



The Clatterbridge  
Cancer Centre  
NHS Foundation Trust

# Pain in Pancreatic Cancer

Dan Monnery

Consultant in Palliative Medicine, The Clatterbridge Cancer Centre

# Declarations of Interest

- No conflicts

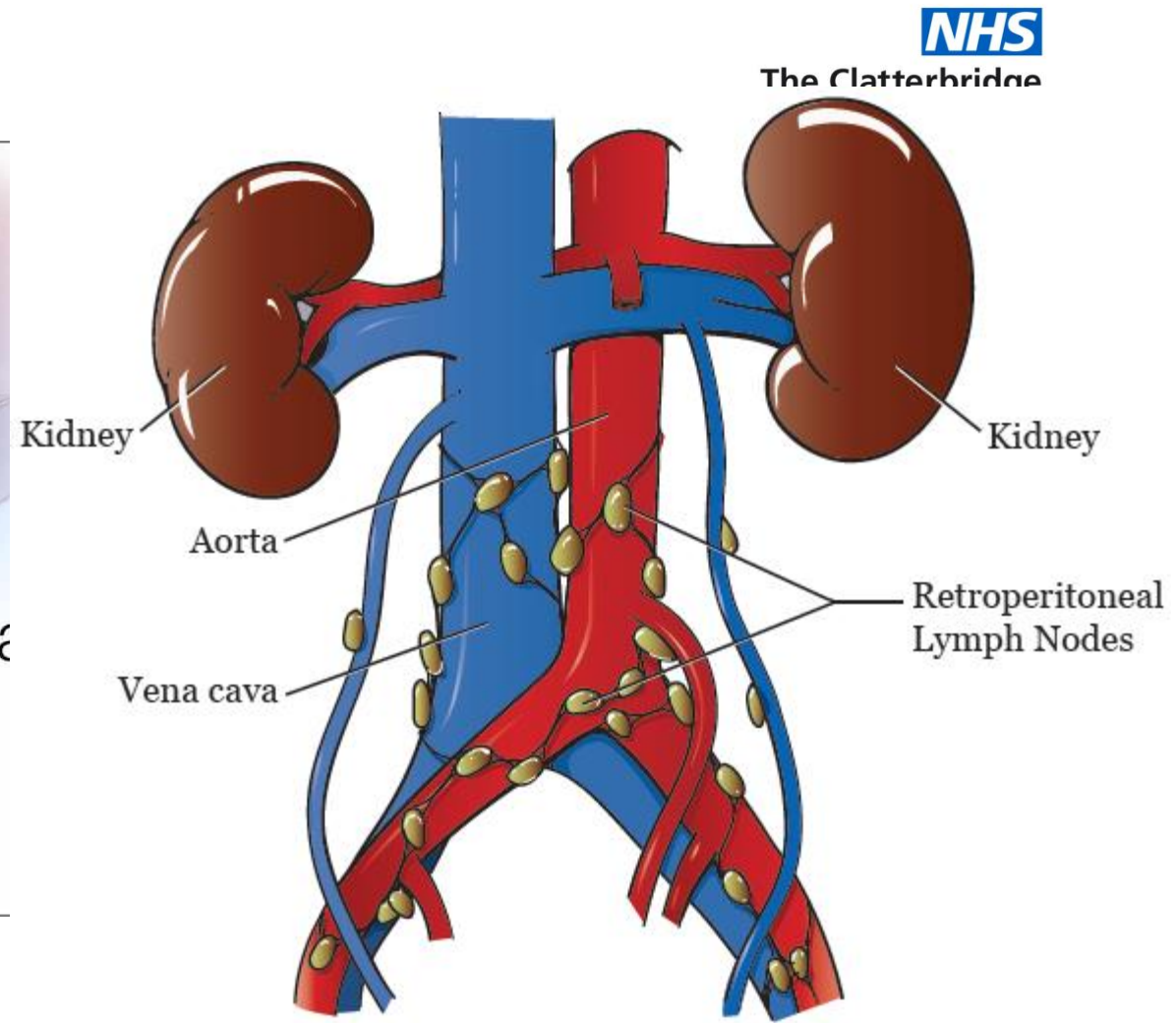
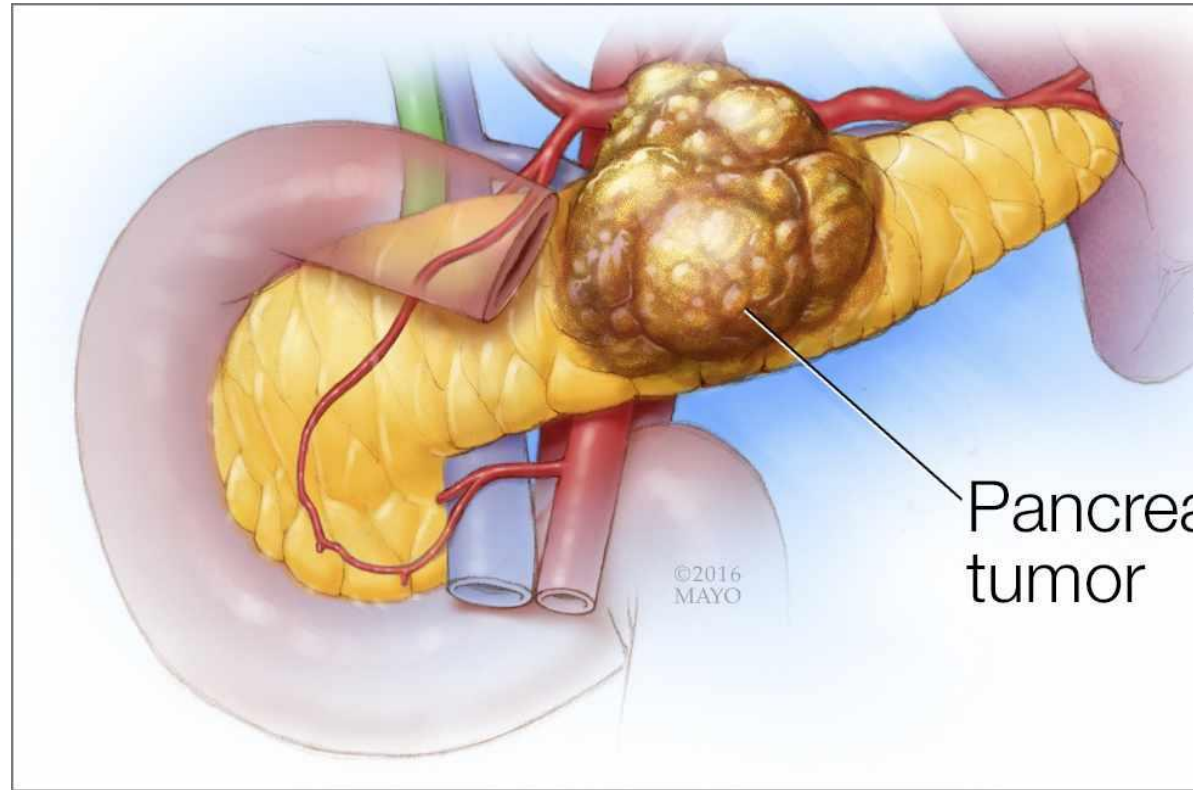


