Step 1: Prevention and early detection

Prevention
The two most effective prevention strategies are avoiding tobacco smoking and maintaining a normal body weight.

Risk factors
- Tobacco smoking (most established risk factor; risk increases significantly with greater intensity and duration)
- Cystic lesions of the pancreas
- Obesity
- Increased consumption of red meat and processed meat
- Family history of pancreatic cancer
- Older age
- Chronic pancreatitis
- Longstanding type 2 diabetes mellitus
- Male gender
- Asian or Pacific Islander ethnicity
- Chronic alcohol consumption
- Liver cirrhosis

Early detection
People with a strong family history of pancreatic cancer and related hereditary conditions should be referred to a familial cancer service, geneticist or oncologist for possible genetic testing.

Potential monitoring for pancreatic cancer in high-risk populations includes endoscopic ultrasound for small pancreatic head tumours and blood tests (CA 19-9, carcinoembryonic antigen and liver biochemistry).

Screening
Population screening is not recommended for pancreatic cancer in Australia.

Checklist
- Recent weight changes discussed and the patient's weight recorded
- Alcohol intake discussed and recorded and support for reducing alcohol consumption offered if appropriate
- Smoking status discussed and recorded and brief smoking cessation advice offered to smokers
- Physical activity recorded
- Referral to a diettitian considered
- Referral to a physiotherapist or exercise physiologist considered
- Education on being sun smart considered

Step 2: Presentation, initial investigations and referral

Many cases present with non-specific symptoms or are asymptomatic until advanced stages of the disease.

The following signs and symptoms should be investigated:
- acute pancreatitis where the cause is not alcohol ingestion and gall stones are not evident
- new-onset diabetes
- jaundice that is progressive, together with unexplained weight loss and abdominal pain that may radiate to the back (the jaundice may also be accompanied with dark urine, light-coloured stools and itchy skin)
- pain, which is often severe, unrelenting and of a short duration
- unexplained weight loss
- pale and greasy stools
- nausea and vomiting
- constipation
- fatigue
- gall bladder enlargement
- a blood clot in the leg without a clear risk factor
- incidental lesions found on radiology.

Checklist
- Signs and symptoms recorded
- Supportive care needs assessment completed and recorded, and referrals to allied health services actioned as required
- Patient notified of support services such as Cancer Council 13 11 20
- Referral options discussed with the patient and/or carer including cost implications
### Step 2: Presentation, initial investigations and referral continued

**Initial investigations**
Where there is suspicion of pancreatic cancer, consider an abdominal CT scan with pancreatic protocol, conduct serum CA 19-9 and liver function tests and early referral is strongly indicated, usually prior to a definitive diagnosis. Where jaundice is present, the following should be performed urgently: liver function tests, abdominal ultrasound and CT where appropriate.

**Referral options**
At the referral stage, the patient’s GP or other referring doctor should advise the patient about their options for referral, waiting periods, expertise, if there are likely to be out-of-pocket costs and the range of services available. This will enable patients to make an informed choice of specialist and health service.  

**Timeframe**
Patients who present with jaundice should be referred for tests within 48 hours and followed up rapidly. Other symptoms require review within 2 weeks.

Patients with suspected or proven pancreatic cancer should be seen by a gastroenterologist, oncologist or hepatopancreatobiliary surgeon with expertise in pancreatic cancer management and linked to a multidisciplinary team within 1 week of referral to the specialist.

### Step 3: Diagnosis, staging and treatment planning

#### Diagnosis and staging
Most diagnostic procedures should be completed before the MDM. Biopsy is only required where there is diagnostic uncertainty, or tissue is required for further management or clinical trials. A contrast-enhanced CT scan should be completed first if not already performed. Additional tests may also be requested by the multidisciplinary team. If diagnostic uncertainty still remains, conduct:
- endoscopic ultrasound with or without biopsy
- contrast-enhanced MRI of the pancreas or magnetic resonance cholangiopancreatography (MRCP) in patients who cannot tolerate contrast or where diagnostic uncertainty remains
- diagnostic laparoscopy with or without laparoscopic ultrasound when resection is planned.

