

What is a pancreatic lesion?

An abnormality in the pancreas. This may be either benign or malignant.

Anatomy and pathology

The pancreas is in the upper part of the abdomen, located in the back and sandwiched between the spine, major blood vessels and the organs in front of it (stomach, liver, bile duct, gallbladder, small bowel, and large bowel), to the side (spleen) or behind it (kidneys). The pancreas is a feather-shaped organ that extends almost horizontally across the abdomen from right to left. It is intimately associated with a number of organs and major blood vessels to/from the lower limbs and to/from the organs of digestion.

The pancreas produces enzymes that assist in digestion and hormones that control blood sugar levels. An abnormality in the pancreas may be solid or cystic (fluid-filled) in appearance and may be found in any part of the pancreas

Historically, the prognosis for pancreatic cancer is poor. However, the prognosis for all pancreatic cancers is not the same and there are certain types with an excellent prognosis.

What are the signs and symptoms of a pancreatic lesion?

Often these lesions are found incidentally on imaging investigations for other reasons. Usually, patients are asymptomatic and the lesion benign in this context.

Symptoms from a pancreatic lesion depend on the location of the abnormality. If located in the right

side (head/uncinate part of the pancreas) these patients or their relatives may notice a yellow tinge to the skin or eyes (jaundice). Other signs and symptoms patients may notice include loss of weight, reduced appetite, or pain in the upper abdomen or back if the disease is advanced. Patients may also describe vague upper abdominal discomfort on occasions.

Patients may also develop new-onset diabetes (high sugar values) or present to hospital with pancreatitis (inflammation of the pancreas) from these lesions.

Rare signs and symptoms include symptoms of low blood sugar (dizziness, confusion), multiple stomach ulcers refractory to treatment and profuse diarrhea.

What tests are required?

In addition to tests checking your kidney function and blood count, you will need to have liver function tests and tumour markers. Tumour markers are blood tests that are helpful if significantly abnormal but require interpretation in the current context. Unfortunately, if normal they are unhelpful and maybe non-diagnostic. Additional blood tests may be requested to assist in ruling out benign causes such as inflammatory conditions.

Due to the pancreas location, it is not easily visualised on ultrasound.

Therefore, most patients will require a CT of the Abdomen and Pelvis or MRI to detect a lesion in the pancreas. If a malignancy is suspected your surgeon will arrange

a specific CT of the Abdomen and Pelvis to stage the disease and arrange a CT of your chest. MRI is the preferred scan if doubt remains following the CT (lesion not visualised or remain indeterminate) or if a cystic lesion remains a possibility.

Occasionally, additional interventions are required if the diagnosis remains elusive or biopsies are required for confirmation. These procedures can be performed endoscopically (camera in the mouth) by endoscopic ultrasound (EUS). An additional reason to perform invasive procedures are to drain the bile duct by placing a stent to dilate the narrowing. This procedure can be performed conventionally either by endoscopy (ERCP) or radiologically (PTC). There is also an important emerging role for EUS in this instance.

What are the options of management?

Depends on whether the pathology is benign or malignant. If clearly benign the patient will be discharged from follow-up or treated with medications. If potentially malignant or the lesion remains indeterminate, then follow-up and close surveillance may be recommended with regular blood tests and imaging at pre-determined intervals. There are however certain lesions of concern which although not malignant, surgery still recommended. Usually these lesions have a high risk of malignant transformation.

If there is a concern for malignancy, your surgeon will present your case in a multi-disciplinary meeting for



discussion. A multi-disciplinary meeting is a meeting of multiple experts from different specialties who review potential malignancies and formulate a decision that is both patient-centred and evidence-based. In the meeting the patients are discussed and in their absence their imaging and biopsies (if applicable) are reviewed. A consensus is reached, and the plan communicated to the patient by the treating doctor and the patient's general practitioner. Treatments recommended are either with curative or palliative intent (symptom management). The treatment intent depends on patient factors (age, medical problems) and disease factors (stage of disease).

Curative treatment is surgical often in combination with systemic treatment (chemotherapy) which may occur before or after surgery. If before surgery, this is called neoadjuvant treatment. The purpose of which is to reduce the size of the tumour to potentially offer surgery after several weeks of treatment following review of repeat imaging. In the absence of tumour progression, surgery is offered and most often performed by an open approach. The open approach is a large incision in the midline which is typically 30-40 cm in length. Surgery involves removing the cancer and usually the adjacent lymph nodes (glands), aiming to achieve a cancer-free margin of normal surrounding tissue. Surgery may involve removing part of your pancreas/or other surrounding organs. If the surgery involves the head/uncinate part of the pancreas, then a Whipples procedure is

recommended and if the body or tail is resected, this is described as a distal pancreatectomy (with or without the spleen being removed). Rarely, the whole pancreas may be removed together with the spleen or alternatively pancreas-sparing resections (enucleation) for certain tumour types. Chemotherapy may be required depending on the final pathology review after surgery (stage of the disease).

Palliative treatment is directed at controlling symptoms. If the patient is jaundiced, the bile tube is stented, and the patient referred to an Oncologist for consideration of palliative chemotherapy together with a referral to palliative care doctors and nurses. Occasionally, radiotherapy may be a useful adjunct to assist with symptom management or occasionally localised treatment in patients

[What are the possible complications?](#)

- Pancreatic leak
- Bile leak
- Infection
- Chyle leak (leak abdominal fluid)
- Delayed gastric emptying
- Incisional hernia
- Death

[What to expect following your procedure?](#)

All procedures require an overnight admission. You will wake from anaesthesia with dressings over dissolvable sutures. It is normal to experience some pain from the procedure which is managed with painkillers. Occasionally, a drain is placed which is removed within three

days of being placed if there is no bile or pancreatic leak present. You will be admitted to the intensive care for close monitoring. You will be encouraged to ambulate after surgery and will be discharged from hospital if you are tolerating a diet, your pain is controlled with painkillers, you are ambulating independently and in the absence of any complications.

The dressing for the open procedure should be left intact for one week, this dressing is also waterproof to splashes. Once removed, see your GP if you have any concerns.

Gentle exercises are encouraged. Avoid heavy lifting for 3-4 weeks. You may drive if you are able to put your foot on the brake in an emergency or have ceased taking any painkillers. Usually this occurs after three weeks.

Patients after pancreatic surgery may take many months to fully recover from their surgery. Patience is required as the recovery can be slow.

Post-operative follow-up usually occurs in four weeks and will be arranged on discharge with your surgeon. Your surgeon will review the pathology specimen in the multi-disciplinary meeting. If chemotherapy is required, a referral will be made to the Oncologists and an appointment made. You will then undergo surveillance with both blood tests and imaging after your surgery at regular intervals designed to detect if the cancer returns.