

Non-surgical treatments for pancreatic cancer

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Deciding about treatment can be difficult in advanced cancer.

- Treatments such as chemotherapy or radiotherapy can help to reduce symptoms and ultimately improve quality of life, however, they also have side effects that cause other symptoms which can add to distress.
- Patients and their families/carers should be advised of:
 - the aims of the treatment offered
 - how it might affect quality of life
 - potential side effects and increase in toxicity
 - the choices available including best supportive care

Locally advanced pancreatic cancer

Locally advanced pancreatic cancer has grown into or close to nearby lymph nodes or blood vessels preventing the option to completely remove the cancer.

Metastatic pancreatic cancer

Metastatic pancreatic cancer has spread to other organs preventing removal of the cancer.

Recurrent pancreatic cancer

Recurrent pancreatic cancer has recurred after it has been treated initially. The cancer may come back in the pancreas or in other parts of the body.

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- **Chemotherapy**
 - Standard or clinical trials
 - Treatment that uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping them from dividing. When chemotherapy is taken by mouth or given intravenously, the drugs enter the bloodstream and reach cancer cells throughout the body (systemic chemotherapy). Combination chemotherapy is treatment using more than one anticancer drug
- **Radiation therapy**
 - Radiation therapy is a cancer treatment that uses high-energy [x-rays](#) or other types of radiation to kill cancer cells or keep them from growing. External radiation therapy uses a machine outside the body to send radiation toward the area of the body with cancer.
- **Chemoradiation therapy**
 - Chemoradiation therapy combines chemotherapy and radiation therapy to increase the effects of both
- **Targeted therapy**
 - Targeted therapies usually cause less harm to normal cells than chemotherapy or radiation therapy do. Tyrosine kinase inhibitors (TKIs) are targeted therapy drugs that block signals needed for tumors to grow. Erlotinib is a type of TKI used to treat pancreatic cancer.

Chemotherapy – Current licensed drugs

- Abraxane (Paclitaxel)
- Gemcitabine Hydrochloride
- Gemzar (Gemcitabine hydrochloride)
- Irinotecan Hydrochloride Liposome
- Tarceva (Erlotinib Hydrochloride)
- Combination therapy

- FOLFIRINOX – folinic acid, fluorouracil, irinotecan, oxaliplatin
- FOLFOX (fluorouracil, folinic acid, oxaliplatin)
- GEMCITABINE-CISPLATIN
- GEMCITABINE-OXALIPLATIN

Side effects or toxicity related to chemotherapy

- nausea
- loss of appetite
- weight loss
- lethargy
- lower resistance to infections
- bleeding and bruising
- Deep vein thrombosis or pulmonary embolism
- palmar plantar syndrome
- peripheral neuropathy
- diarrhoea or constipation
- sore or itchy eyes
- headaches
- hair loss
- hearing loss

Neo adjuvant and adjuvant chemotherapy

Neo adjuvant chemotherapy refers to medicines that are administered before surgery for the treatment of pancreatic cancer.

The treatment aims to shrink the tumour prior to surgery to aid surgery and add to overall survival rates and is offered to those cancers deemed resectable or borderline resectable.

Chemotherapy regime efficacy was reviewed as part of the ESPAC trial comparing GEMCAP (Gemcitabine and Capecitabine with FOLFIRINOX. With the outcome favouring a slightly overall survival using FOLFIRINOX. However patient fitness and ability to cope with chemo without deconditioning is paramount.

Adjuvant chemotherapy aims to 'mop up' any stray cancers cells which may still be evident following surgery but no evident on scans as progressive or residual disease.

Chemotherapy in this setting is normally started within 12 weeks of surgery to ensure the optimum benefit however, the individual must be fit enough to cope with the regime and this is often not the case

Regimes offered are normally FOLFIRINOX if used and tolerated pre surgery and fit enough to manage the regime. If not well enough to cope with combination therapy, Gemcitabine may be offered

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Radiotherapy

Radiotherapy may be used to:

- shrink the cancer if it has not spread to other parts of the body, or
- relieve symptoms such as pain if the cancer has spread to other parts of the body