Staging pancreatic cancer may include the following investigations:
- CT scan of the chest/abdomen/pelvis and PET scan
- MRI pancreatic and/or liver
- laparoscopy plus or minus laparoscopic ultrasound for high-risk patients.

#### Genetic testing
Five to 10 per cent of pancreatic cancers arise due to a genetic predisposition. A referral to a familial cancer service should be considered for all patients newly diagnosed with pancreatic cancer, particularly if any of the following features are noted:
- a family history of pancreatic cancer
- young age of diagnosis (< 60 years)
- a personal and/or family history of melanoma, breast, ovarian, stomach or colorectal cancer
- a family history of chronic pancreatitis
- Ashkenazi Jewish ancestry.

#### Treatment planning
The patient’s case must be discussed within 1 week of completing the diagnostic and staging investigations and a management plan should be finalised.

#### Research and clinical trials
Consider enrolment where available and appropriate. Search for a trial <www.australiancancertrials.gov.au>.

<table>
<thead>
<tr>
<th>Checklist</th>
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<tbody>
<tr>
<td>Diagnosis confirmed</td>
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<tr>
<td>Full histology obtained</td>
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<tr>
<td>Performance status and comorbidities measured and recorded</td>
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<tr>
<td>Patient discussed at an MDM and decisions provided to the patient and/or carer</td>
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<tr>
<td>Clinical trial enrolment considered</td>
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<tr>
<td>Supportive care needs assessment completed and recorded and referrals to allied health services actioned as required</td>
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<tr>
<td>Patient referred to support services (such as Cancer Council) as required</td>
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<tr>
<td>Treatment costs discussed with the patient and/or carer</td>
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Step 4: Treatment

Establish intent of treatment
- Curative
- Anti-cancer therapy to improve quality of life and/or longevity without expectation of cure
- Symptom palliation

Treatment for resectable pancreatic cancer: The potential for curative surgery depends on the staging of the tumour, and only 10–20 per cent of patients have clearly resectable disease after careful pretherapeutic staging. This potential is assessed by the multidisciplinary team.

Curative surgery includes Whipple procedure, distal or total pancreatectomy, with or without chemotherapy (adjuvant or neoadjuvant chemotherapy or neoadjuvant chemoradiation).

Treatment for unresectable pancreatic cancer: If unresectable, any other treatment is almost certainly palliative because pancreatic cancer is unlikely to be cured by chemotherapy or radiation therapy. The most commonly used therapies include:
- endoscopic or radiological intervention
- surgical interventions
- chemotherapy with or without chemoradiation
- coeliac plexus or intrapleural block.

Palliative care: In general, all patients with pancreatic cancer, given the poor prognosis, should be offered a referral for a palliative care assessment as an integrated aspect of their overall oncology care. For more, visit the Palliative Care Australia website <www.palliativecare.org.au>.

Communication
The lead clinician and team’s responsibilities include:
- discussing treatment options with the patient and/or carer including the intent of treatment as well as risks and benefits
- discussing advance care planning with the patient and/or carer where appropriate
- communicating the treatment plan to the patient’s GP
- helping patients to find appropriate support for exercise programs where appropriate to improve treatment outcomes.

Checklist
- Intent of treatment established
- Risks and benefits of treatments discussed with the patient and/or carer
- Treatment plan discussed with the patient and/or carer
- Treatment plan provided to the patient’s GP
- Treating specialist has adequate qualifications, experience and expertise
- Supportive care needs assessment completed and recorded, and referrals to allied health services actioned as required
- Early referral to palliative care considered
- Advance care planning discussed with the patient and/or carer

Timeframe
Treatment should begin within 4 weeks of the initial diagnosis, depending on urgency and modality.
Postoperative adjuvant chemotherapy should begin within 12 weeks of surgery.

