

## Pancreatic Cancer

Pancreatic cancer is one of the leading causes of cancer mortality in developed countries, and one of the most fatal cancers across the world. Globally, it is the seventh leading cause of cancer death in men and women, causing more than 300 000 deaths annually.

### What is a pancreas?

A pancreas is one of the organs located in the abdomen and has a function to release juices that help with the digestion or breaking down of food in the body. It also releases hormones that help manage blood sugar levels. What is pancreatic cancer.

Pancreatic cancer is a disease where cells in the pancreas grow and multiply abnormally. This condition usually spreads rapidly to nearby organs and it is hard to catch early as it does not cause symptoms right away. When symptoms occur, they are often unclear and can go unnoticed.

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The number of pancreatic cancer cases which were histologically diagnosed in 2013 in South Africa is shown in table 1 below.

	Number of new cases	Percentage of all cancers
<b>Females</b>	152	0.42
<b>Males</b>	176	0.49

Adapted from the National Cancer Registry 2013 <http://www.nioh.ac.za/assets/files/2013NCR.pdf>

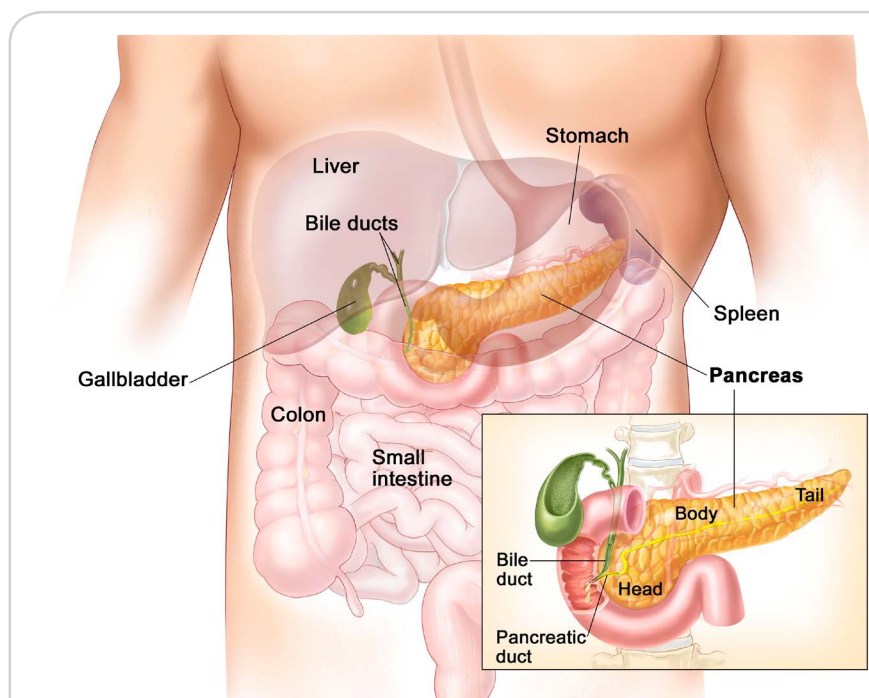
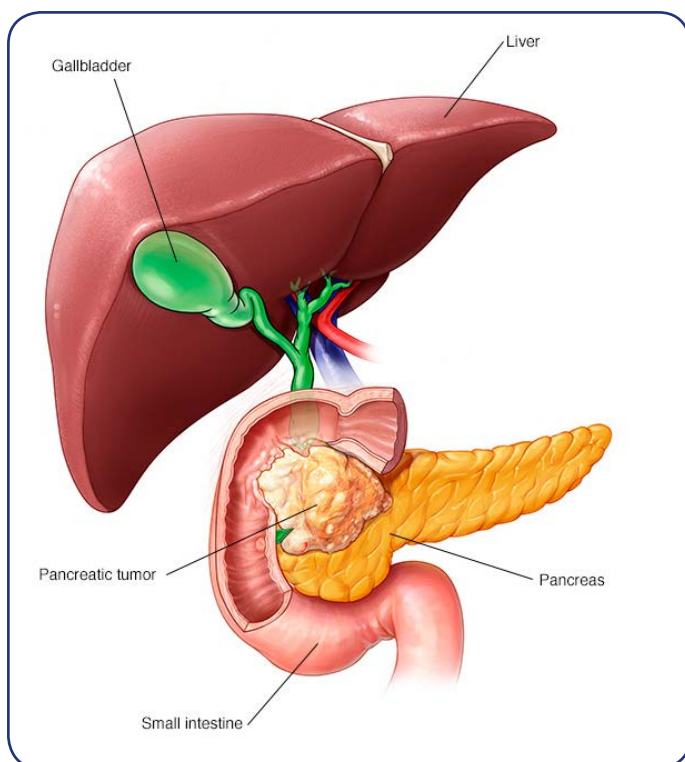