# Pancreatic Cancer

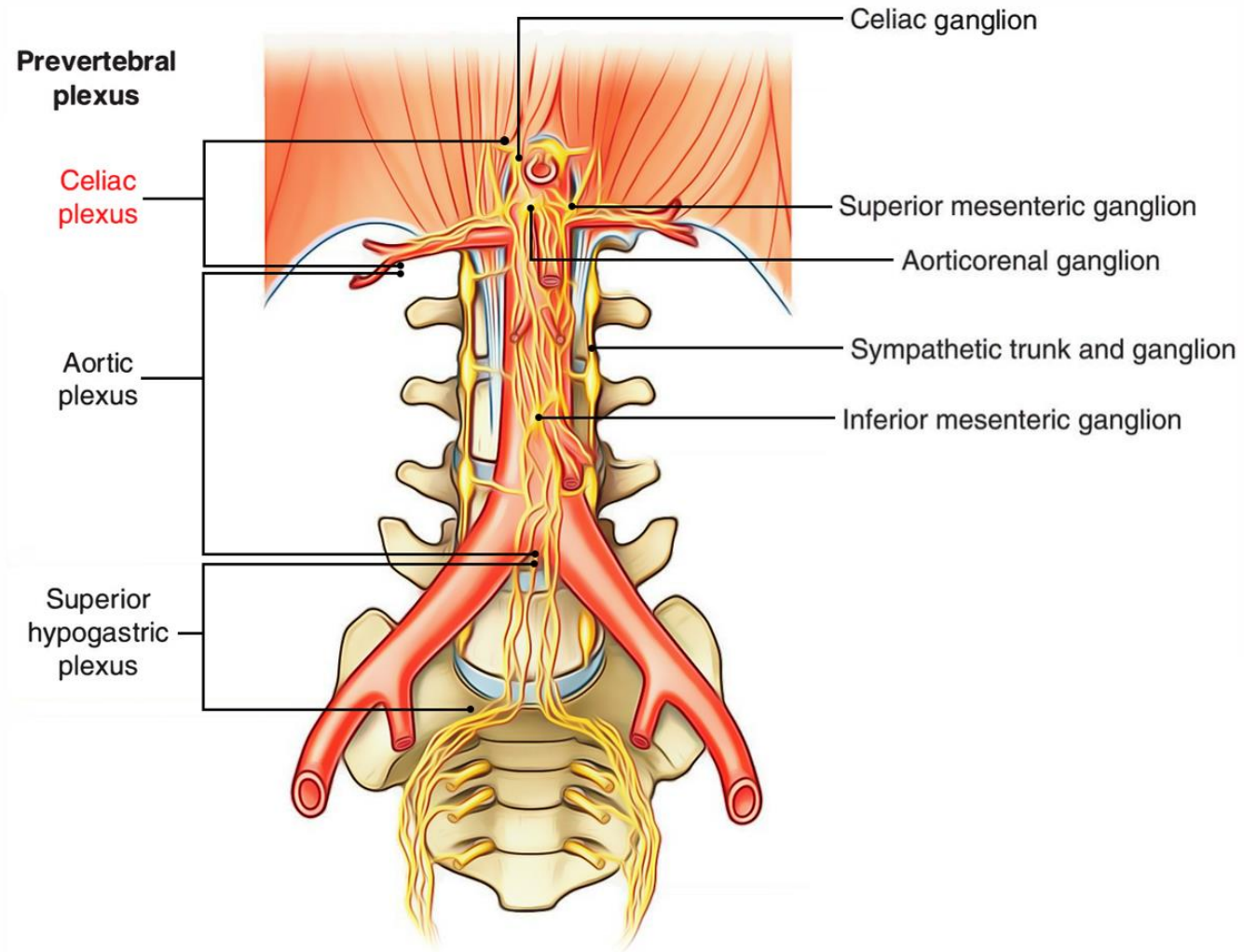
- Often advanced at diagnosis
- Pain is a common feature
- Pain often better controlled if you manage it early
- But the type of pain changes over time and often combinations of approaches are needed to effectively manage pain rather than 1 single approach



# Why is it so Complicated?



# Why is it so Complicated?



# Metastatic Sites

Liver

Lymph nodes

Bones



## Pain assessment using PQRST.

Know this:

**P**

### Provoking Factors.

What factors precipitated the discomfort?

What were they doing at the time of onset?

**Q**

### Quality.

Ask the pt to describe the pain/discomfort and its characteristics.

**R**

### Region | Radiation.

Where is the pain?

Does it radiate?

Is there pain anywhere else?

**S**

### Severity.

Ask the pt to rate their pain/discomfort on a pain scale.

**T**

### Time.

How long has the pt had the pain.

Does anything make it worse or better?

