4th finger. Split 4th finger symptoms are pathognomonic for ulnar nerve entrapment.

The symptoms are exacerbated with elbow flexion.

Diagnosis is confirmed on NCS.

Conservative treatment includes avoidance of both leaning on the elbow and flexing the elbow at night. Splints can be provided to assist with this.

Surgical treatment includes decompression alone in most instances, or submuscular transposition in the presence of subluxing ulnar nerve syndrome, redo procedures. or prior major orthopaedic trauma around the elbow (ref. 1). Referral should not wait until wasting and weakness is evident in ulnar innervated hand muscles, as damage may then be irreversible.

## Thoracic Outlet Syndrome (TOS)

Classic symptoms include an aching pain, discomfort or heaviness in the anterior neck, shoulder and upper arm. This is associated with numbness/tingling down the medial arm and

forearm to the 4th and 5th fingers (sometimes 3rd). There are abnormal sensations in anterior chest and axilla, associated with tightness in the neck and occipital headache. The symptoms are worse with any activity requiring elevation of the arm (washing hair, hanging washing). There may also be vascular symptoms of discoloration, and temperature change affecting the hand.

TOS must be differentiated from ulnar nerve syndrome. The keys are:

1. The distribution of symptoms - medial arm and forearm (TOS), split 4th finger (ulnar nerve).
2. Involvement of Abductor pollicis brevis (APB) – median nerve (TOS)
3. Symptoms worse with elbow flexion (Ulnar nerve)
4. Neurophysiology – delayed conduction across ulnar nerve at elbow (ulnar). EMG changes in APB (TOS)

*continued..*



**Dr Michael Biggs** has 26 years experience as a Consultant Neurosurgeon with particular interest and expertise in peripheral nerve surgery, minimally invasive spine surgery, trigeminal neuralgia, hemifacial spasm, and brain tumours, particularly skull base (acoustic neuroma, meningioma).

Dr Michael Biggs has consulting rooms at St Leonards, Dee Why and Frenchs Forest, and is now consulting on the Central Coast at:

- Woy Woy: 19 Kingsley Avenue, Woy Woy 2256
- Erina: The Element Building, Suite 2, Level 1, 200 Central Coast Highway, Erina 2250

**Call us:** 02 8320 0577

**Email:** [info@biggsneuro.surgery](mailto:info@biggsneuro.surgery)

**Website:** [biggsneuro.surgery](http://biggsneuro.surgery)

The pathology is usually a cervical rib or a fibrous band acting in the same way as a rib. Conservative management involves Physiotherapy targeting the shoulder elevators. Surgical management involves supraclavicular excision of cervical rib or division of the fibrous band to decompress the brachial plexus.

### Meralgia paraesthetica (Lateral Femoral Cutaneous nerve entrapment)

Symptoms include pins and needles/ numbness in antero-lateral thigh. The onset of symptoms is often associated with obesity or putting on weight.

Nerve Conduction Study (NCS) can be helpful, but is not reliable as the SNAP can be difficult to obtain in normal patients.

Conservative management consists of weight loss, anti-neuropathic medication such as Lyrica or Gabapentin, or ultrasound guided cortisone injection. This is useful for diagnostic and therapeutic reasons.

Surgical release should be performed if conservative treatment fails.

### Common Peroneal nerve entrapment

Symptoms include pins and needles and pain in anterolateral calf and dorsum of foot. Examination may reveal foot drop and weakness of eversion.

The diagnostic conundrum is distinguishing this from an L5 radiculopathy. In L5 radiculopathy, hip abduction may be weak (+ve Trendelenberg sign). In L5 radiculopathy, EMG abnormality may be identified in tibialis posterior (supplied by tibial nerve). Thus, Nerve Conduction Study (NCS) and EMG are critical.

Surgical release is generally needed, and associated with good outcomes.

### Tarsal Tunnel Syndrome

Symptoms include a burning parasthetic pain in the sole of the foot. It may involve the medial plantar nerve territory, the lateral plantar nerve territory, or both.

Diagnosis is best confirmed on NCS.