Figure 1: Illustration of the location of the pancreas within the digestive system

### Risk factors for pancreatic cancer

Doctors cannot always explain why one person gets pancreatic cancer and another does not get it. However, people with certain risk factors may be more likely than others to develop cancer of the pancreas. These risk factors include:

- Chronic inflammation of the pancreas (pancreatitis) - Pancreatitis is a painful inflammation of the pancreas. Having pancreatitis for a long time may increase the risk of pancreatic cancer.
- Diabetes - People with diabetes are more likely than other people to develop pancreatic cancer. The reason for this link is not known. Most of the risk is found in people with type 2 diabetes. Type 2 diabetes most



**Figure 2: Illustration of a pancreatic tumour**

often starts in adulthood and is often related to being overweight or obese.

- Family history of genetic syndromes that can increase cancer risk, for example, people predisposed to specific genes associated with ovarian cancer, endometrial cancer, colorectal cancer and breast cancer, will have an increased risk of pancreatic cancer.
- Family history of pancreatic cancer - Having a mother, father, sister, or brother with pancreatic cancer increases the risk of developing the disease.
- Smoking - People who smoke tobacco are more likely than non-smokers to develop this disease. Heavy smokers are most at risk.
- Cirrhosis (scarring) of the liver - It develops in people with liver damage caused by hepatitis and alcohol use. People with cirrhosis seem to have an increased risk of pancreatic cancer.
- Obesity - People who are overweight or obese are slightly more likely than other people to develop pancreatic cancer.
- Age - the risk of developing pancreatic cancer increases as people age, with an increase in pancreatic cancer being seen in patients that are older than 45 years.

It is important to note that many people who get pancreatic cancer have none of these risk factors, and many people who have known risk factors may not necessarily develop the disease.

### **Signs and symptoms of pancreatic cancer**

Pancreatic cancer is difficult to detect and diagnose early mainly because:

- There are no noticeable signs or symptoms in the early stages of pancreatic cancer.
- The signs and symptoms of pancreatic cancer, when present, are similar to the signs and symptoms of many other illnesses.
- The pancreas is hidden behind other organs such as the stomach, small intestine, liver, gallbladder, spleen, and bile ducts.

However, people with the following symptoms should notify their doctor so that problems can be diagnosed and treated as early as possible:

- Yellowing of the skin and the white part of the eyes (jaundice)
- Loss of appetite and unintended weight loss
- Pain in the upper abdomen that spreads to the back
- Fatigue
- New-onset diabetes
- Nausea and vomiting
- Dark urine and pale stools
- Stools that float in the toilet

### **Diagnosis and staging of pancreatic cancer**

A physical examination of the body to check general signs of health and a history of the patient's health habits, as well as past illnesses and treatments, will be taken. Blood tests, kidney function tests and an ultrasound scan of the abdomen may form part of the initial tests upon suspicion of pancreatic cancer.

Once the diagnosis of pancreatic cancer is suspected from clinical symptoms and/or abdominal ultrasound findings, the tests below might be done to confirm the diagnosis and/ or stage the cancer of the pancreas:

- Computerised tomography (CT) of the abdomen and pelvis, or a magnetic resonance imaging (MRI) of the pancreas.
- Endoscopic ultrasound (EUS) – this uses an ultrasound device to make images of the pancreas from inside the abdomen. The device is passed through a thin, flexible tube (endoscope) down the oesophagus (also called the gullet that connects the mouth to the stomach) and into the stomach in order to obtain the images.
- Endoscopic Retrograde Cholangiopancreatography (ERCP) – a surgical procedure to examine a pancreas and bile ducts. A biopsy or a small tissue sample can be taken during this procedure to confirm the presence of cancer or any other abnormality.