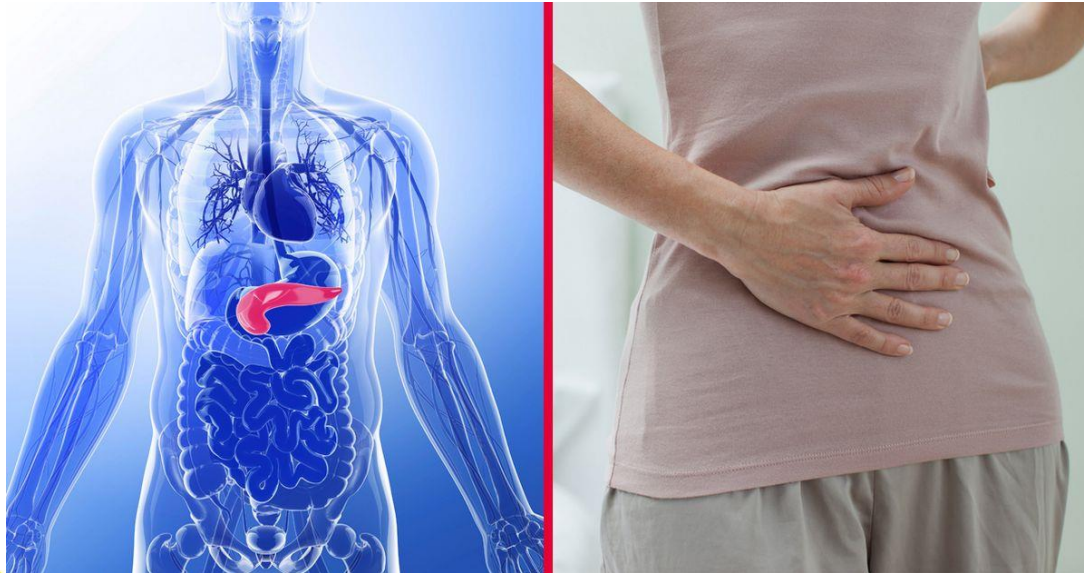


# Provoking Factors

- Pain after a meal
- Worse when lying down
- Severity increases at night



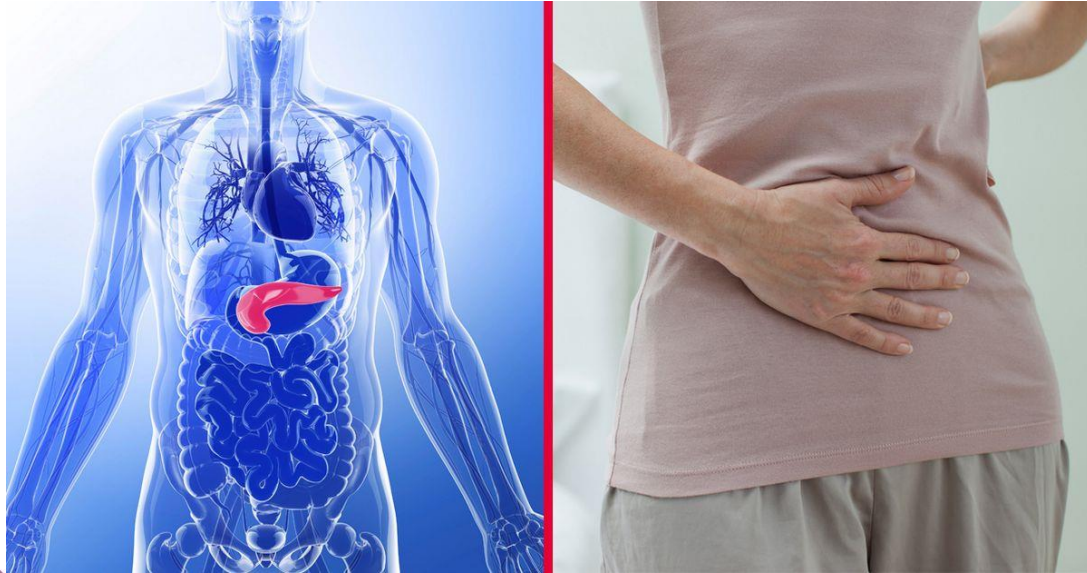




- Burning, band like
- Persistent / constant in nature
- Dull, epigastric pain



# Region/Radiation



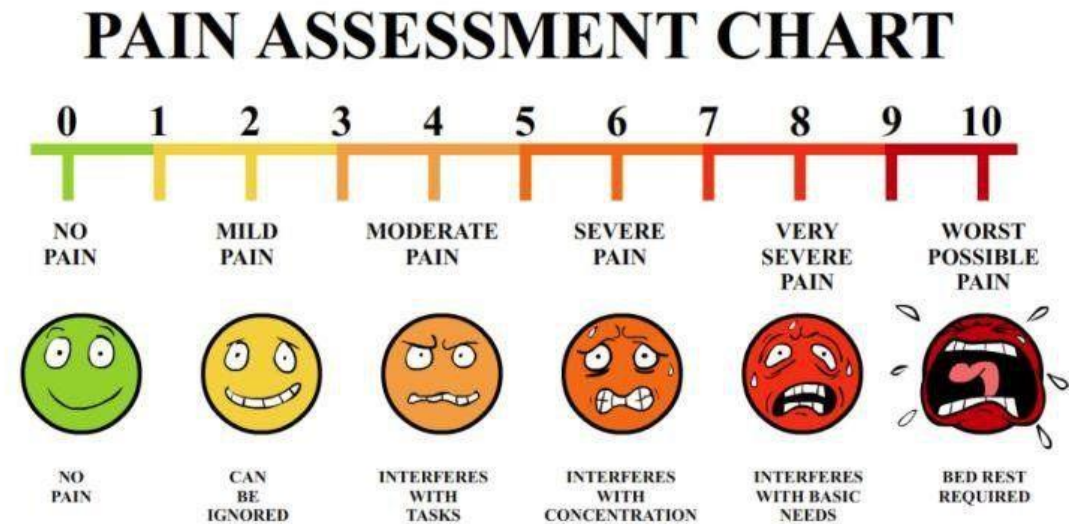
## Sites of pain

- Abdomen and back
- Right upper quadrant pain
- Right shoulder tip pain



# Severity

- Score pain at each assessment
- Use a tool that is appropriate



# Time

- How long has the patient had the pain?
- What makes it better?
- What makes it worse?
- Current medication?
- Anything else?



# Case Example

Geoffrey has been diagnosed with pancreatic cancer with local lymph node involvement and liver metastases and comes to see you with pain.

He has pain in his back and upper abdomen.

On closer questioning these pains seem to be the same pain and feel like a 'tight band' all the way around.

He described it as a fairly constant dull ache.

The pain is worse after eating and relieved to some extent by rubbing his back and heat packs.

He also has pain in his right upper quadrant when he takes a deep breath or bends over to tie his shoes.



# What Kind of Pain is This?

1. Nociceptive
2. Neuropathic
3. Bone
4. Psychogenic/ total pain



# Types of Pain

## **Nociceptive**

- Somatic - caused by activation of pain receptors in skin or muscle. Usually well localised and sharp if at the skin level or aching if in the muscle. E.g. post-surgical pain.
- Visceral - caused by stretch of pain receptors surrounding body cavities. Usually dull and severe and poorly localised. E.g. Liver capsule pain.

**Neuropathic** - caused by damage to nerves (either by compression, infiltration or chemicals). Usually pain is sharp, burning, stinging or shooting. Can be extremely severe and often needs specific types of analgesic. E.g. sciatica.

**Bone** - caused by activation of pain receptors in and surrounding the bone. Typically, pain is dull but well localised, and worsened by movement. E.g. bone metastases.

**Psychological (total)** - psychological distress can cause severe generalised pain or worsen an existing pain beyond the severity of the cause. Does not respond well to medications and requires a holistic approach to management.



# Pancreatic Cancer

Mixed Pain Aetiology.

Nociceptive - Liver, nodal, local inflammation from tumour (this is the dull epigastric ache)

Neuropathic - radiating in tight band, relieved by heat and rubbing.

