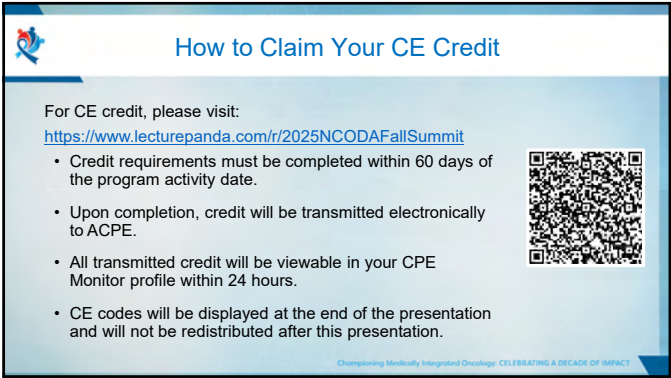




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OBJECTIVES

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1. Summarize the current treatment plan options for adult patients with pancreatic cancer.

2. Identify common symptoms of pancreatic cancer and corresponding supportive care strategies.

3. Distinguish performance status assessment strategies and nutrition interventions to improve outcomes and quality of life in patients with pancreatic cancer.

4. Review survivorship care strategies in pancreatic cancer, including gaps in survivorship care delivery.

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DISCLOSURES

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The following relevant financial relationships from the past 24 months have been identified and disclosed for the following faculty and planners of this CE activity:

• Jaclyn V. Moore, MS, RD, C.S.O

◦ Alcresta Therapeutics, Abbvie Pharmaceuticals

• Dallas Lawry, DNP, FNP-C, AOCNP

◦ Pfizer, IPSEN, Bristol Myers Squibb, Abbvie, Canopy

No relevant financial relationships from the past 24 months have been identified for the following speakers and planners of this CE activity:

• Tara Davis, RN

• Amanda McCauley MSN, RN, OCN

• Tahsin Imam, PharmD

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QUESTION 1

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How often do you care for a patient with pancreatic cancer?

a. Daily

b. Monthly

c. A few times a year

d. Never

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QUESTION 2

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What is the five-year survival rate for pancreatic cancer?

a. Less than 1%

b. 13%

c. 24%

d. 50%

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Pancreatic Cancer Basics

• Expected to be the second leading cause of cancer death as early as 2026, but very likely by 2040

• Once a rare malignancy, now on the rise due to factors that are unexplored due to a lack of research

• Will affect about 67,440 people and take **51,980** lives in 2025

• 5-year survival rates are only **13%**, which includes all stages of the disease, many of whom present metastatic

• Pancreatic cancers are defined by endocrine or exocrine tumors



Roth, L., Walter, M. R., Mahajan, L. M., & Hess, K. T. (2021). Estimated projection of US cancer incidence and death to 2040. JAMA Network Open, 4(1), e214708. <https://doi.org/10.1001/jamanetworkopen.2021.4708>

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How do these patients present?

Vague Symptoms:

• Abdominal and/or med-to-upper back pain

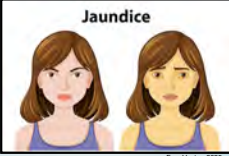
• Nausea/loss of appetite

• Jaundice (yellowing of the skin and eyes)

• Changes in stool (oily or watery)

• New-onset diabetes

Jaundice



Free Vector, 2025

Pancreatic Cancer Action Network. 14 Pancreatic Cancer Warning Signs Infographic. <https://pancreaticcanceraction.org/14-pancreatic-cancer-warning-signs-infographic/>. Published (date unknown). Accessed (September 10, 2025).

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Known Risk Factors for Pancreatic Cancer

Family history in first degree relative

Diets high in red and processed meats

Obesity

Black Americans and Ashkenazi Jews

Smoking

Advanced age

Long standing diabetes

Chronic pancreatitis

Pancreatic Cancer Action Network. 14 Pancreatic Cancer Warning Signs Infographic. <https://www.pancreaticcancer.org/pancreatic-cancer-warning-signs-infographic/>

Published (date unknown). Accessed (September 18, 2025).

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Types of Pancreas Cancer

• Exocrine (~92%)

- **Pancreatic adenocarcinoma (PDAC) ~ 90%**
- Acinar cell (very rare)
- Intraductal papillary-mucinous neoplasm (IPMN, a pre-cancer)

• Endocrine (~8%)

- Pancreatic neuroendocrine tumor (PNET) ~ 10%
- Characterized by the type of hormones produced by the tumor

• VERY rare types

- Adenosquamous carcinoma, squamous cell carcinoma, pancreatoblastoma



Pancreatic Cancer Action Network. Types of Pancreatic Cancer. <https://pancan.org/facing-pancreatic-cancer/about-pancreatic-cancer/types-of-pancreatic-cancer/>

Accessed September 18, 2025.



