

# Imaging Characteristics of Primary Pancreatic Sarcoma: Review of Literature

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DOI: [10.36348/sjm.2020.v05i01.011](https://doi.org/10.36348/sjm.2020.v05i01.011)

| Received: 04.01.2020 | Accepted: 21.01.2020 | Published: 30.01.2020

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## Abstract

**Introduction:** Sarcoma is a rare entity with the primary pancreatic sarcoma represents a diagnostic challenge. **Material and Methods:** I reviewed articles particularly radiology studies in English language found in PubMed that were published recently to draw conclusions. **Results:** The common presenting symptom is vague abdominal pain. The described imaging appearance of such entity which shared between the different subtypes is a large heterogenous solid mass with frequent cystic degeneration/necrosis. The regional lymph nodes are rarely involved. Overall, poor prognosis of primary pancreatic sarcoma was reported. **Conclusions:** Although primary pancreatic sarcoma diagnosis remains a challenge, imaging differentiation from pancreatic ductal adenocarcinoma may be possible.

**Keywords:** sarcoma, nonepithelial, pancreas, neoplasm, CT, imaging.

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## INTRODUCTION

Nonepithelial pancreatic neoplasms comprise only 1% -2%. The mesenchymal tumors are being the most common type, with the leiomyosarcomas are most commonly reported subtype. Primary pancreatic sarcomas are rare and difficult to differentiate from retroperitoneal sarcoma with extension to pancreas [1].

## MATERIAL AND METHODS

I searched PubMed for primary pancreatic sarcomas. The articles including radiologic studies which conducted recently were reviewed. Metastasis to pancreas and non-English reports were excluded.

## RESULTS

The common presenting symptoms of primary pancreatic sarcomas are vague abdominal pain, palpable mass or as acute pancreatitis [1, 2]. CT is the modality of choice for localization, lesion characterization and assessing local invasion for staging as well as evaluating for distal metastasis. The shared radiological findings between the different sarcoma subtypes is a large heterogenous solid mass with frequent cystic degeneration/necrosis and hemorrhage [3]. There are specific radiological features for some of the subtypes such as a variable fat component with solid nodules or septations in a liposarcoma and chondroid matrix in a chondrosarcoma [3]. Despite the relatively large size of such tumor at the time of presentation, patients are

rarely present with jaundice as the bile and pancreatic ducts are not commonly affected [4-8]. Regional lymph nodes are rarely involved except in cases of a chondrosarcoma where nodal dissection is needed. Distant metastasis is well known in leiomyosarcomas subtype. Although poor prognosis of primary pancreatic sarcomas patients was reported, but still better than the observed with those who has pancreatic ductal adenocarcinoma [10-15].

## CONCLUSIONS

A primary pancreatic sarcoma represents a challenge due to clinical and imaging features which may overlap with pancreatic ductal adenocarcinoma [9]. However, whenever a large well-defined pancreatic mass is found particularly with lack of biliary and pancreatic ductal dilatation a consideration of these rare tumors is suggested [3]. Also, a clinical absence of jaundice may support such a diagnosis. Awareness of these rare entity is important to direct appropriate clinical and/or surgical management.

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