Dr Kellee Slater
MBBS (Hons) FRACS
Hepato-Biliary & General Surgeon
Gallbladder Liver Pancreas

Brisbane Liver and Gallbladder Surgery
Suite 207, Ramsay Specialist Centre
Newdegate Street, Greenslopes QLD 4120
Phone: 3847 3000 Fax: 3847 3002
Email: admin@brisliver.com.au Web Site: www.brisliver.com.au

DISTAL PANCREATECTOMY AND SPLENECTOMY

(REMOVAL OF THE TAIL OF THE PANCREAS AND SPLEEN)

THIS INFORMATION REFLECTS THE PERSONAL PRACTICE OF A/PROF KELLEE SLATER ONLY AND DOES NOT SUBSTITUTE FOR DISCUSSION WITH YOUR SURGEON

YOUR ADMISSION DETAILS:

Your admission date is: _____

On your arrival to hospital, present to Admissions at the designated time. From the main entrance of the hospital, there is a pharmacy on the left. At the end of the pharmacy, there is a lift. Take this to Level 1. This is Admissions.

You will need to stop eating food from: _____

Drink the 2 DEX between: _____

You can drink CLEAR fluids until: _____ **then it is NIL BY MOUTH.**

Your operation date is: _____

The Rooms will call you a day prior to when you are due to enter the hospital to confirm your admission time and when to start fasting.

Register your admission to confirm your personal details and health history.

This must be done at least 48 hours prior to your admission. It can be done in two ways:

You can complete the admission form online at:

http://www.greenslopesprivate.com.au then click on the ONLINE ADMISSION button

OR

Call Greenslopes Private Hospital Admissions on phone 1800 777 101.

Monday to Friday 8am – 7:30pm or Saturday 8:15am – 12:45pm.

WHY DO I NEED THIS OPERATION?

The most common reasons to perform this surgery are:

- cancer of the tail of the pancreas,
- cysts of the tail of the pancreas – both benign and cancerous,
- chronic pancreatitis,
- swollen blood vessels to the spleen (splenic artery aneurysm).

The spleen is commonly removed with the pancreas because the blood supply to the spleen is intimately connected to it. In some non-cancerous conditions it may be possible to remove the tail of the pancreas without removing the spleen.

Cancer of the tail of the pancreas is a very serious condition that often presents when it is very advanced. Making a diagnosis of cancer of the tail of the pancreas with a biopsy prior to surgery is generally very difficult and may not be possible. The pancreas tends to develop a great deal of scarring or reaction that interferes with interpreting a needle biopsy. It is common to biopsy a cancer in this region and not obtain a diagnosis of cancer. This does not mean that cancer is not present, it just means the biopsy has not obtained enough tissue. Thus, it is up to our judgment as to whether or not the patient has cancer and might benefit from this operation. The presence of cancer will be determined after surgery by the pathologist when they assess the pancreas under a microscope. A result from the pathologist can take anywhere from 2 – 7 days.

The decision to proceed to this type of surgery is very complicated and this is the reason why it is important to be operated on by a surgeon with a great deal of experience with operations for cancer of the pancreas. Our judgment will be valuable in determining whether or not a tumour is present and if it is removable. Sometimes distal pancreatectomy may be done with keyhole surgery. This technique is usually not suitable for cancer and is only used for tumours in the very tail of the pancreas.

Sadly, there are cases where at the time of surgery, we will determine that the cancer is not removable. This is commonly due to the finding of a secondary cancer in the liver. Another reason may be the cancer's relationship to vital blood vessels supplying blood to the liver. These blood vessels cannot be removed without threat to the patient's life. If this is the case, we may not be able to remove the cancer. This will be discussed fully with you and your family after the surgery.

WHAT DOES THE PANCREAS DO?

The pancreas has two purposes.

1. It produces insulin to prevent diabetes.
2. It produces digestive juices to help your body absorb food.

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HOW DO I KNOW I HAVE A PROBLEM WITH THE TAIL OF MY PANCREAS?

Tail of the pancreas cancer has very few symptoms.

- Pain can occur and unusually signifies that the cancer is advanced. This pain is commonly in the back.
- Many times a problem with the pancreas is found during a scan for another reason and there are no symptoms at all.
- There may be a new onset of diabetes.
- There may be nausea, loss of weight and a loss of appetite.
- Some patients who smoke cigarettes suddenly do not feel like doing it anymore.

WHAT TESTS WILL I HAVE BEFORE AN OPERATION IS OFFERED?

Planning surgery for a distal pancreatectomy and splenectomy requires a number of tests. These can usually be done within a week. These tests may be both invasive and non-invasive and must be performed before any decision regarding an attempt at curative surgery can be made. After each test, the situation is re-assessed. The decision not to offer an operation can occur after any or all of these tests. The final decision about the feasibility of surgery is made at the actual time of the operation. You will be included in the decision making.

You must be quite fit to undergo this type of operation. If you are over 80 years of age, serious consideration will be given to whether this operation will be of benefit. This is because even if you are healthy you may not have enough reserve to recover from this operation.

Some of the tests you can expect to have may include but are not limited to:

1. Blood Tests

   Full blood count, kidney and liver function tests.

   Tumour markers: it is important to remember, blood tests for cancer are not helpful in some people. They are used only as a guide and not for diagnosis.

2. CT Scan of the Chest and Abdomen

   This is done to look for cancer outside the pancreas – distant spread of cancer to the lungs or liver. It also gives information about the artery and veins around the pancreas and their relationship or involvement with the tumour. In order to perform successful surgery, there must be no cancer distant to the pancreas.

3. EUS – Endoscopic Ultrasound

   This is done under a light anaesthetic by a skilled gastroenterologist. A flexible telescope with an ultrasound mounted in the camera head is inserted via the mouth into the stomach. Because the pancreas is behind the stomach an excellent view of

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the pancreas can be obtained. The pancreas can be biopsied. This is the most common way to get a biopsy of the pancreas. If the diagnosis is obvious from the CT scan, however, this test may not be performed.

4. Heart and Lung Tests

   These are performed to assess your fitness for major surgery. This will depend on your age and other health problems. The tests may be an ultrasound of the heart (Echocardiogram), lung function tests and exercise tests.

5. MRI

   If there is some doubt about the diagnosis an MRI can sometimes be of benefit.