Bone? Unlikely but if the spine is tender then worth considering.

Psychogenic/total pain - everyone experiences pain in different ways. The psychological experience of pain is not proportionate to displayed anxiety.





# Other Factors in the Mix

Chemotherapy induced peripheral neuropathy

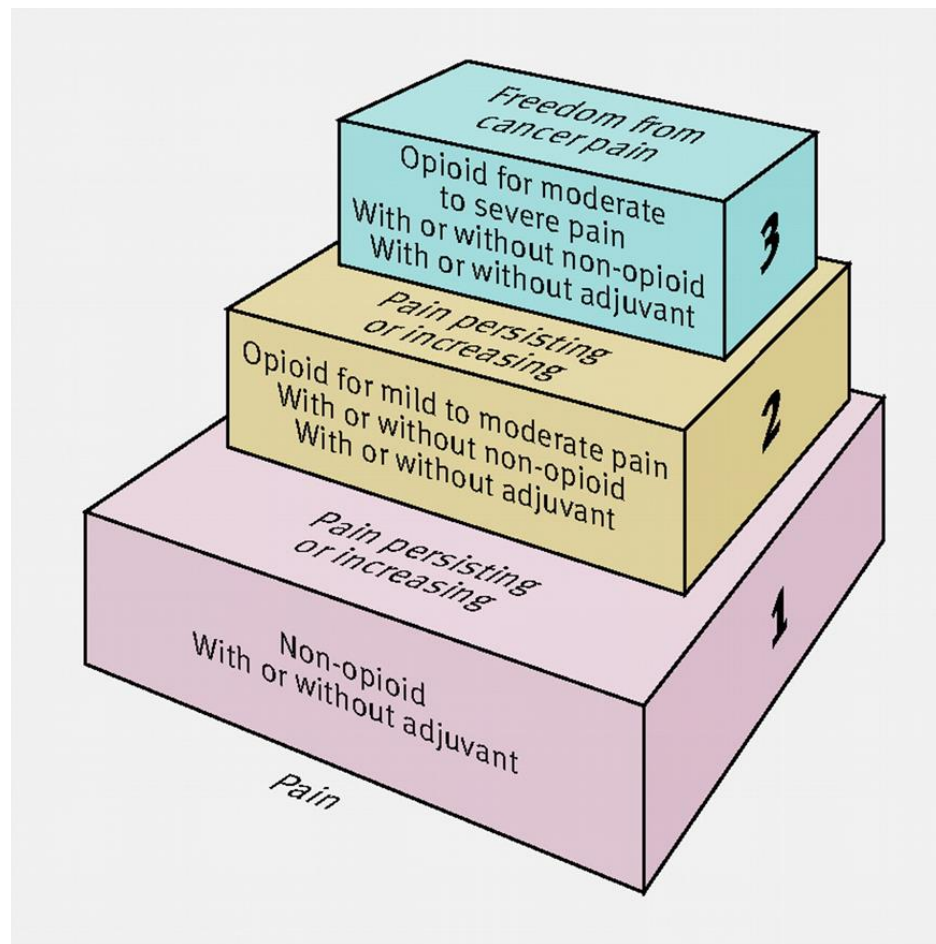
Constipation / digestive pain and cramp

Psychological distress leads to worse pain



# So Let's Treat it!

## What's this?



# Strong Opioids

Don't waste time with codeine and tramadol<sup>1</sup>

Morphine MR 5mg bd and / or morphine sulphate oral solution 2.5-5mg prn 2 hourly

Or (depending on renal function)

Oxycodone MR 5mg bd and/or oxynorm liquid 2.5-5mg prn 2 hourly.

Aim is to maintain pain control with  $\leq 2$  prns in every 24 hours. If more than 2 prn doses taken, increase the background dose.