Conservative management includes anti-neuropathic medication (Lyrica or Neurontin), and simple analgesia. Surgical treatment reserved for those who fail conservative treatment.

In summary, entrapment syndromes can be managed conservatively when symptomatic, but should be referred for surgical release prior to development of any deficit. If referred after development of a fixed deficit, there can be no guarantee of neurological recovery post successful decompression.

If the diagnosis remains unclear, consider imaging, as nerve sheath tumours (schwannoma or neurofibroma) may present with similar symptoms to entrapment syndrome.

### References:

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- ✓ Day only surgery (3-5 hour hospital stay)
- ✓ Virtually painless procedure
- ✓ Minimal pain relief (Paracetamol or Ibuprofen)
- ✓ Provides long term cure in 97% of patients

## Traditional Surgery

- ✗ General anaesthetic
- ✗ 3-4 day hospital stay
- ✗ Notoriously painful procedure
- ✗ Pain relief usually morphine



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# PELVIC VENOUS CONGESTION SYNDROME

– with Vascular Surgeon Dr Victor Bourke

## What is Pelvic Venous Congestion Syndrome (PVCS)?

PVCS is a cause of chronic pelvic pain in women, and should be considered when evaluating women who suffer pelvic pain, especially if no clear cause of the pain can be identified on routine gynaecological examination and investigation.

PVCS is associated with:

- Dragging sensation in the pelvis, often but not always left sided
- Symptoms exacerbated by exercise and standing
- Pelvic ache that worsens during the day
- Symptoms relieved by lying down or putting legs up
- Dyspareunia and post-coital pain
- Atypical distribution of varicose veins (e.g. buttocks, labia, inner thighs)
- Oedema, ache, and feeling of “fullness” in the lower limbs
- Symptoms can be worse during menstruation
- Dysmenorrhoea
- Dysuria

## Why is Pelvic Venous Congestion Syndrome important?

15% of women aged 18-50 will suffer from Chronic Pelvic Pain. In 60% of these women the cause remains undiscovered.

Pain caused by Pelvic Venous Congestion Syndrome can be disabling, and is an under-recognised cause of chronic pelvic pain in women.

A study by Soysal et al. found a 31% incidence of PVCS in a population of symptomatic women<sup>1</sup>. This study also found a 12% incidence of PVCS in patients with another explanation of pelvic pain (e.g. fibroids, endometriosis), while only 3% of asymptomatic women had radiological evidence of pelvic venous congestion.

## What causes Pelvic Venous Congestion Syndrome?

Most commonly it is caused by reflux (blood travelling in the wrong direction) in the ovarian veins, especially the left ovarian vein. In isolation, this is known as Primary Ovarian Vein Incompetence (POVI).

Rarely, ovarian vein incompetence can be secondary to compression of the left renal vein between the Aorta and Superior Mesenteric Artery (Nutcracker syndrome).

Pelvic venous congestion can be caused by reflux in the internal iliac veins which can be primary, or secondary (for example, due to compression of the left common iliac vein seen in May-Thurner Syndrome).

## What are the risk factors?

- Multiparity
- It often occurs in women aged 20-40 but can occur in older women.
- Cystic disease in the ovaries can be associated

## How is it diagnosed?

Duplex ultrasound performed by a specialist vascular laboratory is the gold standard for initial assessment.

At Central Coast Vascular (in the Gosford, Kanwal, and Woy Woy laboratories) this test is available. We assess the diameter of the ovarian vein (>6mm is abnormal and has a high positive predictive value >80%), the direction of flow (with retrograde flow indicating reflux) and whether or not there is true renal vein compression (as opposed to pseudo-compression that can be seen in primary ovarian reflux caused by haemodynamic flow alterations). We also perform direct imaging of pelvic varicosities. We are currently researching volume flow measurements in the ovarian veins as a diagnostic criterion.

Occasionally severely dilated (varicose) pelvic veins are seen at laparoscopy, which can trigger a referral to an Endovascular Surgeon.

