

AMSER Case of the Month

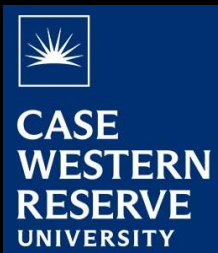
September 2026

2-year-old female with hepatomegaly

Jade Dohner, M2 at CWRU School of Medicine

Michael Wien, MD, University Hospitals Cleveland Medical Center

Pauravi Vasavada, MD, University Hospitals Cleveland Medical Center



Patient Presentation

- **HPI:** 2-year-old female presents to well child visit and noted to have hepatomegaly on exam. Baseline labs obtained and referred to GI.
- **PMH:** prematurity of 35.5 weeks with subsequent hypoxia, candida stomatitis, malformation of eyelid, poor nutrition, and mixed receptive language delay

Patient Presentation

- ROS

- No abdominal pain, nausea, vomiting, diarrhea, constipation
- Denies any scleral icterus, jaundice, easy bruising, frequent nosebleeds, or bleeding

- Physical Exam

- Hepatomegaly, 3 cm below costal margin
- Normal sclera, no ascites

Pertinent Labs

- GGT = 305 U/L (5-16 U/L)
- Alkaline Phosphatase = 108 U/L (145-320 U/L)
- TIBC = 463 ug/dL (250-450 ug/dL)
- **Normal** AFP, B-HCG, LDH, uric acid, total iron, ferritin, BMP, and CBC

What Imaging Should We Order?

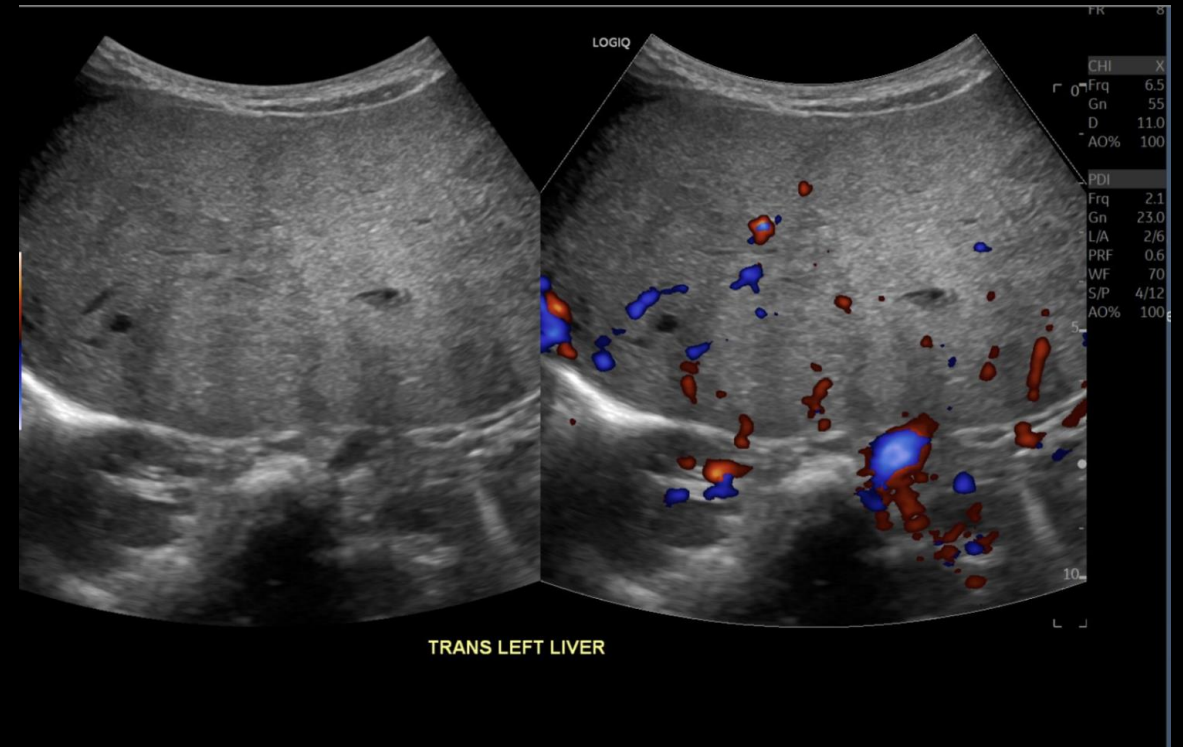
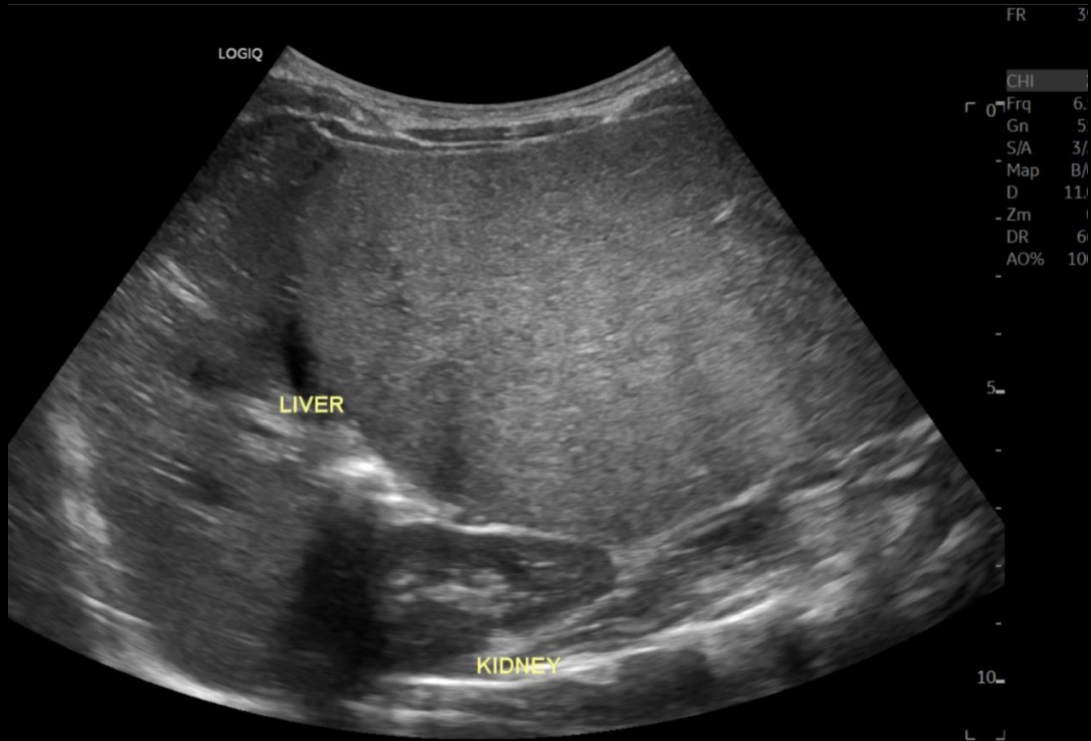
Select the applicable ACR Appropriateness Criteria