6. Key hole surgery or diagnostic laparoscopy

   This is done under general anaesthesia in the operating theatre. A small cut is made in the belly button and the abdominal cavity is blown up with gas. A camera is inserted. There may be 1 or more additional cuts made to move things around. This test is done to look for small lumps of cancer that may have spread around the abdominal cavity. This is relatively common in advanced pancreatic cancer and if present, is not curable. This type of advanced cancer is not seen well on scans.

If all these tests prove to be favorable for surgery, we will discuss the operation with you.

WHAT ARE THE CONSEQUENCES OF LIFE WITHOUT A SPLEEN?

The spleen is part of the immune system – it is there to filter bacteria and release cells to fight these bacteria. It also helps the body to remove worn out red blood cells and stores platelets - another component of blood.

Generally, day to day life without a spleen goes on as normal. The risk of infection is not great but is, however, lifelong. The risk of infection is higher in the first twelve months after the surgery. The risk only applies to certain bacteria (Pneumococcus, HIB and Meningococcus) and for this reason you will receive vaccinations and preventative antibiotics. You will be given the antibiotic, Amoxicillin 500mg a day (an alternative will be prescribed if you are allergic to penicillin). The vaccinations will cover you lifelong and the antibiotics need only be taken for twelve months i.e. the high risk period. You will get your vaccinations either before the operation or as you leave the hospital.

It is also recommended that you have a yearly Influenza vaccination. Yes, influenza is a virus, but getting the flu can lower your resistance to harmful bacteria.

Even though, the risk of life threatening infection after splenectomy is very low, patients and their families must always by aware they are susceptible to these infections and seek help early if they feel unwell or have an unexplained fever or confusion. You should have a pack of antibiotics with you if you travel overseas in case you become unwell. If you are visiting malaria prone countries you need to take suitable precautions.

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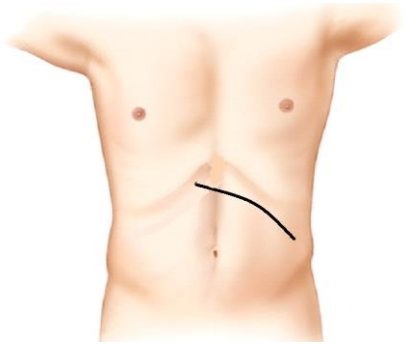
The other problem after a splenectomy is a temporary elevation of the platelet count. Platelets help the blood to clot. They are stored in the spleen and after its removal the levels rise. This increases the risk of clots in the legs and lungs. I will check your platelet count in the week after discharge (a blood test) and let you know if you have to begin taking aspirin. This deactivates the platelets. You will continue to take this until the platelet count is normal. This usually takes 1 – 2 months.

Queensland now maintains a registry of people who have no spleen. Please register at their website https://spleen.org.au/ or by calling 1800 SPLEEN (775 336). There is a large amount of useful information on this website.

WHAT DOES THE OPERATION INVOLVE?

Distal pancreatectomy and splenectomy is performed as follows:



The incision will be on the left just under the ribs.

In many cases, it is possible to do a distal pancreatectomy via a keyhole or laparoscopic approach. This means slightly smaller incisions are made and the recovery might be slightly quicker. This approach is not for everyone and I will discuss this with you.

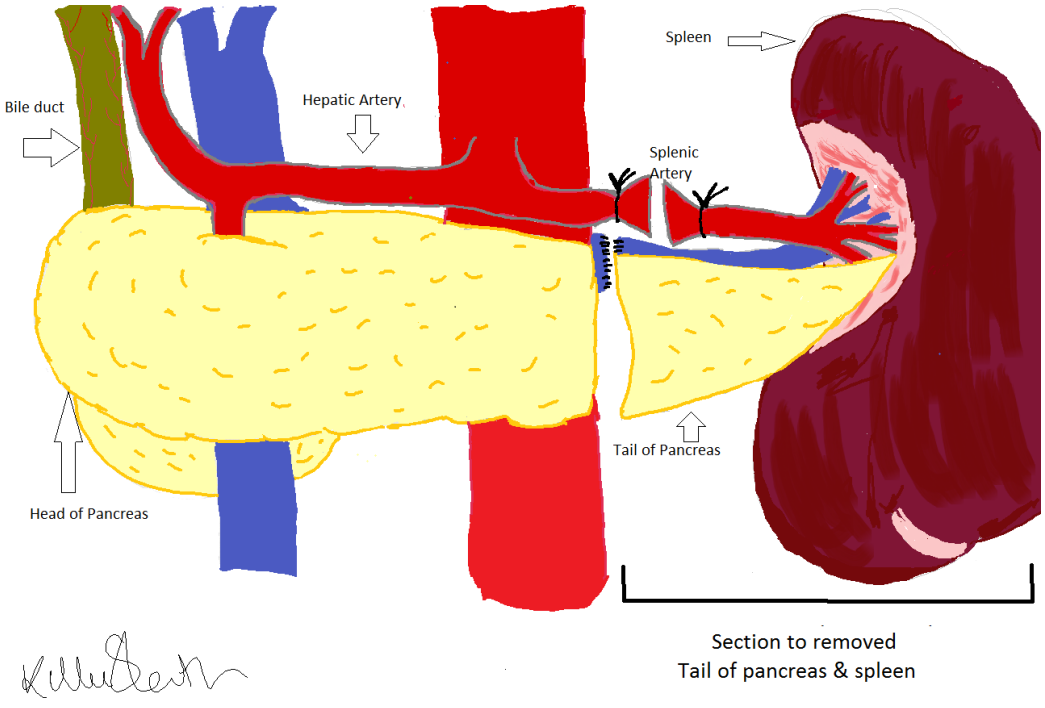


Diagram of the section of the pancreas to be removed

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WHAT TO EXPECT IMMEDIATELY AFTER SURGERY?

Pain Relief

For the first few days after surgery, there may be a moderate amount of discomfort at the site of the operation. This is the case even if you have key-hole surgery.

You will have some form of pain relief. There will usually be a choice of:

- Epidural (if medically suitable) – this is a fine tube placed in the back that delivers local anaesthetic to the nerves around the spinal cord. It is highly effective and you will still be able to walk with it in place. There are small risks associated with an epidural including infection and very rarely permanent paralysis. The anaesthetist will discuss this with you.
- Patient Controlled Analgesia (PCA) and a "Pain buster" – a button you will press that causes strong pain killers (like morphine) to run straight into your IV line, combined with a tiny catheter in the wound providing local anaesthetic. These devices are very safe and have locking mechanisms to prevent overdose.

