Pancreatic Lymphoma *from* Head to Tail

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Background

Pancreatic lymphoma is a rare disease that arises primarily from the pancreas or secondarily involves the pancreas as a part of systemic lymphoma. Due to its rarity, radiologic features of the disease is relatively unfamiliar with the radiologists which could potentially lead to curative-intent, yet futile surgical resection.

Clinical features of pancreatic lymphoma

	1° Pancreatic lymphoma	2° Pancreatic lymphoma
Prevalence	Rare; < 2% of extranodal lymphomas	Not uncommon; > 30% in NHL
Epidemiology	M:F=7:1, seventh decade	
Histologic subtype	Most commonly DLBCL	
Lesion	Bulk of disease in pancreas/peripancreatic area	Frequently as direct extension from peripancreatic lymphadenopathy
Symptoms	Abdominal pain, weight loss; infrequently jaundice	
Lab findings	Elevated LDH, normal to slightly elevated CA 19-9	
Diagnosis	EUS-FNA with flow cytometry; percutaneous or open biopsy in undiagnostic cases	
Treatment	Chemotherapy in the mainstay of the treatment (CHOP, R-CHOP)	
Prognosis	CR/PR in 85%; surveillance CT warranted	Depends on the extent of systemic disease

Radiologic features of pancreatic lymphoma

- Ultrasonography
 - A bulky homogeneous hypoechoic mass

- MR
 - T1WI: Homogeneous hypo-signal intensity
 - T2WI: Homogeneous hyper-signal intensity
 - Mild homogeneous enhancement, but without delayed enhancement

- CT
 - Large, well-defined homogeneously hypovascular mass(es)
 - Without pancreatic duct obstruction/vascular invasion
 - Two morphologic patterns: Localized mass(es) and diffuse disease

Radiologic differential diagnosis

	Pitfalls	Pearls
AIP	<ul style="list-style-type: none">• Share major radiologic features• Both manifests as focal lesion(s) or diffuse disease	<ul style="list-style-type: none">• Capsule-like peripancreatic rim• Heterogeneous, relatively low T2 signal• Delayed enhancement
Pancreatic cancer	<ul style="list-style-type: none">• Pancreatic cancer is the most common pancreatic neoplasm	<ul style="list-style-type: none">• Poorly defined hypovascular mass• Progressive enhancement and peripancreatic infiltration causing ductal obstruction
Pancreatic metastasis	<ul style="list-style-type: none">• Hypovascular metastasis may mimic focal lymphoma	<ul style="list-style-type: none">• History of known primary cancer• Hypervascularity favors metastasis
NET	<ul style="list-style-type: none">• Hypovascular tumor (usually neuroendocrine carcinoma)• Well-defined, less likely to cause pancreatic duct obstruction	<ul style="list-style-type: none">• Internal necrosis and occasional calcification• Distant metastasis