## What is the treatment?

Endovascular treatment is usually performed under local anaesthesia using coils alone, or coils in combination with foam sclerotherapy (using Sodium Tetradecyl Sulphate). The procedure is performed from either a femoral or jugular vein approach. The procedure is performed as a day procedure.

Endovascular treatment has been validated by several large patient cohort studies with long term follow-up using standardised pain and outcome assessment tools. Endovascular treatment with embolisation has been shown to be significantly more effective than open or laparoscopic therapy for improvement of symptoms.

The rates of improvement are reported in the literature at 80-100%.

## What are the complications?

Complications are rare and include non-target embolisation, coil migration, DVT, haematoma and contrast allergy.

## References:

1 Soysal M E, Soysal S, Vicdan K, Ozer S. A randomized controlled trial of goserelin and medroxyprogesterone acetate in the treatment of pelvic congestion. *Hum Reprod.* 2001;16(5):931-939.

2 Park SJ, Lim JW, Ko YT, et al.: Diagnosis of pelvic congestion syndrome using transabdominal and transvaginal sonography. *AJR Am J Roentgenol.* 182:683-688 2004

**Dr Victor Bourke** is an experienced Vascular and Endovascular Surgeon, Fellow of the Royal Australasian College of Surgeons, and member of the Australian and New Zealand Society for Vascular Surgeons (ANZSVS).

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# IVF – WHAT TO DISCUSS WITH YOUR PATIENTS

– with Obstetrician and Gynaecologist, Dr Raouf Farag

With infertility affecting one in six couples, struggling to conceive is highly common. Local leading obstetrician, gynaecologist and IVF specialist, Dr Raouf Farag discusses what factors affect fertility, when to start seeking advice and why you would need IVF.

## What factors affect fertility?

### Age

Age is the single biggest factor. As a woman ages her fertility declines, as her eggs diminish in quantity and quality. From the age of 32 a woman's chances of conceiving begins to decrease, with the decline accelerating after 35. A 30-year-old has a 20 per cent chance of conceiving per cycle. For a 40-year-old, that reduces to 5 per cent. Age is also important for men because it can affect time to pregnancy, risk of miscarriage and health of the child.

### Weight

Obesity can cause hormonal imbalances and problems with ovulation and is associated with polycystic ovary syndrome (PCOS). Being underweight can also cause infertility due to hormonal imbalances.

### Smoking and drinking

Smoking and heavy drinking can increase the length of time it takes to get pregnant for both men and women. In men alcohol can impair fertility because it can cause impotence, reduce libido, and affect sperm quality.

### Health conditions

Chlamydia, pelvic inflammatory disease, or severe endometriosis can cause physical barriers to conception such as blocked fallopian tubes.

### When to start

As a general rule, prospective parents are advised to seek advice after one year of trying for a pregnancy without success. However, women who do not have a period or men who have had a vasectomy should be investigated straight away and women who have irregular cycles over three months should also seek help.

Women aged over 34 are recommended to see a medical professional after 6 months of trying with no luck.

### What can be done to treat your infertility problem?

The first step in treatment is to address any problems which have been specifically diagnosed by the testing. Following treatment of specific problems, further management often involves ovarian stimulation using fertility drugs combined with partner insemination. This helps ensure that sperm and eggs meet at the appropriate time in the fallopian tubes of the woman on the day of ovulation. There are many additional treatment plans that can be undertaken if controlled ovarian stimulation and partner insemination does not result in pregnancy.

Depending upon individual situations, such treatments may include in-vitro fertilisation (IVF), intra-cytoplasmic sperm injection (ICSI), intra-uterine insemination (IUI), assisted hatching, laparoscopic or laparotomy treatment of pelvic factors, and others.

### Why would patients need IVF?

Most clinics put prospective parents having fertility problems on lower-tech cycles such as ovulation induction and intrauterine insemination before opting for IVF.

However, IVF is generally the best option for infertility caused by physical reasons such as a blocked fallopian tube. IVF is also more common for older women because the chances of pregnancy with the lower-tech cycles is not as good. In fact, IVF could offer a better chance of getting pregnant per cycle than trying to do it naturally.

