North Carolina Society of Gastroenterology 2024 Annual Meeting

Liver Cases for the Liver Panel

Mark Russo
Atrium Health Wake Forest

Joint Providership

ASGE
American Society for
Gastrointestinal Endoscopy

32 year-old woman presents for evaluation of a liver mass after presenting with right upper quadrant pain.

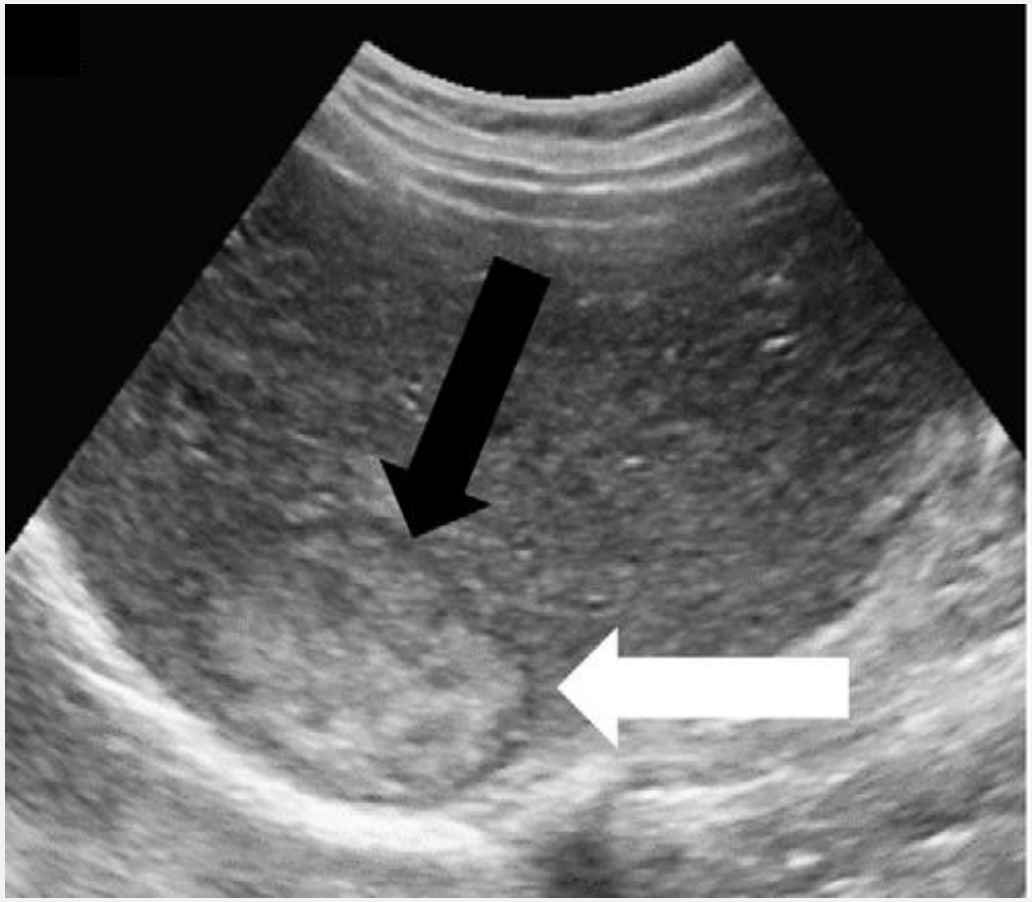
10 year history of oral contraceptive use, last use 5 years ago.