# How often can patients be allowed to take prn oramorph?

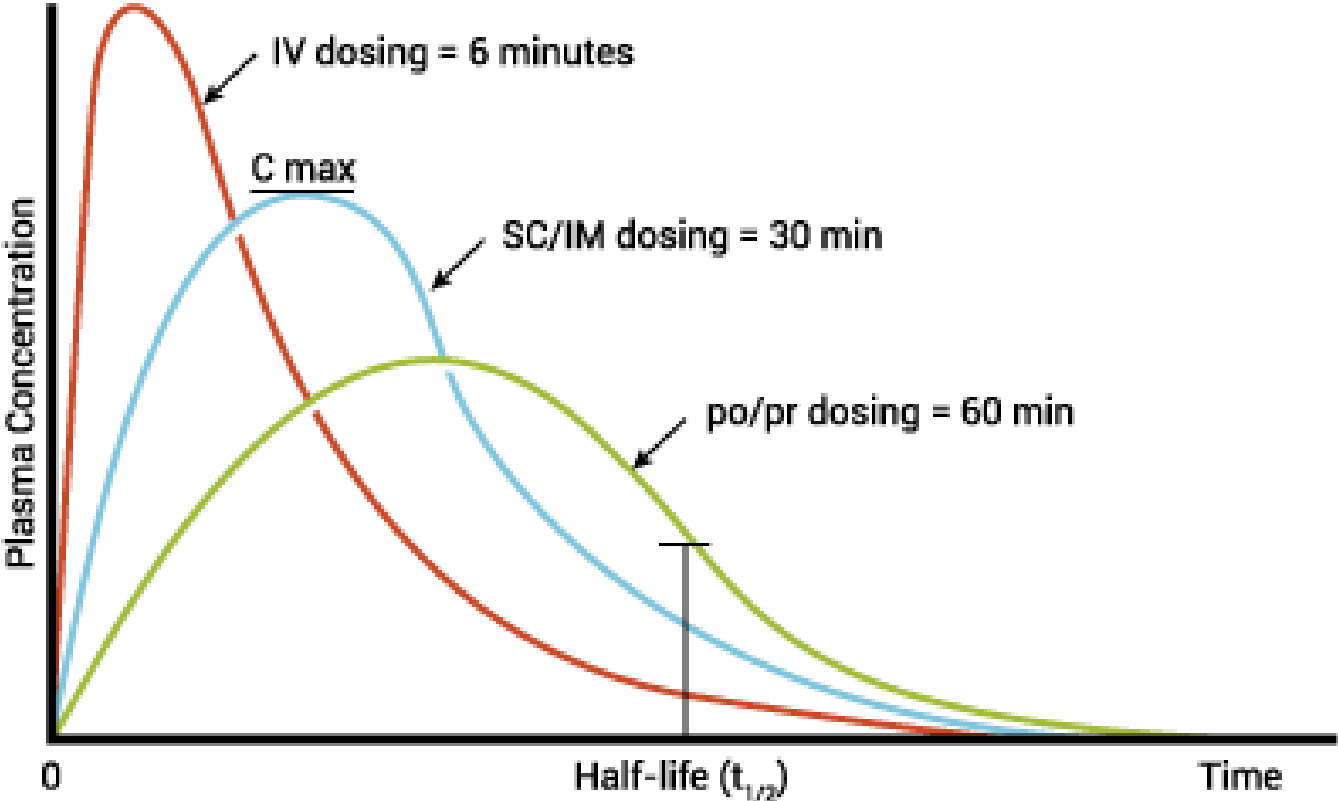
1. 4 hourly
2. 2 hourly
3. 6 hourly
4. 1 hourly
5. As often as they want



# 2 Hourly PRNs?

## Time to maximal plasma concentration

Pharmacologic Dosing Curves After a Single Opioid Dose



# What about adjuvants? Select all that apply:

1. Amitriptyline
2. Duloxetine
3. Gabapentin
4. Pregabalin
5. Dexamethasone
6. Naproxen
7. Nefopam
8. Lidocaine plasters



# Neuropathic Agents

Pregabalin 25mg bd, titrate every 3 days

(I know the BNF says 75mg bd to start with, that's too much!)

Gabapentin 100mg tds, titrate every 3 days.

Amitriptyline 10-20mg nocte, titrate every 7 days.