IT IS VERY IMPORTANT THAT YOUR RELATIVES DO NOT PUSH THE PAIN BUTTON FOR YOU AS THIS WILL RESULT IN AN OVERDOSE OF MEDICATION THAT MAY STOP YOU BREATHING AND LEAD TO DEATH.

Your anaesthetist will discuss the pros and cons of each method, prior to surgery. Either option may not be suitable for every person.

Every effort will be made to minimise your discomfort and make it bearable. Your nurse will be monitoring your level of pain frequently.

When you are back on a normal diet, you will be converted to oral pain relief.

Drain tubes

You will have a number of plastic tubes in your body following surgery. They will vary depending on your particular case. They will be removed at variable times following your surgery under our explicit direction. All tubes, except for the IV in your hand will be put in place under anaesthesia.

- Central venous line: in your neck (placed under anaesthesia) to give you fluids and pain relief after surgery.
- Urinary catheter: tube placed in your bladder so you don't have to get up to pass urine.
- Abdominal drain tubes: two or three soft plastic drains coming out of your abdomen that are placed around the pancreas to drain any fluid, bile or pancreatic juice so it does not collect in your abdomen.
- Nasogastric tube: a tube in the nose used to drain stomach fluid, so you do not vomit.
- Arterial line: a fine catheter inserted into the artery at the wrist to monitor the blood pressure.

Eating

The spleen and pancreas are just behind the stomach. As a consequence, your stomach may take a few days to begin to work again. You will not have anything to eat or drink for the first few days after surgery. An intravenous drip will provide you with the necessary fluids. In most cases you will have a nasogastric tube (NG) in your nose that will remove the stomach contents until it recovers. We will let you know when you will be able to eat.

It is normal to have a sore throat for a few days after the surgery.

People who drink more than two cups of coffee a day may notice caffeine withdrawal headaches and irritability a few days after surgery.

Urinating/Bowel Movements

During the first few days after the surgery, the tube placed in your bladder will drain your urine. You will probably not have a bowel movement until several days after the surgery.

Intensive Care

It is usual that you will be looked after in Intensive Care for at least the first day after your surgery. Your continued stay here will depend on your condition.

Other Medications and Preventative Measures

You will be given a blood thinner once or twice a day as a small injection under the skin. This helps to prevent clots in the legs or deep venous thrombosis (DVT) that may travel to the lungs and be life threatening. If you are in a high risk group for DVT, you may be sent home with this injection for several weeks after surgery. You or a family member will be taught how to give the injections.

You will be asked to wear TED stockings throughout your hospital stay. These help with DVT. You may stop wearing these when you are able to get up and walk easily by yourself.

In many instances you will be given a medication to decrease the acid secretions in the stomach. This prevents stomach ulcers that may occur after major surgery.

You must not smoke at all.

Alcohol can be toxic to the pancreas. After surgery, alcohol should be avoided for at least three months, and after that it is recommended that alcohol consumption be no more than one standard drink a day with at least two alcohol free days a week.

Activity

You can expect your nurse and physiotherapist to help you to get out of your bed on the first day after surgery. You will be able to walk short distances even with all of the tubes and intravenous lines. As each day passes your tolerance for walking and sitting in a chair will increase. This is extremely important to prevent pneumonia, clots in the legs and loss of general condition.

Your Incision

You can expect to have a waterproof bandage over your incision for the first several days. We will remove the dressing at the appropriate time. You will be able to shower with the waterproof dressing on. It is quite common to have a small amount of leakage from the wound.

Other Important Information

You can expect to see your primary surgeon every day. On weekends or in times when your surgeon is operating elsewhere, you will see one of the practice partners. All are very experienced in this type of surgery and commonly assist each other in the operating theatre.

We will make every effort to keep you informed of your progress. We are always honest and open with you and your family. Feel free to ask questions.

Length of Stay in Hospital

On average most patients will expect a 1 – 2 week hospital stay. This time, however, differs greatly for individual patients. Some stay shorter, some much, much longer. You will not be discharged before you can walk unaided and care for yourself.

WHAT ARE THE COMPLICATIONS THAT MAY HAPPEN IMMEDIATELY AFTER SURGERY FOR DISTAL PANCREATECTOMY AND SPLENECTOMY?

This is complex surgery with many potential complications. In the hands of surgeons who are experienced, the complication rate is usually very low.

The most serious and specific complications that may be seen after this operation include:

Pancreatic Fistula or Leak

After the tumour is removed from the pancreas, the cut end of the pancreas is stapled and sutured closed. The pancreas is a very soft, fatty organ and in some patients this suture line may not heal very well. If this happens patients develop leakage of pancreatic juice. A pancreatic leak of any degree occurs in approximately 10 – 20% of patients. The consequences of this may be very minimal or may be very serious.

If there is a significant leak, you will need either a drain tube to control the secretions this will usually be placed by the Radiology Department or may need to be drained again in the operating theatre by opening up the full wound. This re-operation occurs in 1 – 4% of patients undergoing this procedure.

The drain tube will remain in place until the pancreas dries up – this can, unfortunately, take MONTHS.

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Gastroparesis – paralysis of the stomach

It is quite common (about 10% of patients) for the stomach to remain paralysed for a short time after a distal pancreatectomy. You may experience vomiting that requires the re-insertion of the tube down your nose into you stomach.

Other immediate complications of this surgery

Like all major surgery there are a number of serious complications that may occur. These must be dealt with on a case by case basis. Some of these complications are:

- Death: approx. 0.5% of all patients having this type of operation.
- Bleeding: either in the first 2 – 3 days requiring a return to theatre or delayed bleeding from a ruptured artery some weeks after surgery. You may require a blood transfusion. This can be fatal.
- Complications of removal of the spleen.
- Infections: wound, pneumonia, urine, bile duct, intra-abdominal related to a pancreatic leak, epidural related, IV line related.
- Damage to the hand because of the arterial line.
- Punctured lung secondary to the IV line in your neck.
- Clots in the legs that may travel to the lungs.
- Stomach ulcer that may bleed - this may present as a vomit of blood or black bowel motions.
- Heart attack and stroke.
- Urinary catheter complications: unable to pass urine after the catheter is removed especially in men.
- Permanent or temporary damage to nerves in the arms, legs and neck due to prolonged immobilisation on the operating table. This may result in loss of feeling or movement.
- Wound pain and prolonged numbness under the wound.
- Hernia of the wound.
- Anaesthetic risks: there is a small risk of severe allergy, inhalation of vomitus, drug reaction and even death during an anaesthetic.