Meds: cetirizine prn, buproprion

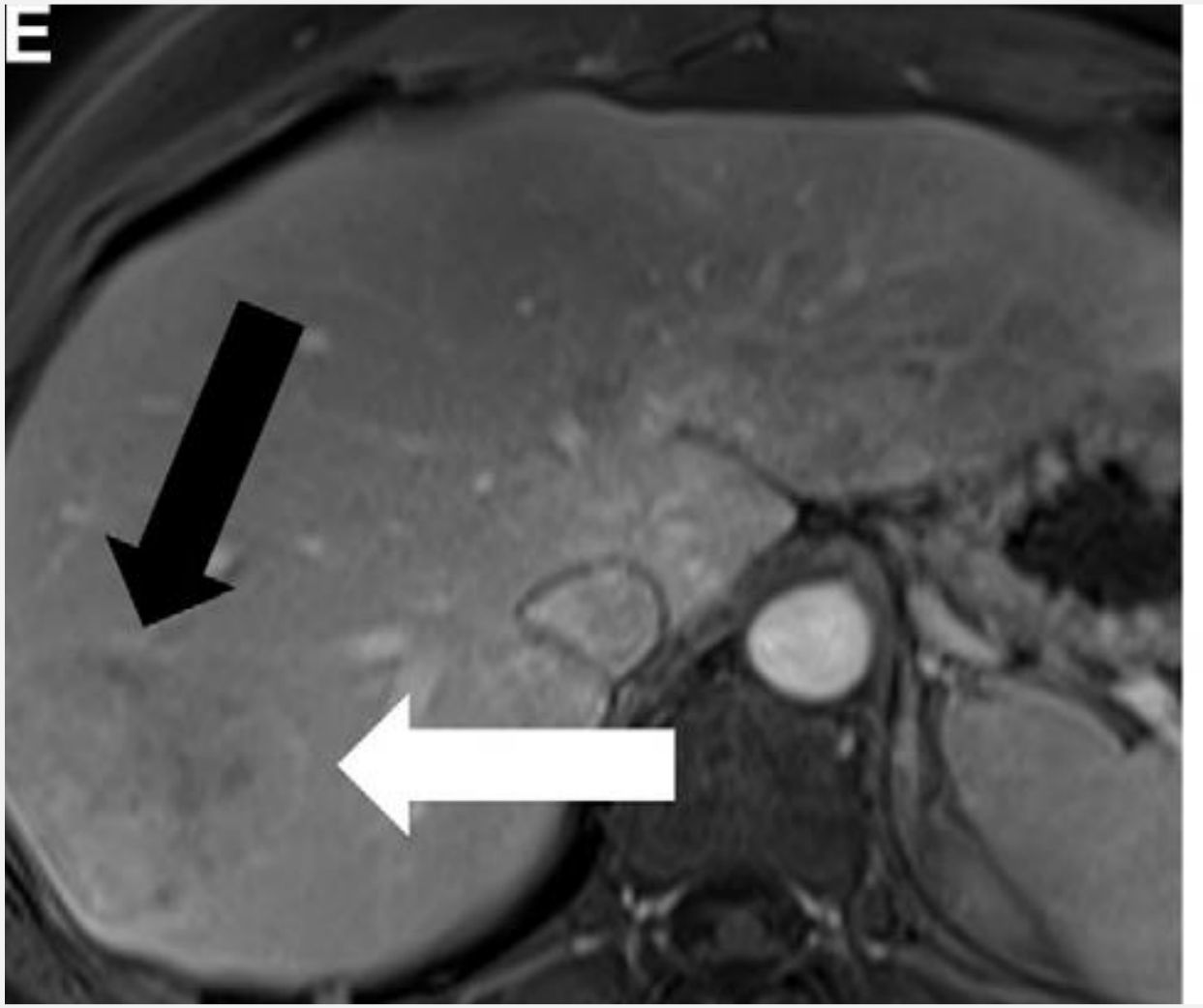
She has no significant past medical history

BMI 33, exam is unremarkable

AST 38 IU/L, ALT 44 IU/L, ALP 145, t bili 1.1 mg/dL, GGT 188
Hepatitis C ab NR, hepatitis B sAg NR



Differential
Next test?



Gadoxetate disodium (Eovist)

Radiographics 2023;43:e220134.

Epidemiology

Exposure to estrogen 30/million vs 1/million non OCP users
Beta-catenin -males, androgens, risk of HCC

Risk factors

- Oral contraceptives (estrogen)
- Anabolic steroids
- Glycogen storage disease IA
- Familial adenomatous polyposis
- Obesity
- PCOS

Hepatic adenoma

Subtype	Sex	%	Risk	Imaging
Hepatocyte-nuclear factor 1 alpha	Female	~40%	Low risk hemorrhage Minimal to no malignant potential	Peak enhancement on arterial phase, no enhancement on portal phase
Inflammatory	Female	~50%	**Hemorrhage**	Enhancement on arterial and portal phases, peripheral rim enhancement 'Atoll sign'
Beta-catenin (mutated exon-3)	Male/ female	**~10%**	**Malignant transformation (HCC)**	Peak enhancement on arterial phaseT2 hyperintense scar, iso/hyperintense hepatobiliary phase
Sonic hedge hog	Female	<4%	Bleeding	

Radiographics 2023;43:e220134.