Step 3: Diagnosis, staging and treatment planning

Communication
The lead clinician’s responsibilities include:
- discussing a timeframe for diagnosis and treatment options with the patient and/or carer
- explaining the role of the multidisciplinary team in treatment planning and ongoing care
- encouraging discussion about the diagnosis, prognosis, advance care planning and palliative care while clarifying the patient’s wishes, needs, beliefs and expectations, and their ability to comprehend the communication
- providing appropriate information and referral to support services as required
- communicating with the patient’s GP about the diagnosis, treatment plan and recommendations from multidisciplinary meetings (MDMs).

Timeframe
Diagnostic and staging investigations should be completed within 2 weeks of referral.

1 Lead clinician – the clinician who is responsible for managing patient care.
The lead clinician may change over time depending on the stage of the care pathway and where care is being provided.
Step 5: Care after initial treatment and recovery

Most patients with pancreatic cancer are palliated. If a patient is thought to have been cured after their treatment, then care in the post-treatment phase is driven by predicted risks, as well as individual clinical and supportive care needs.

**Provide a treatment and follow-up summary to the patient, carer and GP outlining:**

- the diagnosis, including tests performed and results
- tumour characteristics
- treatment received (types and date)
- current toxicities (severity, management and expected outcomes)
- interventions and treatment plans from other health professionals
- potential long-term and late effects of treatment and care of these
- supportive care services provided
- a follow-up schedule, including tests required and timing
- contact information for key healthcare providers who can offer support for lifestyle modification
- a process for rapid re-entry to medical services for suspected recurrence.

**Communication**

**The lead clinician’s responsibilities include:**

- explaining the treatment summary and follow-up care plan to the patient and/or carer
- informing the patient and/or carer about secondary prevention and healthy living
- discussing the follow-up care plan with the patient’s GP.

**Checklist**

- Treatment and follow-up summary provided to the patient and/or carer and the patient’s GP
- Supportive care needs assessment completed and recorded and referrals to allied health services actioned as required
- Patient-reported outcome measures recorded

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Step 6: Managing recurrent, residual or metastatic disease

**Detection**

It is likely that the patient’s current symptoms will progressively worsen. This should be managed following discussion by a multidisciplinary team in consultation with palliative care specialists.

**Treatment**

Evaluate each patient for whether referral to the original multidisciplinary team is appropriate. Treatment will depend on the location and extent of disease, previous management and the patient’s preferences.

**Advance care planning**

Advance care planning is important for all patients but especially those with advanced disease. It allows them to plan for their future health and personal care by thinking about their values and preferences. This can guide future treatment if the patient is unable to speak for themselves.

**Survivorship and palliative care**

Specialist palliative care is recommended for all patients with pancreatic cancer. Survivorship and palliative care should be addressed and offered early. Early referral to palliative care can improve quality of life.

**Communication**

**The lead clinician and team’s responsibilities include:**

- explaining the treatment intent, likely outcomes and side effects to the patient and/or carer and the patient’s GP.

**Checklist**

- Treatment intent, likely outcomes and side effects explained to the patient and/or carer and the patient’s GP
- Supportive care needs assessment completed and recorded and referrals to allied health services actioned as required
- Advance care planning discussed with the patient and/or carer
- Patient referred to palliative care if appropriate
- Routine follow-up visits scheduled

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Step 7: End-of-life care

**Palliative care**

Consider a referral to palliative care. Ensure an advance care directive is in place.

**Communication**

**The lead clinician’s responsibilities include:**

- being open about the prognosis and discussing palliative care options with the patient
- establishing transition plans to ensure the patient’s needs and goals are considered in the appropriate environment.

**Checklist**

- Supportive care needs assessment completed and recorded, and referrals to allied health services actioned as required
- Patient referred to palliative care
- Advance care directive in place


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