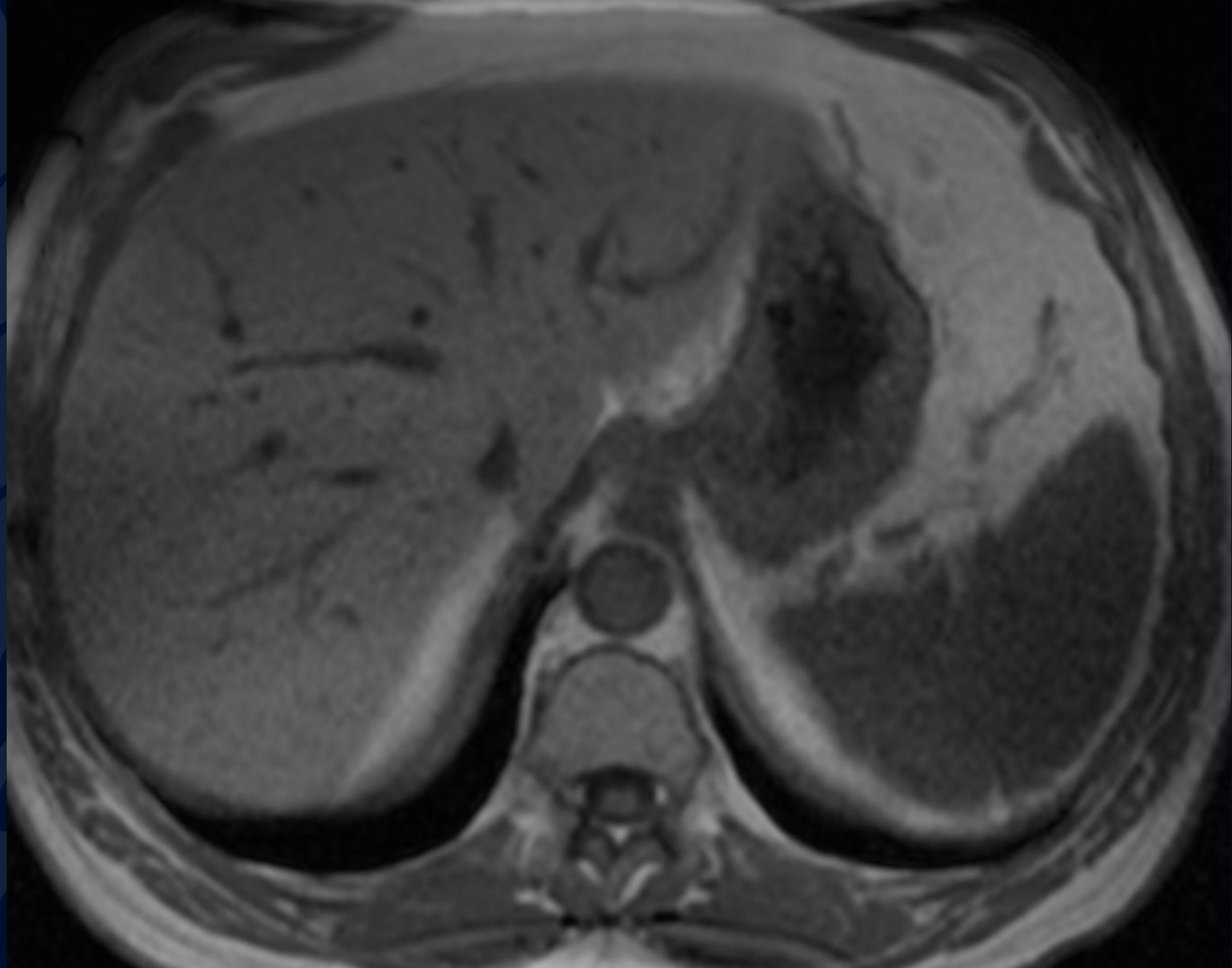