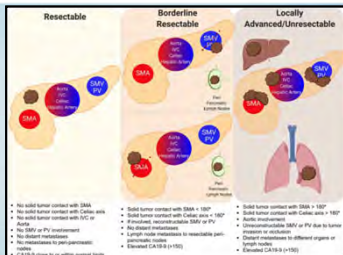
11

Staging of Pancreas Cancer

• Location on pancreas: body, tail, head, mixed, multiple tumors

• Staging:

- Resectable (curative) stage IA, IB, IIA, IIB
 - Stage II cancers may require neoadjuvant chemotherapy
- Unresectable (non-curative)
 - Stage III locally advanced
 - Stage IV metastatic



Pancreatic Cancer Action Network. Staging. <https://www.pancreaticcancer.org/facing-pancreatic-cancer/about-pancreatic-cancer/staging/>

Accessed September 18, 2025.



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Pancreatic Adenocarcinoma

Treatment plans:

- Systemic therapy examples (pancreatic adenocarcinoma)
 - Based on NGeno: FOLFIRINOX or NALIRIFOX, gemcitabine/nab-paclitaxel
 - Adjuvant: FOLFIRINOX or NALIRIFOX, gemcitabine/nab-paclitaxel, gemcitabine/capecitabine
 - Immunotherapy: S testing
- Surgical options: based on tumor location and metastatic disease
 - Whipple, Appleby, distal pancreatectomy, irreversible electroporation (IRE)
- Radiation therapy/proton therapy
- Clinical trials: KRAS, bispecifics, vaccines, targeted therapy, IRE

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QUESTION 3

According to NCCN guidelines what is a front-line systemic therapy for stage IV pancreatic cancer?

- a. Pembrolizumab
- b. Entrectinib
- c. Nivolumab + Ipilimumab
- d. FOLFIRINOX

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Pancreatic Cancer Treatment Modalities

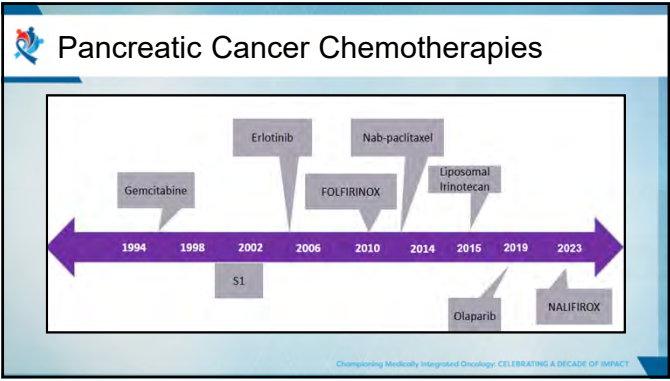
Cancer Type	2010 (Thousands)	2020 (Thousands)	2030 (Thousands)
Lung	155	145	125
Pancreas	40	55	85
Colorectal	55	52	50
Breast	40	42	45
Prostate	35	33	30

Surgery
Only curative option

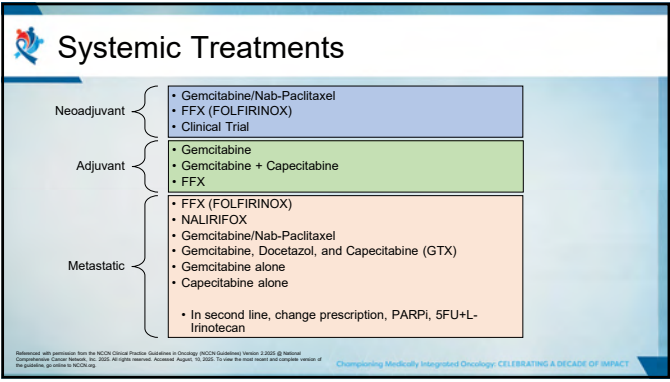
Chemotherapy
Multiple clinical trials validating its benefit

Radiotherapy
Commonly utilized in neoadjuvant setting

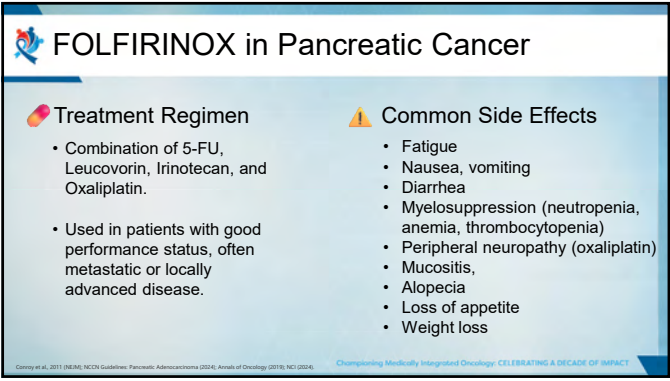
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Nursing Considerations and Supportive Care
- FOLFIRINOX

**Nursing Considerations**

- Monitor CBC, electrolytes, and organ function.
- Assess for neuropathy at each visit.
- Educate patients on cold sensitivity related to oxaliplatin.