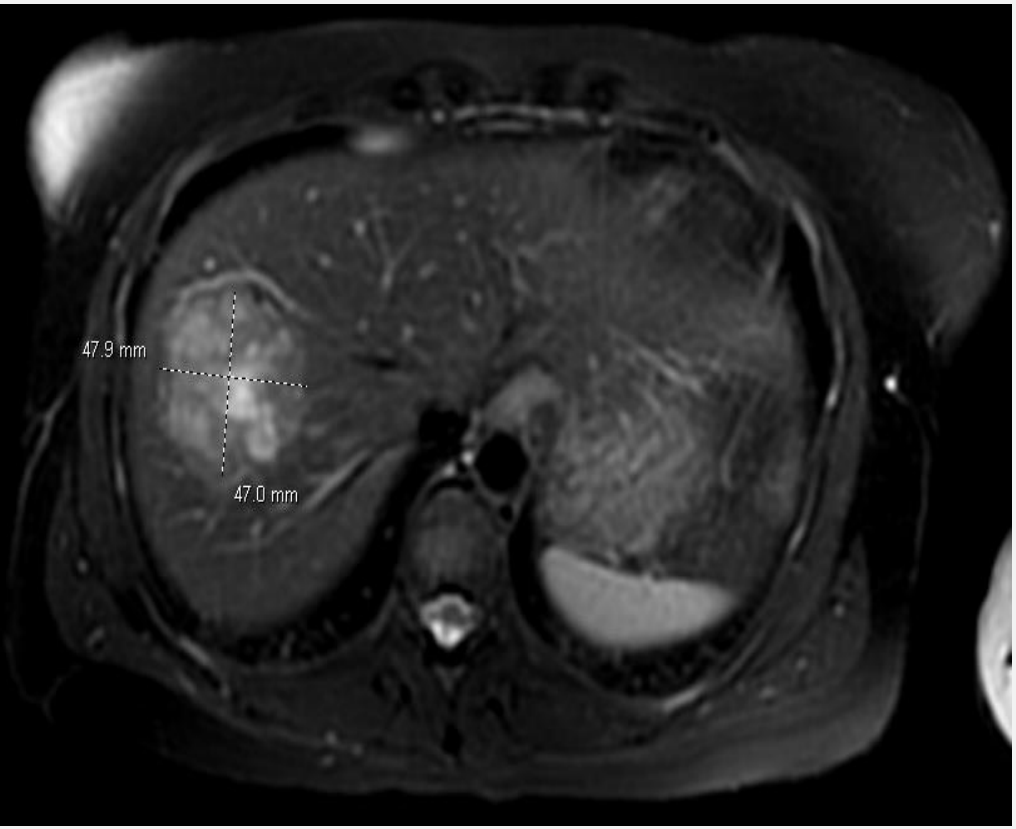
Hepatic adenoma Management

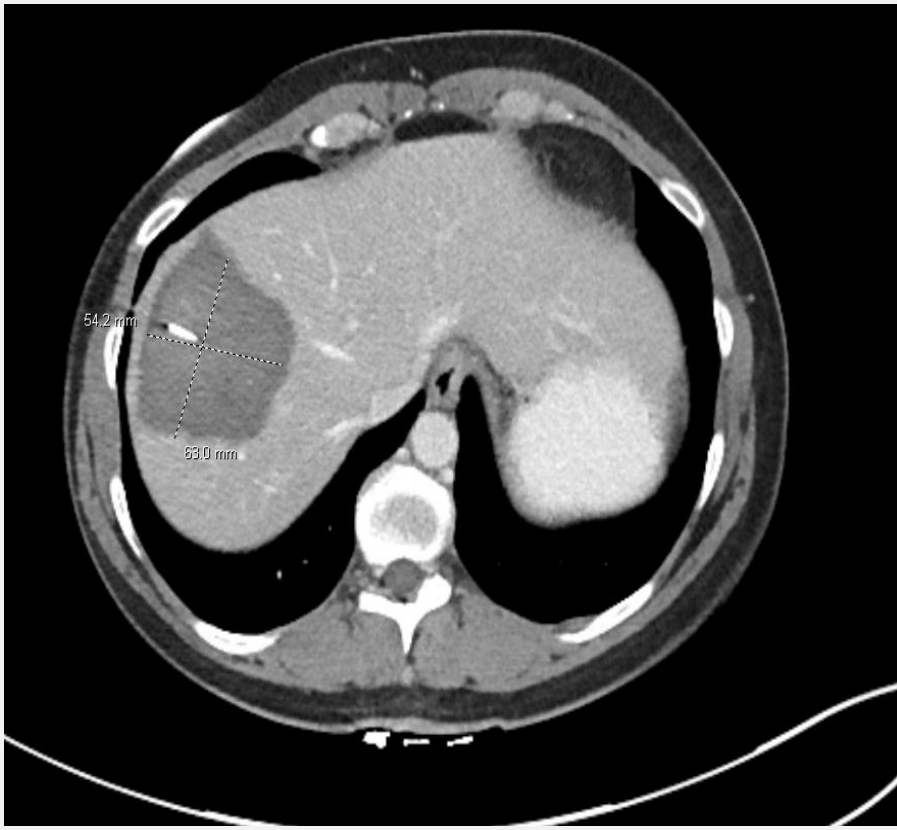
Males- resect

Observe
Resect
Ablate
Embolize

- Size
- Location
- Subtype
- Patient preference
- Circumstances

Hepatic adenoma





Atrium Wake HPB- 41 adenomas ablated
average size 3.4 cm, 19.5% recurrence: recurrence > 5 cm

Courtesy David Iannitti, Vince Butano

Hepatitis B high viral load

42 y/o man with chronic hepatitis B
Born in Vietnam, moved to U.S. 25 years ago
Does not know family history

HBV viral load 660 million IU/mL
ALT 18
AST 20
ALP 94
T bili 0.8 mg/dL
AFP 3.8 ng/mL
HIV neg, HCV ab nonreactive

Hepatitis B eAg positive
Normal RUQ US

Do you want additional testing?

Do you recommend treatment?

Would anything change your mind about your recommendations?

Monitoring HBV Immune tolerant phase and other recommendations AASLD HBV Guidelines Hepatology 2018;67:1560-99.