Risks specific to Laparoscopic Surgery

Everything mentioned above plus

- Injury to any organ in the abdomen may occur with keyhole surgery: bowel, aorta, liver and stomach. This is rare.
- Gas embolism – a bubble of carbon dioxide gets into a blood vessel and causes life threatening heart problems. This is very, very rare.
- Re-operation: if I have to re-operate for any reason, this may be done with keyhole surgery or an open operation.

AFTER DISCHARGE

What are the long-term complications of the Distal Pancreatectomy?

Some of the long-term consequences of this operation include the following:

Poor absorbtion of fat

The pancreas produces a substance (enzyme) that digests food and especially fat. In some patients, removal of part of the pancreas can lead to a decreased production of this enzyme. Patients complain of diarrhoea that is very oily and floats in the toilet bowl. Treatment consists of taking oral pancreatic enzyme tablets (Creon) and usually provides excellent relief from this problem. About 10 - 30% of all pancreatectomy patients may require these supplements.

Diabetes

Another role of the pancreas is to produce insulin that controls blood sugar levels. During the operation the neck and tail of the pancreas are removed. Therefore, the risk of developing diabetes is present.

In general, patients who are diabetic at the time of surgery or who have an abnormal blood sugar level that is controlled on a diet have a high chance of needing insulin permanently after the surgery. Patients who have completely normal blood sugar prior to surgery with no history of diabetes and do not have chronic pancreatitis or obesity have a lower probability of developing diabetes after the operation.

Alteration in diet

After a distal pancreatectomy operation there may be a significant change in the amount of food people can eat. Because the propulsion of the stomach can be temporarily affected, it is easy to feel full very quickly and not take in enough calories. This is part of the reason for the weight loss experienced after this operation. It is also very common to have an occasional vomit at home. If the vomiting occurs every day after discharge, this is not normal and should be reported to us.

We generally recommend that patients eat smaller meals and snack between meals to allow better absorption of the food and to minimise symptoms of bloating or fullness. This means eating small amounts of food 6 – 8 times per day.

We also recommend the use of high calorie drinks like Ensure, Sustagen or Resource. They are a relatively low volume and pack in a lot of calories.

It is also a good idea to take an inexpensive over the counter multivitamin each day leading up to and after the operation.

If you experience diarrhoea, you should let us know as this can be a sign that the body needs pancreas supplements. This irritating problem is very treatable.

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Loss of weight

It is common for patients to lose up to 5% of their body weight. The weight loss usually stabilises very rapidly and most patients after a small amount of initial weight loss are able to maintain their weight and do well.

How you may feel

You will feel weak or "washed out" when you go home. You might want to nap often. Even simple tasks may exhaust you. You may lose your taste for food. You might have trouble concentrating or difficulty sleeping. You might feel depressed.

These feelings are usually transient and can be expected to resolve but may last many months after this tremendously arduous operation.

It is common to have discomfort, pulling and numbness of the wound for many months after the operation. It becomes more pronounced about a month after surgery. It is not agonising, but it can be annoying if you don't understand that it is normal. It takes a full year for a wound of this nature to settle completely.

Going home

You will not be sent home until you are walking unaided and able to care for yourself. You may need to have help at home preparing meals and cleaning because you will be tired for a month or two. It is a good idea to have someone at home with you for the first week.

Your medications

I will discuss with you which medications you should take at home. This will usually include some sort of painkiller. You can expect to go home with stomach medication to prevent ulcers that you may need to take for several weeks. If your spleen has been removed, you may need a daily antibiotic tablet for up to a year and an Aspirin tablet daily for several weeks.

Your incision

Your dressing will be removed before you leave the hospital and if it is not leaking it will be left open to the air. You may wear clothes over the top of it.

It is very common to have a small or even large leakage of clear fluid from one of the drain sites, several days or weeks after the operation. If this occurs at home, do not panic. If it is minor cover that part of the incision with a pad. If leakage is severe, you should contact our office or go to the emergency department.

It is very common to have a prickly end of a stitch poking out of the end of the wound. This happens as the stitches dissolve. If it bothers you, you may snip it off with a pair of scissors. Otherwise it will disappear about 8 weeks after the surgery. If you are very thin, you may be able to feel the deep stitches that are not dissolvable if you push hard with your finger. If this bothers you, it is relatively easy to cut the offending stitch out several months after the operation.

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Your incision may be slightly red along the cut. This is normal. You may gently wash dried material around your incision and let water run over it. Pat the wound dry with a towel. Do not rub soap or moisturiser into your incision for at least 4 weeks or until it is fully healed. After this you may rub Vitamin E cream along the wound.

It is normal to feel a ridge along the incision. This will go away. It is normal to have a patch of numbness under the wound.

Over the next few months your incision will fade and become less prominent.

Activity

Listen to your body, if it is hurting, do not continue with the activity.

Do not drive until you have stopped taking narcotic pain medication and feel you can respond in an emergency.

You may climb stairs.

You may go outside but avoid travelling long distances until you check with us at your next visit.

Do not lift more that 10kg for 6 weeks. (This is about the weight of a briefcase or a bag of groceries). This also applies to lifting children, but they may sit on your lap.

You may start some light exercise when you feel comfortable.

You may swim after 4 weeks

Heavy exercise may be started after 6 weeks - but use common sense and go slowly at first.

You may resume sexual activity when you feel ready.

WHAT SHOULD I BE AWARE OF IN THE DAYS BEFORE MY OPERATION?

Hospital

The hospital will call you the day before your operation to confirm your personal details and medical history. They will also let you know about any hospital excess you may have to pay.

Fasting

You must have nothing to eat or drink for six hours prior to surgery. (You may take sips of water up until 2 hours before the operation and you may take your medications with a sip of water). You must not chew gum or smoke on the day of the operation.