**Supportive Care**

- Manage oral mucositis with salt & soda rinses and magic mouthwash.
- Support hydration, bowel regimen, and infection prevention.

Conroy et al., 2011 (NEM), NCCN Guidelines: Pancreatic Adenocarcinoma (2024); Annals of Oncology (2015); NCI (2024).
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Gemcitabine + nab-paclitaxel (albumin-bound paclitaxel) in Pancreatic Cancer

**Treatment Regimen**

- Combination of gemcitabine and nab-Paclitaxel
- Standard first-line therapy.
- Often for patients not eligible for FOLFIRINOX.

**Common Side Effects**

- Fatigue
- Nausea, vomiting, diarrhea, constipation
- Myelosuppression: neutropenia, anemia, thrombocytopenia
- Peripheral neuropathy
- Alopecia
- Rash
- Mucositis
- Edema

Von Hoff et al., 2013 (NEM), NCCN Guidelines: Pancreatic Adenocarcinoma (2024); NCI Drug Dictionary (2024).
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Nursing Considerations and Supportive Care-
gemcitabine + nab-paclitaxel

**Nursing Considerations**

- Monitor CBC and organ function before each cycle.
- Assess neuropathy at each visit
 - Educate patients on safety and fall prevention
- Manage mucositis with salt & soda rinses and magic mouthwash.
- Support hydration and bowel regimen to reduce GI side effects.
- Educate patients on signs of infection and bleeding risk.

**Supportive Care**

- Provide teaching on managing fatigue and maintaining nutrition.
- Encourage use of wigs, scarves, or head coverings for alopecia if distressing.
- Coordinate referrals to supportive care and rehabilitation services as needed.

Von Hoff et al., 2013 (NEM), NCCN Guidelines: Pancreatic Adenocarcinoma (2024); NCI Drug Dictionary (2024).
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Olaparib in Pancreatic Cancer



Treatment Regimen

- Olaparib (PARP inhibitor) is an oral targeted therapy.
- Used as maintenance therapy for patients with germline BRCA1/2 mutation who have not progressed after ≥16 weeks of platinum-based chemotherapy.



Common Side Effects

- Fatigue
- Nausea
- Anemia
- Decreased appetite
- GI upset (vomiting, diarrhea, constipation).
- Cytopenias (neutropenia, thrombocytopenia).
- Rare but serious: myelodysplastic syndrome (MDS), acute myeloid leukemia (AML).

Golan T, Hornigold P, Patel M, Van Cutsem E, Macarulla E, Hall M, et al. (2019) Maintenance Olaparib for germline BRCA-mutated metastatic pancreatic cancer. *New England Journal of Medicine*. 381(6): 577-587. <https://doi.org/10.1056/NEJMoa1810141>

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Nursing Considerations and Supportive Care Olaparib



Nursing Considerations

- Monitor CBC routinely for anemia and cytopenias.
- Educate patients on adherence (oral daily dosing with a full glass of water).
- Manage nausea proactively with antiemetics; encourage hydration and nutrition.
- Monitor for unusual bruising, infections, or prolonged fatigue.
- Reinforce need for genetic testing to identify eligible patients.



Why NCCN Recommends It

- Improves progression-free survival in BRCA-mutated pancreatic cancer.
- Represents a step toward personalized, biomarker-driven therapy.
- Expands treatment beyond chemotherapy, giving patients a new targeted option

Golan T, Hornigold P, Patel M, Van Cutsem E, Macarulla E, Hall M, et al. (2019) Maintenance Olaparib for germline BRCA-mutated metastatic pancreatic cancer. *New England Journal of Medicine*. 381(6): 577-587. <https://doi.org/10.1056/NEJMoa1810141>

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Benefits of a Multidisciplinary Pancreatic Clinic



Expert Collaboration

Specialists (oncology, surgery, GI, radiology, pathology, genetics, supportive care) evaluate patients together.



Efficient & Coordinated Care

One visit, same day, same place → reduces delays and repetition.



Personalized Care Plans

Joint review of imaging, pathology, and genetics ensures tailored treatment.



