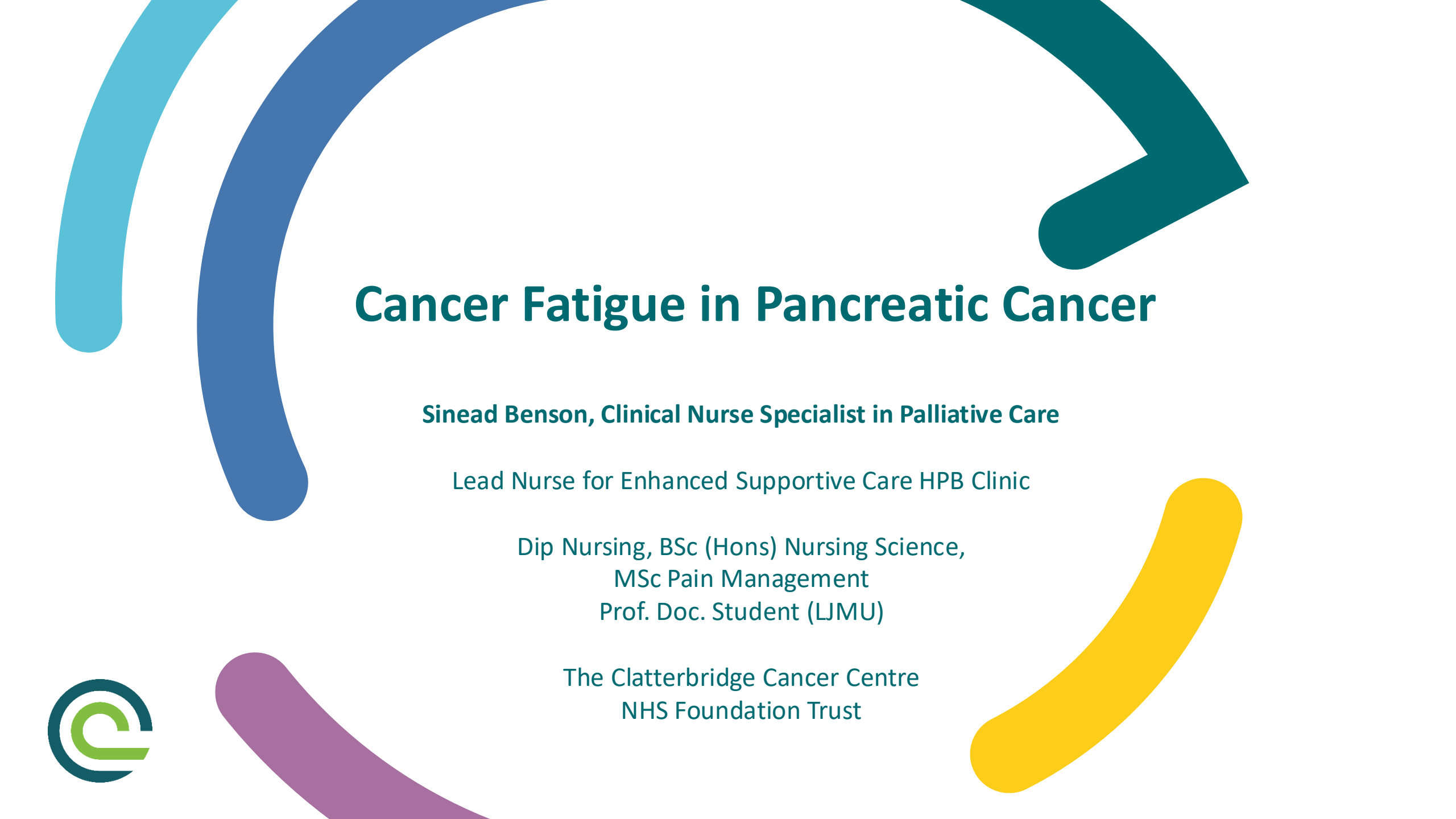




Cancer Fatigue in Pancreatic Cancer

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What We'll Cover

1. Defining cancer-related fatigue
2. Why it matters in pancreatic cancer
3. Mechanisms & contributing factors
4. Impact on patients
5. Screening & assessment
6. Management strategies

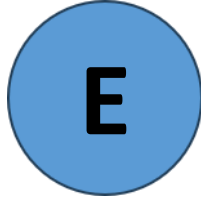
Defining Cancer Related Fatigue

The National Comprehensive Cancer Network describes cancer-related fatigue as a distressing, persistent sense of physical, emotional, and/or cognitive exhaustion related to cancer or its treatment. Unlike ordinary tiredness, it is disproportionate to recent activity and is not relieved by rest.