Same-sex couples seeking IVF are becoming more common, representing about 10-15 per cent of patients. People may also seek IVF to screen for a genetic disease through a process known as pre-implantation genetic diagnosis.

With 1 in 25 Australian babies now born via IVF, it is worth exploring with suitable patients as a highly viable option.

**Dr Raouf Farag** is an active Obstetrician and Gynaecologist in private & public practice in Central Coast (NSCCAHS) with special interest in high risk pregnancy, minimal access advanced pelvic surgery and infertility.

Dr Farag's clinic in Gosford offers advice, counselling, and support.

Dr Farag specialises in gynaecology, obstetrics, and IVF. Including:

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# FINDING ANSWERS: WHEN TO TAKE YOUR CHILD TO SEE A CHILD PSYCHIATRIST

– with Psychiatrist, Dr Sangeetha Makielan

Australia's youth are facing a crisis, and they need our help as care providers and advocates.

The percentage of youth in Australia who say mental health is an issue of national importance grew from 21% to 43% between 2015 and 2018. Forty-three percent of children say coping with stress is their top personal concern.

At the same time, as many as half of all children and adolescents in Australia receive inadequate (or no) treatment, despite meeting the criteria for mental health disorders. Children with complex conditions have an even higher risk of inadequate care.

There are many reasons our children aren't getting the mental healthcare they need. Often, those reasons tend to be structural and aren't reflective of the kind of care possible for young people. Even still, if you recognise behaviours in your child that trouble you, there is something you can do to advocate for your child's care - bring your child to see a Child and Adolescent Psychiatrist.

## Finding help for your child: the first steps

Is your child struggling or experiencing emotional distress?

When it comes to a child's health, while there may be a number of professionals available, there is one often overlooked professional - the Child & Adolescent Psychiatrist.

A Child & Adolescent Psychiatrist is a medical specialist with at least five years (often longer) of further accredited rigorous specialist training under the Royal Australian and New Zealand College of Psychiatrists (RANZCP) in public hospitals where they deal with complex and acute cases of mental health.

To become a Child and Adolescent Psychiatrist, a candidate has to

complete at least two years of specialised training under the RANZCP in mental health work with children, adolescents, and their families. Their expertise allows them to use multiple treatment approaches - diagnostic studies, prescription medications, and several types of psychotherapy interventions.

## When should you see a child Psychiatrist?

Diagnosing mental illness in children is tricky for all health professionals for several reasons. First, children may not have the vocabulary or the emotional maturity to express their feelings as they experience them. Additionally, development varies significantly between individual children, which means there's no true timeline to follow. Finally, mental illness presents differently in children than in adults.

It is important for the psychiatrist to be directly involved in the initial assessment and management of any children displaying common signs of mental health issues. However, it becomes even more crucial among children and young people presenting with complex, severe symptoms and who face increased risk to themselves and others.

In cases where the underlying cause of problem behaviours is illness, a misdiagnosis or no diagnosis is devastating for children. Attempting other treatment options without rigorous assessment and diagnostics means you are all working to manage symptoms without acknowledging the existence of the underlying cause.

What's worse, data shows that waiting too long is harmful for both children and their families. As they wait for help, their ability to emotionally or cognitively function declines. The decline may cause you to lose hope that anything can change, and you both may be resistant to try care again in the future.

Although your child benefits from the work of a healthcare team (including a psychologist, Paediatrician, speech therapist, etc.), both your child and the team benefit when a Child Psychiatrist oversees all aspects of mental health treatment. Doing so offers a clear path forward and allows all members of the team to adjust the treatment plan as one rather than as individuals.

Australia's children are asking for help with their mental help, and we can give them the care they deserve.

**Dr Sangeetha Makielan** is a fellow of the Royal Australian and New Zealand College of Psychiatrists and is an accredited member of the Faculty of Child & Adolescent Psychiatry. She commenced her specialist medical training in psychiatry at the Maudsley in the UK and finished her specialist training in Australia.