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Shaving and showering

You do not need to shave any body hair from your abdomen before the surgery. If needed, I will do this with sterile clippers after you are asleep, just before the surgery commences. This gives the lowest chance of infection.

There is no evidence to suggest that having a shower in antiseptic prior to surgery decreases infection rates, so just shower normally on the morning of surgery. Do not use any perfume.

Belly buttons

You need to remove any belly button piercings. If the surgery is keyhole, I'd like you to leave the ring out for 4 weeks after the operation. If you don't wear your piercing anymore but have a hole you don't like, talk to me and I can remove the hole as part of my incision, at the time of the operation.

For people with very deep belly buttons, it is normal to have a build up of lint and old skin hiding in there. This can be very smelly. Try and clean your belly button with a cotton bud and water a few days before the surgery to decrease the risk of a wound infection.

Make up, nail polish and jewellery

I understand that some women feel quite anxious about going without their make up. Most of your body will be covered during the operation, so it is important that the anaesthetist can see your face clearly. Your colour can be a good monitor of how much oxygen you are getting. For this reason, it is best to come to theatre with a clean, make up free face.

Nail polish is OK with me as long as you keep it clear on your fingernails. Coloured nail polish can interfere with the device we use to measure the oxygen in your blood. For many women, having a pedicure the day before the surgery can be a good way to relieve some anxiety.

Any jewellery you are comfortable with removing, you should leave at home. If you would like to leave your wedding ring on, you may, but this will be covered with tape for the duration of the surgery.

Glasses and contact lenses

You should remove your contact lenses prior to coming to the hospital. You don't need to bring your glasses into the operating theatre. Put them with your belongings and you can use them again when you are back on the ward.

False teeth, caps, crowns

Do not take your teeth out before you come to the operating theatre. They will usually be removed by the anaesthetist after you go to sleep. Keeping your teeth in will help the anaesthetic doctor get a good seal on your mouth with the oxygen mask. Your teeth will be well taken care of during your operation and returned to you in recovery before anyone can see you.

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Preparations at home

Ensure that you have someone available to care for small children for a little while to take the pressure off your recovery. If you are handy in the kitchen, try to cook and freeze some easy meals to have on hand for when you do not feel like cooking. Another option is to consider ordering precooked meals from companies like Lite and Easy. Consider hiring some help around the house for a few weeks after the surgery or enlist willing (or unwilling) relatives to help out. Make sure all your bills are paid ahead or on automated payments to reduce the things you have to think about in the recovery period.

Medications

- If you are on blood thinners such as Aspirin, Warfarin, Plavix, Iscover, Clopidogrel, Pradaxa, Dabigatran, Rivaroxaban, Xarelto or anti-inflammatory drugs (Brufen, Mobic, Voltaren, etc), they can cause bleeding during surgery. We will advise you about what to do with these drugs prior to surgery. You must let us know about these drugs as the decision to stop them is based on each individual patient's needs.
- Diabetic medications: we will give you advice on whether to take your diabetic medications on the morning of surgery or not. Some diabetics will be admitted the night before the operation.
- If you are on Prednisone, you should not stop this drug suddenly.
- Cholesterol lowering medication should not be taken when you are fasting.
- If you are taking any alternative medications e.g. St John's Wort, fish oil or garlic, you should stop these tablets one week before surgery as they may result in excess bleeding.
- You may continue to take a multivitamin.
- Continue to take all other medications, even on the morning of surgery with a small sip of water.

Other things to know

- You must bring all relevant x-rays/scans to the hospital with you.
- If you smoke, it is in your best interests to stop completely as soon as you can. See your GP for alternatives or call Quitline (13 18 48) if you wish to seek advice.
- You should also abstain from drinking alcohol 24 hours prior to any surgery.
- Bring all your current medications with you to the hospital.
- Bring comfortable pyjamas, personal toiletries, small change for newspapers etc.
- Bring something to do - DVDs, books, laptops. Alternately you can use hospitalisation as an opportunity to rest completely without distractions of the outside world.
- Do not bring large amounts of cash or valuables.

Income Protection Insurance and Centrelink

If you have income protection insurance, start doing the paperwork required to claim before the operation. Centrelink claims take many weeks to process. It is difficult to recover well when you are worried about finances. Before any major surgery it is wise to get your affairs in order including an Advance Health Directive, Will and Power of Attorney. Talk to your employer and let them know that you may be away from work for a few months.

Queensland Cancer Council

Call the Queensland Cancer Council 13 11 20 as they have a number of general support financial assistance programs in place if needed.

Family

This is the time to rely on family and friends for support. If you receive offers of home cooked meals and household help, accept them happily. That way you can concentrate on getting better.

WHAT WILL THIS SURGERY COST ME?

I largely work as a 'no-gap' doctor. This means that the surgeon fee for your operation will be sent to your health fund and there will be no 'gap' or extra amount of money to pay. There are always exceptions and decisions regarding this are made on a case by case basis.

If you do not have private health insurance or if you have overseas insurance, you will be given a quotation for surgery, anaesthetic and hospital fees which **must be paid in full *prior* to the operation.**

Outpatient consultations are not covered by the health funds and there will be a charge for these meetings. You will get a proportion of this money back from Medicare. There is no fee to be paid for normal care after the operation.

If your Body Mass Index is >35, the surgery is far more difficult and the risks of complications including pancreatic leak is higher. If it is medically suitable, we may recommend a period of weight loss before contemplation of this operation, so it can be done more safely. This may involve a supervised weight loss program called INTENSIV to get the best results in the shortest time. This will occur an extra out of pocket expense.

We use a drug after your surgery called Octreotide to slow down the juices made by the pancreas. It incurs an out of pocket expense of $300 - $400. We feel that this decreases the risk of a pancreatic leak. Please let us know if you do not wish for us to use this drug.

There may be other out-of-pocket fees from your anaesthetist and any other specialists who are asked to look after you. You should ask them ahead of time about any out-of-pocket costs. Ask us who will be performing your anaesthetic and you can make enquiries with them about any out-of-pocket expenses.

There may be extra costs for x-ray, pharmacy and pathology. You have a right to gain 'informed financial consent'. Fees from other practitioners are beyond our control and you should ask for the costs from each person who is asked to look after you. Patients have a choice when it comes to paying for their health care and you are fully within your rights to shop around.

