

Frightening Flare-Ups: Tackling Chronic Pancreatitis in Primary Care

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Disclosures

- I have no financial disclosures
- I am a “burnt out” Primary Care Physician

Objectives

- Explore medical strategies for managing pain in Chronic Pancreatitis.
- Examine surgical and endoscopic treatment options for Chronic Pancreatitis.
- Review the diagnosis and management of Exocrine Pancreatic Insufficiency (EPI).

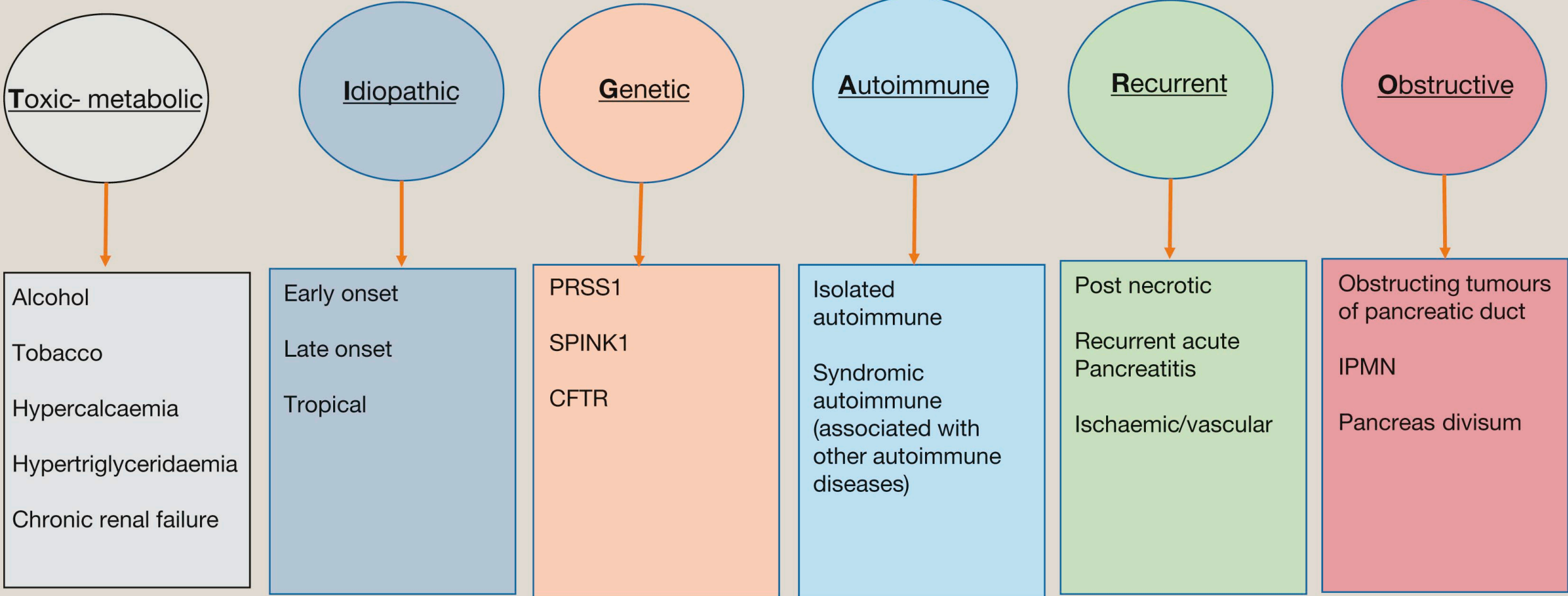
What is Chronic Pancreatitis?

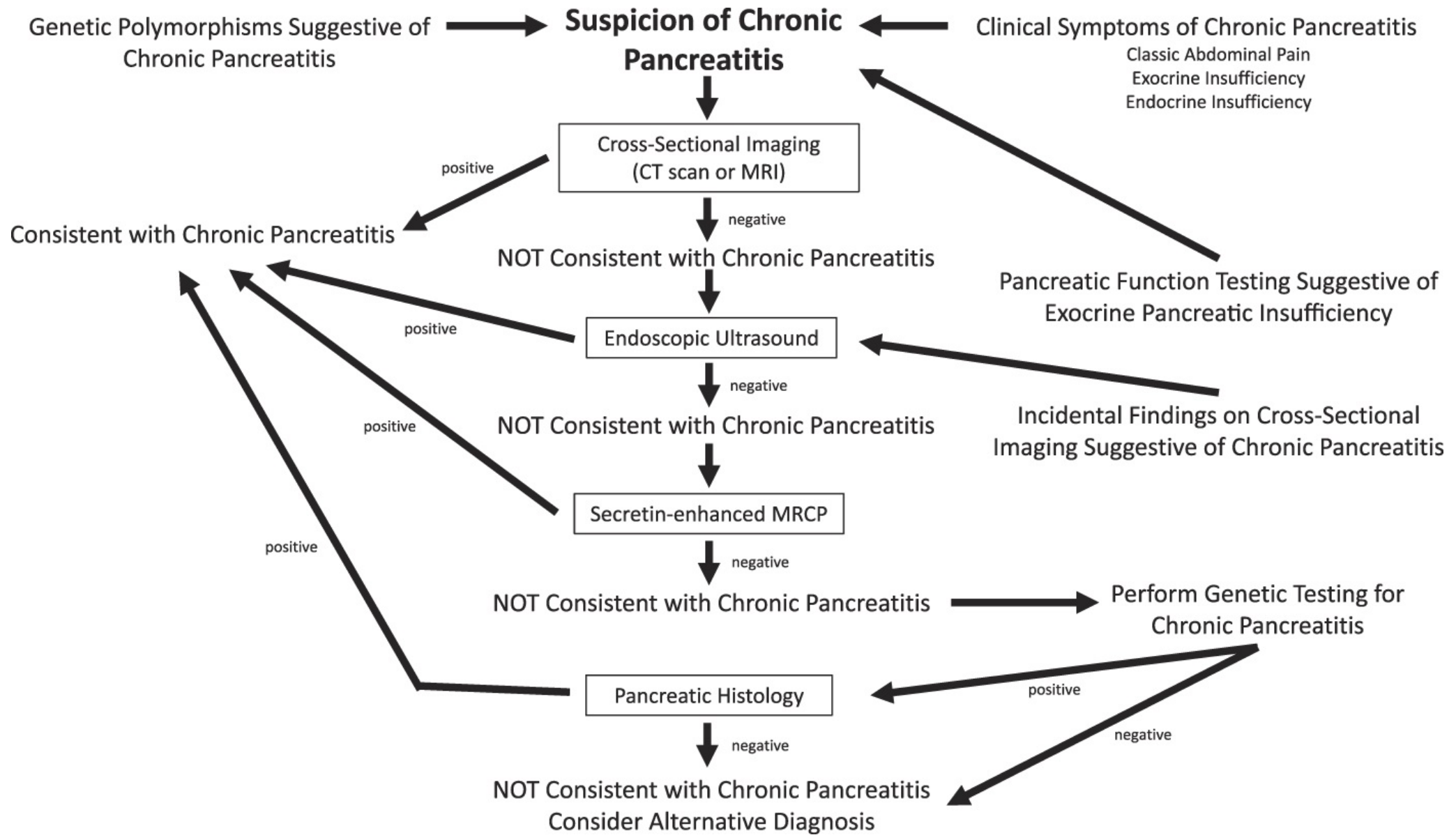
*Chronic pancreatitis is a **pathologic fibro-inflammatory syndrome** of the pancreas in individuals with genetic, environmental and/or other risk factors who develop persistent pathologic responses to parenchymal injury or stress*

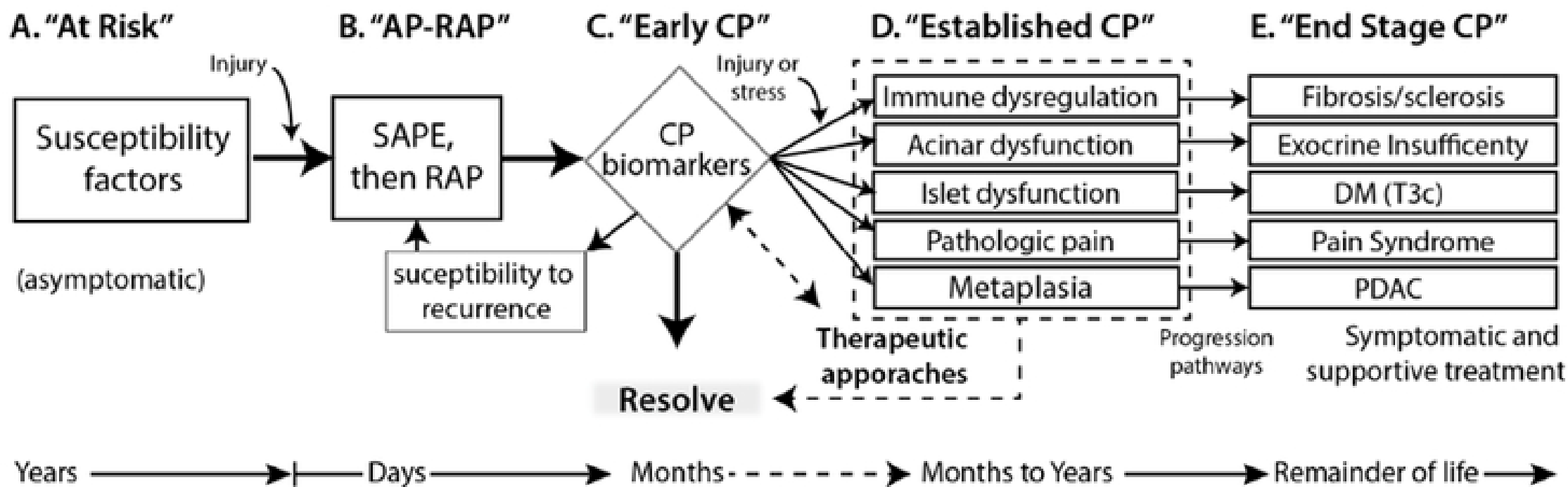
Epidemiology

- The incidence of chronic pancreatitis is approximately 8/100,000 with a prevalence of about 50/100,000.
- Male Predominance
- Middle age around 40

Risk factors associated with chronic pancreatitis (TIGAR-O classification)