Access to Research & Trials

Quicker identification of eligible patients for clinical studies and new therapies.



Improved Patient & Family Experience

Streamlined appointments and unified communication → less stress, more support.



IStock

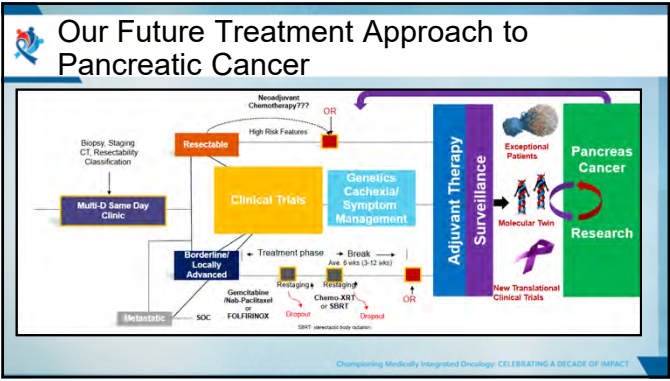
Eliza M, Abbas AA, Lee A, Duvall J, Rosenburg E, Atkins RM, Korman M, Lu S, Goldstein S, Garg A, Kozak K, Ansa A, Hargrave N, Smith M, Obermayer S, Beckman R, Wilson N, Lander BK, Macarulla E, Garg A, Fennell C, Hargrave A, Cooper A. Collaborative management of pancreatic cancer: impact of a same day multidisciplinary clinic on access to guideline-directed care. *BMJ Open*. 2023;13(1):e007105. <https://doi.org/10.1136/bmjopen-2022-027105>. *BMJ Open*. 2023;13(1):e007105. <https://doi.org/10.1136/bmjopen-2022-027105>

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Multimodal Supportive Care Interventions

- Employ early on in Patient's Care
- Pain Management
 - Opioids
 - Celiac Plexus Block
- Biliary Stents
- Anticoagulation
- Emotional support
- Cachexia management

The signpost has six arrows pointing in different directions, each with a label: ADVICE (pink), SUPPORT (purple), HELP (blue), ASSISTANCE (green), GUIDANCE (yellow), and TIPS (orange).

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Quality of Life Enhancements

- Symptom Relief**
Prioritize pain control, nausea management, fatigue, and bowel care.
- Nutrition & Function**
Support weight maintenance, pancreatic enzyme use, and hydration.
- Emotional Support**
Screen for anxiety/depression, encourage open communication, and connect to counseling resources.
- Family & Caregiver Needs**
Recognize caregiver burden, provide education, and encourage respite support.
- End-of-Life & Palliative Focus**
Advocate for patient-centered goals, advance care planning, and comfort measures

The image shows two hands gently holding a red heart, symbolizing care and support.

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Clinical Trials in Pancreatic Cancer

**Access to Innovation**
Trials provide patients with cutting-edge therapies not yet widely available.

**Personalized Medicine**
Genetic and biomarker testing guide eligibility for targeted or immune-based therapies.

**Types of Trials**
New chemotherapy combinations, targeted agents, immunotherapy, and surgical/radiation strategies.

**Earlier Enrollment Matters**
Patients benefit most when considered at diagnosis or early in treatment.

**Nursing Role**
Educate patients/families about options.
Support informed consent, adherence, and side effect management.



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KRAS Inhibitors

**KRAS & Pancreatic Cancer**

- KRAS mutation is found in ~90–95% of pancreatic ductal adenocarcinomas (PDAC).
- Historically considered “undruggable,” but new inhibitors are changing the landscape.

**KRAS Inhibitor Therapies**

- Early trials target KRAS G12C mutation (less common in pancreatic cancer).
- Research expanding into G12D and other variants, more prevalent in PDAC.

Long SA, Amparo AM, Goodhart G, Ahmad SA, Waters AM. Evaluation of KRAS inhibitor-directed therapies for pancreatic cancer treatment. Front Oncol. 2024 May 10;14:1402128. doi: 10.3389/fonc.2024.1402128. PMID: 38804091; PMCID: PMC11116677.

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KRAS Inhibitor Clinical Trials

**Clinical Trial Insights**

- Combination strategies being tested (KRAS inhibitors + chemotherapy, immunotherapy, or other targeted agents).
- Patients often require genomic profiling (NGS) to determine eligibility.

**Nursing Role**

- Educate patients on the importance of genetic testing.
- Support trial participation by monitoring side effects (GI symptoms, fatigue, skin issues).
- Reinforce adherence and communication with trial teams.

**Key Point**

- KRAS inhibitors represent a promising new frontier — still investigational but may soon change standard of care.