- Do not treat. Monitor ALT, HBV DNA, q 3-6 mos, eAg q 6-12 mos
- Alternative methods to assess fibrosis, elastography
- If these noninvasive tests indicate significant fibrosis (F2), treatment is recommended.
- HBsAg quantitation is not routinely recommended
- HBV genotyping can be useful in patients being considered for peg-IFN therapy, …but not routinely recommended
- In persons with HBV DNA <2,000 IU/mL but elevated ALT levels, evaluate for other liver disease (HCV or HDV, DILI, MASLD, alcohol, or autoimmune liver disease)

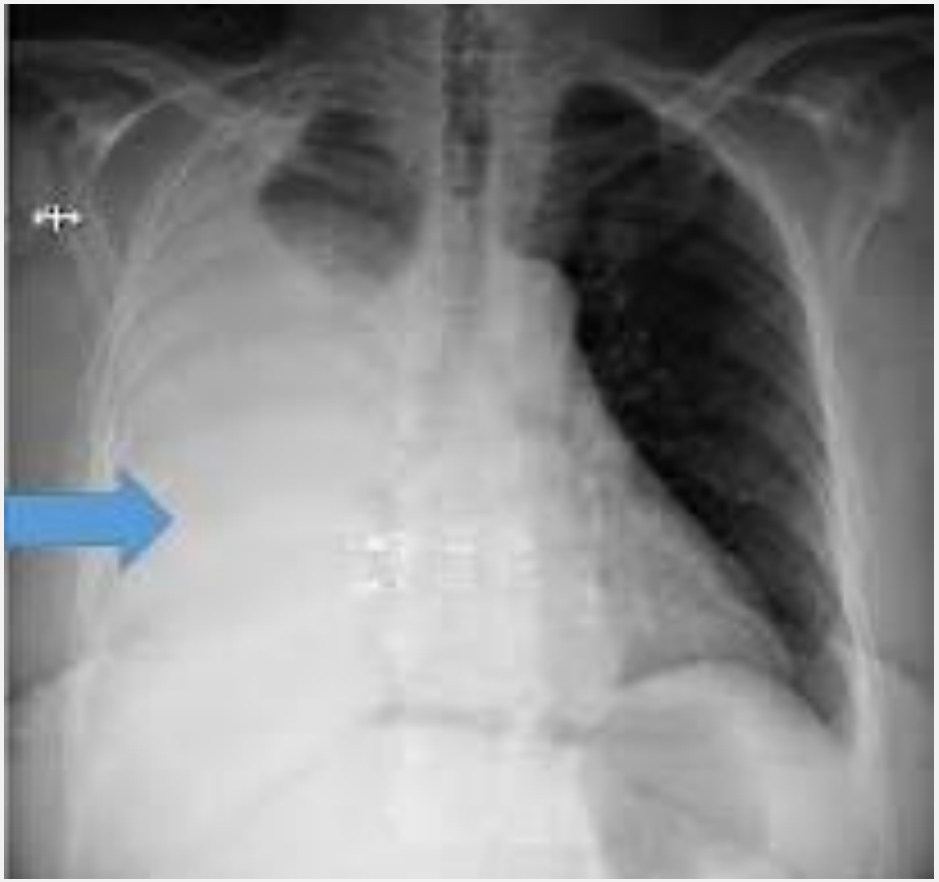
72 year-old man with cirrhosis from alcohol presents with shortness of breath. He has a history of hepatic encephalopathy treated with lactulose. He has a past medical history of type 2 diabetes mellitus. No history of variceal bleeding.

