Survivorship – Pancreatic Cancer

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Approved by The Executive Committee of the Medical Staff on 06/20/2023

Survivorship – Pancreatic Cancer

ELIGIBILITY

Resected pancreatic adenocarcinoma

or

Sporadic neuroendocrine tumor

or

Resected Duodenal/Peri-ampullary cancer

and

≥ 3 years post-treatment and No Evidence of Disease (NED)

CONCURRENT COMPONENTS OF VISIT

SURVEILLANCE

Years 3 to 5:

- History and physical every 6-12 months
- CT chest, abdomen, and pelvis with contrast every 6-12 months
- Nutrition evaluation with Registered Dietitian:
  - As clinically indicated if status post distal or central pancreatectomy
  - Every 6-12 months if status post pancreatoduodenectomy (PD) or total pancreatectomy (TP)
- Labs: CBC with differential, CMP, HbA1c, CA 19-9 and/or CEA every 6-12 months
  - If status post PD or TP, will need additional labs annually (see Appendix A)
- Bone Density Monitoring (DEXA) baseline at 2 years post-op, then every 2-5 years from baseline or as indicated (see Appendix B)

Years 5 to 10:

- Annual history and physical
- Annual CT chest, abdomen, and pelvis with contrast or MRI Abdomen with and without contrast - MRCP based on age of patient and genetic history
- Nutrition evaluation with Registered Dietitian:
  - As clinically indicated if status post distal or central pancreatectomy
  - Annually if status post PD or TP
- Labs: CBC with differential, CMP, HbA1c, CA 19-9 and/or CEA annually
  - If status post PD or TP, will need additional labs annually (see Appendix A)
- Bone Density Monitoring as indicated (see Appendix B)

> 10 years:

- Annual history and physical
- Annual MRI Abdomen with and without contrast - MRCP
- Nutrition evaluation with Registered Dietitian annually or as clinically indicated. If status post PD or TP, additional labs with annual visit (see Appendix A)
- Labs: CBC with differential, CMP, HbA1c, CA 19-9 and/or CEA annually
- Bone Density Monitoring as indicated (see Appendix B)

MONITORING FOR LATE EFFECTS

RISK REDUCTION/ EARLY DETECTION

PSYCHOSOCIAL FUNCTIONING

See Page 3

DISPOSITION

Abnormal findings?[1]

- Yes
  - Return to primary treating physician
  - **Primary Oncologist** to discuss Goal Concordant Care (GCC) with patient, or if clinically indicated, with Patient Representative[2]
- No
  - Continue survivorship monitoring

CMP = complete metabolic panel
CA 19-9 = cancer associated antigen 19-9
CEA = carcinoembryonic antigen
MRCP = magnetic resonance cholangiopancreatography

[1] CA19-9 elevated above normal, new lesions/lymphadenopathy on imaging, imaging findings suggestive of stricture, thrombus, fluid collections, clinical status decline, patient choice with MD review, abnormal physical exam findings

[2] GCC should be initiated by the **Primary Oncologist**. If Primary Oncologist is unavailable, Primary Team/Attending Physician to initiate GCC discussion and notify Primary Oncologist. Patients, or if clinically indicated, the Patient Representative should be informed of therapeutic and/or palliative options. GCC discussion should be consistent, timely, and re-evaluated as clinically indicated. The Advance Care Planning (ACP) note should be used to document GCC discussion. Refer to GCC home page (for internal use only).

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CONCURRENT COMPONENTS OF VISIT

MONITORING FOR LATE EFFECTS

Monitor for following at each visit:

- Fatigue
- Weight loss
- Pancreatic Exocrine Insufficiency (PEI)
- Nutrient Deficiency
- Hepaticojejunostomy Anastomotic Strictures
- Glucose control
- Peripheral neuropathy
- Osteoporosis (see Appendix B)
- Diarrhea

RISK REDUCTION/ EARLY DETECTION

Patient education, counseling, and screening:

- Lifestyle risk assessment[1,2]
- Routine cancer screening[3] as appropriate per guidelines
- Consider Vitamin D testing and replacement as clinically indicated
- HPV vaccination as clinically indicated (see HPV Vaccination algorithm)
- Screening for Hepatitis B and C as clinically indicated (see Hepatitis B (HBV) Screening and Management and Hepatitis C (HCV) Screening algorithms)
- Consider cardiovascular risk reduction[4]
- Osteoporosis surveillance (see Appendix B)
- Genetic screening if not already completed (see Genetic Counseling algorithm)
- Vaccinations[5] including Splenectomy Vaccine boosters (see Asplenia/Hyposplenia – Management of Adult Patients algorithm) as appropriate

PSYCHOSOCIAL FUNCTIONING

Assess for:

- Distress management (see Distress Screening and Psychosocial Management algorithm)
- Body image concerns

DISPOSITION

Refer or consult as indicated

[1] See Physical Activity, Nutrition, and Tobacco Cessation algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice
[2] Recommend at least 30 minutes of moderate-intensity activity most days of the week
[3] Includes breast, cervical (if appropriate), colorectal, liver, lung, pancreatic, and skin cancer screening
[4] Consider use of Vanderbilt's ABCDE's approach to cardiovascular health
[5] Based on Centers for Disease Control and Prevention (CDC) guidelines

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APPENDIX A: Pancreatoduodenectomy or Total Pancreatectomy labs

- CBC with differential
- PT with INR
- Copper
- Zinc
- Selenium
- Ferritin
- Iron
- Transferrin
- Folate
- Vitamin B6
- Vitamin B12
- Methylmalonic acid
- Vitamin A
- CRP
- Vitamin E
- 25-OH Vitamin D
- Albumin
- HbA1C

PT with INR = Prothrombin Time with INR
CRP = C-Reactive Protein

APPENDIX B: Bone Density Monitoring

	Patient Population	Frequency of Monitoring
Follow up (based on results)	Normal bone density	Recheck DEXA every 5 years if male or premenopausal; recheck DEXA every 2 years if postmenopausal
	Osteopenia, ≥ 50 years old	Consider medical therapy or referral to bone health specialist based on FRAX Calcula[1] : if risk of hip fracture is < 3% risk and risk of non-hip fracture is < 20%, recheck DEXA in 2 years. If risk of hip fracture is ≥ 3% or risk of non-hip fracture is ≥ 20%, bone health specialist
	Osteopenia, < 50 years old	Refer to bone health specialist
	Osteoporosis	Refer to bone health specialist

DEXA = dual-energy x-ray absorptionmetry
PDAC = Pancreatic Ductal Adenocarcinoma

[1] FRAX® - Fracture Risk Assessment Tool at www.shef.ac.uk/frax

SUGGESTED READINGS

Centers for Disease Control and Prevention. (2023). *Recommended adult immunization schedule for ages 19 years or older, United States, 2023*. Retrieved from https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html

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