

## Mucinous cystadenocarcinoma of pancreas with cystic liver metastases

Published on 14.05.2006

**DOI:** 10.1594/EURORAD/CASE.2469

**ISSN:** 1563-4086

**Section:** Abdominal imaging

**Imaging Technique:** CT

Case Type: Clinical Cases

**Authors:** McCarthy C

**Patient:** 80 years, female

### Clinical History:

Weight loss, change in bowel habit

### Imaging Findings:

The patient presented with 6 month history of change in bowel habit from constipation to diarrhoea. She had no Per Rectal bleeding and no change in appetite. She had weight loss of 2 stone over the past 2 years. On further questioning, she had been on Thyroxine and it was postulated that the dose was too high. A Barium enema was performed, which was normal and at this stage the thyroxine dose was also found to be within normal limits. An abdominal CT was performed. This showed a 5 x 2.6cm mainly cystic, but with some solid components within it, mass lesion in the body of the pancreas. This was associated with duct dilation throughout the pancreas, with some duct branch dilatation seen in the pancreatic head. In addition, there were multiple low attenuation focal lesions throughout the liver, which had tissue characteristics at the upper limit of normal 'cystic' range (between 18 - 22HU), similar to the cystic components of the pancreatic mass lesion. It was felt that, taking into account the patients age, recent weight loss and the fact that the mass was relatively large and contained both cystic and solid components, as well as there being probable cystic metastases within the liver, that this was likely to represent malignant disease with distant spread to the liver. After discussion with the patient about the likely diagnosis, no further imaging was undertaken and further management was palliative.

### Discussion:

Mucinous cystadenocarcinoma's are rare cancers of the pancreatic gland and, along with the other types of pancreatic cystic neoplasms, namely microcystic adenomas and mucinous cystic adenomas, make up for less than 5% of pancreatic tumours. They usually present in middle - aged women, who present with epigastric pain, anorexia, an abdominal mass or as an incidental finding.. Most are located in the body or tail of the pancreas, with only 10 - 30% arising in the head. They can grow to relatively enormous sizes (up to 20cm) and it appears that the larger the tumour is, the more likely it will have undergone malignant change, from a benign mucinous cystadenoma to a frankly malignant mucinous cystadenocarcinoma. Other findings that suggest malignant change are intramural nodules within the cysts and solid components, as well as cystic, within the mass. Metastases within the liver will often be cystic in nature, and septations and irregularity of the cyst walls can be seen within them. Imaging techniques can include plain radiography, which will show calcification in up to 16% of cases but is not very specific. Ultrasound is very good at showing the, usually, multiloculated cystic masses with internal septae and irregularity of the cyst walls, if it is possible to get diagnostic views of the pancreas. More reliable and consistent images will be produced with CT. It will also show the internal structures within the cystic mass but not as well as ultrasound. Both imaging techniques can show main or pancreatic duct dilatation. This can happen due to the high production of

mucin by these tumours. However, neither imaging technique is good at distinguishing between the histological types of the mucinous cystic neoplasms, unless there is frank invasion of adjacent structures or if metastatic disease is present. CT has been shown to be better than ERCP, at diagnosis of these type of cystic tumour. Furthermore, MRI is very good at demonstrating the multilocularity and septations within the cystic tumours, as well as different signal intensities within the compartments, including hamorrhage that may have occurred within individual compartments. It is not good at demonstrating calcification within the tumour mass however. MRCP will show the dilated main and secondary ducts within the pancreas, and will usually show the cystic components of the mass within the pancreas also. Surgical treatment can be potentially curative, if the tumours are not obviously metastatic at the time of presentation, and therefore if patients are well enough then a surgical procedure to allow complete excision of the tumour should be planned. For those patients who are medically unfit for surgery or in whom there is obvious tumour spread at the time of diagnosis, symptomatic and palliative methods of treatment are chosen.