Dr Makielan is pleased to accept referrals for patients, by contacting Brisbane Waters Private Hospital on: T: 02 4343 0265 or 1800 270 888  
E: [contact@dolphintribe.com.au](mailto:contact@dolphintribe.com.au)  
W: [dolphintribe.com.au](http://dolphintribe.com.au) or [familypsychiatrist.com.au](http://familypsychiatrist.com.au)





# Mental Health

## Evidence based holistic approach

A holistic approach to mental health takes into account all aspects of the individual, considering not only the diagnosis and symptoms, but emotional and social factors as well. By integrating holistic methods into the patients overall treatment plan a more comprehensive approach to healing will improve the clinical outcome. In recent years, the support for holistic strategies for achieving mental wellness has swelled.

The focus of holistic healing is to encourage the person to strive for wholeness and healthy living with the goal being to gain proper balance in all aspects of life.

The Central Coast Clinic promotes relaxation and exercise by offering patients the choice of participating in Art Therapy, Gardening, Tai Chi and Hydrotherapy, to name a few.

Known to reduce pain and the symptoms of depression, Tai Chi combines gentle physical exercise and stretching with mindfulness and is popular with patients.

Gardening is good for mental health. Research shows that people that suffer from anxiety or depression have found gardening and caring for plants to be incredibly beneficial. While gardens can be relaxing, they can also be places where our efforts result in a real sense of achievement, boosting confidence and self-esteem.

Art Therapy program integrates psycho therapeutic techniques with the creative process to improve and foster mental health and well-being. This therapy is evidence based and can be used to treat a wide range of mental disorders and psychological distress. The aim of art therapy is to utilise the creative process to help people explore self-expression and, in doing so, find new ways to gain personal insight and develop new coping skills.

The Central Coast Clinic promotes an holistic approach to wellness to complement the patient's clinical program.

**For all inpatient admissions please call  
1800 814 226**



At Brisbane Waters Private Hospital we have partnered with private health funds to now offer telepsychiatry appointments to our patients during this time. Telepsychiatry appointments are available via Medicare Item rebates for privately-insured patients. This means you can access mental health consultations over-the-phone, safely and in the comfort of your home. To arrange a telepsychiatry appointment, a GP referral is required.

**For more information to make an appointment with one of Psychiatrists, contact Brisbane Waters Private Hospital on 02 4341 9522 or visit [centralcoastclinic.com.au](http://centralcoastclinic.com.au)**

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# UNRAVELLING ACUTE CONFUSION/DELIRIUM

– with Geriatrician, Dr Peter Lipski

Delirium is a sudden onset of confusion. It is a potentially life-threatening syndrome, up to 50% mortality within 2 weeks and the underlying causes can be multi-factorial. It is usually associated with a severe underlying illness which is potentially treatable.

Delirium is very common in the acute hospital situation with more than 50% of patients over 65 years having some form of delirium which is commonly under-recognised, under-diagnosed and under-treated. It is common in both medical patients and in the post-operative surgical patient.

Delirium always occurs abruptly over a period of hours or days. There is a fluctuating course. There are characteristic lucid periods where the patient appears normal and then deteriorates, usually much worse at night with lack of sleep and nocturnal restlessness. Key features include inattention, difficulty focusing, disorganised thinking, altered level of consciousness, delusion, hallucinations, agitation, aggression, wandering.

Delirium is diagnosed solely on clinical grounds. There is no specific test. Delayed or missed diagnosis can result in early death of the patient. A CT brain scan does not diagnose delirium!

Collateral history from family and friends is very important to compare pre-admission cognition and general function.

95% of drowsy patients after surgery have delirium. Patients with post-operative delirium, with falls, slowing up and drowsiness have the worst outcome. These are usually the sickest patients with more serious complications.

Delirium is a medical emergency! If delirium is diagnosed early, and the underlying causes found and managed in a multi-disciplinary care setting, then full recovery is possible.

## Warning signs of Delirium

- Sudden onset of confusion.
- Worsening confusion in someone with known dementia.
- “Not coping at home”.
- Behavioural or personality change.
- Found on the floor.
- Unexpected new falls.
- Sudden deterioration in balance.
- Generally off and not quite right.
- New urinary or faecal incontinence.