Variant: 1 Child. Palpable abdominal mass. Suspected neoplasm. Initial imaging.		
Procedure	Appropriateness Category	Peds Relative Radiation Level
US abdomen	Usually Appropriate	0
Radiography abdomen	Usually Appropriate	☢☢
CT abdomen and pelvis with IV contrast	Usually Appropriate	☢☢☢☢
US pelvis transabdominal	May Be Appropriate	0
MRI abdomen and pelvis without and with IV contrast	May Be Appropriate (Disagreement)	0
CT chest abdomen pelvis with IV contrast	May Be Appropriate	☢☢☢☢
US abdomen with IV contrast	Usually Not Appropriate	0
MRI abdomen and pelvis without IV contrast	Usually Not Appropriate	0
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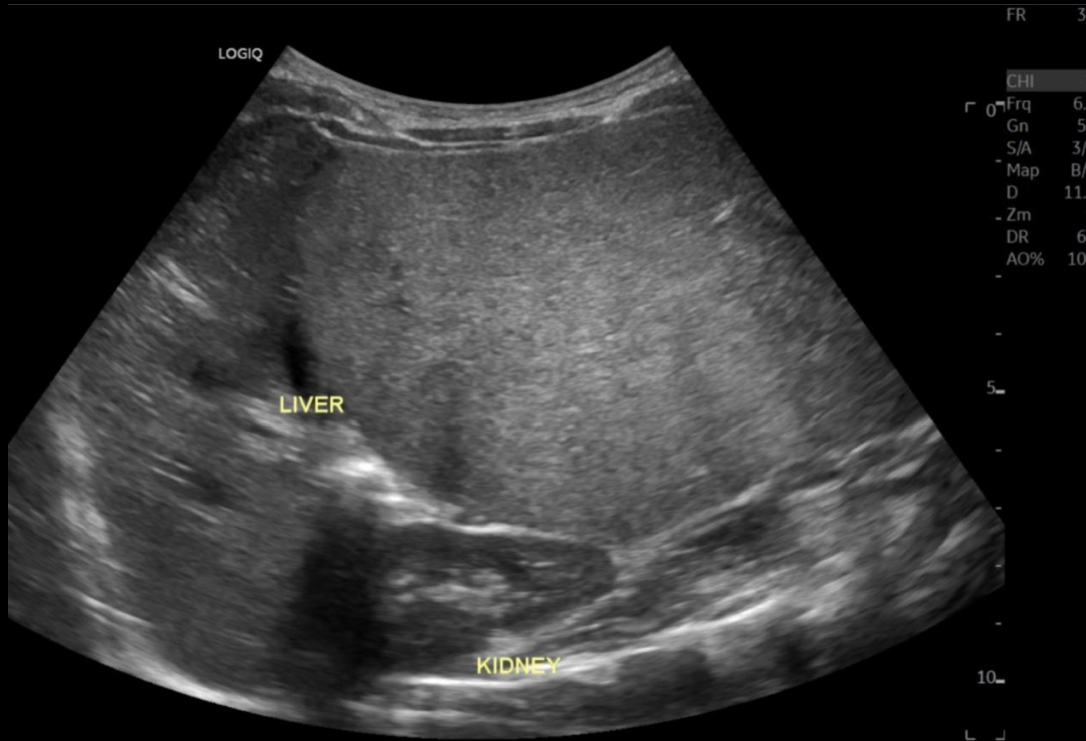
This imaging modality was ordered by the GI physician