Management of Chronic Pancreatitis

Abdominal Pain

Patient A

45 yr old female

Chronic abdominal pain

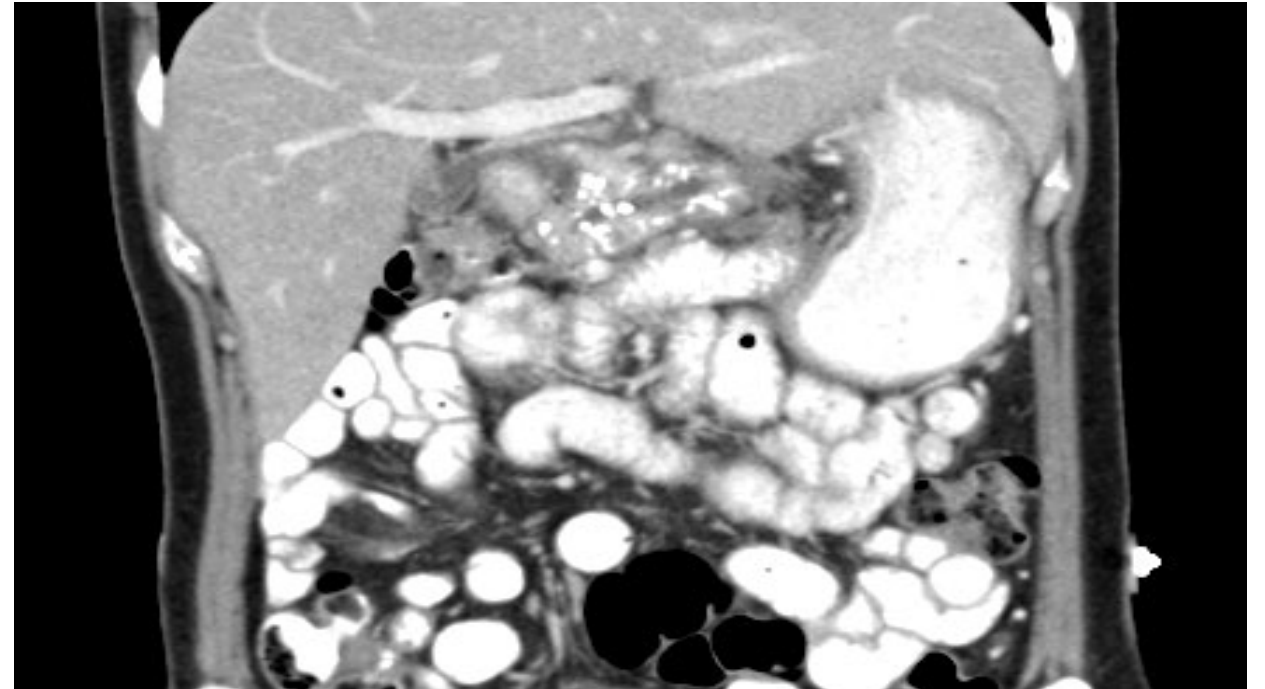
On opiates



Abdominal Pain

40 year old male

Chronic Fluctuating abdominal
pain

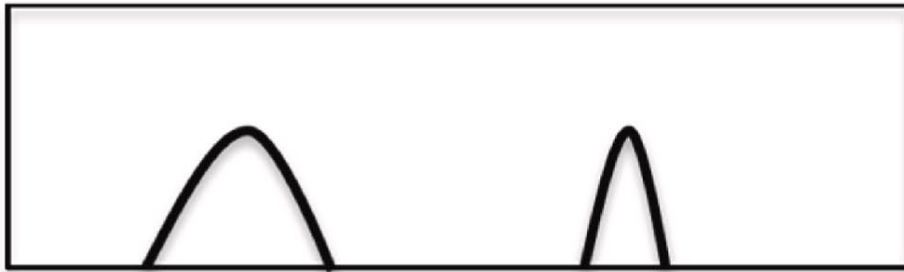


Abdominal Pain

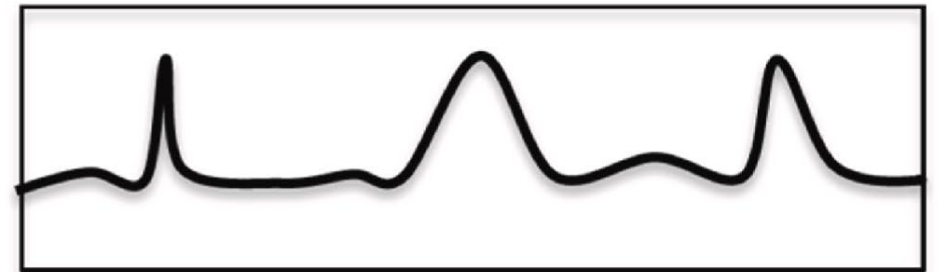
Worst pain



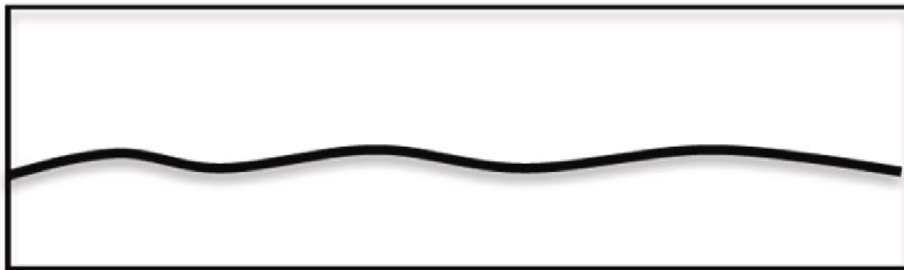
No pain



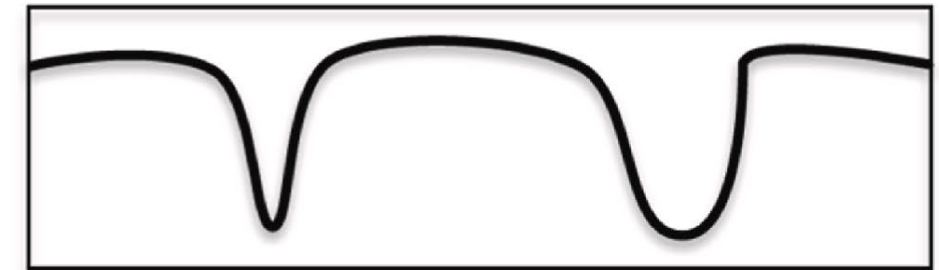
A. Pain attacks with no pain in-between



C. Constant background pain with pain attacks

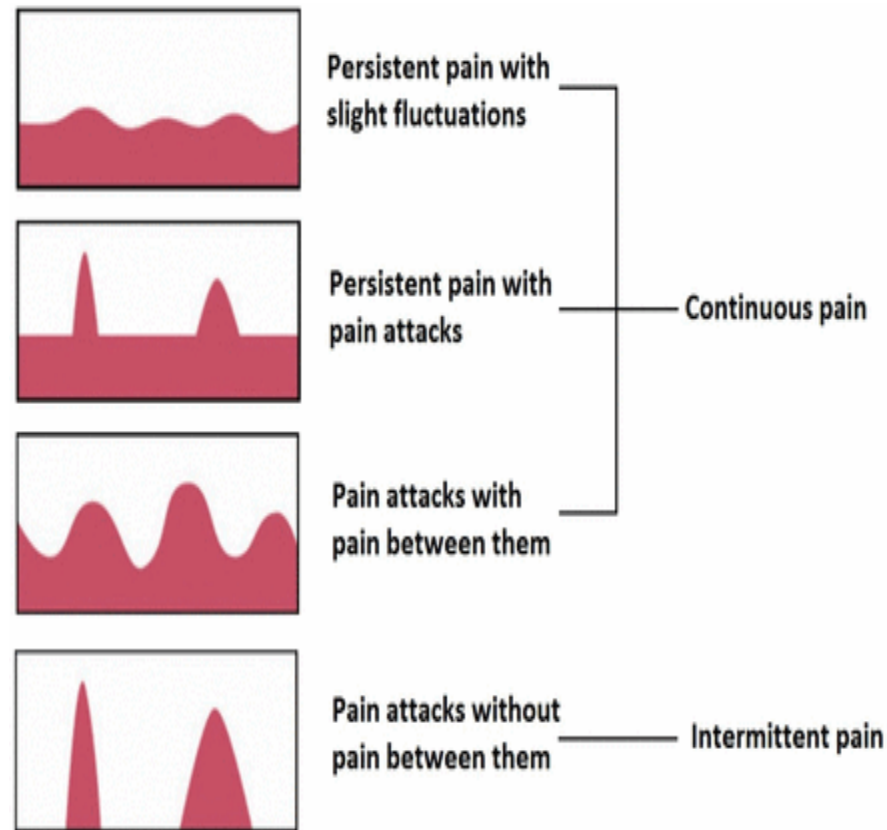


B. Constant pain daily



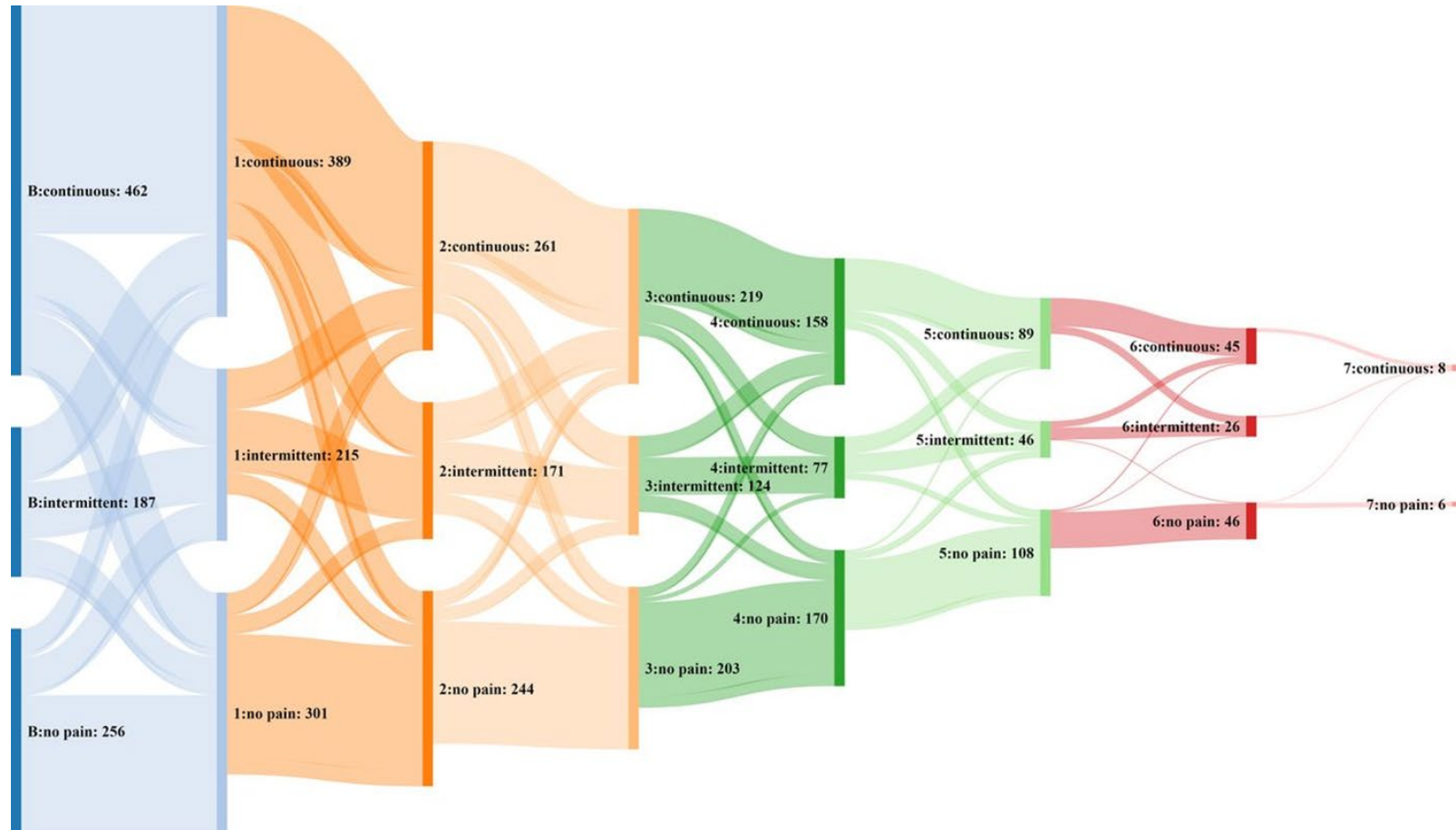
D. Severe constant background pain with reduced pain periods in-between

Abdominal Pain



Continuous and intermittent pain patterns in chronic pancreatitis do not seem to be the result of distinctly different pathophysiological entities. The subjectively reported character of pain is not