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 NGS Testing

**Why NGS?**

- Next-Generation Sequencing (NGS) identifies genetic mutations and biomarkers that drive tumor growth.

**Key Findings**

- Detects KRAS, BRCA1/2, PALB2, mismatch repair (MMR), and other actionable alterations.
- Helps determine eligibility for targeted therapies (e.g., PARP inhibitors, immunotherapy).



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 NGS Testing in Clinical Trials

**Impact on Clinical Trials**

- NGS is often required for trial enrollment (KRAS inhibitors, novel targeted agents).
- Expands access to precision medicine approaches.

**Benefits for Patients**

- Informs personalized treatment plans.
- May improve survival, symptom management, and quality of life.

**Nursing Role**

- Advocate for testing at diagnosis and progression.
- Educate patients/families about results and treatment implications.
- Support informed decision-making and trial discussions.

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 Time is of the Essence in Pancreatic Cancer

**Aggressive Disease Course**

- Pancreatic cancer progresses rapidly, limiting treatment opportunities.

**Early Testing Matters**

- Fast NGS and genetic testing optimize care by identifying targeted therapies and trial options early.

**Treatment Access**

- Prompt referral to a multidisciplinary clinic ensures coordinated, timely, and optimized interventions.

**Delays Impact Outcomes**

- Waiting weeks can mean loss of surgical candidacy, reduced treatment effectiveness, or missed trial enrollment.

**Nursing Role**

- Advocate for timely testing, referrals, and supportive care.
- Guide patients and families to optimize care pathways while addressing urgent needs.



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Benefits of Second Opinions at Academic Institutions

- Multidisciplinary Expertise**
 - Access to specialists in oncology, surgery, radiation, genetics, and supportive care.
- Access to Research & Trials**
 - Larger centers often have clinical trials and investigational therapies not available locally.
- Advanced Diagnostics**
 - Expanded use of NGS, molecular profiling, and precision medicine tools to guide treatment.
- Optimized Treatment Planning**
 - Second opinions can confirm, refine, or change treatment plans, improving quality and outcomes.
- Patient Confidence & Support**
 - Provides reassurance, helps patients feel informed, and may open opportunities not previously considered.

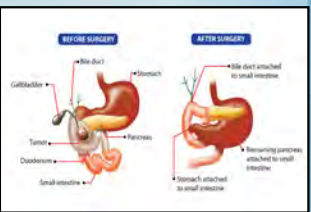
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Whipple: Pre-Surgical Care

- Pre-Surgical Care**
 - Optimize nutrition & hydration prior to surgery.
 - Manage neoadjuvant chemo and side effects when applicable.
 - Patient/family education on procedure, recovery expectations, drains, and lifestyle changes.
 - Assess comorbidities (diabetes, cardiac, pulmonary) and optimize status.
 - Provide emotional support and address anxiety about surgery.



adapted from cancer.net

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Whipple: Nursing Considerations

- Long-Term Recovery**
 - Nutrition management: pancreatic enzyme replacement, small frequent meals.
 - Blood glucose monitoring (new or worsened diabetes is common).
 - Support gradual activity increase and rehabilitation.
 - Immunization support
- Nursing Role**
 - Provide education, advocacy, and psychosocial support.
 - Coordinate care with dietitians, endocrinology, and supportive care teams.
 - Reinforce adherence to follow-up and surveillance plans.

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Nursing Takeaways

- Symptom Management**
 - Monitor and manage pain, fatigue, anorexia, cachexia, and nausea/vomiting.
 - Support bowel regimen, hydration, and nutritional needs.
- Nutritional Support**
 - Assess weight loss and appetite.
 - Collaborate with dietitians to optimize caloric intake and pancreatic enzyme replacement.
- Education & Advocacy**
 - Educate patients/families about treatment plans, side effects, and home care.
 - Reinforce the importance of genetic testing, clinical trials, and follow-up.
- Psychosocial & Emotional Support**
 - Screen for depression and anxiety.
 - Provide resources for coping, counseling, and caregiver support.
- Coordination of Care**
 - Serve as patient navigator between specialties (oncology, surgery, palliative care).
 - Ensure timely follow-up and continuity across the multidisciplinary team.

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QUESTION 4

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What is the minimal number of calories a patient should consume a day when going through treatment to maintain their body weight?

