

# Rare Case of Mucinous Adenocarcinoma of Stomach with Calcified Metastasis in Liver

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**Abstract:** Mucinous adenocarcinoma of the stomach (MGC) poses diagnostic challenges due to its unique characteristics. Traditional endoscopic biopsy often falls short in assessing infiltration depth and metastasis accurately. Multidetector computed tomography (MDCT) offers superior preoperative assessment by detailing tumor characteristics and surrounding involvement. However, magnetic resonance imaging (MRI) and endoscopic ultrasound (EUS) struggle with peristalsis and visualizing advanced stages. Positron emission tomography - computed tomography (PET - CT) is less effective initially and preoperatively.

**Keywords:** mucinous gastric carcinoma, clinicopathological characteristics, computed tomography

## 1. Case History and Imaging

A 74 year old male patient presented to the emergency department with abdominal pain, weight loss, nausea, and early satiety.

On endoscopy there is evidence of diffuse wall thickening of stomach with subtle mucosal irregularities suspecting gastric carcinoma they have sent biopsy for histopathology and the patient was subjected to CECT abdomen to rule out nodal and distant metastasis.



1mm thickness plain image shows diffuse irregular long segment wall thickening noted along the greater curvature of body of stomach with max thickness of 23mm and for a length of 9cm.

Peri gastric fat stranding noted.

Multiple variable sized lymphnodes are noted in peri gastric region.

Liver appears enlarged in size with multiple varied sized heterogenous lesions predominantly hyperdense with HU +97 studded in right and left lobe. Rest of the solid organs appears normal. The presence of nodules in liver gives nodular appearance - pseudo cirrhosis pattern.

Minimal amount of fluid noted in bilateral pleural cavities.



Contrast enhanced 1mm thickness arterial phase image shows heterogeneous enhancement of thickened stomach wall.

The lymphnodes in perigastric region shows homogenous post contrast enhancement.

Few of the hyperdense lesions in liver shows heterogeneous enhancement on arterial phase.

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Contrast enhanced 1mm thickness portal venous phase images shows that the hyperdense lesions in liver are significantly washed out.

The main portal vein and its branches are seen compressed by the hepatic lesions.



On 5mins delayed images significant washout is seen in the hepatic lesions.

All the above mentioned findings suggestive of carcinoma stomach with nodal and hepatic metastasis.

I/V/O calcified hepatic and nodal metastasis may pin the diagnosis of carcinoma stomach.

## 2. Discussion

Currently, the primary method for diagnosing gastric cancer (MGC) is through endoscopic biopsy. However, this approach has limitations in accurately assessing certain aspects such as infiltration depth, peripheral invasion, lymph node metastasis, and distant metastasis. Studies indicate that endoscopic biopsy has low sensitivity in diagnosing MGC

In contrast, multidetector computed tomography (MDCT) is highly effective in evaluating various aspects of MGC prior to surgery. MDCT can accurately depict the attenuation value of the primary lesion, infiltration depth, involvement of surrounding structures, enhancement patterns, and even punctate calcifications. Importantly, MDCT imaging is minimally affected by factors like breathing, heartbeat, and

gastrointestinal peristalsis [12]. Therefore, MDCT is considered the primary imaging modality for preoperative assessment of gastric carcinoma.

Other imaging tools have specific technical limitations. Magnetic resonance imaging (MRI), for example, is hindered by the influence of gastrointestinal peristalsis due to the lengthy duration of examination. Endoscopic ultrasound (EUS), while useful, cannot provide clear visualization of infiltration depth in advanced gastric cancer, and it may not accurately assess lymph node and distant metastasis.

Positron emission tomography - computed tomography (PET - CT) also has drawbacks in diagnosing MGC, as its diagnostic accuracy is notably low, making it less valuable in the initial diagnosis and preoperative evaluation of MGC.

## 3. Conclusion

Mucinous adenocarcinoma of the stomach (MGC) presents unique diagnostic challenges due to its mucin - rich nature and subtle endoscopic features. Advances in imaging, particularly MDCT, have improved preoperative assessment by providing detailed insights into tumor extent and infiltration depth. Treatment typically involves surgical resection followed by tailored adjuvant therapies, yet prognosis remains guarded, often due to advanced stage at diagnosis. Future research should focus on early detection methods and personalized treatment strategies to enhance outcomes for MGC patients. Collaborative efforts are crucial for advancing our understanding and management of this complex gastric malignancy.

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