If you do not live in Brisbane, you will be responsible for all accommodation, hotel, meal and transport costs for you and your family. There is some monetary assistance available for private patients through the Patient Travel Subsidy Scheme (PTSS) providing

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assistance to patients and in some cases their carers, to enable them to access specialist medical services that are not available locally. Please see Queensland Health's Patient Travel Subsidy Scheme site for details http://www.health.qld.gov.au/iptu/html/ptss.asp.

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YOUR JOURNEY THROUGH THE OPERATING THEATRE

HOW YOU MAY FEEL BEFORE SURGERY

Having a general anaesthetic (being fully put to sleep) can very scary for some people. It brings up issues about loss of control. People worry about what may happen when they are asleep.

Having an anaesthetic involves a lot of trust and in the end you will have to take a leap of faith and believe that you have chosen a team that will look after every part of your body. You should read this article if you would like to know exactly what goes on just before, during and after an anaesthetic for major surgery. For some people, understanding precisely what happens in the operating room brings a sense of calmness.

CHECKING INTO THE OPERATING THEATRES

You will be greeted at the front desk by one of our friendly executive staff who will do the administrative paperwork. They will also collect any hospital excess you may have to pay. Please bring your health fund and Medicare cards. They will also want to know about your next of kin. With your permission I will call a nominated family member at the end of the surgery and the recovery nurse will also let them know when you are ready to go to the ward.

For major surgery, it is best that you remove ***all*** your normal clothes including your underpants and bra. This is so we don't lose them or mess them up with blood or antiseptic fluid during your surgery. You will meet one of the pre-op nurses who will help you change into your glamourous theatre gown and paper underpants. For abdominal operations, it is very common that you will wake up completely naked i.e. without your paper underpants. We often remove them in the operating theatre to keep them away from the area we are operating on. Your modesty will be protected as much as possible. Contrary to what you see in the movies, your bottom will not be on view out the back of your gown. Hospital robes wrap around your rear.

You will be measured and fitted with white, knee high stockings to prevent clots in the legs. For some operations, you may have a pair of pneumatic leg warmers placed on your calves to gently massage your legs while you are asleep. This prevents clots in the legs. The look is complete with a puffy paper hat. Any jewelry you would like to keep wearing, like a wedding band will be covered with tape.

You will be weighed and your temperature, blood pressure and pulse will be checked. You will be asked about your allergies and will be given an ID band that will stay on for your entire stay. The nurse will ask you if there are any implants or metal in your body. We ask this because we need to place an earthing plate on your body during the surgery and need to place it away from any internal metal.

You will then go through many repetitive identification processes to make sure we have the right patient and that everyone agrees on the operation you are having done. You will be put on a bed and you will wait and wait and wait until it is your turn to be called into

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theatre. This waiting can be quite stressful, and you will feel hungry. You may want to bring something to do during this time. There is also a TV to watch and magazines to read. Rest assured we are moving as fast as we can and because unexpected events happen all the time, delays in hospitals are inevitable. It is possible to develop a headache due to caffeine withdrawal. This is not harmful, and you may have two Panadol with a sip of water to help.

Your clothes, glasses, valuables will be put into a bag and your belongings will be put into a locker whilst you are in theatre. You will be reunited with them when you return to your room in a ward or intensive care. If you have come to theatre from the ward, your belongings will stay in your room and await your return. If you are going to intensive care after the surgery, your belonging will travel with you.

Why do I have to starve before surgery?

For an arranged operation, you must have absolutely nothing to eat or drink for six hours before you go to sleep. When you have an anaesthetic, all the muscles in your body relax. If you have food in your stomach, it can reflux back up into your mouth and even worse, your lungs. This can produce a life-threatening pneumonia. You must also not chew gum prior to surgery as this increases the fluid in your stomach. You may drink clear liquid up until 2 hours prior to your operation. I may give you a sugary drink two hours prior to surgery to help you feel less thirsty and speed up your recovery. It is OK to take your normal medications with a sip of water any time before surgery. It is also fine to brush your teeth.

Special circumstances

There are a few instances where certain precautions take place.

Latex allergy:
Please let the admission nurses know if you have a latex allergy. We need to remove all the latex products from the operating theatre to protect you.

If you take certain medications:
If you have recently had chemotherapy or take immune suppressing drugs like azathioprine or methotrexate, special measures will be taken to protect staff members against coming into contact with these drugs.

If you have certain bacteria on your skin:
Many people have bacteria living on their skin that have been given special names by hospitals. It is likely you will know this from a previous hospital admission. This does not mean you have an infection. We all have bacteria living in and on our bodies, some just have special names and some have a higher chance of being resistant to some antibiotics. It is best if these bacteria are not passed onto other patients as it promotes antibiotic resistance. If you are MRSA “golden staph”, VRE, CRE or MRAB positive, then isolation precautions will be taken throughout your stay in the hospital.

If you have false teeth or plates:
Please leave these in. It makes it easier for the anaesthetist to help you breathe as you go off to sleep. If needed, the anaesthetist will remove them after you are asleep and they will be returned to you in recovery.

TAKING YOU INTO THE OPERATING THEATRE

You will be wheeled around to the operating room by one of the theatre orderlies or a nurse. This is where you will say goodbye to your relatives. They will be next able to see you when you return to the ward. Because there are other patients in the recovery unit, relatives are not permitted.

The next stop is the anaesthetic room. This is a small cubicle adjoining the main operating theatre. The orderly will hand you over to the nurse assisting the anaesthetist. You will then have another identification check (you will be very good at reciting your name by this point).

Then the anaesthetist will arrive. They are the person with the good drugs that will make you relaxed, so be nice to them! If they have not met you earlier, they will go through your medical history again and what to expect. They may also explain some risks of anaesthesia, but because you have read this book, you will be aware of them already. This is not meant to scare you. It is our job to tell you about the good and bad aspects of surgery.

The only thing that will go into your body while you are awake is a small plastic tube in your hand called a cannula, drip or IV. This is a small needle and will hurt for a second or two. When it is in the vein, the needle is taken out and a soft plastic tube is all that is left. Once in, you should not be able to feel it. It is secured with tape and you may move your arm. The drip is used to give the medication that will put you off to sleep. If you are having an epidural for post-operative pain relief then this will be done prior to going off to sleep.