**Differential Diagnosis List:** Mucinous cystadenocarcinoma with liver metastases.

**Final Diagnosis:** Mucinous cystadenocarcinoma with liver metastases.

### References:

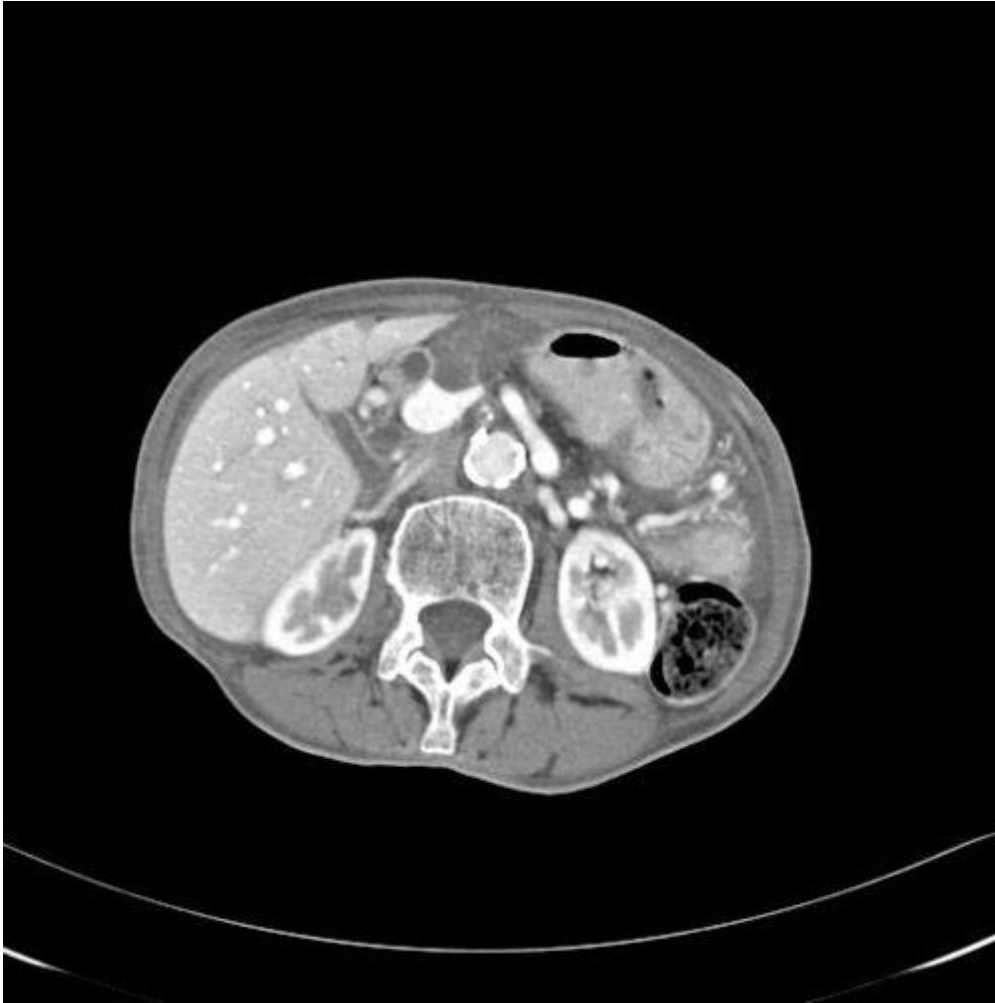
Kehagias D. Cystic tumours of the pancreas:preoperative imaging, diagnosis and treatment. Int Surg 2002, Jul-Sep;87(3):171-4. (PMID: [12403093](#))

Hammond N, et al. Imaging of cystic diseases of the pancreas. Radiol Clin North Am 2002 Dec;40(6):1243-63. (PMID: [12479709](#))

Buetow PC, et al. From the archives of the AFIP.Mucinous cystic neoplasms of the pancreas:radiologic-pathologic correlation. Radiographics 1998 Mar-Apr;18(2):433-49. (PMID: [9536488](#))