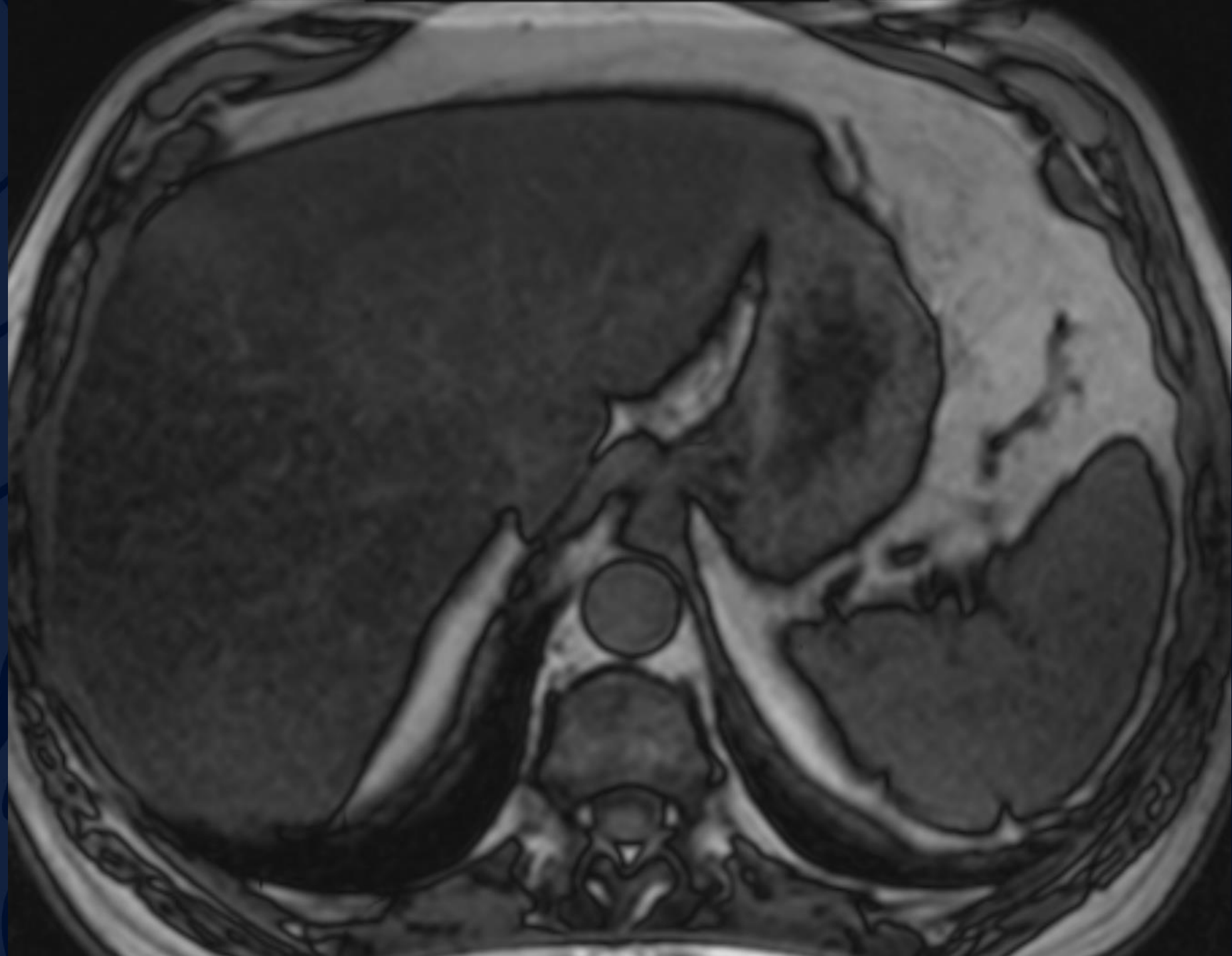


