



UNIVERSITY of  
**ROCHESTER**  
MEDICAL CENTER

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### DEPARTMENT OF IMAGING SCIENCES

## Imaging Sciences Interesting Cases

### CASE 229

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**CLINICAL PRESENTATION:** Patient is a 23-year-old male with abdominal pain.

**IMAGING FINDINGS:** See below.



**Figure 1:** CT post-contrast axial image demonstrates a heterogeneous mass replacing the left lobe of the liver and severely compressing the entirety of the pancreas. The mass is large and multilobular. It contains heterogeneous low attenuation areas within.

#### **DIAGNOSIS: Fibrolamellar carcinoma**

**DISCUSSION:** Fibrolamellar carcinoma (FLC) is a rare primary hepatic malignancy and considered a histologic variant of hepatocellular carcinoma (HCC). The etiology of FLC remains unclear. It is associated with cirrhosis in less than 10% of patients and typically presents in the absence of underlying liver disease. FLC is also most common in young adults and occurs in both sexes with equal incidences. Patients usually present without symptoms. When symptoms do develop, they are most commonly abdominal pain, abdominal fullness, and weight loss.

Ultrasound findings include a well-defined, large, solitary mass with variable texture and a hyperechoic scar.

CT findings are of a well-defined heterogeneous low-attenuation mass in the liver with central scar. Area

of necrosis and calcification are common. On post-contrast arterial phase images, the mass usually has heterogeneous enhancement and appears hypoattenuated on portal venous phase images. On delayed phase images, the mass is isodense with hyperdense central scar.

MR findings:

- T1WI: Homogeneous and hypointense mass with hypointense scar.
- T2WI: Heterogeneous and hyperintense mass with hypointense scar.
- T1 post-contrast: Heterogeneous enhancement of the mass without enhancing of the scar. On delayed phase, the mass appears more homogeneous enhancement with partial enhancement of the scar.

Nuclear Medicine:

- Tc99m Sulfur colloid: photopenic defect of the mass.
- Tagged red blood cell scan: early uptake and late defect.

Optimal management for FLC is complete surgical resection (e.g., anatomic liver resection, wedge resection, orthotopic liver transplantation). There appears to be occasional utility for treating FLC with neoadjuvant or adjuvant chemotherapy or transarterial chemoembolization (TACE).

#### **REFERENCES:**

1. Choti M, Nathan H. Fibrolamellar carcinoma. e-Medicine. March 9, 2009. <http://emedicine.medscape.com/article/278354-overview>
2. McLarney JK, Rucker PT, Bender GN, Goodman ZD, Kashitani N, Ros PR. Fibrolamellar carcinoma of the liver: radiologic-pathologic correlation. *Radiographics*. 1999 Mar-Apr;19(2):453-71. [PubMed]