related to imaging findings or disease duration. Pain patterns often change over time and are merely a feature of how severity of pain is experienced.

Pain Patterns change over time

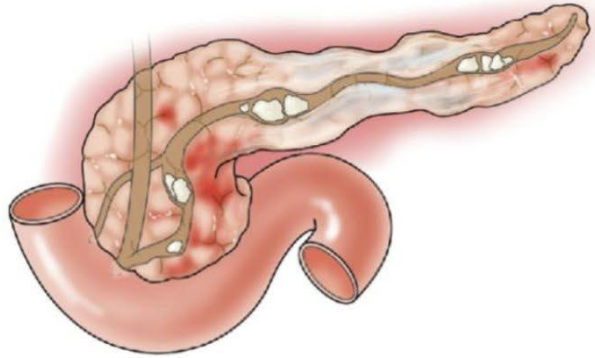


One in ten patients with CP have primary painless disease.

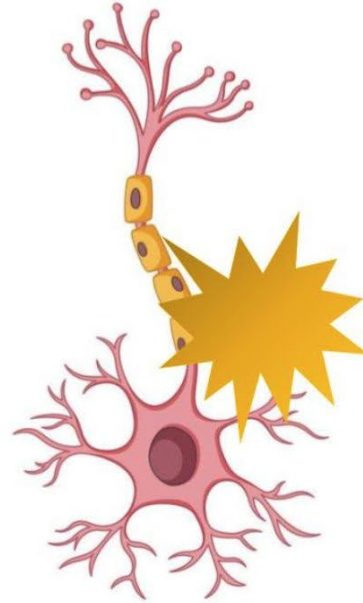
Majority of painless chronic pancreatitis attributable to an idiopathic/genetic etiology.

Overlap and cumulative effects of pancreatic duct obstruction, abnormal pain processing and psychological distress on patient-reported outcomes in chronic pancreatitis

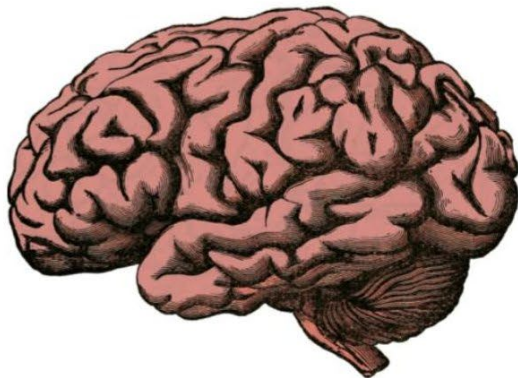
Pancreatic duct obstruction



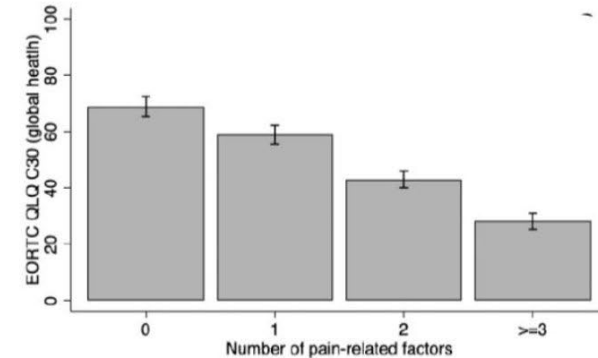
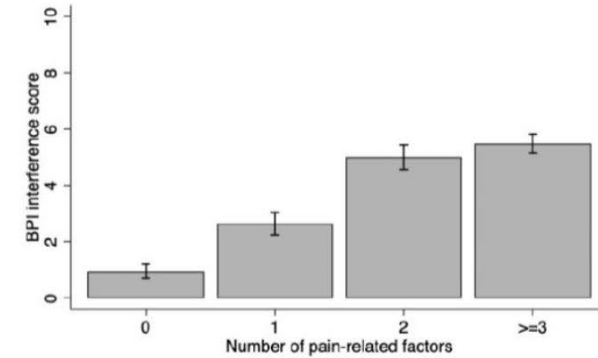
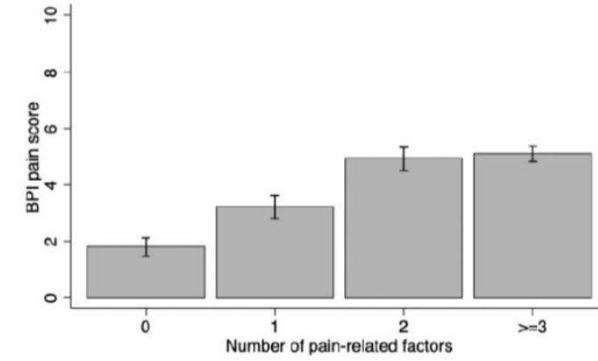
Neuronal sensitization

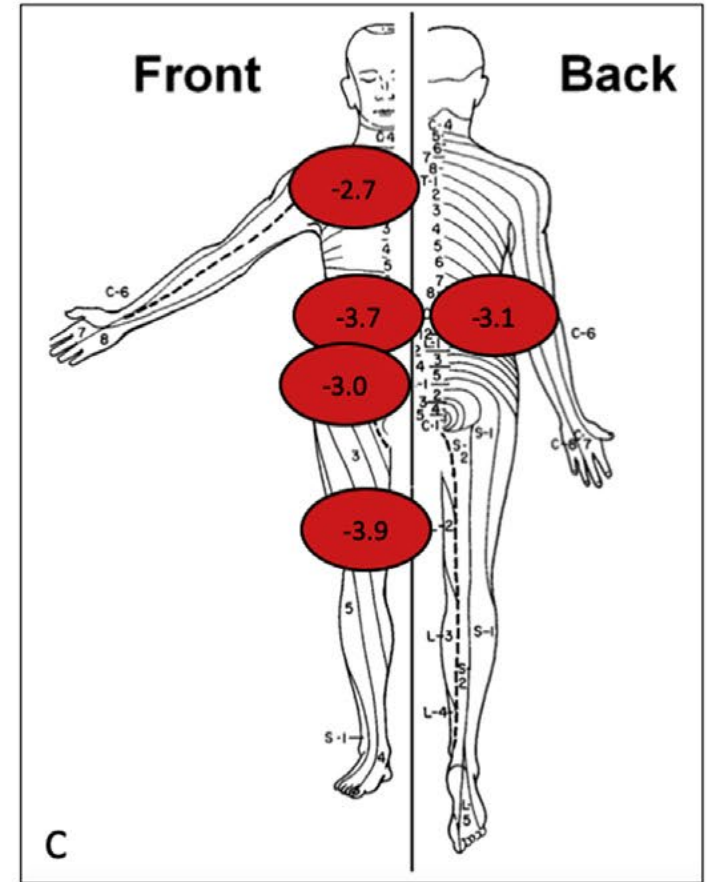
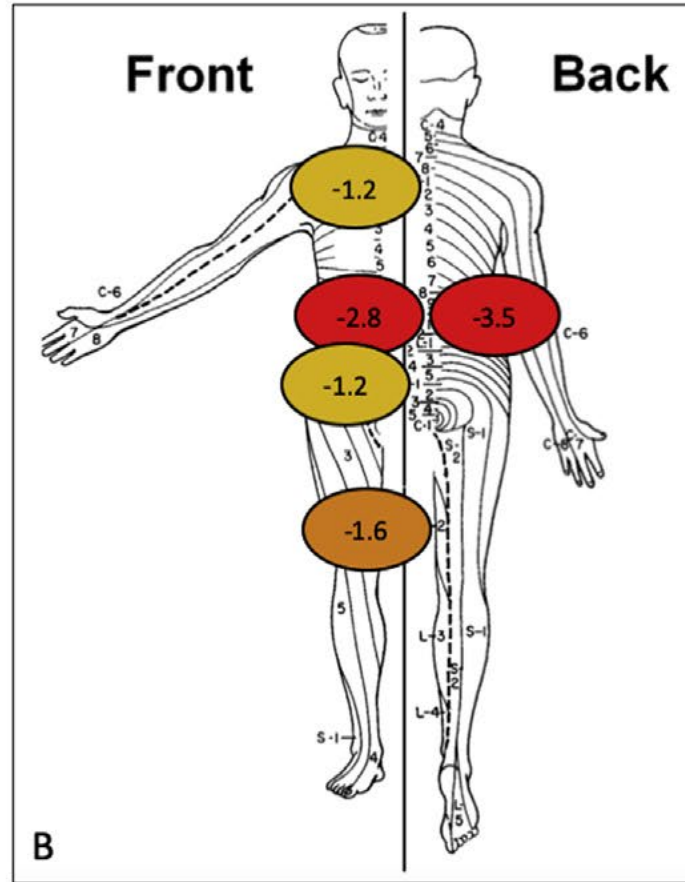
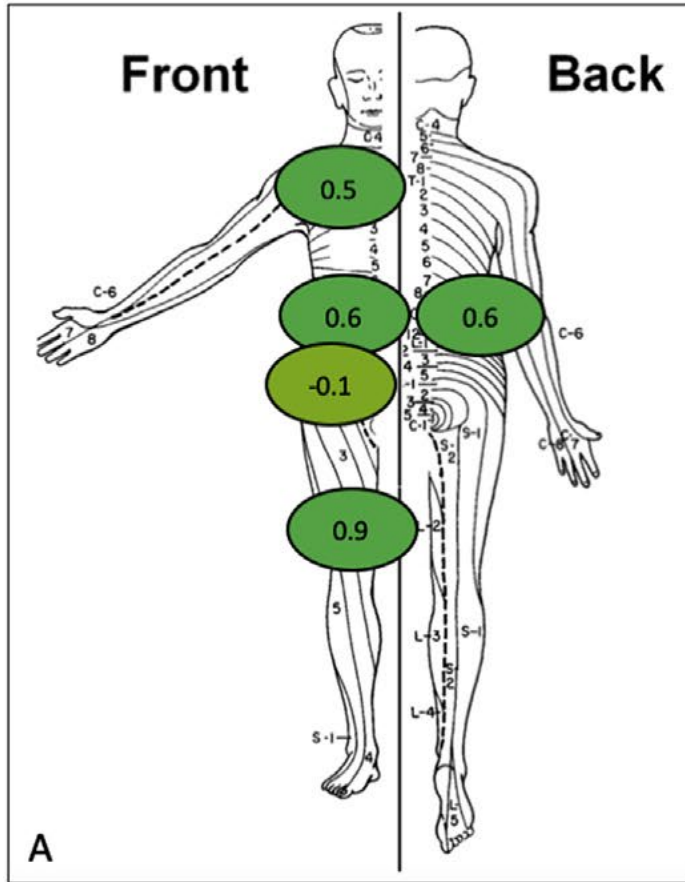