- a. 2500
- b. 1500
- c. 1800
- d. 2000

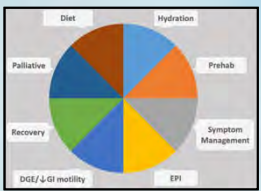
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Nutrition and Pancreatic Cancer

Key Considerations:

- Consult a registered dietitian
- Address patient performance and quality of life
- Adjust strategies for resectable vs. unresectable disease
- Incorporate symptom management
- Address malabsorption/EPI
- Prepare for surgery
- Recover from surgery
- Multifaceted approach



Reference: Mahal D, Bhatnagar J, Bhatnagar-Kumar A, Singh K, Chinn B, Bhatnagar R, Chinn A, Dey A. Evaluation of Nutritional Status and the Impact of Nutritional Treatment in Patients with Pancreatic Cancer. *Cancers (Basel)*. 2023 Jul 27;15(15):3916. doi: 10.3390/cancers15153916. PMID: 37582028. PMCID: PMC10411607

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Prehabilitation

What is prehabilitation, aka prehab?

Prehab is physical therapy before surgery.

Prehab = Impairment prevention.



Image source: <https://www.apls.org/apls-images/2018/02/01/better-slower-and-faster-prehabilitation>

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Prehab Basics

- Standard of care in the management of resectable disease
- Prehab initiatives should be concurrent with neoadjuvant treatment (NT)
- Tailored to the patient's specific needs but at minimum should include:
 - Nutrition counseling (PO +/- alternative nutrition)
 - Physical therapy
 - Psychosocial support



Image source: <https://aapc.org/aapc-images/2018/02/01/better-slower-and-faster-prehabilitation>

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Prehab Process

Initiate prehab *at diagnosis*

- Proactive > Reactive

Re-evaluate patient performance every 1-2 weeks throughout neoadjuvant treatment

- Consider a standard questionnaire with suggested actions based on patient responses

Prepare to add and adjust prehab initiatives at every follow-up:

- Symptom management (reflux, NV, DGE, irregular bowel function)
- Hydration (supplemental IV fluids)
- Nutrition support
- Formal PT program



Image Source: <https://www.fortis.com/fortis-images/2020/07/13/proactive-vs-reactive-compares-and-distributed-work-by-fortis.com/fortis.com/>

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Prehab Quality Goals

- <10% weight loss during NT
- Acceptable physical performance
 - Defined as the ability to comfortably walk ≥2.0 MPH for ≥25 min without stopping +/- maintain
 - Improve upon all ADLs
 - Formal PT program
- Adequate nutrition
 - >1800 calories per day
- Adequate hydration: >64 fl oz per day
 - "Hydrating" liquids
- Socioeconomic support
- Patient self-motivation for upcoming surgery



Reference: Velazquez R, Mangos RP, Slat A. Prehabilitation: A proactive approach to enhancing outcomes in gastrointestinal surgery. J Clin Oncol and Therap. 30: 10230. April 2014

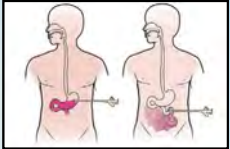
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Prehab Nutrition

- Weight Maintenance
 - Initiate nutrition support if wt. loss >10%
 - Performance
 - Sometimes the scale is just a number.
- G tube vs J tube vs TPN
 - Consider GI toxicity from NT
 - G tube vs J tube
 - TPN considerations – malabsorption, too frail for surgery, requires central IV access, can be cycled off for chemo infusion
- Probiotics – benefits and research



Reference: O'Hall CH, Moore J, Phelps P, Wells RCJ 2nd. Complications of Abdominal Feeding Tubes: A Single Center Experience of 465 Cases. J Gastrointest Surg. 2016 Apr 24;16(4):614-618. doi: 10.1007/s12220-016-0450-2. Epub 2016 Jan 28. PMID: 26928653

Image source: <https://www.medicare.org/careers-caregiver-education/education/feeding-tube-feeding>

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Indications for High Potency Probiotics

- High dose chemotherapy
- Long term chemotherapy
- Prehabilitation (>30 days of probiotic use recommended before major abdominal surgery)
- Abnormal post-op stools
- Frequent diarrhea, frequent stools, and/or GI distress
- Current or recent *c-diff* infection (continue probiotic for minimum 6 months following positive *c diff* culture)

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Probiotics Research

Nutrients, 2021 Dec; 13(12): 4425.
Published online 2021 Dec 10; doi: 10.3390/nu13124425

PMCID: PMC8709322
PMID: 34959977

Pancreatic Cancer and Gut Microbiome-Related Aspects: A Comprehensive Review and Dietary Recommendations

Barbora Kami Sobocka,^{1,*} Karolina Kałmierzak-Siedlecka,^{2,*} Marcin Foliwarski,³ Viktoria Haverkornicz,⁴ Włodzisław Makarewicz,² and Ewa Stachowicz⁴

*...we should not treat the microbiome like a static population closed in different, separate compartments, but rather like dynamic and able to migrate population interacting with tumor microenvironment and microbiome in other locations.