Occasionally, some patients have a severe needle phobia. This one small needle can create terrible anxiety. If this is the case, we can sometimes give the anaesthetic without a needle at the beginning. This is done by asking you to breathe on gas for a few minutes. You will drift off to sleep. The IV is placed once you are fully out and you will know nothing about it. This is a slower way to go off to sleep, but for some people avoiding a needle while awake makes a big difference.

Once the IV is in, you will be taken into the main operating theatre. This can be a confronting place too. There are usually 5 - 10 people in the room, all wearing masks and talking. We are all there to look after you. Most operating theatres are set up in a predictable way. There will be an anaesthetic machine with all the monitors to ensure you are safe. There will be several tables filled with surgical instruments ready to perform your surgery. There will also be nurses preparing this equipment and counting each and every instrument to ensure that nothing is missing at the end of your operation. There may also be junior medical staff and orderlies. The operating table is in the middle of the room under big lights. They will not be turned on until you are asleep. The table is narrow and cold. It is narrow because we need to stand close to you to operate and it won't be cold for long because during the surgery you will covered with a heating blanket.

The trolley you are on will be placed beside the operating table and if you are mobile, you will be asked to move yourself across onto it. The nurses will make sure you are not lying on your gown as it will usually need to be moved aside to expose the area we need to operate on. If you are in pain or not mobile, we will slide you across to the operating table on a special board or float you over on a noisy hover mattress. A lot of activity will then

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happen around you. We will place padded boards on the side of the bed for you to rest your arms on. Your leg massagers will be hooked up and switched on and you will feel a gentle compression on your calves.

You will have three stickers placed on your forehead. This helps the anaesthetist monitor how deeply asleep you are. Sticky dots to monitor your heart beat will be placed on your chest. Fluid will be hooked up to your IV line and a clip that reads your pulse placed on your finger. A blood pressure cuff will be wrapped around your arm and the first time it takes your blood pressure, it will inflate very tightly. It will only do that once.

You may already be feeling happy, drowsy or talkative as the anaesthetist may have given you a relaxing medication via the IV. You will not go to sleep yet, but it is unlikely you will remember anything after this until you wake up in recovery even though you will continue to talk to us.

WHAT HAPPENS DURING AN ANAESTHETIC

Sometimes knowing what happens during an anaesthetic really helps you relax and realize that you are well taken care of while you are asleep. Many people's greatest fear is the anaesthetic. They worry about vomiting afterward, being aware during surgery and not waking up. Whilst these things very, very rarely occur, having an anaesthetic is actually far safer than anything you have already done that day, like driving into the hospital.

General anaesthetic consists of three phases

1. **Going to sleep – similar to taking off in a plane**

   Just before you go to sleep, the anaesthetic nurse will ask you to breathe into a mask and fill your lungs with oxygen. This makes sure that you have the maximal amount of oxygen in your blood. This does not put you to sleep. A white medication called Propofol is then given through your IV. The anaesthetist will ask you to keep your eyes open. As this medication goes into your veins, it can cause a stinging sensation in your arm. This is normal and does not damage you. After this injection you will be asleep in about ten seconds. Your breathing will temporarily stop and the anaesthetist will take over your breathing for you by blowing oxygen into your lungs. As soon as you are asleep and if you are having abdominal surgery, the anaesthetist will give a medication that stops your muscles moving. This has many functions. It allows your throat to relax so the anaesthetist can safely place the breathing tube into the windpipe. It also relaxes your abdominal muscles and makes surgery on the abdomen easier. If you have false teeth, they will be removed at this point and returned to you in recovery.

   As soon as the muscle relaxer has worked, the anaesthetist will use a special tool called a laryngoscope. This is a smooth spatula with a light that is inserted over your tongue and deep into your throat. The anaesthetist will be able to see your vocal cords and beyond this is your trachea or windpipe. A specially designed hollow tube is placed down the spatula and into the wind pipe. A balloon on the end of the tube is inflated by the nurse to fully occlude your airway and stop any vomit or secretions from entering your wind pipe.

This is often the trickiest part of the anaesthetic and your life can depend on it. There are many signs the anaesthetist will look for before you go to sleep to predict whether getting this tube down will be difficult or not. If you have a small jaw, previous difficulties with intubation, neck problems, difficulty opening your mouth, the anaesthetist will be ready with a different strategy to get the tube down your throat safely. Because your breathing is our number one priority, occasionally putting the breathing tube down can result in damage to your teeth or cuts to your lips. All care is taken and this is uncommon. Having a tube in your throat can leave it sore and dry for a day or too. This is transient. You may also have a swollen uvula (the dangly bit at the back of your throat) for a few days.

Before the surgery starts, if appropriate, you will be given a dose of antibiotics via your drip to help lessen the risk of wound infection. Soft tape will be placed over your eyes to keep them closed and protected. There are other devices we use to monitor your wellbeing during surgery. Tubes like urinary catheters and IV lines will now be placed. Your arms and legs will be padded to protect your pressure areas and you will be positioned for surgery.

2. Staying asleep during the surgery – cruise control

You will be kept asleep by anaesthetic gas piped in via the tube in your windpipe or by a continuous infusion of Propofol in your drip. The anaesthetic machine will steadily and precisely breathe for you. Your anaesthetist will never leave your side and constantly monitors your vital signs. They will give you small doses of medications and fluids to keep everything steady.

3. Waking up – landing the plane

As the surgery comes to an end, the anaesthetist will give you strong dose of pain killer, so you will wake up in comfort. They will turn the gas off and give a medication to reverse the paralysis. While you are still asleep, you will be transferred onto your bed. When you are breathing by yourself, the anaesthetist will remove the breathing tube and suction your throat. Patients rarely remember this. An oxygen mask will be placed on your face and you will be wheeled out to recovery.

APART FROM THE SURGERY, WHAT ELSE HAPPENS WHEN I AM ASLEEP

If you have body hair on the area having surgery, it will be clipped off. Often a larger area that is needed will be shaved. An earthing plate will be placed somewhere on your body, so the electrocautery device can be used to stop bleeding as required. This will be removed before you wake up.

Just before surgery, everyone in the theatre will stop what they are doing and check once again your identity and the operation we are performing.

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WHAT SOME PEOPLE WORRY ABOUT BUT WERE TOO AFRAID TO ASK

What if I have my period on the day of surgery?

This makes no difference to you or us. Having a period is a normal part of life. I would suggest that you use a pad and not a tampon as it may be some time before you can change it. If you have any questions about this, ask the nurse who checks you in.