Psychological distress



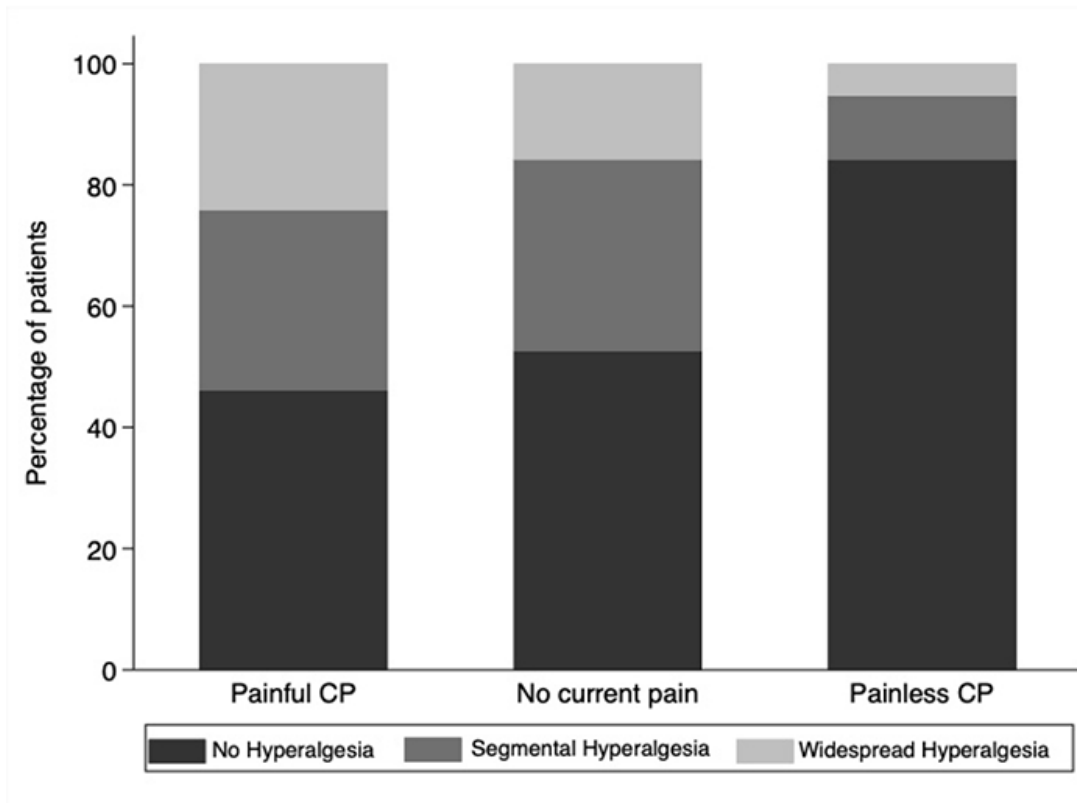
- Anxiety
- Depression
- Pain catastrophising