No alcohol use for 2 months and he has a 30 pack year history of smoking

RUQ US no ascites, no masses, patent portal vein

Total bilirubin mg/dL	1.9
AST/ALT U/L	42/33
Albumin mg/dL	3.1
INR	1.2
Hgb g/dL	10.1
AFP ng/mL	2.2
PLT	98,000
Creatinine mg/dL	1.3
MELD/MELDNA/MELD3.0	14/17/17

Additional testing?

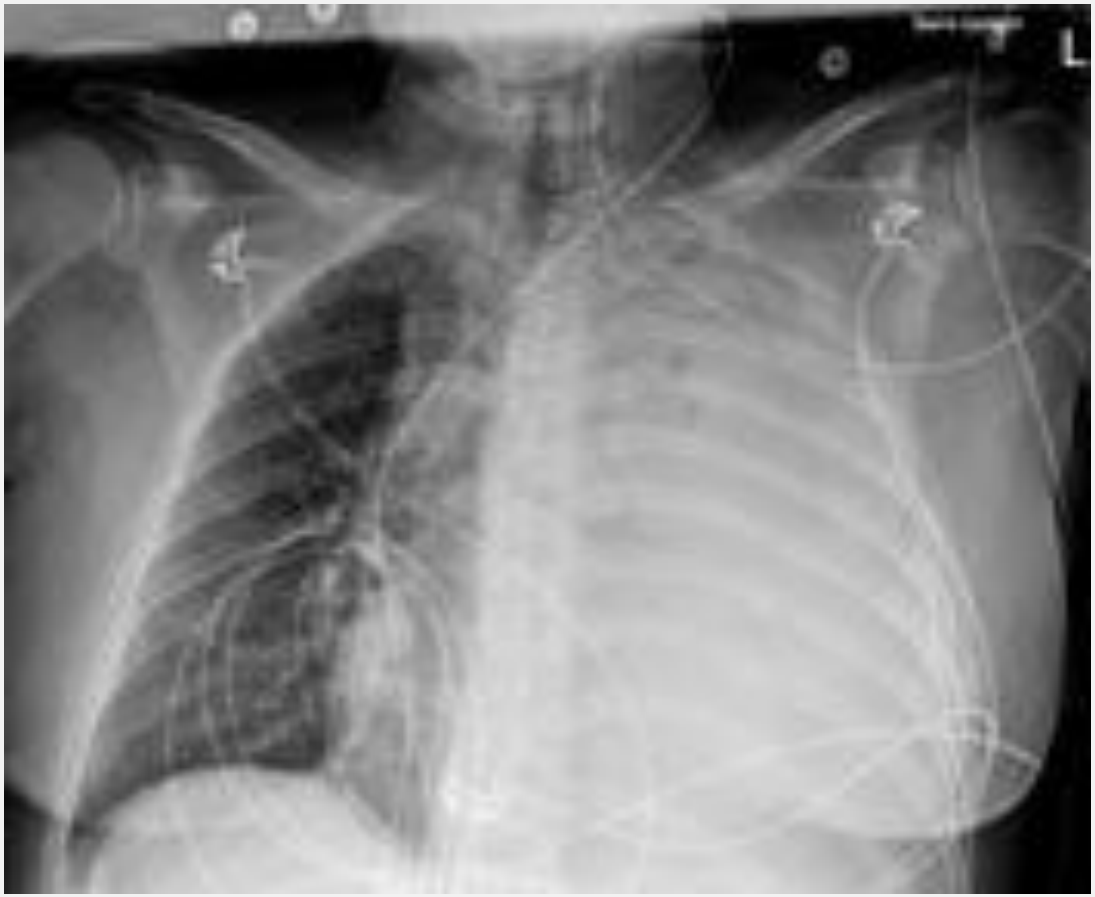


Pleural fluid
Albumin <0.1
Wbc 88
Cytology negative
LDH 65
Glucose 110
Total protein <1.1
pH 7.49
Triglycerides 68