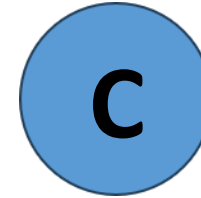
Physical

Whole-body tiredness, weakness, and reduced stamina for daily tasks



Emotional

Low motivation, irritability and reduced capacity to cope with stress



Cognitive

Difficulty concentrating, planning or holding information in mind (chemo brain, brain fog)

The Burden in Pancreatic Cancer

No. 1

Ranked the single most important symptom to monitor by patients with hepatobiliary/pancreatic cancer in a multi-center NCCN survey

Near-universal

Fatigue is reported by the large majority of patients with pancreatic cancer, with prevalence approaching 100% in advanced disease

Under-treated

Systemic Mechanisms

1

Systemic inflammation

Tumour- and treatment-driven pro-inflammatory cytokines (IL-6, TNF- α) act on the brain and muscle to produce fatigue

2

HPA axis & circadian disruption

Dysregulated cortisol rhythm and disturbed sleep-wake cycles blunt normal energy regulation

3

Muscle wasting & deconditioning

Loss of lean muscle mass reduces physical capacity even before activity begins

4

Central neurotransmitter changes

Altered serotonin and dopamine signaling contribute to the subjective sense of exhaustion and low motivation

Pancreatic-Specific Drivers

Exocrine insufficiency

Reduced digestive enzyme output causes malabsorption, steatorrhea, and calorie/protein deficits that drive fatigue

Cancer cachexia

Pancreatic cancer has among the highest rates of Cachexia of any solid tumour- progressive muscle & fat loss beyond simple malnutrition

Biliary obstruction

Tumour compression of the bile duct causes jaundice, pruritus and cholestasis, all of which disturb sleep and sap energy

Glucose dysregulation

New-onset or worsening diabetes is common & Often an early sign- poor glycaemic control independently worsens fatigue

Treatment-related contributors

1

Surgery

Pancreaticoduodenectomy (Whipple) is a major operation with a prolonged recovery and high physiologic demand

2

Chemotherapy

FOLFIRINOX and gemcitabine-based regimens are directly fatigue-inducing, with effects that often accumulate over cycles

3

Radiation therapy

Localized and systemic fatigue is common, typically building over the course of treatment

4

Medications

Opioids and other supportive medications for pain and nausea can cause sedation and add to overall fatigue

Compounding & Comorbid Factors

Anemia

Uncontrolled pain

Depression & anxiety

Insomnia / sleep disturbance

Weight loss & malnutrition

Deconditioning

Impact on Patients

Function

Interferes with basic and instrumental activities of daily living, work, and independence

Quality of life

Consistently rated by patients as one of the most distressing and life-altering symptoms of the illness

Treatment course

Severe fatigue can prompt chemotherapy dose reductions, delays, or early discontinuation

Caregivers & family

Fatigue reshapes household roles and increases the physical and emotional burden on caregivers

Screening & Assessment

NCCN guidelines recommend screening every patient for fatigue at each visit using a simple 0–10 severity scale — mild (1–3), moderate (4–6), or severe (7–10).