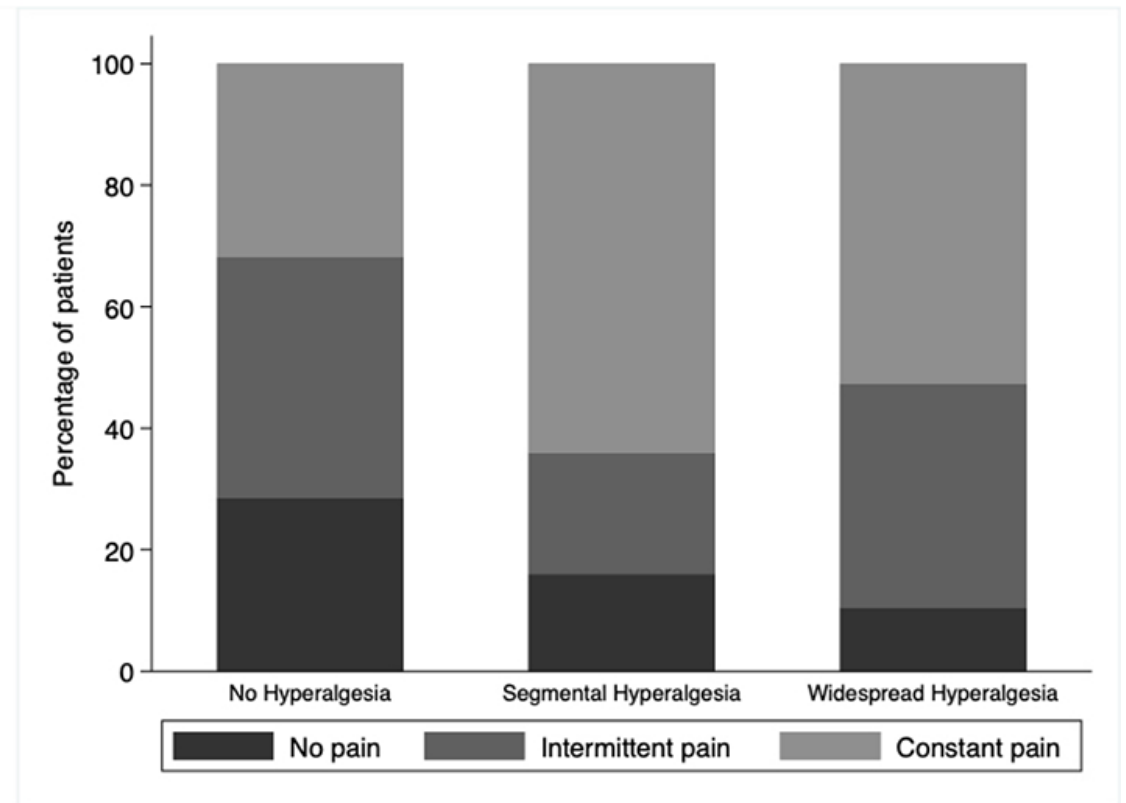


High prevalence of central sensitization in painful CP

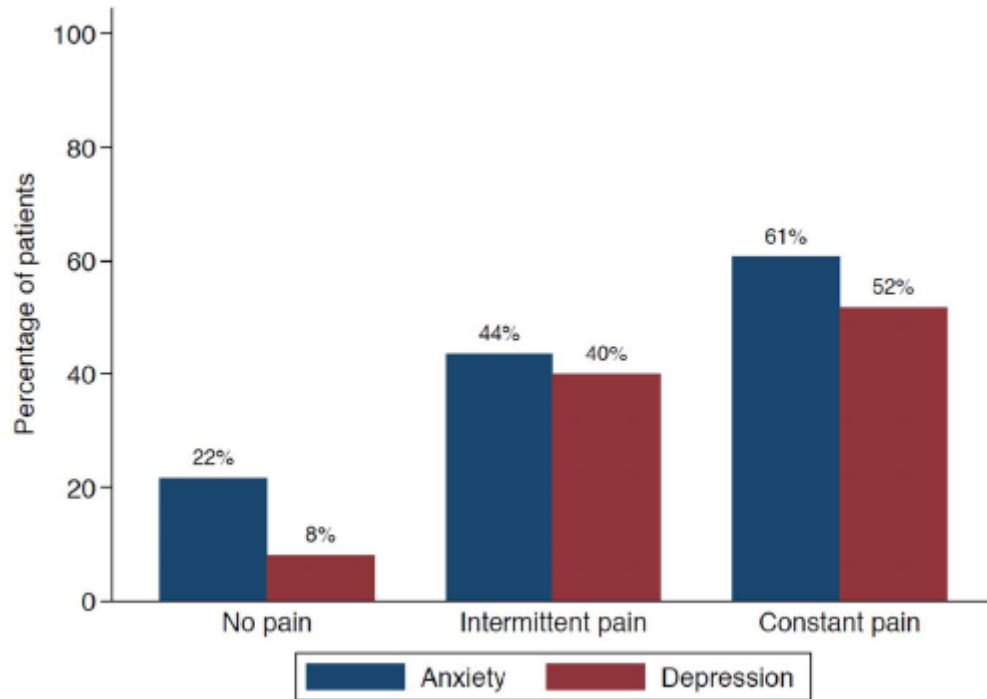
2.A



2.B



Prevalence of Anxiety and Depression in CP



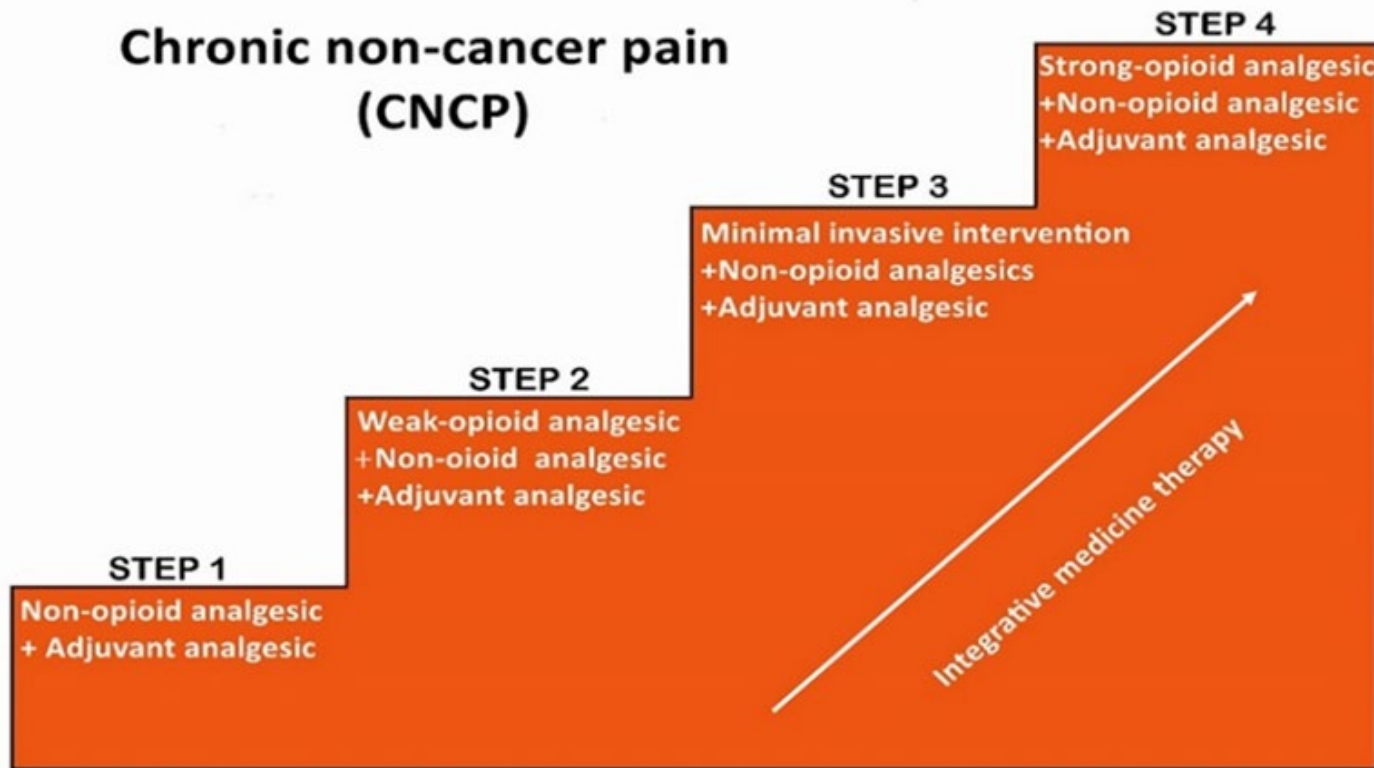
High Prevalence

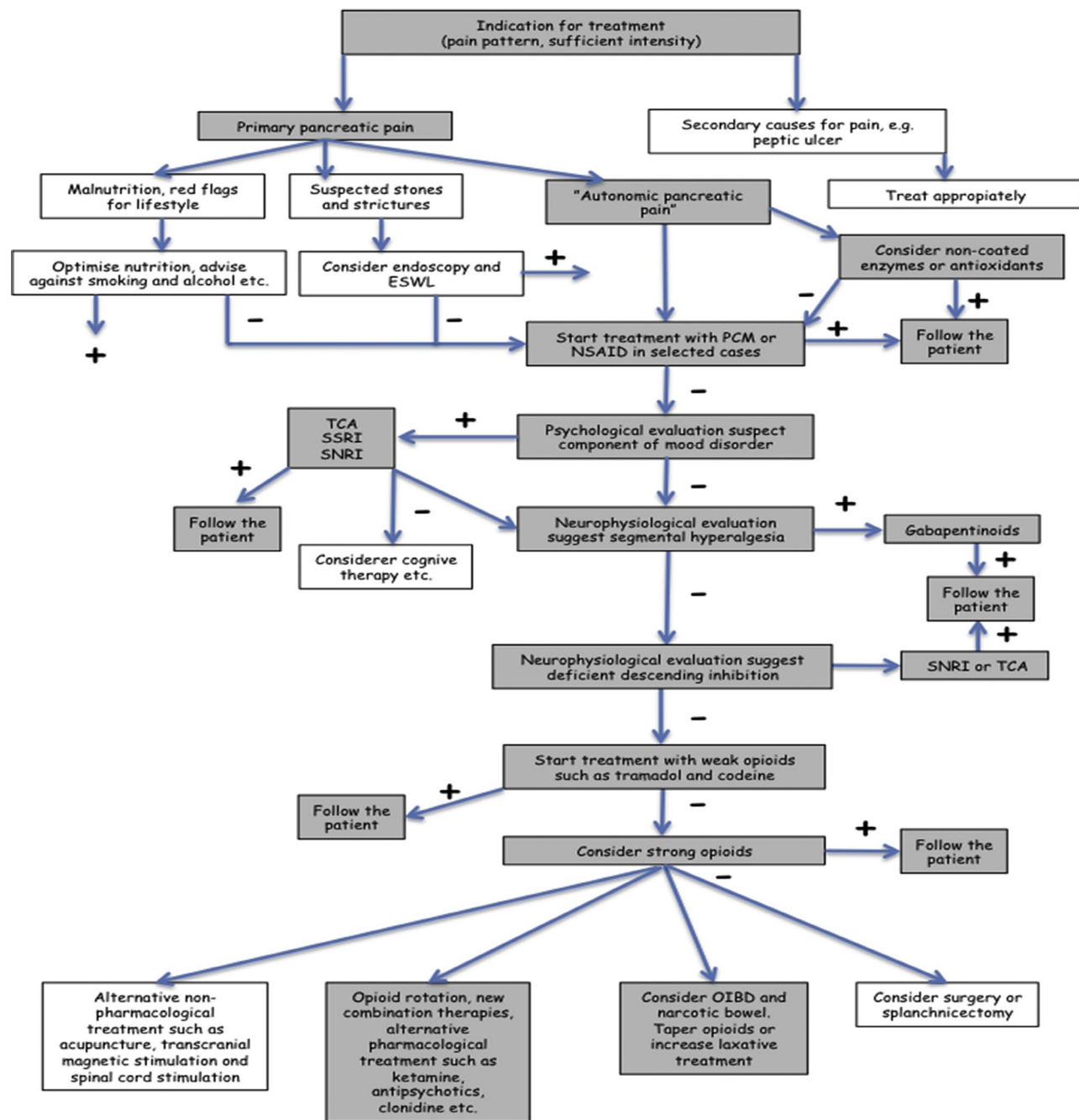
- Anxiety : 46.8%
- Depression: 38.65%
- Both: 29%

Chronic pancreatitis patients with symptoms of anxiety and depression are more likely to report

- Pain
- Pain of higher severity
- More pain interference with their lives

Analgesic Ladder

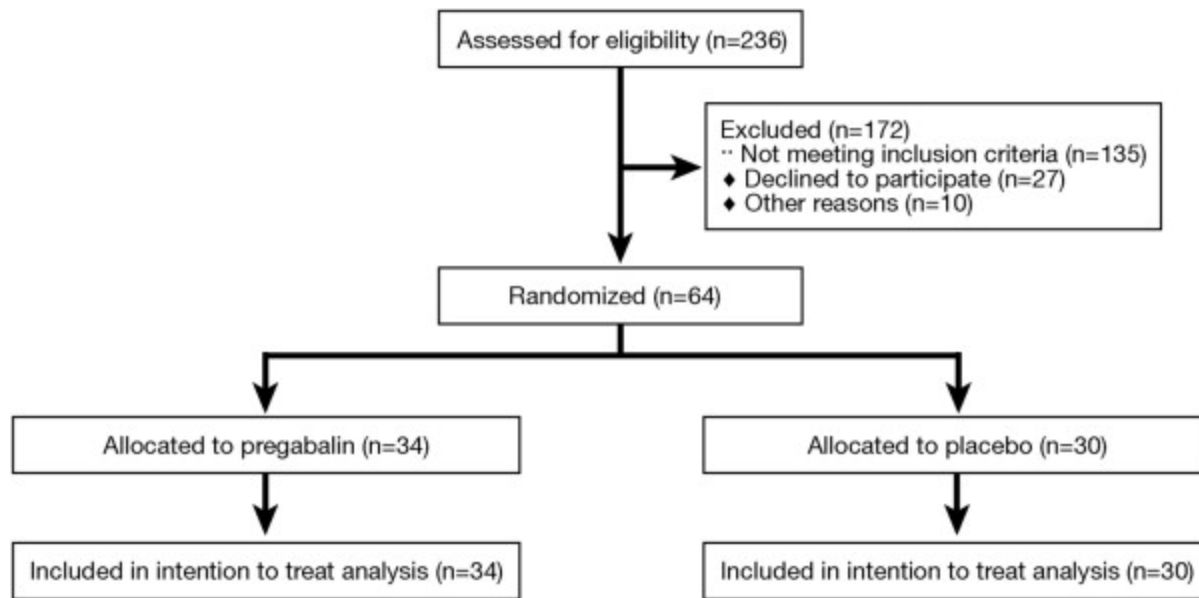




Adjunctive Therapies

- Psychiatric therapy for concomitant disorders
- Sleep aid for insomnia
- PERT for EPI
- GABA-ergic medications
- Antioxidants
- SNRI
- SSRI
- Procedural pain interventions

