

# Uncommon pancreatic metastasis - A case report

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## PART A

A middle-age woman presented in the Emergency Department with generalized weakness, shortness of breath and weight loss. As part of the clinical and labo-

ratory examination, a Computed tomography (CT) scan was performed for the investigation of the non-specific symptoms.

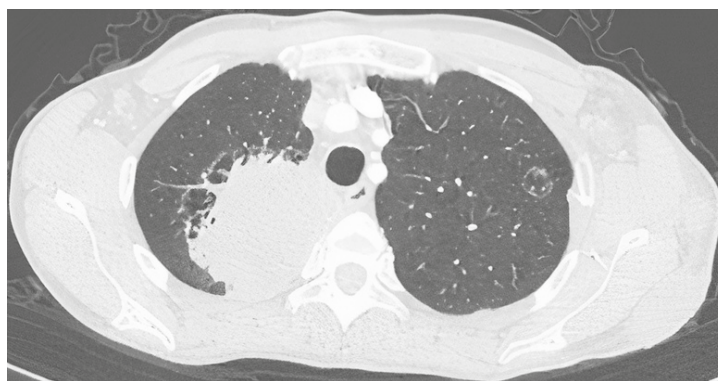


Figure 1



### KEY WORDS

pancreatic metastasis, metastatic lung cancer, computed tomography



### CORRESPONDING AUTHOR, GUARANTOR

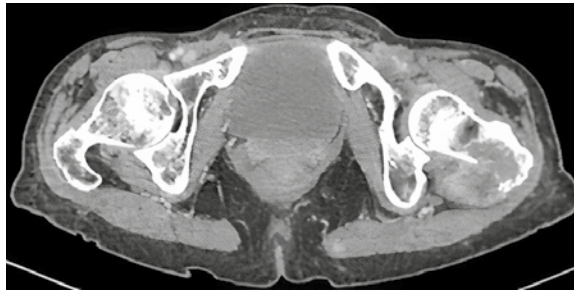
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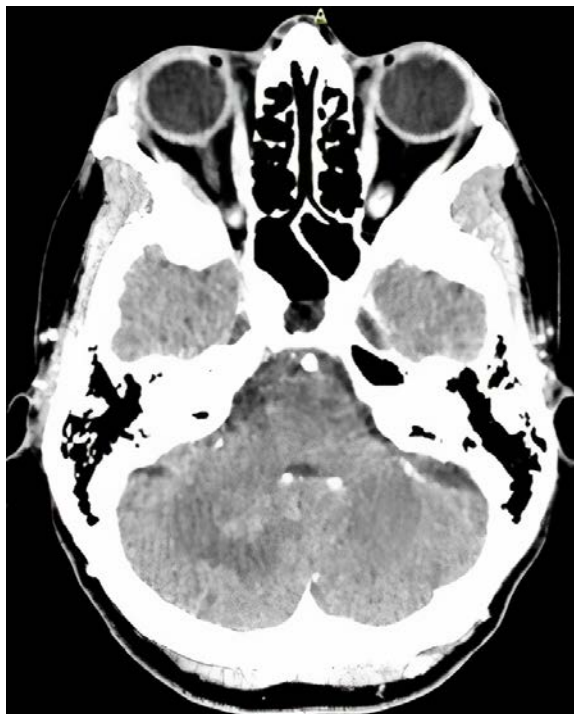
*Figure 2a*



*Figure 2b*



*Figure 3*



*Figure 4*

## PART B

***Diagnosis: Metastatic lung cancer with uncommon metastasis to the pancreas.***

Computed tomography (CT) showed a dominant lung mass in the right upper lobe, infiltrating the right hilum. The CT scan also showed as a solitary brain lesion and a few lesions in the liver, left adrenal and in the subcutaneous tissues likely metastatic. Two non-specific hypodense lesions were also detected in the body and tail of the pancreas.

The patient was discussed in our local Multidisciplinary Team regarding the imaging findings, the diagnostic work-up and the further clinical management. In case of multiple lesions, there is possibility of one primary or two or more synchronous cancers which is often challenging to identify radiologically.