CT chest no malignancy

CT abd patent portal and hepatic veins, minimal ascites, no focal masses

ECHO NL EF, NL right heart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Multidisciplinary Management of Hepatic Hydrothorax in 2020: An Evidence-Based Review and Guidance

HEPATOLOGY, VOL. 72, NO. 5, 2020

Bubu A. Banini,[1] Yahya Alwatari,[2] Madeline Stovall,[2] Nathan Ogden,[3] Evgeni Gershman,[4] Rachit D. Shah,[2] Brian J. Strife,[3] Samira Shojaee,[4] and Richard K. Sterling[1]

Low sodium diet
Diuretics
Thoracentesis
Evaluate for TIPS
Evaluate for Liver Transplant
Pleurodesis
Pleural catheter

North American Practice-Based Recommendations for Transjugular Intrahepatic Portosystemic Shunts in Portal Hypertension

Clinical Gastroenterology and Hepatology 2021;

Advancing Liver Therapeutic Approaches (ALTA) Consortium

Testing For Elective TIPS
CT or MRI ABD IV contrast
ECHO

Contraindications
Severe CHF
Severe valvular untreated valvular heart disease
Moderate to severe pulmonary HTN
Uncontrolled systemic infection
Refractory Overt HE
Unrelieved biliary obstruction
Lesion, Tumors in hepatic parenchyma interfering with TIPS

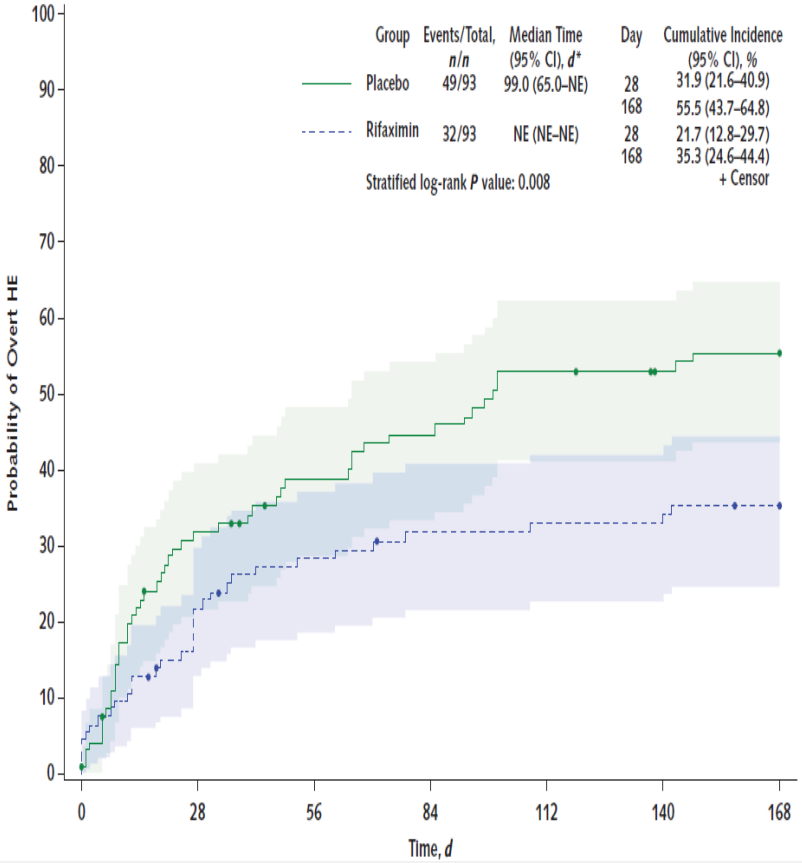
TIPS for 70 years and older n=50

Table 3. Outcomes after TIPS in study groups.