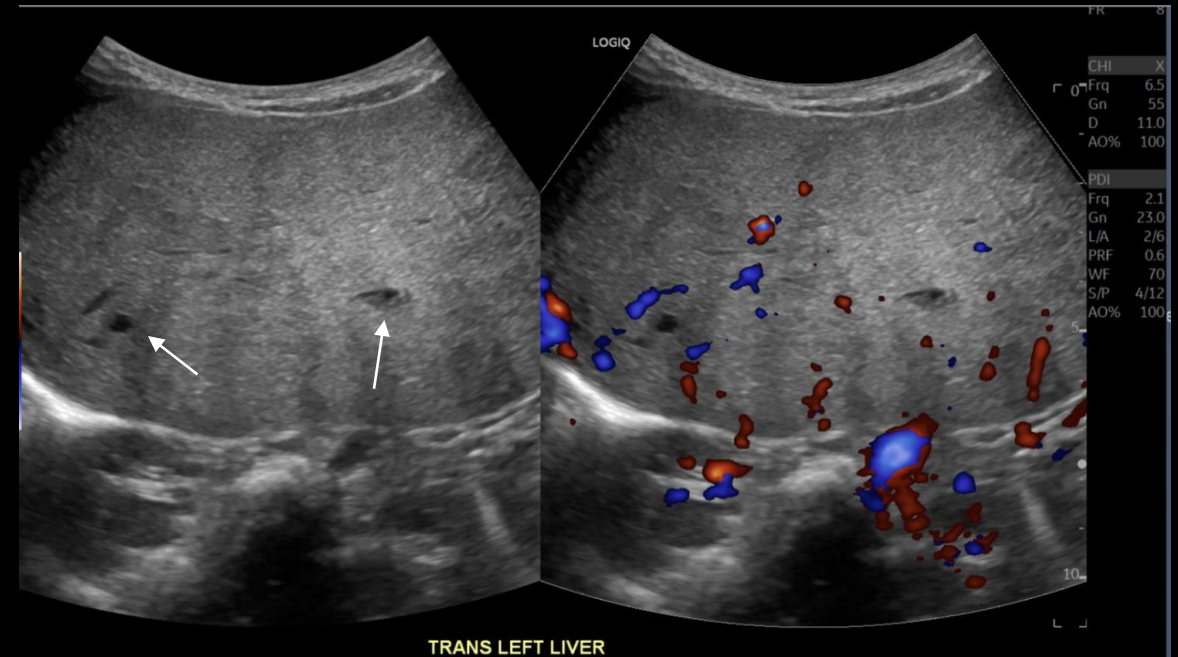
Ultrasound with Doppler (unlabeled)



Ultrasound with Doppler (labeled)



Large, heterogenous, hyperechoic hepatic mass suspected to be arising from the left lobe, well-demarcated



Cystic spaces
within mass

Internal vascularity
of mass

Hematology- Oncology physician ordered further imaging for further characterization of the mass.