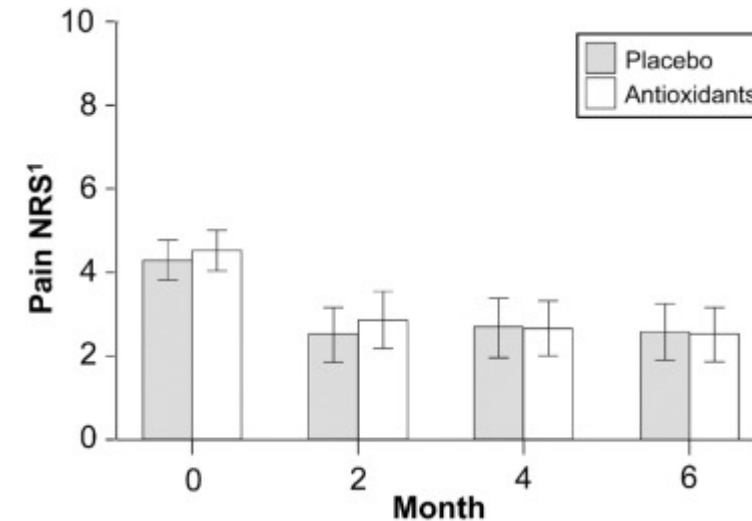
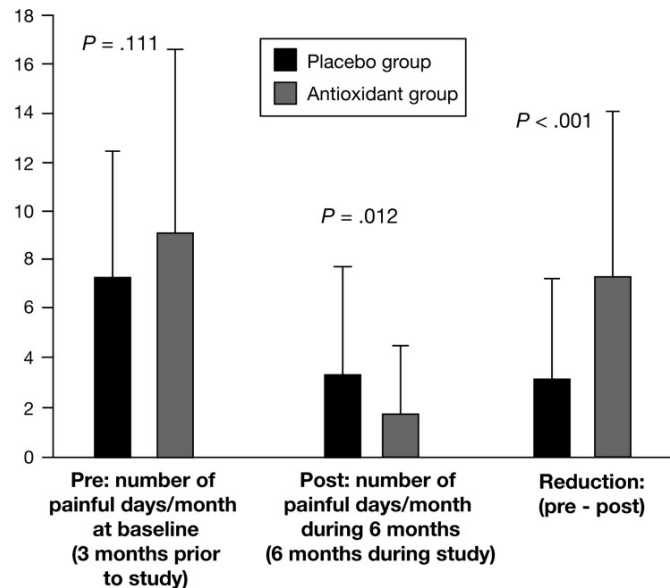
Pregabalin



- Over three weeks pregabalin reduced daily average pain score by 36% compared to 24% in placebo group.
- Most patient were also on opiates to the effect of pregabalin was independent
- Side effects were common

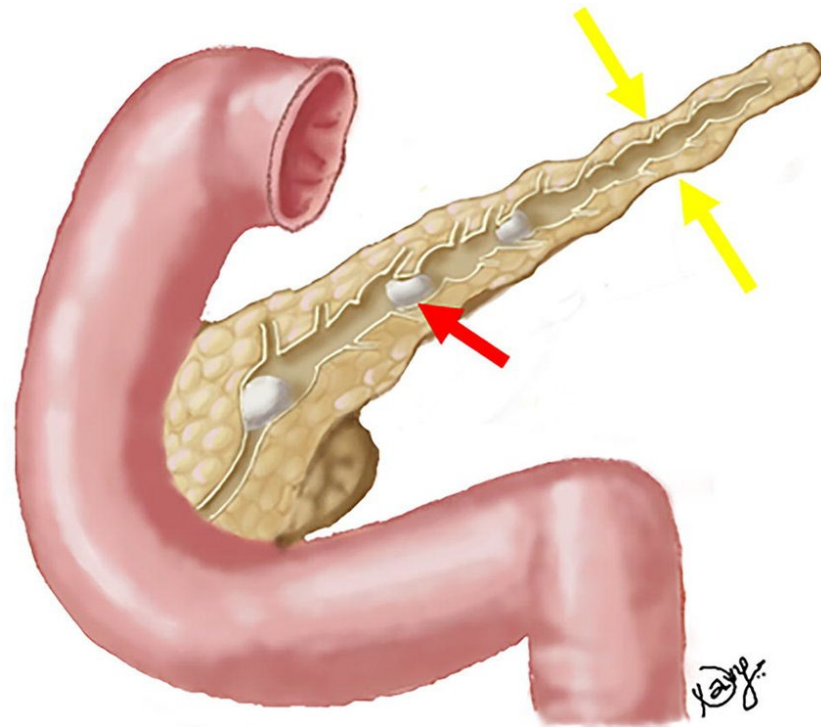
Antioxidants show mixed results in CP

- Consist of Vitamin A,C, E, selenium and methionine
- Benefits were seen in younger patient with a non alcohol etiology



Pain Management with endoscopy

- Remove obstruction (stone, stricture) in the pancreatic duct.



Pain Management with endoscopy

- EUS and ERCP interventions are mostly based on observational data
 - Biliary/pancreatic sphincterotomy
 - Pancreatic duct stents
 - Stone extraction
 - Lithotripsy (ESWL vs intraductal)
 - Celiac plexus block (weak data)

Pain management : surgery

- Goal : relieve obstruction in pancreatic duct, common bile duct or gastric outlet obstruction
- Factors influencing surgical choice
 - Diffuse vs local disease
 - Ductal obstruction
 - Surgical expertise

QUESTION For patients with painful chronic pancreatitis, is early surgery more effective than the endoscopy-first approach in addressing pain reduction?

CONCLUSION This randomized clinical trial found that early surgery resulted in less pain over 18 months.

POPULATION

67 Men
21 Women



Patients with chronic pancreatitis and dilated main pancreatic duct who started opioids for pain

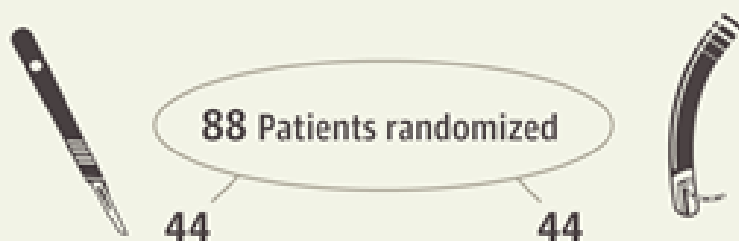
Mean age: 52 years

LOCATIONS

30 Hospitals
in the Netherlands



INTERVENTION



Early surgery

Pancreatic drainage surgery within 6 wk

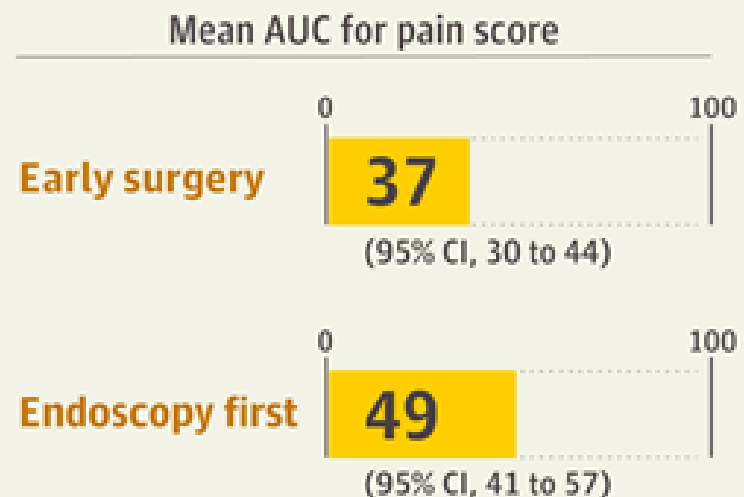
Endoscopy first

Medical treatment, endoscopy if needed, surgery if needed

PRIMARY OUTCOME

Pain measured on Izbicki pain scale through 18 months (scale range, 0-100 [increasing score indicates more pain severity]), reported as mean area under the curve (AUC)