64 year old male undergoing MR eval of a pancreatic lesion with an incidental finding

Ryan Joyce, MD



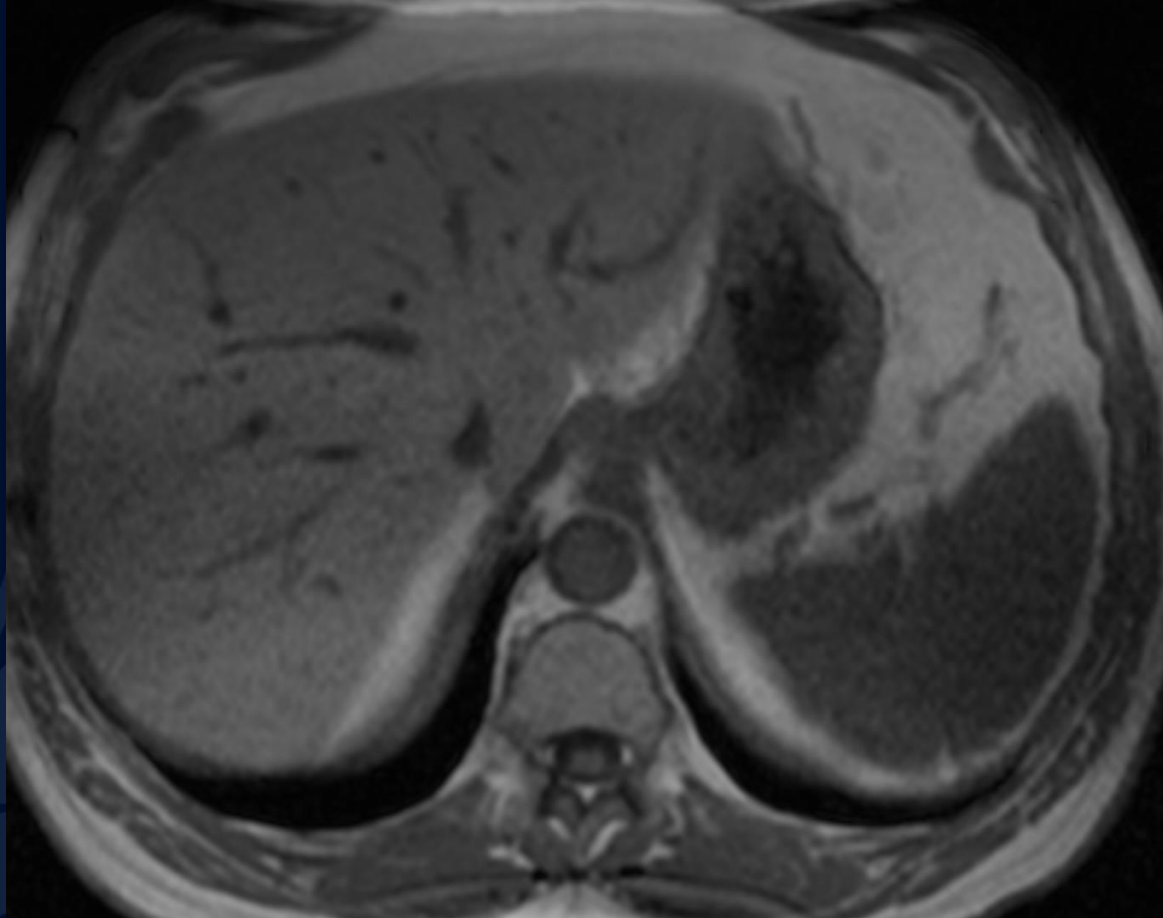


A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. The leaf has a prominent central vein and several smaller veins branching off it. The leaf's edge is serrated.

?