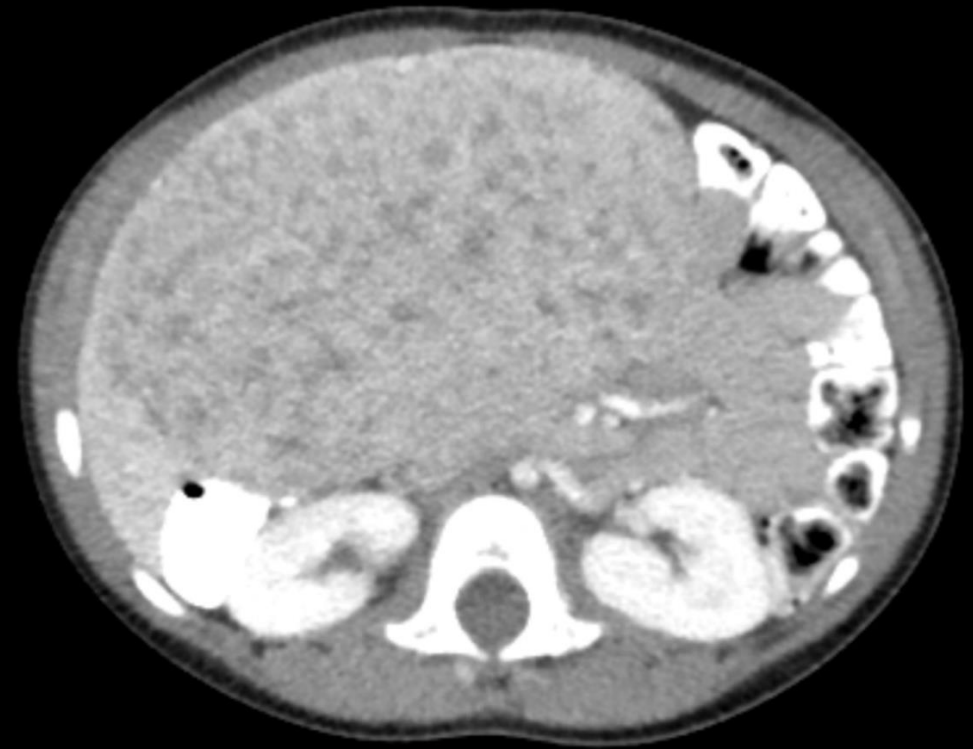
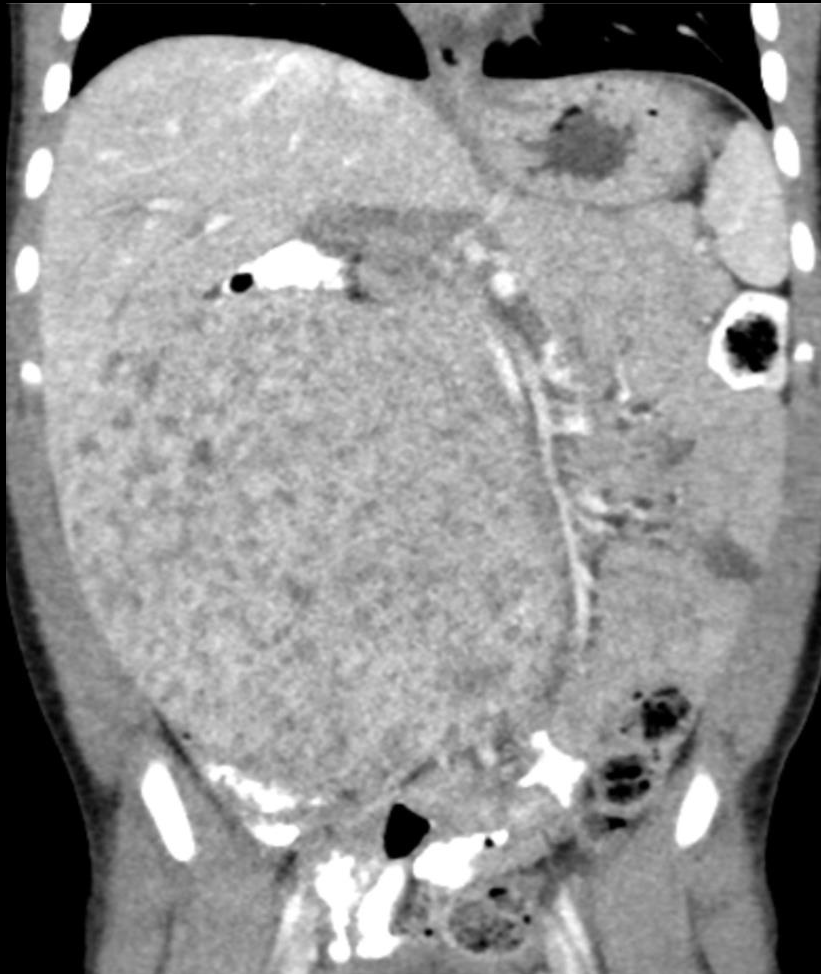
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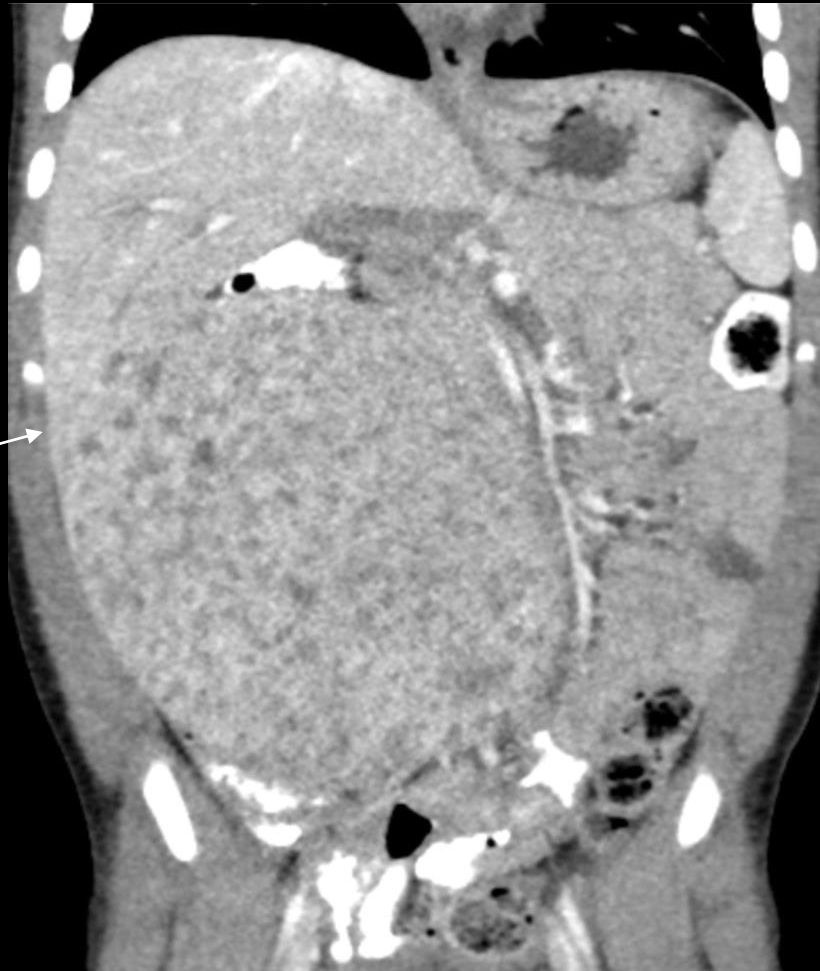
This imaging modality was ordered by the heme-onc physician