	Age 50–59	Age 70–84
30 d mortality *N* (%)	6 (12)	12 (24) $p = 0.19$
Length of stay (mean/median/IQR d)	3/1/3	3/2/2
Readmission *N* (%)	6 (12)	17 (34) $p = 0.02$
Readmission for HE post TIPS *N* (%)	5 (10)	14 (28) $p = 0.04$
On lactulose post TIPS *N* (%)	43 (86)	38 (76)
On rifaximin post TIPS *N* (%)	18 (36)	22 (44)

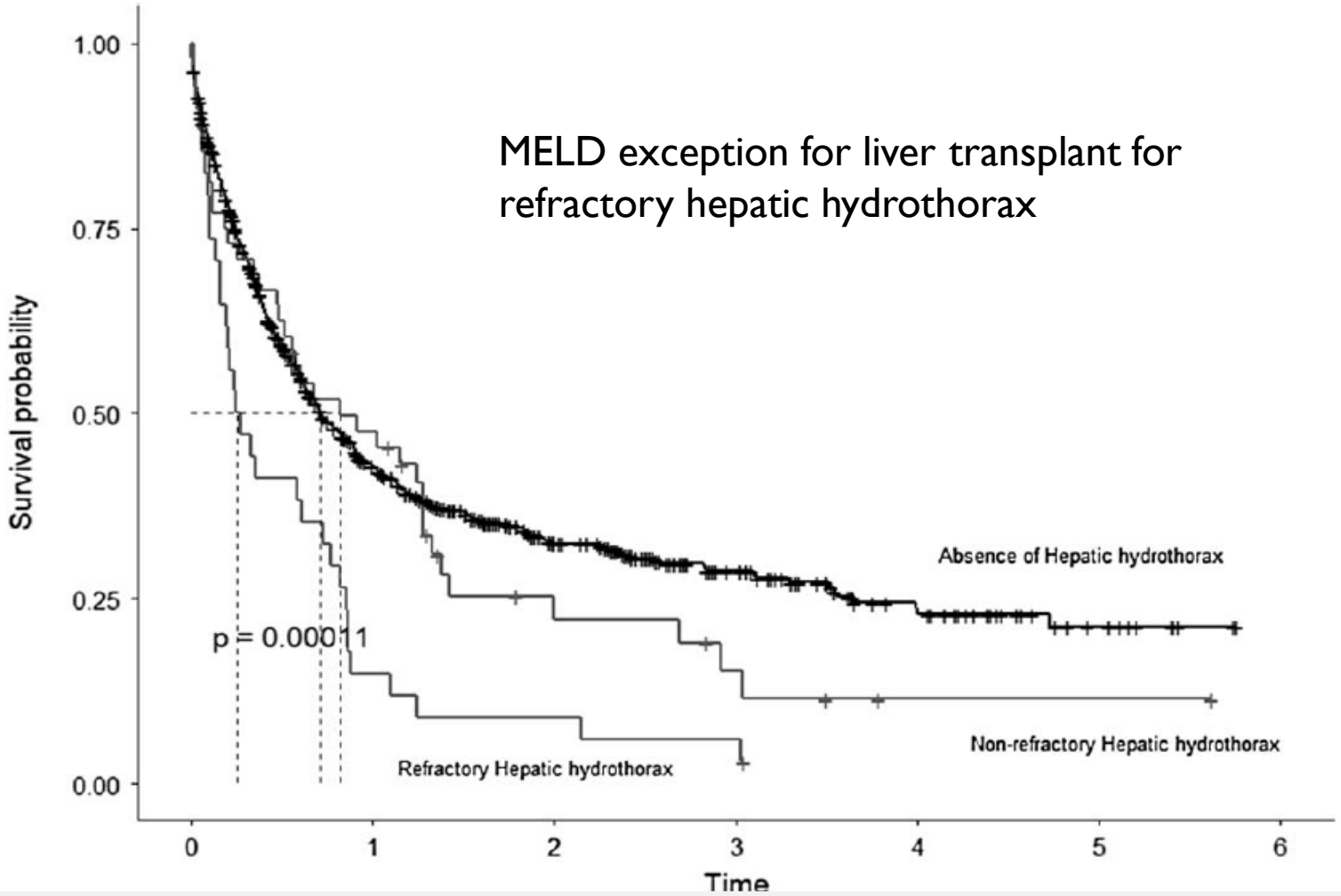
Adlakha N, Russo MW J Clin Med 2020;9:381