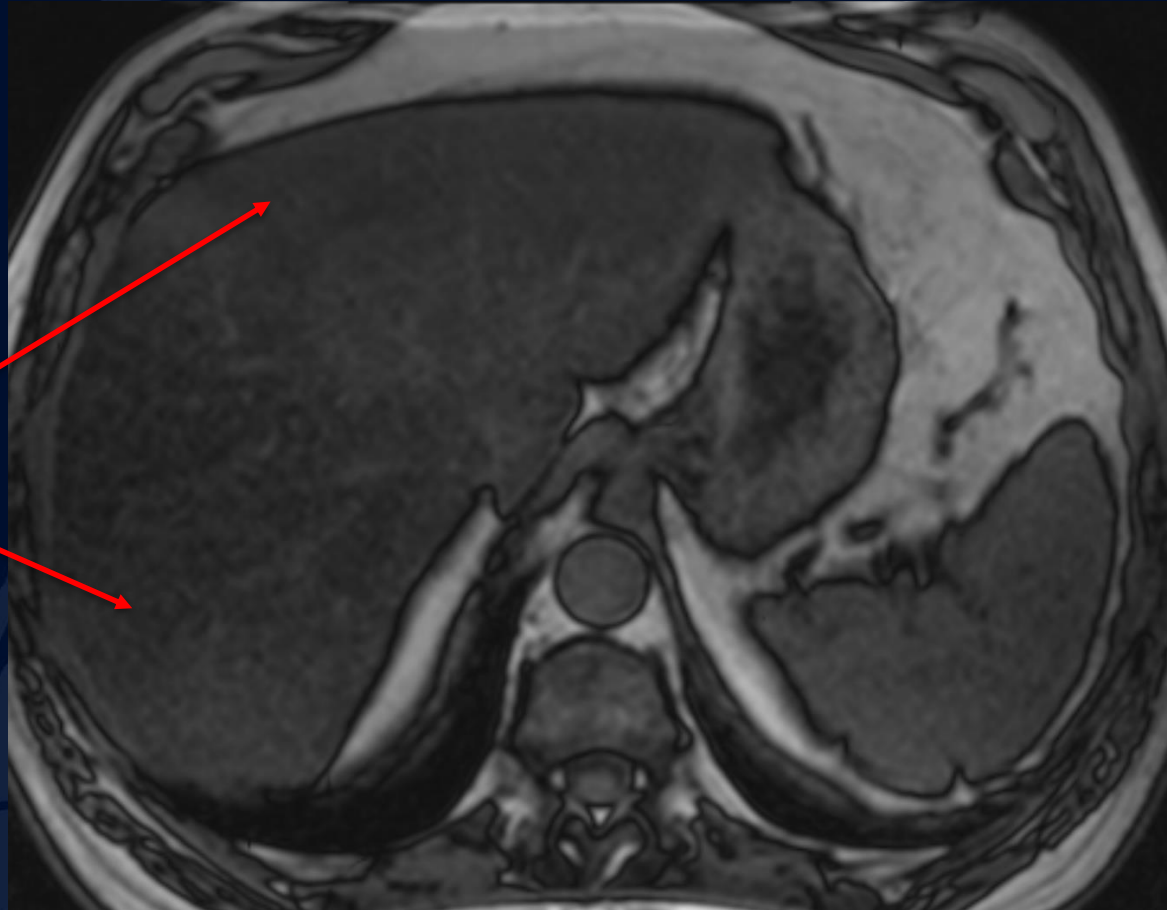
The background features a dark blue color with a subtle, stylized pattern of oak leaves on the left side. The leaves are rendered in a slightly lighter shade of blue, creating a layered, organic texture.

Hepatic steatosis



T1 in-phase GRE

Diffuse liver
signal
dropout



T1 opposed-phase GRE

Hepatic steatosis

Accumulation of triglycerides within hepatocytes

- May be focal, multifocal, or diffuse (with or without areas of sparing).
- Liver maintains normal shape and surface contour.
- On imaging:
 - **US:** increased parenchymal echogenicity (compare to kidney), decreased conspicuity of portal vein walls, blurring of hepatic vein margins, increased beam attenuation.
 - **CT:** decreased hepatic density (best evaluated with non-contrast CT) at least 10 HU less than spleen or absolute attenuation < 40 HU.
 - **MR:** increased signal of liver relative to spleen (subjective). More definitively, look for hepatic signal dropout on opposed-phase T1 imaging compared to in-phase T1 imaging.
 - All modalities: normal vessels course through the abnormal area!

Hepatic steatosis

Most commonly, is related to metabolic derangement (DM, obesity, hyperlipidemia).

- Other causes include, but are not limited to:
 - Alcohol abuse
 - Protein malnutrition
 - Tetracycline use
 - Steroids
 - Cystic fibrosis
 - Reye syndrome

Patients are usually asymptomatic with abnormal LFTs (helps distinguish from steatohepatitis).

References

1. Lawrence DA et al: Detection of hepatic steatosis on contrast-enhanced CT images: diagnostic accuracy of identification of areas of presumed focal fatty sparing. AJR Am J Roentgenol. 199(1):44-7, 2012
2. Statdx.com