*Ferrichrome is a molecule received from probiotics that suppressed the growth of refractory pancreatic cancer cells. Its mechanism is based on the inhibition of cancer cells progression and cell cycle dysregulation by activating p53 [51]. Ferrichrome is derived from probiotic strain *Lactobacillus casei* ATCC334 [52] and may act against not only pancreatic cancer, but also gastric as well as colon cancer [52,53].

References: Sobocka BK, Kałmierzak-Siedlecka K, Foliwarski M, Haverkornicz V, Makarewicz W, Stachowicz E. Pancreatic Cancer and Gut Microbiome-Related Aspects: A Comprehensive Review and Dietary Recommendations. Nutrients. 2021 Dec; 13(12):4425. doi: 10.3390/nu13124425. PMID: 34959977. PMCID: PMC8709322.

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Perioperative Probiotics

Randomized Controlled Trial > Hepatogastroenterology, 2007 Apr-May;54(7S):661-3.

Probiotics reduce infectious complications after pancreaticoduodenectomy

Tatsuya Nomura¹, Yoshiaki Tsuchiya, Atsushi Nishimoto, Hiroshi Yabusaki, Yasumasa Takii, Satoru Nakagawa, Nobuaki Sato, Chizuko Karabayashi, Otsuo Tanaka

Affiliations + expand
PMID: 17591036

- Randomized prior to pancreaticoduodenectomy: perioperative probiotic group vs control
- Control = 34, Experimental = 30, Total = 64
- Probiotics started 3-15 days pre-op and resumed POD 2 and continued until hospital discharge
- Infectious complications in probiotic group (23%, 7/30) and control group (53%, 18/34), $p = 0.02$
- Study originated in Asia, utilizing a probiotic called Bio-Three
- Live strains: Clostridium butyricum, Enterococcus faecalis, and Bacillus mesentericus

References: Nomura T, Tsuchiya Y, Nishimoto A, Yabusaki H, Takii Y, Nakagawa S, Sato N, Karabayashi O, Tanaka O. Probiotics reduce infectious complications after pancreaticoduodenectomy. Hepatogastroenterology. 2007 Apr-May;54(7S):661-3. PMID: 17591036.

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Nutrition for Unresectable Disease

- Balanced diet, adequate protein
- Focus on symptom management
 - EPI, N/V/C/D, reflux, DGE
 - Medication recommendations
- Address poor appetite and early satiety
 - 2-hour rule
 - Liquids between meals
 - Shakes, smoothies, ONSs
- Encourage activity throughout the day
 - 5-10 minute walks, minimum 4 per day
- Consider nutrition support only if in line with goals of care

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Nutrition Summary

- Work closely with a registered dietitian
- Nutrition initiatives should focus on improving patient performance and quality of life
- Nutrition recommendations should include symptom management and microbiome enhancement
- Consider aggressive nutrition support for patients with resectable disease
- Consider prophylactic use of high potency probiotics and/or a formal probiotic protocol.

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QUESTION 5

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Which patient is appropriate for survivorship?

- a. Patient who has stage IV pancreatic cancer
- b. Patient who had NED on their last scan
- c. Patient who had curative WHIPPLE procedure
- d. All of the above

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Survivorship in Pancreatic Cancer

Survivorship definition:
An individual is considered a cancer survivor from diagnosis, through the balance of life. This includes survivors living with cancer and those free of cancer. (Anyone with a history of cancer)

- Includes those on treatment, in remission, or living with metastatic disease
- Not all individuals with a history of cancer identify with the term "survivor"
- NCCN guidelines focus on the vast and persistent impact both the diagnosis and treatment of cancer have on adult survivors
- Includes the impact on physical and mental states, health behaviors, professional and personal identity, sexuality/sexual health, and financial standing.
- Includes all survivors across the continuum of cancer care, including those with metastatic disease
- As the population of "survivors" or "thrivers" grows, more specific guidelines on survivorship will develop; including those for people living with long-term metastatic disease

National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology: Survivorship. Version 3.2024. <https://www.nccn.org/professionals/guidelines/guidelines>. Accessed September 16, 2024.
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Gaps in Survivorship Care

- No guidelines for pancreatic cancer survivors
- No research focused on survivorship in this patient population
- Lack of dedicated survivorship programs in healthcare institutions
- Inadequate patient education that these services are available
- Poor provider knowledge of surveillance guidelines
- Disparities in available programs
- Social disparities in accessing programs
- Minimal psychosocial services
- Financial toxicity
- Loss of care coordination
- Lack of resources to transition back into community
- Poor management of long-term or late stage side effects



Gallagher, J., Townsend, R., de Moor, J.S., Evans, J., Farnell, M., Green, P., Mitchell, M., Molina, M., Pomeroy, P., Sauter, M.S., Shaw, J., Wheeler, J., Nogue, D.S., Evans, C. *Is Cancer Survivorship Care a Patient Need?* 2015 National Cancer Institute. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4542102/>. Accessed 10/10/2019. PMID: 26175010, PMCID: PMC4542102.

