Cancer of oesophagus (food pipe) is an increasing problem in Australia with more cases diagnosed. There are two main types of oesophageal cancer – Squamous Cell Carcinoma (SCC) and Adenocarcinoma. Both cancers are treated similarly. Treatment can be difficult and involves a Multi-Disciplinary Team (MDT) of doctors (surgeons, medical oncologist, radiation oncologists and radiologists) and allied health professionals (physiotherapists, dietitians and nursing staff). Other indications include benign diseases such as peptic strictures, benign lesions (GIST) or achalasia.

What are the advantages of surgery?

Advantages include:

- Removal of the tumour and improved survival
- Improvement in symptoms (difficulty swallowing, bleeding)

What are the options for surgery?

There are generally 2 types of surgery offered depending on the location of the tumour:

1. 2 Stage Oesophagectomy (Ivor-Lewis) – involves abdominal and thoracic (chest) incisions. These are generally performed laparoscopically (keyhole) for the abdomen and through an open (larger) incision in the chest.

2. 3 Stage Oesophagectomy (McKeown) – involves abdominal, thoracic and neck incisions. Various parts of this operation are performed thorascopically, laparoscopically and open depending on your surgeon.
Your surgeon will recommend one operative approach based on your clinical symptoms, previous surgery and medical problems. It is your decision to proceed with surgery.

**What if I don’t have surgery?**

Surgery is the recommended standard of care in the management of oesophageal cancer unless the lesion has spread to other organs. It offers the only chance of cure. In this circumstance other interventional (endoscopic) or medical (chemotherapy options) will be recommended by our Multi-Disciplinary Team.

**What does the surgery involve?**

The surgery usually involves admission on the day of surgery. The surgery will be performed under General Anaesthesia. Local anaesthetic and intravenous antibiotics will be administered during the procedure.

Surgery will be performed either open, laparoscopically or thorascopically depending upon your surgeon and your tumour location. Principally surgery involves removing the cancer with a margin of normal healthy tissue. It involves creating a conduit (tube) with your healthy stomach and passing this into the chest and joining it to the remaining oesophagus. For three stage oesophagectomy, a third incision will be performed in the neck and the conduit passed to the neck to be joined to the oesophagus. At the time of surgery a feeding jejunostomy will be performed, which allows feeding enterally (into the bowel) following surgery. Chest, abdominal and neck drains may be placed. The surgeon will then close your incisions. Generally, you will be admitted to the Intensive Care Unit (ICU) following surgery for ongoing management.

**Things to know?**

**Fasting**

Generally, you will need to fast for 6 hours prior to surgery. Your surgeon will provide instructions when booking your surgery. If you are unsure or have any concerns please contact our team.

**Medications**

Discuss with your surgeon/anaesthetist all the medications you take, particularly any blood thinning (warfarin, aspirin, clopidogrel, Xarelto, Eliquis, Pradaxa) or herbal medications. Your surgeon will advise which medications need to be ceased prior to surgery.

**Smoking**

Your surgeon will advise you to stop smoking prior to surgery. Smoking increases the risk of developing complications post-operatively.

**Weight**

Any weight you can lose prior to surgery will improve the outcomes following surgery. Overweight patients have a higher risk of developing complications following surgery. Occasionally pre-operative nutritional support will be provided to lose weight.

**Exercise**

Regular exercise improves lung and heart function which improves recovery following surgery. For hernias, you should avoid heavy lifting and exercise which you feel worsen your symptoms. Seek the advice of your surgeon or GP prior to surgery.

**General information**

**Pregnancy** – please advise your surgeon if there is any possibility you are pregnant.
Hair removal - in the week prior to the procedure do not shave/wax in the region of your surgery.

Hygiene - have a shower the day before or day of surgery.

Please discuss any other questions with your surgeon.

**Complications**

Your surgeon and their team will make your surgery as safe as possible, however complications do occur. Some of these can be serious and even cause death.