My bladder feels full – will I wet myself?

Just before you go into the operating theatre, many people feel like they need to pass urine. This is usually anxiety. If you have gone to the toilet in the waiting area, it is very unlikely that you will need to go again.
For big operations, we will put a tube in your bladder that will catch all your urine. If you are having a smaller operation and still need to go once you reach the theatre, the nurse will take you to the bathroom.
It is a fact of life that some people occasionally wet themselves during the operation. It does not bother us and you will be cleaned up before you go to the recovery room.

What if I think I am pregnant?

You must let us know at check in, even if you are only suspicious. If you are pregnant it is likely we will delay the surgery. If you are not sure, there are quick pregnancy tests available to check. It is essential that we know because the surgery and anaesthetic drugs can harm your unborn child and even lead to miscarriage.

I always vomit after an anaesthetic

Nausea and even vomiting can happen after an anaesthetic. It is such an unpleasant feeling that it may be an enduring memory of previous surgery. Post anaesthetic nausea is more common if you suffer with motion sickness. Your anaesthetist will discuss this with you and there are many strategies to avoid this troubling side effect.

What if I am breastfeeding?

Breast feeding should not stop you from having a surgery you need. Very small amounts of anaesthetic and pain relieving drugs will pass into your breast milk. Theoretically, this is low risk for your baby. Anaesthetic guidelines suggest you pump and discard breast milk for 24 hours after an anaesthetic. Your baby will need to be fed with previously pumped milk or formula. It is almost certainly perfectly safe however to feed your baby less than 24 hours later. Whether you are up to it of course is another matter. Occasionally, surgery may cause a decrease or even cessation of your milk supply.

Who will be in the operating theatre with me?

It is necessary for your safety for a number of staff, both male and female to be in the operating theatre both before and during you surgery. In addition to your surgeon and anesthetist, there may be junior doctors, a number of nursing staff, theatre orderlies and x-ray technicians. As this is a teaching facility there may be medical students present.

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All of these staff are highly professional. There are definitely moments where you will be exposed whilst preparing you for surgery, but extreme efforts are made to preserve your modesty.

Do you play music while I am asleep?

No. We are concentrating on your care. Music tends to be a distraction. There are many sounds of machines and monitors in the operating theatre and we are listening to those. We also need quiet to enable communication between staff.

What if my bowels work while I am asleep?

This is quite uncommon. If it does occur however, you will be cleaned up prior to moving to recovery.

I am worried about waking up during the operation

Awareness during anesthesia is exceptionally rare. Making sure you are fully asleep is the anaesthetists' main objective. There are a number of monitors and alarms that you will be hooked up to absolutely ensure that this doesn't occur.

I am on the oral contraceptive pill

There is a medication given as the end of some anaesthetics that can interfere with the effectiveness of the pill. Please tell your anaesthetist if you are on the pill. If the medication is used, then you will need to use an alternate contraception for two weeks to avoid pregnancy.

I am worried about my memory after the anaesthetic

There is no doubt that a condition called post anaesthetic cognitive disorder is a real thing. It is more common on patients over 60 and it can result in memory loss that may be permanent. It is not fully understood. If you have concerns, your anaesthetist would be happy to discuss it with you.

RECOVERY – THE WAKE-UP ROOM

When you wake up, is likely that you will be wearing a gown but be completely naked underneath. You will be covered with a blanket.

The recovery room is the first thing most patients will remember after going to sleep. It will almost be like no time has passed.

You will have a nurse by your side monitoring your vital signs. You will stay in recovery until you are fully awake and your observations are within normal limits. The nurse will monitor your pain and keep you comfortable.

If you have a catheter in your bladder, you may feel a need to pass urine. This feeling will go away.

As you wake up you may have a tube in your throat that the nurse will remove. It is unlikely you will remember this.

If you snore you may have a small tube in your nose or mouth to help you breathe until you are fully awake.

If you have false teeth, they will be returned to you in recovery.

Your family is not allowed in recovery so we can respect the privacy of other patients.

RETURN TO THE WARD

When you return to the ward you may be drowsy, nauseated or in pain. Your nurse will be monitoring these things closely.

They will be checking you pulse, blood pressure, temperature and dressings regularly for abnormalities.

There is a very strict criteria of observations that the nurses must follow. If you fall outside these criteria for any reason the nurses must notify the medical team. Very often this is just a false alarm. It may sometimes seem dramatic, but it is done for your safety.

If you are on strong pain killers like morphine or Fentanyl you will be required to wear an oxygen mask.

HOW DO I HANDLE MY ANXIETY?

Every person suffers from some level of anxiety. You are not human if you do not. Having an operation is up there in the top ten of major life events. A little bit of anxiety can be good thing. It can make you hesitate before taking a misstep. When anxiety gets out of control however, it becomes a medical problem and stops you doing things that you should or want to do. Some people suffer anxiety about many things and for some it can be an issue only in certain situations.

Common symptoms of anxiety are

- Overwhelming negative thoughts
- Sleepless with worry
- A constant stream of bad thoughts “the chatter”
- Physical symptoms such as chest pain, nausea, headache

There are many techniques to address your anxiety. There are mindfulness, meditation and distraction techniques. Sometimes anxiety is so bad that medication is needed.

It is normal to be anxious before surgery but if the feeling of anxiety is overwhelming please talk to me or your GP about it. Help and suggestions are also available at Beyond Blue: www.beyondblue.com.au

ABOUT YOUR SURGEON

A/Prof Kellee Slater MBBS (Hons) FRACS FACS

2018	Associate Professor University of Queensland
2015	Fellow of the American College of Surgeons
2017-2019	National Chair of the Australian Board in General Surgery
2006 – Present	Staff Surgeon Hepatopancreatic-Biliary-Liver Transplant Princess Alexandra Hospital and Greenslopes Private Hospital Brisbane, Queensland
2004 – 2006	Hepatobiliary and Liver Transplant Fellowship Princess Alexandra Hospital Brisbane, Queensland
2002 – 2004	Liver and Kidney Transplant Fellowship University of Colorado Hospital Denver, Colorado, United States of America
2002	Fellow of the Royal Australian College of Surgeons (FRACS) General Surgery
1989 – 1994	MBBS (Honours) University of Queensland