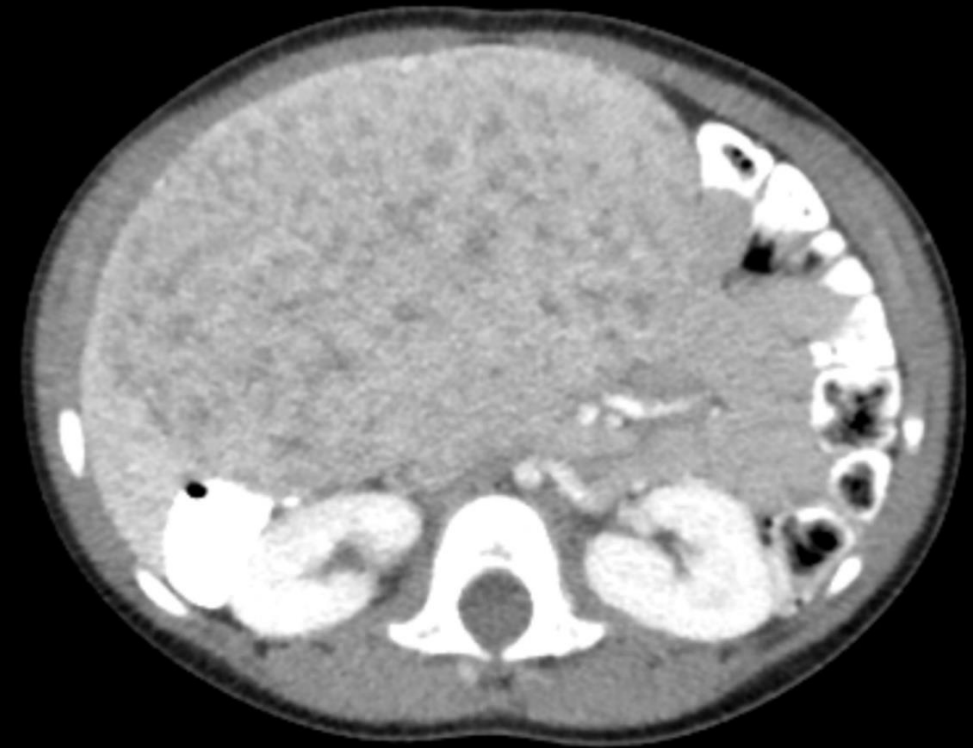
CT with Contrast (unlabeled)