Consider a “dexamethasone bridge”.



# Anti-inflammatories

They do have a role - remember tumours and metastases are naturally inflammatory and secrete pro-inflammatory mediators

Blocking the production and reception of these can help pain

But what to choose?





# NSAIDS

Depends on the least worst side effects for your patient

Naproxen causes least fluid retention so is my first choice  
BUT certain situations dictate other choices:

- Bleeding - COX2 inhibitor
- Clotting - Ibuprofen
- Bleeding AND Clotting - Nabumetone
- Non oral route - diclofenac or ketorolac

Keep an eye on kidneys



# Interventional Approaches

Local pain clinic opinion can be helpful - often the earlier the better.

Coeliac plexus blocks in some centres are done by gastroenterology via endoscopy. These don't tend to be permanent.

Other options include spinal anaesthesia from local pain clinics



# Let's not Forget the Psychological Perspective

Psychology impacts pain - both in generating it and in allowing (or preventing) the person responding to it.

- Communicate clearly and sensitively
- Consider social support
- Deal with added stressors - work, finances, carer burden
- Find peer support
- Use psycho-oncology services as needed
- Consider antidepressants



# And remember the other sources of pain

## Chemotherapy induced peripheral neuropathy

Neuropathic agents, exercise, physiotherapy and OT, topical creams (capsaicin or menthol)

## Constipation/digestive pain and cramp

Correct PERT, appropriate laxatives if needed.

For colic without constipation hyoscine butylbromide and sometimes stronger anticholinergics e.g. glycopyrronium oral solution



# What 2 medications have been shown to work in chemotherapy induced peripheral neuropathy?

1. Gabapentin
2. Pregabalin
3. Duloxetine
4. Amitriptyline
5. Venlafaxine
6. Nortriptyline



# Case study

A 60 year old man with pancreatic cancer comes to see you with pain. He has locally advanced disease with periportal lymph nodes involvement and is receiving palliative FOLFIRINOX.

The pain is in his epigastrium and is constant but worse at night. When he sits forward the pain is relieved to some extent and a hot water bottle also helps.

He gets a little benefit from co-codamol 30/500 TT qds but these don't last the full 4 hours and he watches the clock a lot of the time to determine when he can take more. At their best, they reduce the pain from 8 to 6 out of 10. They have however made him nauseas and he has lost weight because he is struggling to eat.



# What would you prescribe for his pain? Select all that apply:

1. Amitriptyline 10mg at night
2. Duloxetine 30mg bd
3. Oramorph 5mg prn 2 hourly
4. Gabapentin 100mg tds
5. Pregabalin 25mg bd
6. Morphine MR 10mg bd
7. Dexamethasone 8mg od
8. Naproxen 500mg bd
9. Morphine MR 15mg bd
10. Pregabalin 75mg bd
11. Oxycodone MR 5mg bd



# What would you do to manage the nausea? Select all that apply:

1. Stop the co-codamol
2. Cyclizine 50mg three times a day
3. Metoclopramide 10mg three times a day
4. Ondansetron 4mg three times a day





# What onward referrals would you make?

1. Psychology
2. Interventional pain team
3. Dietitians
4. Specialist palliative care
5. Surgeons



# Take Away Messages

Pancreatic cancer pain is a mixed pain, it requires a mixed methods approach of pharmacological and non-pharmacological

There is better success in small doses of multiple complementary medications than big doses of one or two in my opinion

Remember the influence of psychology on pain. Look for it and manage it

Remember to involve the wider team



# References

1. Fallon M, Dierberger K, Leng M, Hall PS, Allende S, Sabar R, Verastegui E, Gordon D, Grant L, Lee R, McWilliams K, Murray GD, Norris L, Reid C, Sande TA, Caraceni A, Kaasa S, Laird BJA. An international, open-label, randomised trial comparing a two-step approach versus the standard three-step approach of the WHO analgesic ladder in patients with cancer. *Ann Oncol.* 2022 Dec;33(12):1296-1303. doi: 10.1016/j.annonc.2022.08.083. Epub 2022 Aug 30. P