- A biopsy – a biopsy is a procedure to remove a small tissue sample from the pancreas. The doctor may obtain a sample of tissue from the pancreas by inserting a needle through the skin and into the pancreas (fine-needle aspiration) or the doctor may remove a sample while performing an EUS described above.

If cancer of the pancreas is diagnosed, the doctor needs to evaluate the extent (stage) of the disease in order to choose the best treatment. Staging is a careful attempt to find out the following:

- The size of the tumour in the pancreas.
- Whether the tumour has invaded nearby tissues.
- Whether the cancer has spread, and if so, to which parts of the body.

### **The stages of pancreatic cancer are**

- Stage I: The tumour is found only in the pancreas.
- Stage II: The tumour has invaded nearby tissue but not nearby blood vessels. The cancer may have spread to the lymph nodes.
- Stage III: The tumour has invaded nearby blood vessels.
- Stage IV: The cancer has spread to a distant organ, such as the liver or lungs.

### **Treatment options**

Due to the fact that pancreatic cancer is often detected late, and spreads quickly, the condition can be difficult to treat. Possible treatment may include surgery, chemotherapy, radiation therapy or a combination of these.

The treatment options will depend on:

- The location of the tumour in the pancreas
- Whether the disease has spread to other organs of the body
- Age and general health

### **Surgery**

Appropriate staging of the patient allows for the selection of patients who will stand the best chance for curative surgery. In patients with stage I and some stage II pancreatic cancer, it might be possible to completely remove the tumour. If complete removal of the tumour is impossible, particularly in cancer that has spread, some surgical interventions such as the insertion of stents, can be done to relieve some symptoms and improve quality of life. In this case the intent of the surgery is palliative and not curative.

### **Chemotherapy**

In early stages of pancreatic cancer, chemotherapy can be given after surgery. As with surgery in the metastatic (cancer that has spread) patients, the primary goal of chemotherapy for metastatic pancreatic cancer is palliation and a potential increase in length of survival. In the metastatic patients, it is important to carefully select the patients who will benefit and are able to tolerate the chemotherapy.

### **Radiotherapy**

In metastatic pancreatic cancer, radiotherapy can be given with or without chemotherapy. This is also done with a palliative intent.

### **PMB level of care**

Treatable pancreatic cancer is a prescribed minimum benefit (PMB) condition under Diagnosis and Treatment Pair (DTP) code 950C. According to the PMB Regulations, treatable cancers are defined as follows:

- They involve only the organ of origin, and have not spread to adjacent organs;
- There is no evidence of distant metastatic spread;
- They have not, by means of compression, infarction, or other means, brought about irreversible and irreparable damage to the organ within which they originated (for example brain stem compression caused by a cerebral tumour) or another vital organ;
- If points (i) to (iii) do not apply, there is a well demonstrated five-year survival rate of greater than 10% for the given therapy for the condition concerned.

Based on these regulations, the schemes have to pay for the consultations, diagnostic and staging tests, as well as treatment of treatable pancreatic cancer, irrespective of the medical scheme option. Follow-up consultations and tests should also be covered as PMB level of care.

When a patient has pancreatic cancer, they are entitled to supportive therapy. Supportive therapy is applicable for the following symptoms:

- Pain
- Nausea and Vomiting
- Constipation
- Diarrhoea
- Gastro-esophageal reflux
- Nutrition
- Physiotherapy

Patients who have untreatable pancreatic cancer should be offered some palliative measures to improve their

quality of life. Palliative care assists in providing comfort, relieving pain and controlling the symptoms and resulting complications of pancreatic cancer; and should be covered as PMB level of care.

## References

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## WHAT ARE PRESCRIBED MINIMUM BENEFITS?

Prescribed Minimum Benefits (PMBs) are defined by law. They are the minimum level of diagnosis, treatment, and care that your medical scheme must cover – and it must pay for your PMB condition/s from its risk pool and in full. There are medical interventions available over and above those prescribed for PMB conditions but your scheme may choose not to pay for them. A designated service provider (DSP) is a healthcare provider (e.g. doctor, pharmacist, hospital) that is your medical scheme's first choice when you need treatment or care for a PMB condition. You can use a non-DSP voluntarily or involuntarily but be aware that when you choose to use a non-DSP, you may have to pay a portion of the bill as a co-payment. PMBs include 270 serious health conditions, any emergency condition, and 25 chronic diseases; they can be found on our [website](#)

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