**Common risks and complications**

**Pain** – can occur following surgery. An epidural will typically be placed before surgery and used for five days following surgery. Pain relief is utilised to keep you comfortable to allow deep breathing and coughing.

**Bleeding** – can occur and may require a return to the operating theatre. Bleeding is more common if you take blood thinning medications.

**Infection** – can occur within the surgical site. It is important to leave the dressings intact as guided by the surgical team. If your wound develops redness or discharge please advise your surgeon as soon as possible.

**Urinary retention** (1 in 100) – following surgery you may have difficulty passing urine. Occasionally a urinary catheter will need to be placed.

**Wound** – thickened scarring of the skin may occur. Small pockets of fluid (seroma) can develop and usually resolve without treatment.

**Lungs** – small areas of lung can collapse and pneumonia develop. Antibiotics and physiotherapy may be required. It is important to practice deep breathing exercises post operatively as lung complications occur in up to 40% of patients.

**Clots** – a blood clot in the leg (deep vein thrombosis DVT) or lung (pulmonary embolism – PE) can develop following surgery. DVT may present with swelling, pain or redness in the leg. PE can present with shortness of breath, chest pain or bloody cough. Further treatment with blood thinners may be required if these develop.

Wound infection, chest infection, heart and lung complications and blood clots are more common in people who are overweight, smoking or have a history of diabetes. Emergency surgery increases the risk of these complications.

**Uncommon risks and complications**

Include:

**Conversion to open surgery** – laparoscopic technique may not be possible and your surgeon may need to convert to open surgery.

**Damage to surrounding structures** – damage to large blood vessels, liver, spleen and gut may occur during surgery.

**Anastomotic leak** (~10%) – is a very serious problem when the anastomosis breaks down leading to leakage of bowel content into the chest or neck. Occasionally it requires further surgery or interventional (endoscopic) procedures.

**Chyle leak** (~10%) – the thoracic duct is a tubular structure within the chest that when damaged leads to the secretion of milky fluid. This sometimes requires treatment with intra-venous or enteral nutrition, interventional (radiology) or surgical procedures.

**Nutritional concerns** – anorexia, low iron, loss of weight or recurrent vomiting may occur.
Strictures – narrowing of the anastomosis can occur and occasionally requires endoscopic dilatation (stretching).

Heart and lung complications – rarely gas used to inflate the abdomen can cause heart and lung complications. Heart attack or stroke can occur due to strain on the heart.

Adhesions – scar tissue may form leading to a bowel obstruction.

Anaesthetic risks are uncommon however you should discuss these risks with your anaesthetist. Death as a result of this procedure is rare.

What to expect following surgery

The majority of patients make a full recovery following an oesophagectomy. Occasionally patients require short term rehabilitation prior to discharge home.

Following the operation you will be transferred to the Intensive Care Unit following surgery. You will remain there for approximately two days and generally be admitted for 12-14 days following surgery. You should discuss this with your surgeon. Post-operatively you will be initially nil by mouth and fed through the feeding jejunostomy. Over the course of your admission you will be progressed to a soft diet before discharge.

You should talk to your surgeon if you develop any of the following:

✔ Worsening pain, especially with walking or coughing
✔ A high temperature or fever
✔ Dizziness or shortness of breath
✔ Swelling of the abdomen or wound
✔ Not opening bowels or passing wind
✔ Difficulty passing urine

If you do not improve over the week following discharge, please contact your surgeon or GP. Do not drive following surgery until you have complete movement, sensation and function.

Do not drive if taking opiate analgesia. Do not drive until you feel you can safely control your vehicle. Do not consume alcohol for 24hrs following general anaesthesia.

You can usually return to normal activities a few weeks following surgery. Do not do any strenuous activities or heavy lifting for 4-6 weeks following surgery. Please discuss with your surgeon prior to commencing strenuous exercise.

This document contains general information only as at the date of publication and should not replace advice obtained by your treating doctors applicable for your specific circumstances.