FINDINGS

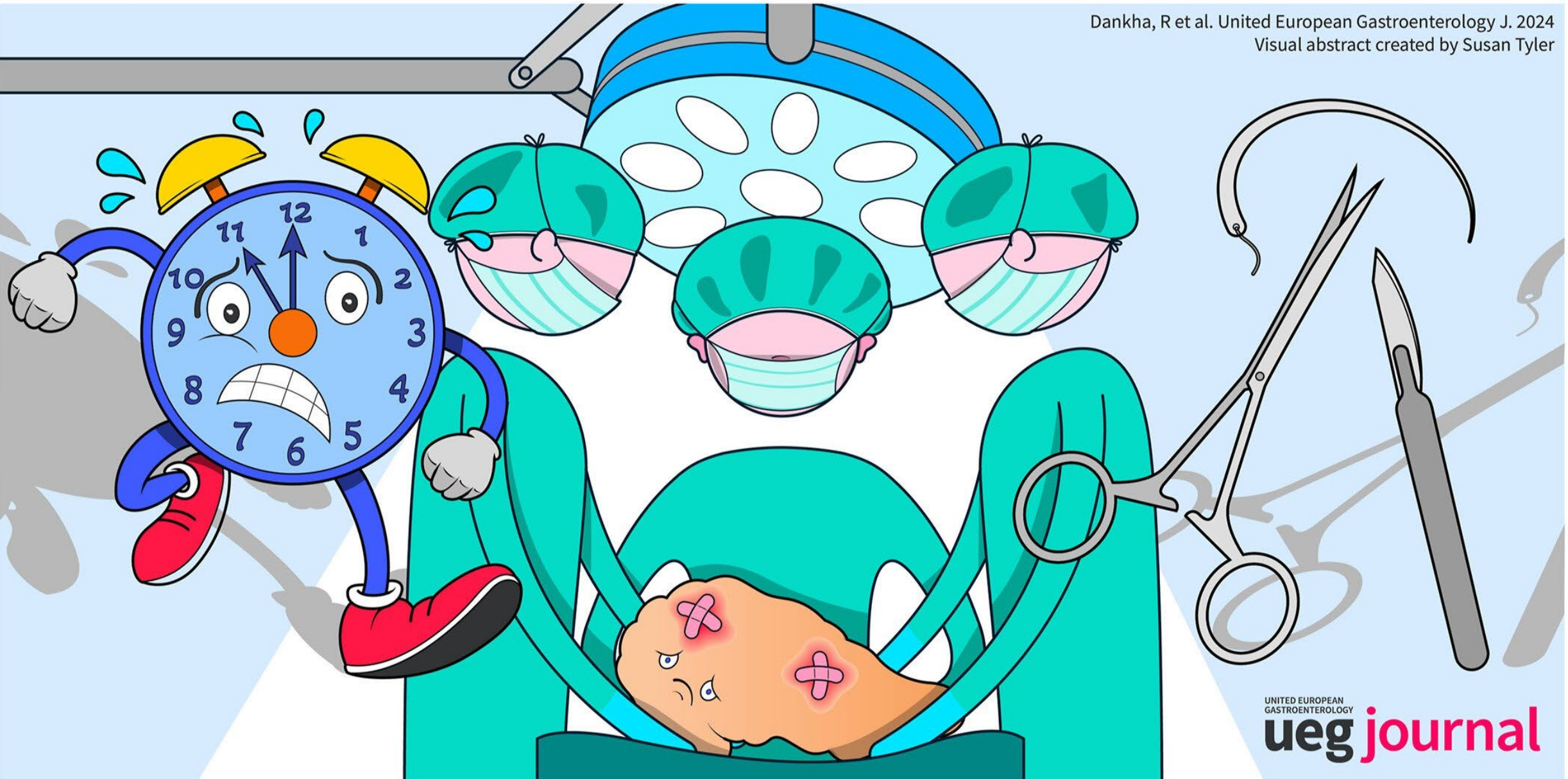


The between-group difference was significant:
-12 points (95% CI, -22 to -2); P = .02

Issa Y, Kempeneers MA, Bruno MJ, et al; the Dutch Pancreatitis Study Group. Effect of early surgery vs endoscopy-first approach on pain in patients with chronic pancreatitis: the ESCAPE randomized clinical trial [published January 21, 2020]. JAMA. doi:10.1001/jama.2019.20967

Surgical Management of Chronic Pancreatitis: A Narrative Review

Dankha, R et al. United European Gastroenterology J. 2024
Visual abstract created by Susan Tyler



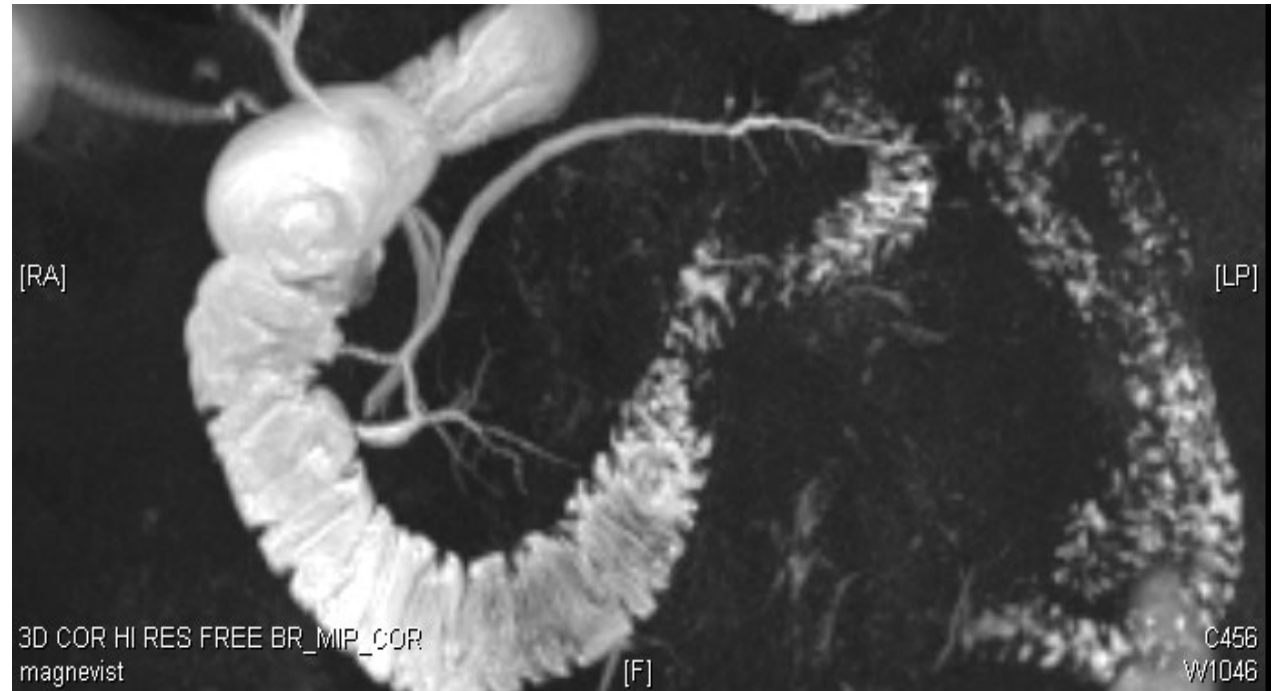
Abdominal Pain

Patient A

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Chronic abdominal pain

On opiates

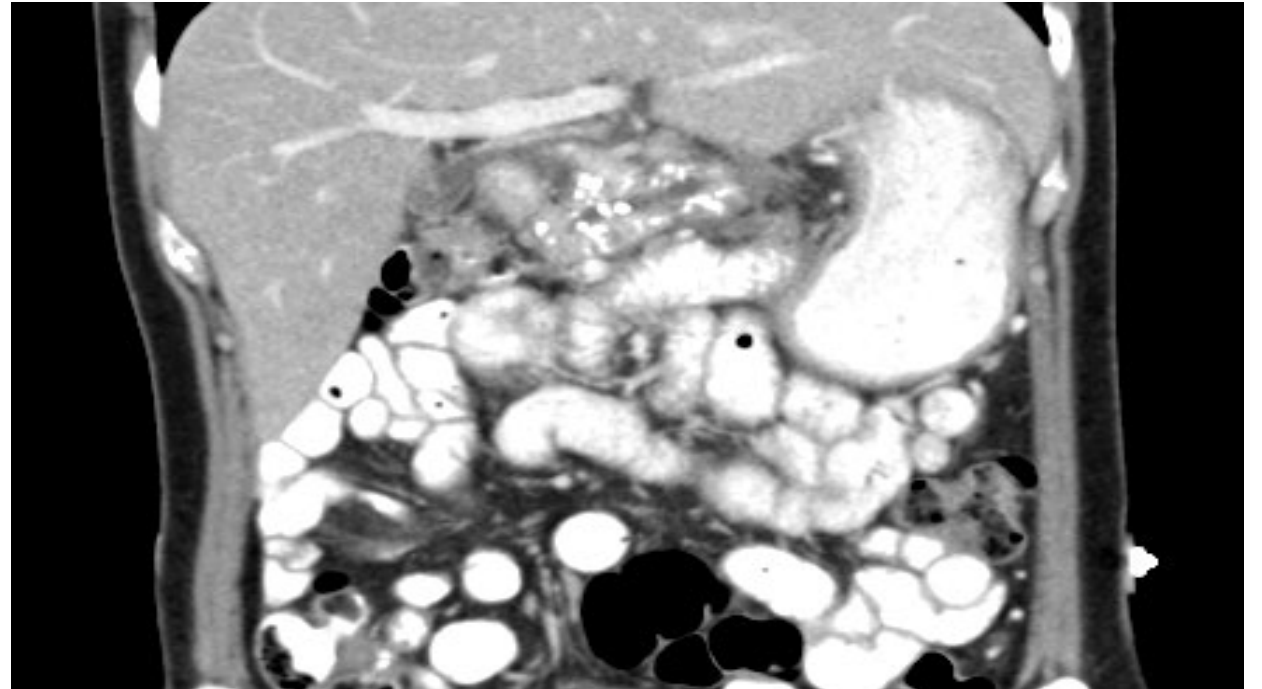


I need an electrician !!

Abdominal Pain

40 year old male

Chronic Fluctuating abdominal
pain



I need a Plumber !!

Chronic pancreatitis related Diabetes

- CP related DM is the most common type of pancreatogenic DM.
- ADA recommends annual diabetes screening.

