Survivorship – Pancreatic Cancer

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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 every 6-12 months: CBC with differential, CMP, HbA1c, fasting lipid panel, CA 19-9 and/or CEA
  - If status post PD or TP, will need additional labs annually (see Appendix A)
- Bone mineral density (BMD) baseline at 2 years post-op, then every 2-5 years from baseline or as indicated (see Appendix B)

Years 6 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 annually: CBC with differential, CMP, HbA1c, fasting lipid panel, CA 19-9 and/or CEA
  - If status post PD or TP, will need additional labs annually (see Appendix A)
- BMD as indicated (see Appendix B)
- For patients with familial PDAC or germline mutations, consider referral to PDAC hereditary High Risk Clinic using the Ambulatory referral to GI High Risk and Genetics order

Years 11 and beyond:

- 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 annually: CBC with differential, CMP, HbA1c, fasting lipid panel, CA 19-9 and/or CEA
- BMD as indicated (see Appendix B)

MONITORING FOR LATE EFFECTS

RISK REDUCTION/ EARLY DETECTION

PSYCHOSOCIAL FUNCTIONING

See Page 3

DISPOSITION

Suspected new primary or 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
PDAC = pancreatic ductal adenocarcinoma
CEA = carcinoembryonic antigen
MRCP = magnetic resonance cholangiopancreatography

[1] CA 19-9 elevated above normal, clinical status decline, patient choice with MD review, abnormal physical exam findings, imaging findings suggestive of: new lesions/lymphadenopathy, stricture, thrombus, fluid collections

[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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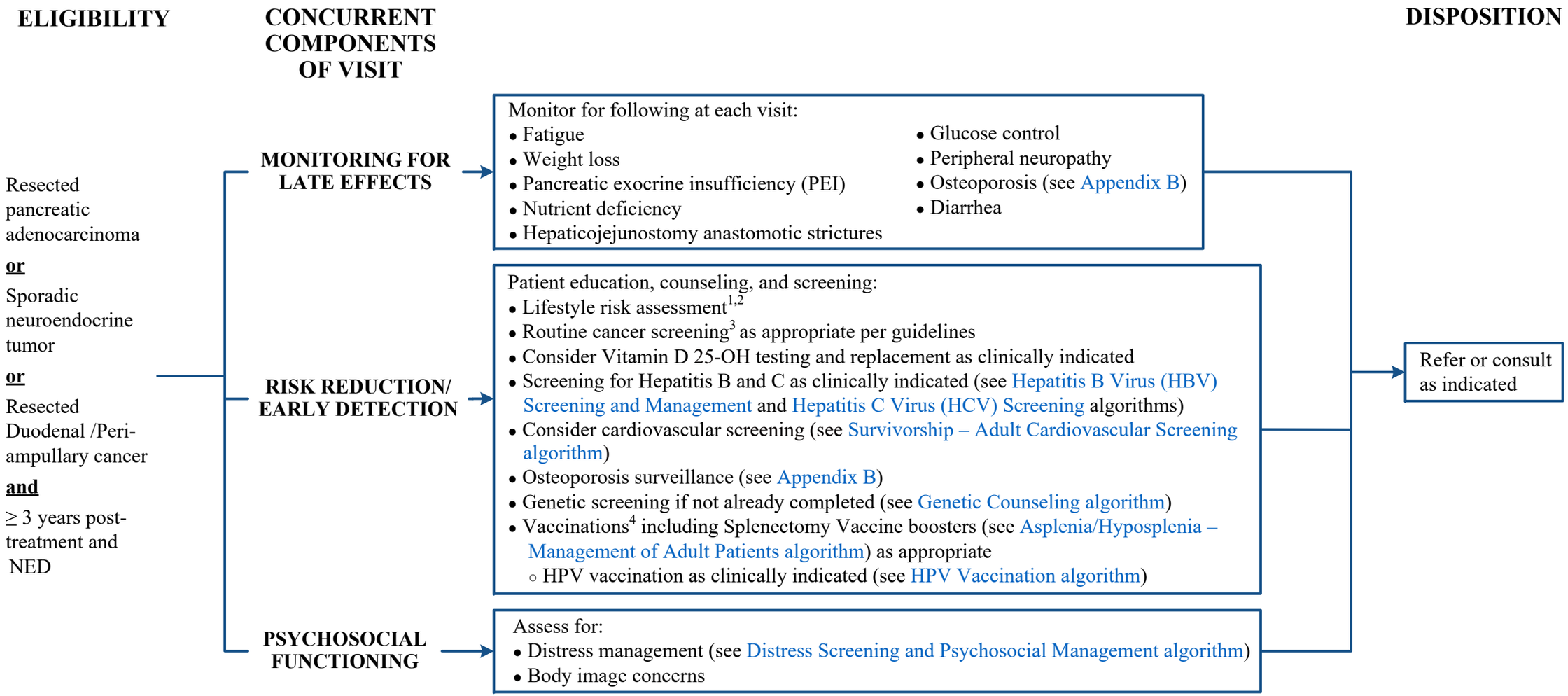

[1] See Physical Activity, Nutrition, Obesity Screening and Management, and Tobacco Cessation Treatment algorithms; patient should be encouraged to limit alcohol consumption. Ongoing reassessment of lifestyle risks should be a part of routine clinical practice
[2] Recommend at least 30 minutes of moderate-intensity activity most days of the week
[3] Includes breast, cervical, colorectal, liver, lung, pancreatic, and skin cancer screening
[4] Based on American Society of Clinical Oncology (ASCO) 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
- Vitamin D 25-OH
- Albumin
- HbA1C

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

APPENDIX B: Bone Mineral Density (BMD) Monitoring

Patient Population	Frequency of Monitoring
Normal bone density	Recheck BMD every 5 years if male or premenopausal; recheck BMD every 2 years if postmenopausal
Osteopenia, ≥ 50 years old	Consider medical therapy or referral to bone health specialist based on FRAX® Calculation[1] : if risk of hip fracture is < 3% risk and risk of non-hip fracture is < 20%, recheck BMD 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

PDAC = Pancreatic Ductal Adenocarcinoma

[1] FRAX® - Fracture Risk Assessment Tool at https://frax.shef.ac.uk/FRAX/tool.aspx?country=9

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SUGGESTED READINGS

Arango, N.P., & Maxwell, J.E. (2023). Pancreatic neuroendocrine tumors and multiple endocrine neoplasia. In BW Feig (Ed). *The MD Anderson surgical oncology handbook* (7th Edition). Philadelphia: Lippincott Williams & Wilkins. Wolters Kluwer.

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