## What are the risk factors for Delirium?

- Being over the age of 65 years.
- Commonly occurs after surgery in the elderly.
- Pre-existing memory loss, cognitive impairment and known Dementia.
- Functional impairment in day-to-day living including poor mobility and a history with falls.
- Underlying neuro-degenerative walking and balance disorders.
- Background of stroke or Parkinson’s disease.
- Pre-existing depression and other psychiatric illness.
- Infection is one of the common causes of delirium, either chest or urine infections.
- Adverse drug reactions, including to narcotic analgesics, Parkinson’s medication, sedatives and anti-psychotic medications.
- Taking multiple medications.
- Low serum Sodium which can be caused by drugs such as SSRI anti-depressants, Thiazide diuretics including Indapamide and the HCT (“Plus” components) of anti-hypertensives such as ACE and ARBs.

- Poor vision and hearing.
- Multiple chronic medical illnesses.
- Dehydration.
- Constipation.
- Urinary retention in itself can cause delirium.
- Urinary catheters.
- Hypoglycaemia - low blood glucose.

## How is Delirium treated?

- Treatment of underlying medical conditions and infections.
- Review of medications. Stopping precipitating drugs and managing drug side effects.
- Particular attention to nutrition, hydration and early mobility.
- Safe swallowing sitting upright and forward to reduce the risk of silent aspiration.
- Expert management of bowel and bladder function.
- Supportive care in a holistic multi-disciplinary care setting.
- Cautious use of low dose sedative and anti-psychotic medications for aggression, agitation and distressing psychosis (paranoid delusions, hallucinations).
- Unsafe wandering behaviour – may need to be managed in a safe, secure part of the hospital.
- A quiet environment, minimising staff changes in the hospital.
- Avoiding room and ward changes which can precipitate a worsening delirium through disorientation.
- Correcting sensory deficits with appropriate hearing aids, glasses and adequate lighting.
- Re-orientation using a large clock on the wall, a calendar on the wall, personalised items including family photos, favourite magazines, books and clothes hanging around them.

*continued..*

## Preventing Delirium

- Targeting the risk factors, and most importantly screening for cognitive impairment with the Mini-Mental Exam and CAM delirium screen which is done on all Geriatric admissions to Brisbane Waters Private Hospital (BWPH).
- Holistic multi-disciplinary care of older medical and surgical patients.
- Geriatrician working very closely with Surgeons. The Geriatrician at BWPH works very closely with the Plastic Surgeon, General Surgeon, Urologist and Orthopaedic Surgeon to provide a holistic peri-operative medical service.
- Delirium is everyone's business and ownership of the problem and attitudes to older people need to change. All Doctors who look after the elderly patient should think delirium including surgeons and be constantly screening and looking for this very common problem in the elderly.

### Dr Peter Lipski's areas of special interest include:

- Frail elderly with multiple medical problems.
- Geriatric malnutrition.
- Adverse drug reactions in the elderly.
- Falls and balance disorders in the elderly.
- Medical fitness to drive assessments for the elderly.
- Delirium/confusion in the elderly.
- Dementia.
- Swallowing disorders in the elderly.
- Osteoporosis with fractures.
- Incontinence.
- Peri-operative medical assessments.
- Cognitive capacity assessments.

### Consulting at:

Brisbane Waters Private Hospital,  
Vidler Avenue, Woy Woy

**Call us:** 02 4343 0333 **Fax:** 02 4344 2133



**REHABILITATION IS FOR EVERYONE – THE YOUNG AND NOT SO YOUNG!**

*Alex's personal journey...*

Six weeks ago Alex was on his way home from work when he was involved in a horrific motorcycle accident. Alex was hit head on by a moving 4WD, causing significant injuries to his arm and both legs. Rushed to emergency, Alex underwent surgery on his fractured wrist, fractured right knee cap and multiple ligament tears to his left leg.