The decision of ultrasound-guided biopsy of one of the subcutaneous soft tissue lesions showed a sarcomatoid carcinoma of lung origin. Given the rarity of pancreatic metastasis and the difficulty to exclude a synchronous cancer, tissue diagnosis was decided in the multidisciplinary discussion confirming the metastasis.

Pancreatic metastasis is uncommon and account for approximately 2% of pancreatic malignancies [1]. At autopsy the pancreas has been found to be a site of metastases in a wide range (3–12%) of patients with malignant tumors [1].

The most common primary sites are lung cancer, breast cancer, renal cell carcinoma, malignant melanoma, carcinoma of gastrointestinal origin and prostate cancer. Less commonly metastases from osteosarcoma,

leiomyosarcoma, chondrosarcoma and Merkel cell carcinoma, have been reported [2].

Most pancreatic metastatic lesions are round or ovoid with smooth margins, [3] similar to our case report. However, pancreatic metastasis can also radiologically present with diffuse infiltration making differential diagnosis difficult [4].

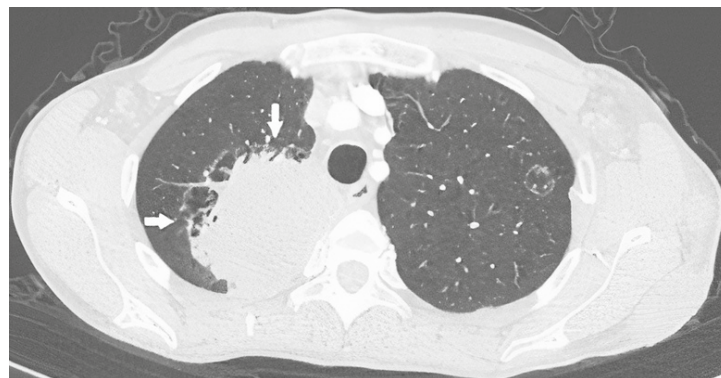
Although pancreatic metastasis usually presents as a solitary lesion, in a small percentage it can present as multiple lesions [4].

CT may demonstrate features that aid in distinguishing metastatic from primary cancer of the pancreas. For example, the enhancement of tumor tissue reflects a degree of vascular perfusion that is not typical of primary pancreatic adenocarcinoma [4].

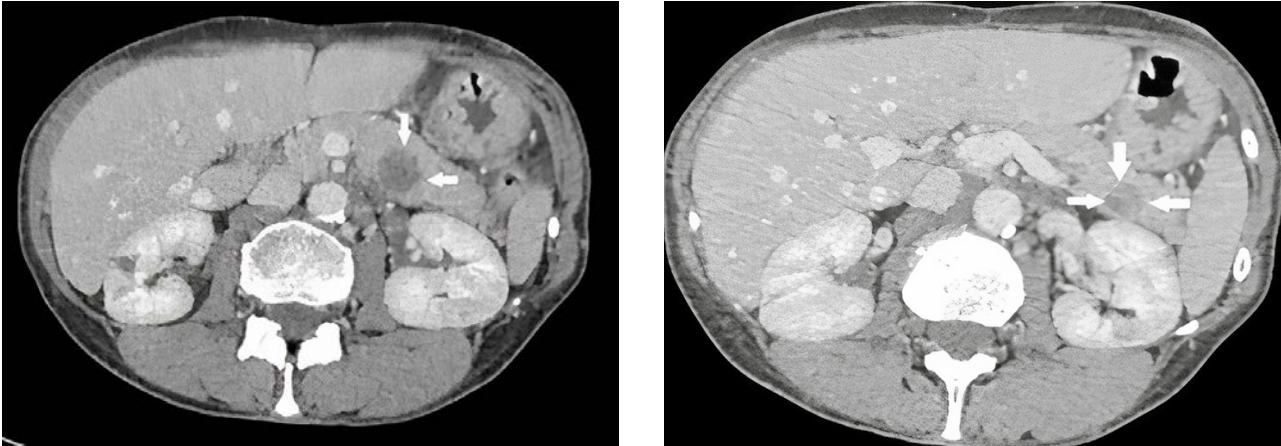
In our case report, the lesions are located in the body and tail of the pancreas and do not cause dilatation of the pancreatic duct, whereas lesions of the head and neck of the pancreas may cause significant dilatation of the pancreatic duct or common bile duct [3].