CT with Contrast (labeled)



Well-circumscribed exophytic mass arising from inferior margin of right hepatic lobe



Mass is anterior to the retroperitoneum

Final Dx:

Mesenchymal Hamartoma

Case Discussion

- Mesenchymal hamartoma is the second most common benign liver tumor in children ^{2,4}
- Typically presents within the first two years of life as significant abdominal distention
- Rapidly growing solid-cystic mass ⁴

Case Discussion

- Diagnosis
 - Blood tests: normal or mildly abnormal CBC and liver function panel ⁴
 - Normal AFP rules out hepatoblastoma
 - Imaging: well-circumscribed, solitary mass with cystic components ^{3,4}
 - Distinct margin between liver and mass
 - Normal hepatic architecture aside from mass compression
 - Typically arises from right hepatic lobe ¹
 - Pathology: mixture of tissues from which the liver is formed ¹
 - Mainly mesenchymal tissue with connective tissue, bile ducts, blood vessels, and lymphatics
- Treatment: surgical excision is curative ²

Case Discussion

- This patient had diagnostic criteria consistent with the expected findings
 - On ultrasound, mass appeared to arise from left hepatic lobe, but CT confirmed inferior margin of right hepatic lobe
- Complete surgical excision revealed a 20 cm mass with no adhesions to surrounding structures

References:

1. Martins-Filho SN, Putra J. Hepatic mesenchymal hamartoma and undifferentiated embryonal sarcoma of the liver: a pathologic review. *Hepat Oncol.* 2020;7(2). doi:10.2217/hep-2020-0002
2. Stringer MD, Alizai NK. Mesenchymal hamartoma of the liver: A systematic review. *J Pediatr Surg.* 2005;40(11). doi:10.1016/j.jpedsurg.2005.07.052
3. Chandramouleeswari K. Mesenchymal Hamartoma of the Liver: A Case Report. *JOURNAL of CLINICAL AND DIAGNOSTIC RESEARCH.* Published online 2012. doi:10.7860/JCDR/2012/4151.2558
4. Candal-Cunha C. Mesenchymal Hamartoma of the Liver. In: *Rare Liver and Biliary Tract Diseases.* Springer Nature Switzerland; 2026:191-204. doi:10.1007/978-3-032-15076-9_16