Rifaximin before TIPS to Prevent HE



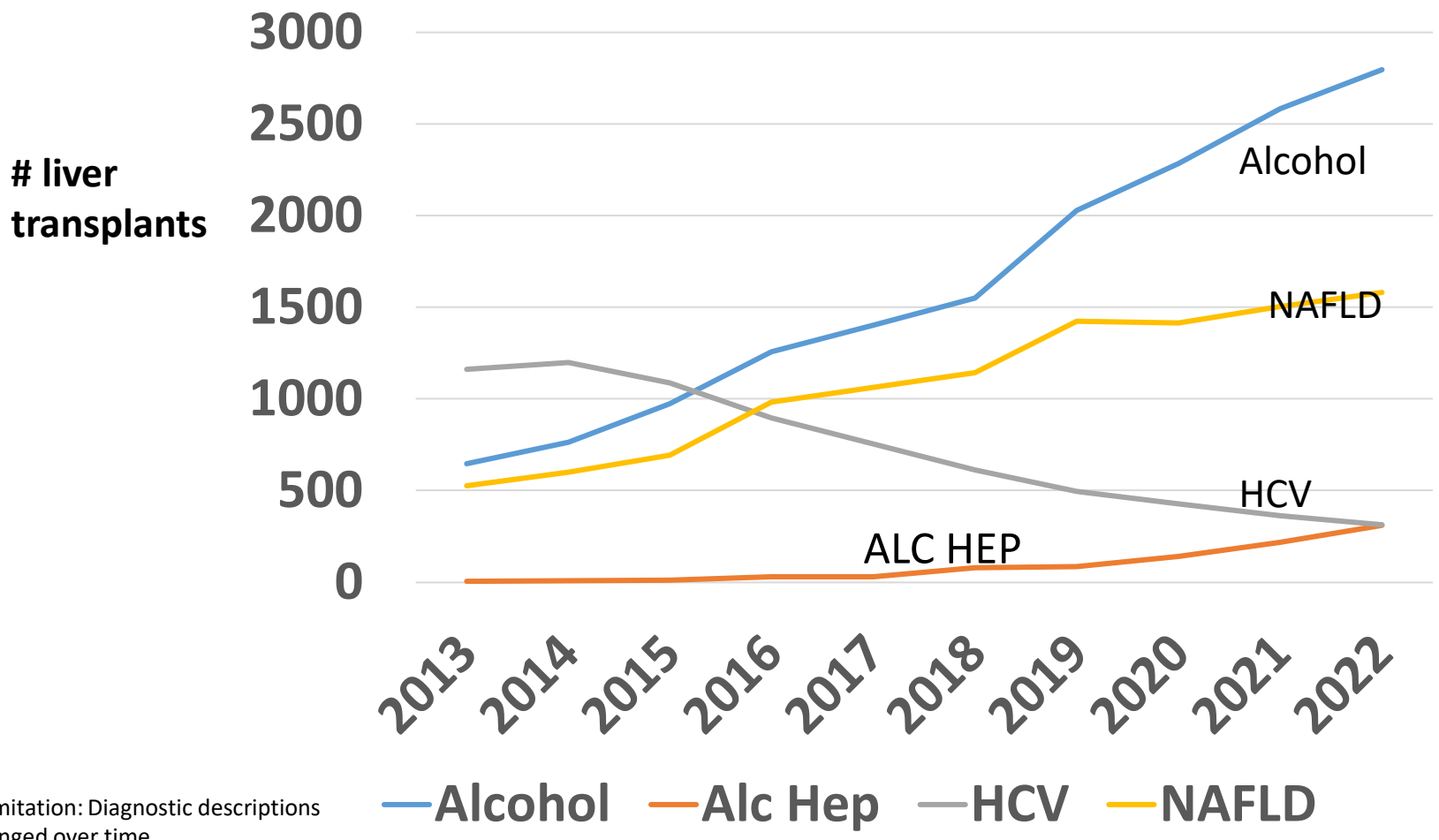
Bureau C, Ann Intern Med 2021;174:633-40.

Low survival with refractory hepatic hydrothorax



Osman K Liver Transpl 2024;30:142-150.

Indications for liver transplant, by diagnosis and year



*Limitation: Diagnostic descriptions changed over time

https://optn.transplant.hrsa.gov/data/view-data-reports/build-advanced/

Alcohol associated hepatitis

Steroids pro con
Pentoxyphylline
N-acetylcysteine

Liver Transplant

Phosphatidylethanol (PETH)

Thank you


Rush S. Dickson Tower
Atrium Health
Carolinas Medical Center