After surgery, by choice, Alex was transferred to Brisbane Waters Private Hospital for an intensive four week rehabilitation program. When Alex arrived at Brisbane Waters Private he was only just starting to walk with the aid of a forearm support frame walker. Alex was also suffering daily flashbacks about the accident. Within days, the Rehabilitation team at Brisbane Waters Private had Alex using a single arm crutch which greatly increased his independence, and subsequently improved his mental state of mind.

Alex continued to gain physical strength with the help of the Exercise Physiologists, Physiotherapists and Occupational Therapists completing his individually tailored inpatient program which included gait re-training (walking), muscle strengthening, and functional exercises, twice a day, five days a week, spending up to 20 hours a week in the gym.

Alex built-up the strength he needed to be able to return to life at home in addition to building up the mental strength to be self-sufficient, after such a horrific accident.

With the help of nursing, Allied Health staff and the great menu on hand from the chefs at Brisbane Waters Private hospital, Alex was able to successfully complete his four week rehabilitation program.

Alex will return to Brisbane Waters Private Hospital as an Outpatient and is determined to regain full strength and confidence to be able to return to work and normal life.

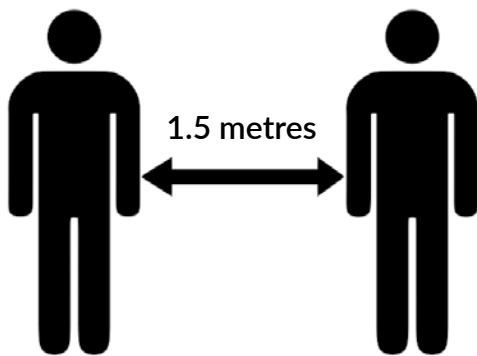
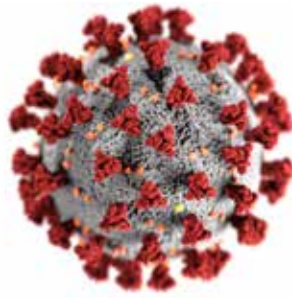
Learn more at [centralcoastrehabilitation.com.au](http://centralcoastrehabilitation.com.au)

# ADMIN UPDATES

## COVID-19: Maintaining Social Distance

With the impact of COVID-19 continuing to be felt across NSW and the Central Coast, each of our hospitals will continue to screen all persons entering our facilities for the foreseeable future. This includes a mandatory temperature check and screening questionnaire with questions relating to recent international and inter-state travel, any contact with COVID-19 confirmed cases and/or the presence of any COVID-19 symptoms (even if mild). We appreciate your patients' and their visitors' ongoing patience as we undertake this process.

A reminder also for all persons to maintain social distancing within our facilities, where practicable. This includes maintaining 1.5m distance when standing in a queue or speaking to our Administration teams, not leaning over Reception Desks, and following appropriate hand hygiene and cough etiquette.



## Reminder: Check Health Insurance coverage

To save time and potential embarrassment, please ensure that your patients are reminded to check their Health Insurance cover prior to their admission to our hospitals. This includes confirming that they are covered for the procedure they are booked in for, have met any stand down periods, and are aware of any potential out of pocket expenses that may be incurred.

## Online Admissions

With restrictions remaining in place for social distancing, particularly for vulnerable people and those aged over 60, we're pleased to now offer Online Admissions for all patients. The Online Admission portals are available on our three hospital websites at:

- **Brisbane Waters Private Hospital**  
[brisbanewatersprivate.com.au/patients/admission/online-admission-form\\_](http://brisbanewatersprivate.com.au/patients/admission/online-admission-form_)
- **Gosford Private Hospital**  
[gosfordprivate.com.au/patients/admissions/online-admission-form](http://gosfordprivate.com.au/patients/admissions/online-admission-form)
- **Tuggerah Lakes Private Hospital**  
[tuggerahlakesprivate.com.au/patients/admissions/online-admission-form](http://tuggerahlakesprivate.com.au/patients/admissions/online-admission-form)

### To complete the Online Admission process, patients will need:

- A list of medications
- Details on any previous surgery
- Medicare card details
- Private health insurance details/DVA number/or Workcover details

If any assistance is required to complete the form, please contact the relevant hospital's main phone number and a member of our Administration team will call back.