**Figure 1**

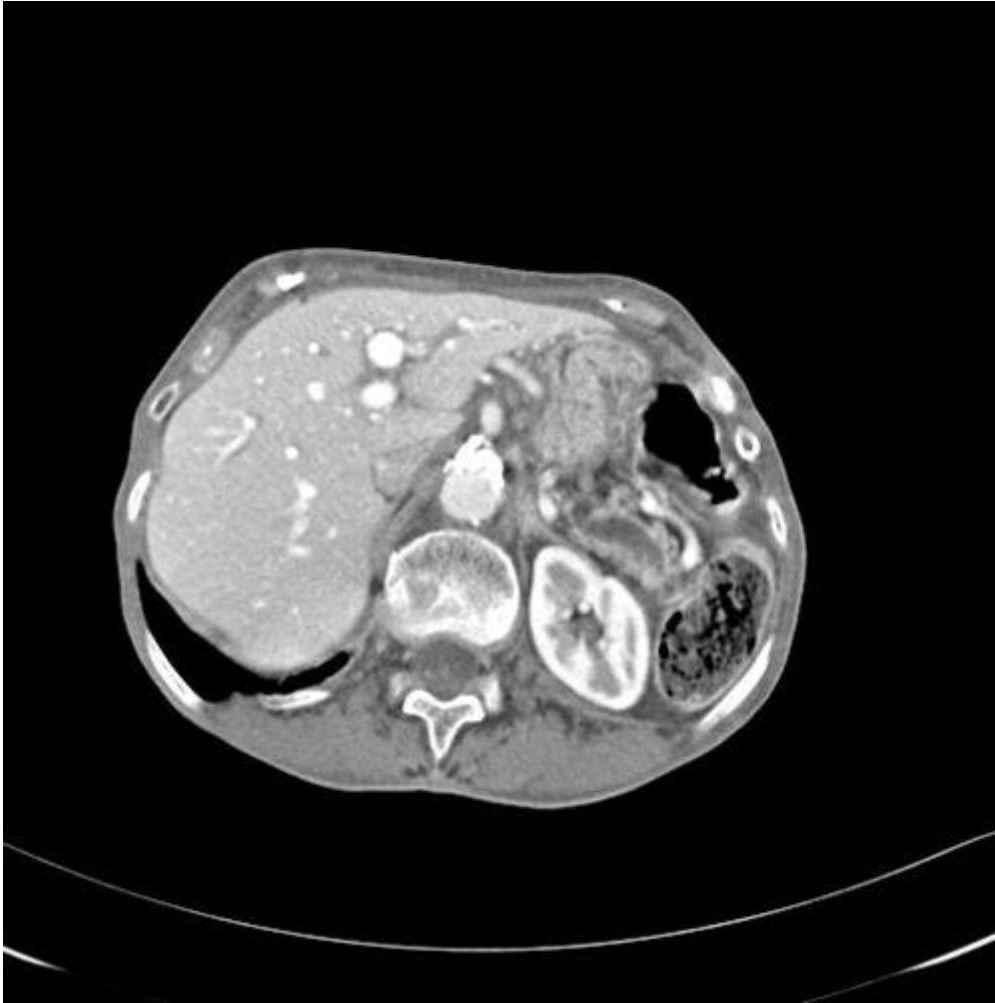
**a**



**Description:** Imaging at the level of the cystic mass located in the pancreatic body. A cystic liver metastasis is seen in the left lobe of the liver also. **Origin:**

**Figure 2**

a



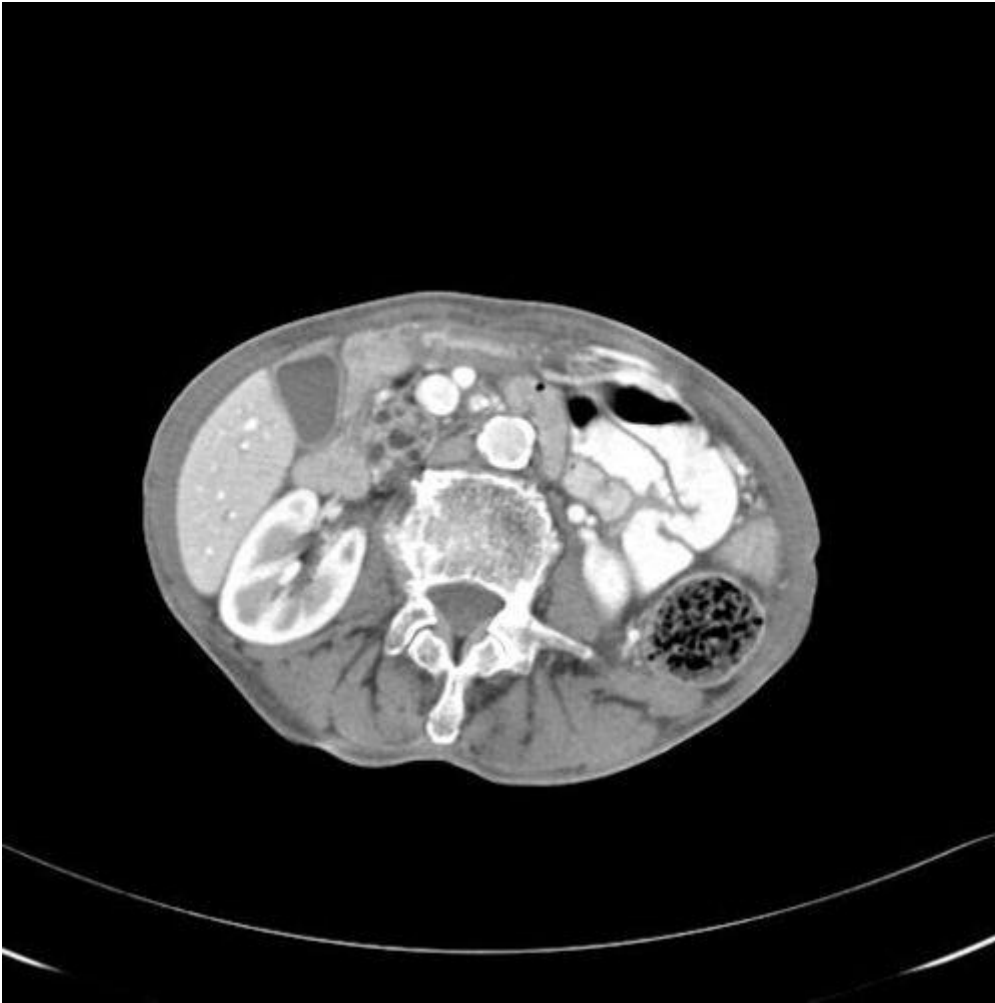
**Description:** Main pancreatic duct dilatation seen in the tail of the pancreas. There is also a tiny cystic liver metastasis seen at the anterior aspect of the right lobe of the liver. **Origin:**

**b**



**Description:** Main pancreatic duct dilatation seen within the body of the pancreas. There is a cystic liver metastasis seen within the caudate lobe. **Origin:**

**c**



**Description:** Dilated main and side pancreatic ducts seen within the pancreatic head. **Origin:**