Brief Fatigue Inventory (BFI)

FACIT-Fatigue Scale

Edmonton Symptom Assessment System (ESAS)

Rule Out Reversible Contributors

☐ Anemia

☐ Thyroid dysfunction

☐ Electrolyte abnormalities (Ca, Na)

☐ Medication side effects

☐ Uncontrolled pain

☐ Depression / anxiety

☐ Sleep disorders

☐ Infection

☐ Poor glycemic control

Pharmacologic & Disease- Specific Management

Treat pancreatic-specific drivers

- Pancreatic enzyme replacement therapy (PERT) for exocrine insufficiency
- Biliary stenting to relieve obstruction and cholestasis
- Active glycemic management
- Nutritional support and dietitian involvement

Targeted pharmacologic options

- Corticosteroids: short-term benefit for fatigue in advanced or palliative-stage disease
- Psychostimulants (e.g., methylphenidate): modest, mixed evidence — considered case-by-case
- Erythropoiesis-stimulating agents: not used routinely; reserved for select anemia cases
- Always treat pain, mood, and sleep disorders directly rather than fatigue in isolation

Non-Pharmacologic Management

1

Exercise

Supervised, individualized physical activity has the strongest evidence of any intervention, even in advanced disease and during active treatment

2

Psychosocial support

Cognitive-behavioral therapy, mindfulness-based approaches, and support groups reduce fatigue and improve coping

3

Energy conservation & pacing

Prioritizing activities, delegating tasks, and spacing exertion throughout the day preserves function

4

Sleep hygiene

Consistent routines and treatment of insomnia or sleep-disordered breathing improve restorative sleep

Key Takeaways

1

Fatigue affects many pancreatic cancer patients and is often the most distressing symptom they face.

2

It is multifactorial — disease biology, cachexia, exocrine insufficiency, biliary obstruction, treatment, and mood all contribute.

3

Routine screening at every visit with a simple 0–10 scale is the essential first step.

4

Always evaluate for and treat reversible contributors before assuming fatigue is refractory.

5

A combined approach — exercise, psychosocial support, and disease-specific treatment — offers the best relief.

A Multidisciplinary Approach Managing Fatigue in Pancreatic Cancer

What We'll Cover

01

The CNS lens: “total fatigue”

A holistic assessment model

02

Why multidisciplinary care works

The evidence for team-based management

03

The team around the patient

Who's involved, and how they connect

04

The CNS as care coordinator

Holding the whole picture together

05

Addressing each layer of fatigue

Physical, functional, psychosocial, spiritual

06

Putting it into practice

Referral pathway and practical barriers

The CNS Lens: “Total Fatigue”

Borrowing from Cicely Saunders' concept of “total pain,” the palliative care CNS assesses fatigue as “total fatigue” — a lived experience shaped by physical, psychological, social, and spiritual dimensions, not by disease biology alone.

P

Physical

Disease burden, treatment effects, pain, anemia, deconditioning

P

Psychological

Anxiety, low mood, fear of progression, loss of role and identity

S

Social

Isolation, caregiver strain, financial pressure, disrupted routines

S

Spiritual

Loss of meaning, existential distress, unresolved questions about illness and dying

Why Multidisciplinary Care Works

No single fix

Because fatigue in pancreatic cancer has many drivers at once, no single clinician or intervention addresses it alone — coordinated input is needed