However, cases of dilatation of the main pancreatic duct in case of metastatic tumor in the tail of the pancreas from lung carcinoma have been described in the literature [5]. Furthermore, metastasis may be more likely when there is a large tumor of the pancreatic head without a dilated bile duct and when the retropancreatic fat is not obliterated in a patient with a large pancreatic mass [4].

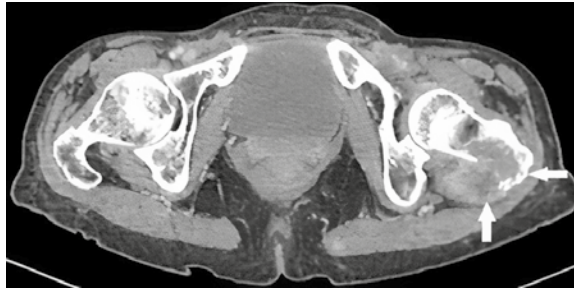
According to a study, the most common types of lung cancer related to pancreatic metastases are, in order,



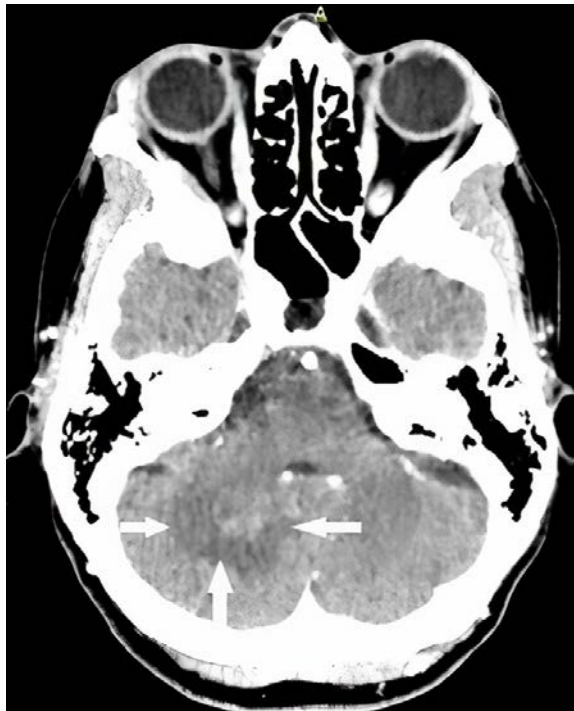
**Fig. 1:** Axial CT image demonstrates a large lung mass (arrows) posteriorly in the right upper lobe, infiltrating the right hilar region.



**Fig. 2a, b:** Axial CT images demonstrate two hypodense round lesions in the body and the tail of the pancreas (arrows). There is no associated pancreatic duct dilatation.



**Fig. 3:** Axial CT image of the pelvis demonstrates a destructive soft tissue lesion in the left femur (arrows).



**Fig. 4:** A metastatic lesion of unclear borders with perivascular edema in the right cerebellar hemisphere (arrows) is observed.

small cell lung cancer (SCLC), lung adenocarcinoma and large cell neuroendocrine carcinoma [6].

Moreover, pancreatic metastases from sarcomatoid carcinoma have been described in the literature [7]. The incidence of pancreatic involvement with the background of squamous cell carcinoma is the lowest among the different histological subtypes of lung cancer [8].

### Conclusion

Pancreatic metastases occur rarely and vary in their location, number and imaging characteristics. Pancreatic metastasis is rare and can be misdiagnosed as primary pancreatic malignancy. Radiologists should be aware of the morphologic features of a possible pancreatic metastasis for the appropriate clinical management. **R**

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