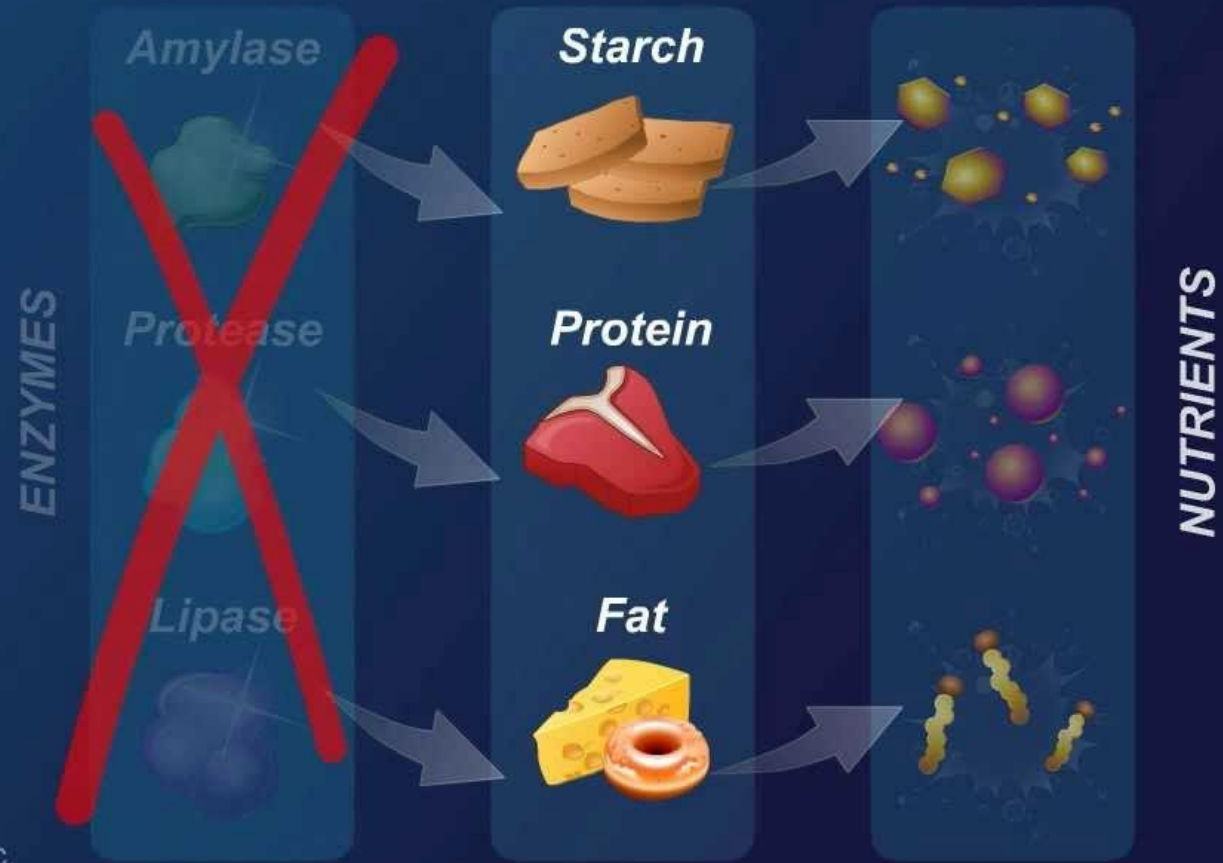
Exocrine Pancreatic insufficiency

- Pancreatic enzyme secretion varies with content and volume of meal ingested
- Average lipase units per meal = 720,000 lipase U
- Exocrine pancreatic insufficiency occurs with 90% of enzyme output is diminished
- EPI is a condition caused by inadequate production, deliver and activity of pancreatic enzymes needed for normal digestion

Associated Medical Conditions

- Chronic Pancreatitis
- Occasionally after severe acute pancreatitis
- Tumors obstructing the main pancreatic duct
- Pancreatic resection
- Surgeries like distal gastrectomy or gastric byass surgery
- Systemic conditions
 - Cystic Fibrosis
 - IBD
 - Celaic Disease
 - Giardiasis
 - Gastrinoma
 - VHL
 - DM

Exocrine Pancreatic Insufficiency (EPI)



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EPI : Signs and Symptoms

- Gas
- Bloating
- Abdominal Pain
- “Diarrhea”
- Unexplained weight loss
- Steatorrhea
- Foul smelling stool
- Nocturnal stools
- Clinically relevant maldigestion occurs earlier than appearance of overt symptoms





Making the diagnosis

- Fecal elastase
- Clinical response to PERT
- Suspect EPI when you see following labs : Low Hb, albumin, abnormal fat soluble vitamins
- 72 hour fecal fat

Fecal elastase

- Stool must be solid or semi solid
- Ok to test patient taking Pancreatic enzyme supplementation

Elastase, stool

Collected on November 17, 2023 8:18 AM

Lab tests - Stool

Results

PANCREATIC ELASTASE-1 FECES View trends

mcg/g

Value **>500**

(NOTE)

Adult and Pediatric Reference Ranges for Pancreatic Elastase-1:

Normal: >200 mcg/g

Moderate Pancreatic

Insufficiency: 100-200 mcg/g

Severe Pancreatic

Insufficiency: <100 mcg/g

Elastase-1 (E-1) assay results are expressed in mcg/g, which represent mcg E1/g feces.

It is not necessary to interrupt enzyme substitution therapy.

PANCREATIC ENZYME REPLACEMENT CAPSULES AND CONTENTS

Karen Maguiness, MS, RD, CSP

Riley Hospital for Children



What is the best time to take the enzymes?

- Highest efficacy → enzymes consumed throughout the meal
- Second Highest efficacy-→ just after meals
- Lowest Efficacy-→ just before meals

Pancreatic Enzyme replacement therapy

- How Much? Recommended starting dose is 25-50,000 USP units of lipase/meals
- Take 50% dose with snacks

Suboptimal Response

- Non compliance → assess affordability
- Underdosing → start low and increase approach
- Inactivation by gastric acid → add PPI or H2A
- Improper timing of administration
- Concurrent GI diseases like SIBO, celiac, IBD, giardiasis



Metabolic Bone disease

- High prevalence of metabolic bone disease in CP
 - Osteopenia -40%
 - Osteoporosis- 25%

Increased risk to low trauma fractures

CP induces an inflammatory state, which contributes to bone loss.

Offer DEXA for osteoporosis screening.

Risk of Pancreatic Cancer

- Increased risk of pancreatic cancer vs general population
- Cumulative lifetime incidence is < 5%
- Insufficient data to recommend routine pancreatic cancer screening

- Screening should be offered to
 - Hereditary Chronic pancreatitis
 - Patients with new onset diabetes
 - Tropical pancreatitis (South East Asian patients with SPINK1)

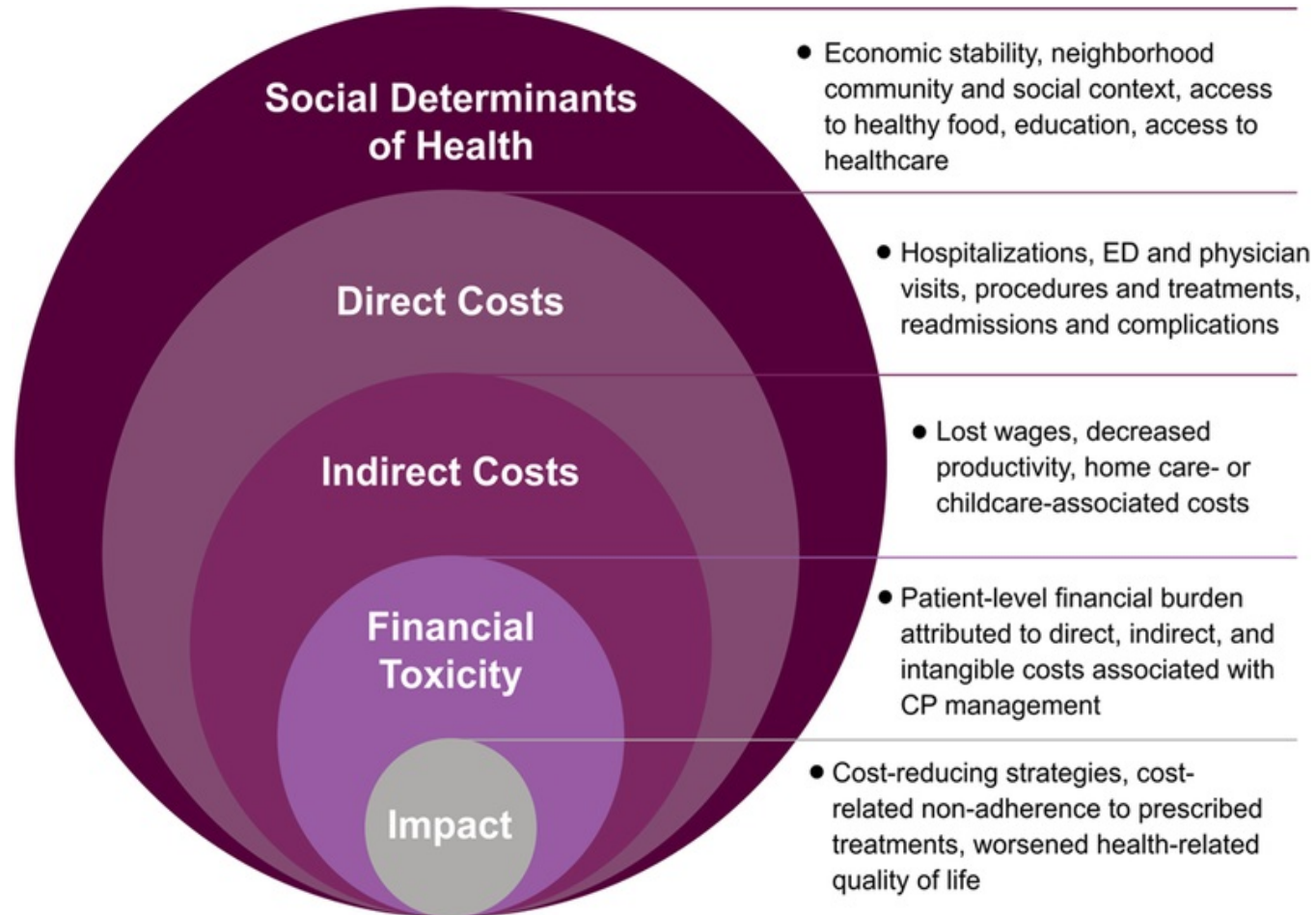
Isolated Gastric Varices

- In setting of Splenic vein thrombosis
- In case of bleeding offer splenectomy

Nutritional Deficiencies

- Fat soluble Vitamin Deficiency - ADEK
- Micronutrient deficiency- Magnesium and Zinc
- Sarcopenia
- Low BMI

Financial Toxicity





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IMPACT-2 STUDY

Do you have pain from recurrent acute or chronic pancreatitis?



About the Study

Researchers at Seattle Children's Research Institute want to learn more about the usefulness of an online pain self-management program for adults with pain from chronic pancreatitis

Eligibility

- 18 years or older
- Diagnosed with recurrent acute or chronic pancreatitis and experience pain
- Access to, or willing to borrow, a web-enabled device

Participation Involves



Completing online questionnaires about pain, mood, and health at 3 time points over 9 months



Being randomly assigned to use one of two online programs for 8 weeks



Optional participation in a telephone interview about the online program



Earning up to \$225 in gift cards

For more information, please contact our study team:



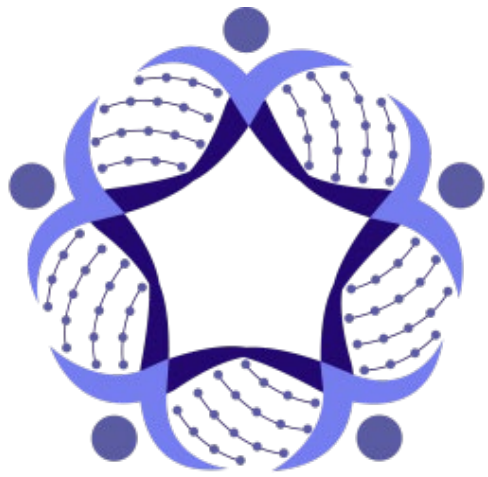
<https://redcap.link/impact2-info>



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