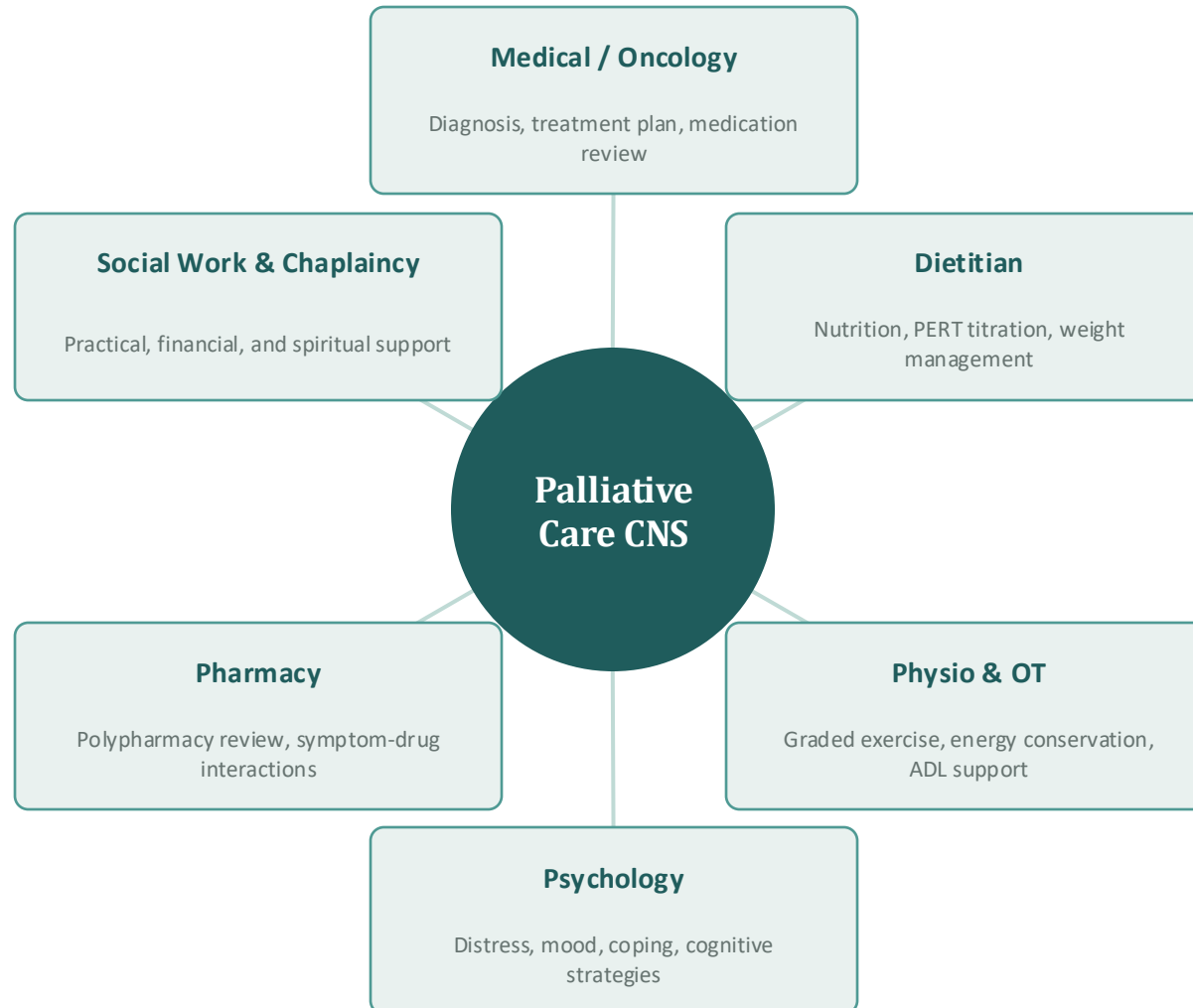
Team-based gains

Trials of multidisciplinary palliative care nursing models report improved fatigue, anxiety, and quality-of-life outcomes compared with standard care

Fatigue lags behind

Palliative team audits show pain and appetite often respond well to intervention, while fatigue improves more slowly — reinforcing the need for sustained, coordinated review

The Team



The CNS as Care Coordinator

Single point of contact

Gives patients and families one consistent, trusted person to raise fatigue and other concerns with

Drives timely referral

Recognizes which layer of fatigue is dominant and routes the patient to the right professional without delay

Holds the whole picture

Integrates input from every discipline into one coherent, patient-centered plan rather than fragmented advice

Reviews and adjusts

Follows fatigue longitudinally across the illness trajectory, revisiting the plan as needs change

Addressing the Physical & Medical Layer

1

Medical team

Reviews disease status, treats anemia, manages biliary obstruction and glycemic control

2

Pharmacy

Reviews polypharmacy and sedating medications; adjusts opioids and antiemetics that compound fatigue

3

CNS

Screens fatigue at every contact using a simple severity scale and escalates uncontrolled pain or new symptoms promptly

Addressing the Functional & Nutritional Layer

1

Dietitian

Optimizes nutrition, titrates pancreatic enzyme replacement therapy, and addresses cachexia early

2

Physiotherapy

Builds an individualized, graded exercise program suited to the patient's current capacity and stage of disease