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Bridging the Gap

- Advocate for survivorship programs within your organizations
- Enhance education provided to staff and patients
- Have prominent placement in underserved areas
- Collaborate with multiple care providers
- Having a dedicated survivorship navigator to be the point person in coordinating care



The illustration shows two stylized human figures, one on the left and one on the right, standing on separate blocks. The left figure is on a blue block and is holding a yellow block. The right figure is on a red block and is also holding a yellow block. The two yellow blocks are positioned towards each other, forming a bridge between the two figures. The entire scene is enclosed in a black rectangular frame.

National Cancer Institute. Life After Cancer Treatment. <https://www.cancer.gov/publications/life-after-cancer-treatment/life-after-cancer-treatment.pdf>. Accessed September 16, 2025.

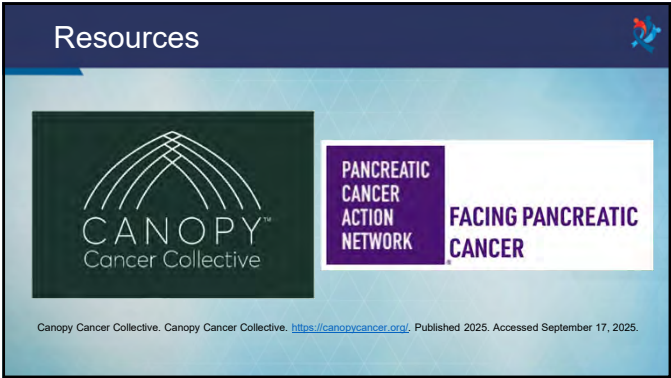
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Supportive Care & Important Referrals

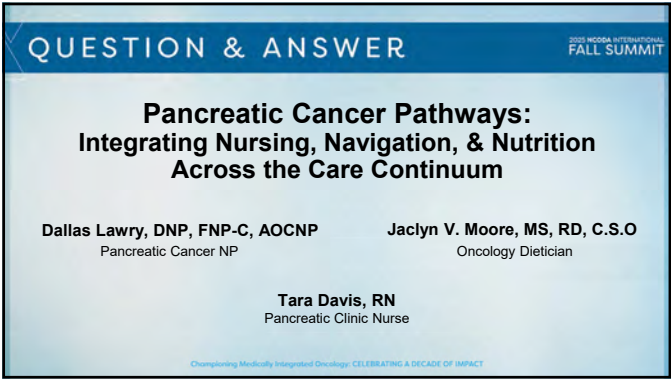


- Primary care
- 2nd opinion visit (clinical trials)
- Palliative care (11-PCST)
- Pain management
- Nutrition (MST)
- Diabetic educator/endocrinology
- Psychology/psychology (PHQ2/9, GAD-70)
- Spiritual counselor/chaplain
- Social work
- Financial advisors
- Nurse navigator/lay-navigator
- Genetics
- Support groups
- Interventional radiology
- GI/motility specialist
- Integrative medicine
- Neurology
- Physical therapy/occupational therapy
- Survivorship Clinic
- Medical aid in dying team
- Eventually, hospice

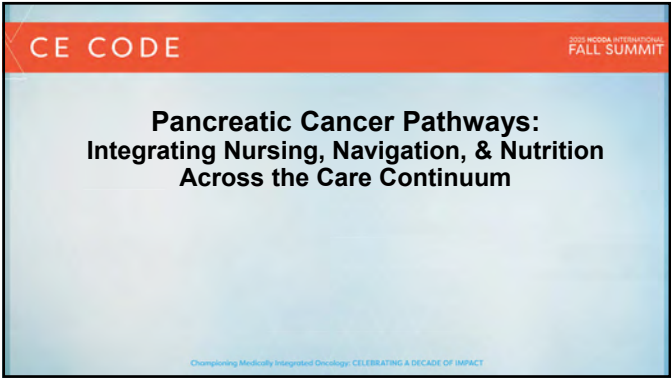
National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology: Survivorship. Version 2.2023. <https://www.nccn.org/docs/default-documents/gip4g Survivorship.pdf>
Accessed September 16, 2025.



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