Stereotactic body radiotherapy (SBRT) or Cyberknife

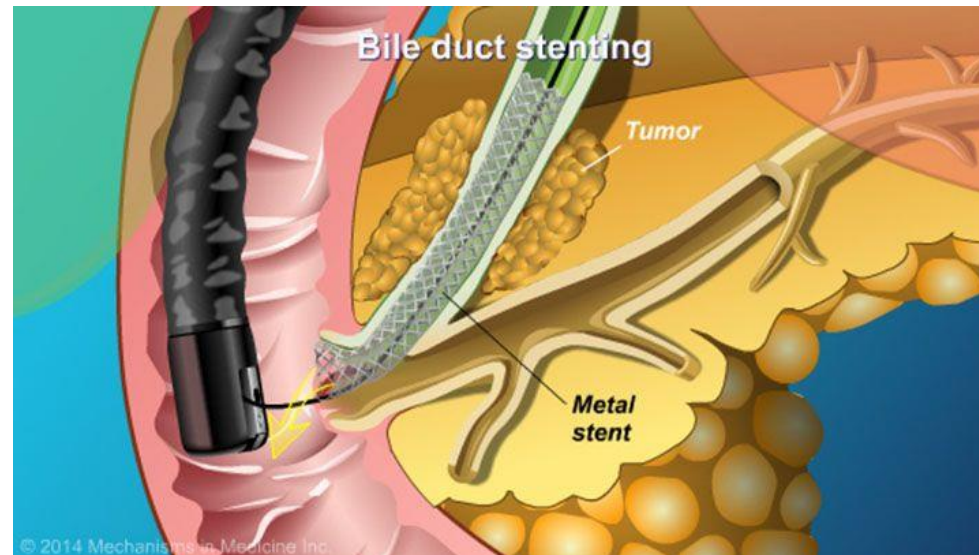
- stereotactic radiotherapy (SRT) gives radiotherapy from many different angles around the body. The beams meet at the tumour. This means the tumour receives a high dose of radiation and the tissues around it receive a much lower dose. This lowers the risk of side effects.

Side effects of radiotherapy

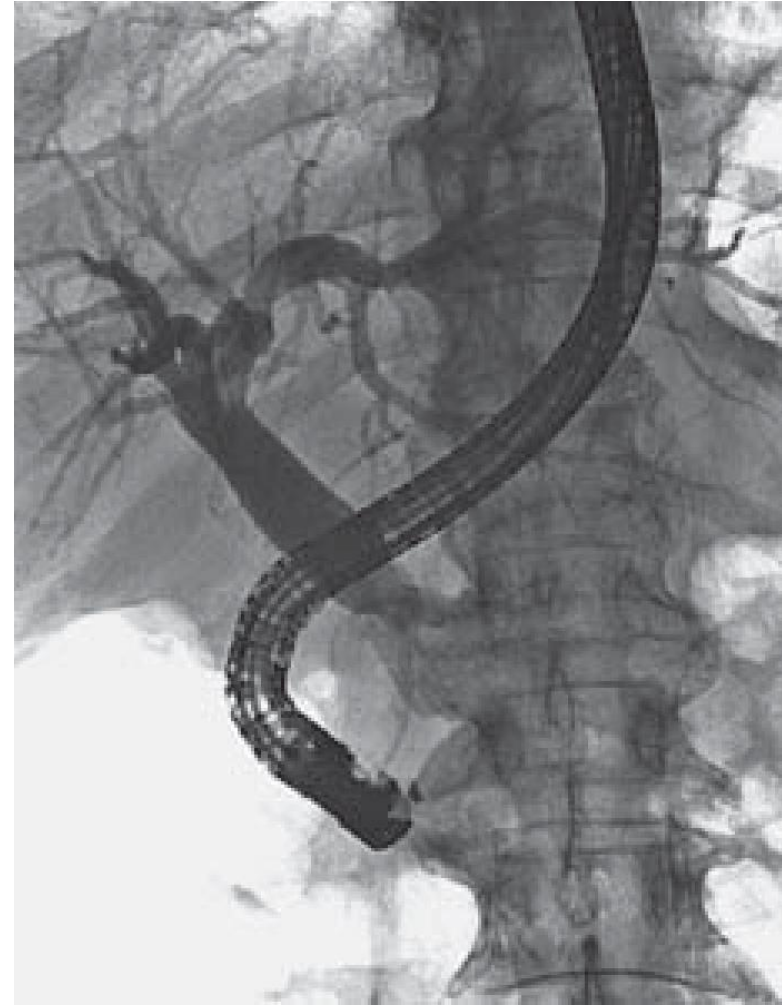
- Lethargy
- Nausea
- Diarrhoea
- Escalation of symptoms before they improve

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- Stents
- ERCP (endoscopic retrograde cholangio pancreatography)
- Percutaneous transhepatic cholangiography (PTC).



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Pain control

- Various types of analgesia but predominately opioids
- Coeliac nerve block
- The coeliac plexus is a complicated web of nerves at the back of the abdomen. It can cause ongoing pain in people with pancreatic cancer

To block the pain, it may be possible to offer

- an injection into the nerve
- a small operation to cut the nerve

Deciding about treatment can be difficult in advanced cancer.

- Any treatment should be offered with the aim to help reduce symptoms and ultimately improve quality of life without causing detriment to life
- Patients and their families/carers should be fully aware of
 - the aims of the treatment offered
 - how it might affect quality of life
 - potential side effects and increase in toxicity
 - the choices available including best supportive care