3

Occupational therapy

Teaches energy conservation and activity pacing, and adapts the home environment to preserve independence

Addressing the Psychosocial & Spiritual Layer

1

Psychology / counselling

Supports coping with anxiety, low mood, and the emotional weight of a life-limiting diagnosis

2

Social work

Addresses financial strain, carer burden, and access to practical support services at home

3

Chaplaincy / spiritual care

Holds space for existential distress and questions of meaning that can deepen a sense of exhaustion

CNS- Led Interventions in Practice

Patient & family education on fatigue as a real, manageable symptom

Collaborative goal-setting around what matters most to the patient

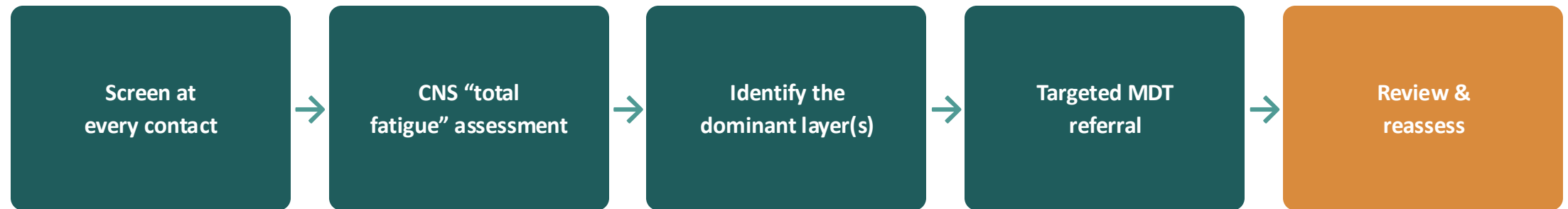
Coaching in energy conservation and activity pacing

Proactive symptom-review clinics or calls between visits

Early, sensitive advance care planning conversations

Signposting to peer support and community resources

A Simple Referral Pathway



Barriers in Practice

Time & capacity

Coordinating multiple disciplines takes time that busy services may struggle to protect

Fragmented services

Not every setting has ready access to physio, psychology, or dietetics, especially in the community

Under-reporting

Patients often under-report fatigue, viewing it as an inevitable and untreatable part of illness

Access & equity

Rural or resource-limited settings can face real gaps in specialist palliative and allied health input

Key Takeaways

- 1 Fatigue in pancreatic cancer is “total fatigue” — physical, psychological, social, and spiritual dimensions all matter.
- 2 No single discipline can manage it alone; coordinated, team-based care improves outcomes.
- 3 The palliative care CNS is well placed to coordinate the team and hold the whole picture together.
- 4 Every layer — physical, functional, and psychosocial — needs a named professional and a clear pathway.
- 5 Fatigue must be screened and reviewed continuously, not treated as a single fixed problem.

Useful Resources

- NCCN Clinical Practice Guidelines in Oncology: Cancer-Related Fatigue
- Kang YE, et al. Prevalence of cancer-related fatigue based on severity: a systematic review and meta-analysis. Sci Rep. 2023.
- Cheville AL, et al. Fatigue ranked as the top symptom concern across cancer types, including hepatobiliary/pancreatic cancer, in an NCCN multi-institution survey.
- ASCO/ASH and palliative care literature on assessment tools (BFI, FACIT-F, ESAS, Piper Fatigue Scale) and management of cancer-related fatigue
- NCCN Clinical Practice Guidelines in Oncology: Cancer-Related Fatigue and Palliative Care
- Li et al. Effect of nurse-led and physician-led multidisciplinary team palliative care on quality of life, negative emotions, and pain for cancer patients: a meta-analysis. Precis Med Sci. 2025.
- Hou et al. Effects of multi-role collaborative palliative care on anxiety, cancer-related fatigue, and quality of life in advanced lung cancer.
- Iwase et al. Assessment of cancer-related fatigue, pain, and quality of life in cancer patients at palliative care team referral (JORTC PAL-09). PLoS ONE. 2015.
- Saunders C. The concept of “total pain” and its extension to holistic symptom assessment in palliative care