



# ACG GUIDELINE

# Highlights

## Hepatic Encephalopathy

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<b>CHE/MHE</b>	<ul style="list-style-type: none"> <li>Use single-test strategy over 2-test combination strategy</li> <li>There is insufficient evidence for/against routine treatment of MHE/CHE for prevention of OHE</li> </ul>	<b>Conditions that may exacerbate cognitive impairment in cirrhosis patients</b> <b>Outpatient</b> <ol style="list-style-type: none"> <li>Dementia</li> <li>Sleep disorders</li> <li>Mood disorders</li> <li>PTSD</li> <li>Substance abuse</li> <li>Medication effect</li> </ol>	<b>Patients with cirrhosis and one or more of the following features could be prioritized for MHE testing</b> <ul style="list-style-type: none"> <li>Hypoalbuminemia</li> <li>Difficulty operating heavy machinery</li> <li>CSPH OR presence of portosystemic shunts</li> <li>Commercial drivers/pilots</li> <li>Decompensated cirrhosis</li> <li>Non-specific cognitive complaints, difficulty with concentration, impaired quality of life</li> </ul>	
	<b>Testing options for CHE/MHE</b> <ul style="list-style-type: none"> <li>Psychometric hepatic encephalopathy score (PHES)</li> <li>Stroop EncephalApp</li> <li>Animal naming test (ANT)</li> <li>Critical flicker frequency (CFF)</li> </ul>			
<b>Inpatient Management</b>	<ul style="list-style-type: none"> <li>Isolated asterixis without alterations in behavior or alertness is NOT enough to diagnose overt HE”</li> <li>In patients with cirrhosis and confusion without any neurological deficits, recommend against routine brain imaging</li> <li>Overt HE: Use lactulose or PEG as an alternative option</li> <li>Add rifaximin to lactulose in acute setting</li> <li>Recommend against routine testing of serum ammonia to guide treatment</li> </ul>			
	<b>Conditions that may exacerbate cognitive impairment in cirrhosis patients</b> <b>Inpatient</b> <ol style="list-style-type: none"> <li>Sepsis</li> <li>Diabetes complications</li> <li>Uremic encephalopathy</li> <li>Electrolytes disorders</li> <li>Intoxication/exposure (CO)</li> <li>Wernicke’s</li> <li>Hypoxia or hypercapnia</li> <li>Neurological conditions</li> <li>Endocrine (thyroid, etc)</li> <li>Dementia/acute psychosis</li> </ol>			<b>In the context of TIPS:</b> <ul style="list-style-type: none"> <li>Initiate rifaximin 14 days prior to elective TIPS and continue to 6 months in decompensated cirrhosis</li> <li>Embolize extrahepatic collaterals</li> </ul>
<b>Prevention of HE Recurrence</b>	<b>Prevention of recurrent HE (outpatient management)</b>		<b>Sarcopenia and Nutrition</b> <ol style="list-style-type: none"> <li>Protein intake target of 1.2-1.5 g/kg/day</li> <li>A late-night snack in patients with cirrhosis</li> <li>Against protein restriction in patients with HE</li> <li>Exercise intervention</li> </ol> <ul style="list-style-type: none"> <li>In patients with multiple HE and MELD &lt;15, evaluate candidacy for living donor transplant</li> </ul>	
	Titrate lactulose to 2-3 bms daily as 1st line			
	Use the Bristol stool scale along with bm frequency for titration of lactulose			
	In cirrhosis with OHE, add rifaximin to prevent recurrence			
Add zinc supplementation if recurrence occurred despite being on lactulose and rifaximin				

bm = bowel movement  
CHE = covert hepatic encephalopathy  
CO = carbon monoxide

CSPH = clinically significant portal hypertension  
MHE = minimal hepatic encephalopathy  
OHE = overt Hepatic encephalopathy

PEG = polyethylene glycol  
Pts = patients  
PTSD = post-traumatic stress disorder