

HCV ECHO Case Recommendations



Session 9: March 31, 2025

Case Recommendations and Considerations:

CATEGORY	RECOMMENDATIONS	Relevant Presentation Question or Concern	REFERENCES/ RESOURCE LINKS
History	<ul style="list-style-type: none"> • If the past medical history does not specifically reveal a patient’s chronic illnesses, a thorough review of their medications may help identify pre-existing co-morbidities. For example, this patient who had Entresto, Coreg, and Lasix on her medication list was most likely being treated for heart failure. • This is important for patients who have a documented history of ascites. The differential diagnoses for a patient with ascites is broad. Her ascites may well have been due to pre-existing heart failure rather than chronic liver disease. 	<ol style="list-style-type: none"> 1. The patient has Entresto, Coreg, and Lasix on her medication list. Does she have a history of heart failure? 	
Physical Exam	<ul style="list-style-type: none"> • 		
Diagnostic evaluation	<ul style="list-style-type: none"> • For patients who are at-risk for ascites, looking for a “sliver” above the liver on ultrasound is a good strategy for checking for ascites. • It is important to keep an open differential when interpreting a patient’s laboratory results. <p>The differential diagnosis for an elevated hemoglobin is broad. Heart failure does not specifically cause increased hemoglobin (in fact, there may be a dilutional effect from fluid retention that can result in decreased Hgb/HCT). Conditions</p>	<ol style="list-style-type: none"> 1. For a patient who you suspect has ascites, what is a method of detecting ascites when reviewing the patient’s ultrasound? 2. The patient’s hemoglobin and hematocrit, along with her WBC count are higher than normal. Are old records available for comparison? 3. For this patient with a laboratory trend for increasing hemoglobin, are there iron studies available? 	



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like obstructive sleep apnea (OSA) or a history of smoking can cause an elevated hemoglobin.

A patient's hydration status at the time the lab is drawn can also result in a higher than normal hemoglobin. This is called hemoconcentration. The WBC count and the platelets may be concomitantly elevated as well. The patient presented was taking furosemide for her heart failure and may be having increased hemoglobin and WBC count due to hemoconcentration from relative dehydration due to diuretic use.

A hematologic cause should also be considered.

- It is important to keep a broad differential until evidence leads to accurate diagnoses. If it figures into your work-up and plan, ask the patient or look for evidence about problems on the problem list in the medical record. Sometimes diagnoses end up there without sufficient diagnostic support.

A patient may present with more than one disease that may be uncovered after a review of the patient's history and diagnostic data. For this patient presenting with increased hemoglobin, iron studies would be a good test to add-on to evaluate for hemochromatosis or iron overload that can also cause chronic liver disease. This may be a co-morbid condition in addition to viral hepatitis. Similarly, this patient may have metabolic associated liver disease on top of her HCV (Met-HCV).

- Regarding the patient's ultrasound results, portal hypertension is a continuum and a

4. How closely do liver doppler findings correlate with portal hypertension?

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normal flow cannot totally rule out portal hypertension. Patients can have portal hypertension but can initially present with normal flow. If the patient's portal hypertension progresses, they may then show bidirectional flow. Ultimately, if the patient's portal hypertension is severe, it can show reverse flow.

It is important to assess a patient taking into account all of the available data including the patient's history and physical exam. For this patient, her clinical picture is not consistent with someone who has portal hypertension. Other diagnostic data that are reassuring include her normal platelet levels.

Neither is this patient's presentation consistent with compensated cirrhosis. This is supported by her normal bilirubin, normal platelets, and normal spleen size. The patient's lower than normal albumin levels and shear wave elastography results may be a consequence of heart failure.

Heart failure may cause liver congestion which in turn may appear as increased stiffness on transient elastography, independent of liver fibrosis.

- There is no test such as a "Liver MRI Sonography". It is always good to read a patient's imaging report carefully and to maintain some skepticism. If available, look at the source images and review these yourself. Have a low threshold to reach out to the reading radiologist and engage them in a discussion about your patient's imaging to help clarify the read. The clinical context

5. If the flow is in the correct direction and normal respiratory variation, can it be safely assumed that no portal hypertension exists?
6. Does this patient have compensated cirrhosis?

7. How should we interpret the patient's ultrasound report stating "liver MRI sonography"?

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	<p>you provide is often helpful to the radiologist in elucidating the findings and results in a better and more accurate interpretation. This is in the patient's best interest and will help the care team provide the best care.</p> <ul style="list-style-type: none"> ● Point-of-care ultrasound is a newer option that can be utilized in the office to help provide additional information. 		
<p>Medication Therapy & Adjustments</p>	<ul style="list-style-type: none"> ● There is no recommended frequency for the monitoring of liver chemistries for patients undergoing treatment for HCV. Patients who may benefit from closer monitoring are patients who have decompensated cirrhosis or patients who have chronic liver disease who may be at high risk. Monthly labs are not otherwise imperative for patients with liver fibrosis and chronic HCV. ● While we have the benefit of a wider range of options for the treatment of HCV, there has been experience in the past of treatment with protease inhibitors, such as simeprevir, combined with sofosbuvir for patients awaiting liver transplant, without resulting decompensation. ● Regarding monitoring for response to treatment, recognize that certain patients are at high risk for poor follow-up due to multiple personal and social factors and limitations. Studies have shown that SVR at 4 weeks has a strong positive predictive value (PPV) for achieving SVR12 in patients with HCV. 	<ol style="list-style-type: none"> 1. What is the recommended monitoring for liver chemistries in a patient being treated for chronic HCV? 2. What are the risks in the treatment for HCV with a protease inhibitor in a patient who is at-risk of or in decompensated cirrhosis? 3. Is sustained virologic response at 4 weeks (SVR-4) concordant with SVR-12? 	<ul style="list-style-type: none"> ● Gane E, de Ledinghen V, Dylla DE, Rizzardini G, Shiffman ML, Barclay ST, Calleja JL, Xue Z, Burroughs M, Gutierrez JA. Positive predictive value of sustained virologic response 4 weeks posttreatment for achieving sustained virologic response 12 weeks posttreatment in patients receiving glecaprevir/pibrentasvir in Phase 2 and 3 clinical trials. J Viral Hepat.

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			2021 Nov;28(11):163 5-1642. doi: 10.1111/jvh.136 00. Epub 2021 Sep 8. PMID: 34448313; PMCID: PMC9292745.
Vaccination	<ul style="list-style-type: none"> • Yes! Patients with chronic HCV who are not hepatitis A immune will benefit from hepatitis A vaccination. 	1. If a patient has chronic HCV and is not immune to hepatitis A, do they need hepatitis A vaccination?	
Social Determinants of Health (SDOH)	<ul style="list-style-type: none"> • 		
Behavioral Health	<ul style="list-style-type: none"> • 		
Screening	<ul style="list-style-type: none"> • 		
Risk Reduction	<ul style="list-style-type: none"> • 		
Other	<ul style="list-style-type: none"> • 		

PLEASE NOTE that case consultations and recommendations for the HBV ECHO do not create or otherwise establish a provider-patient relationship between any participant, Hawaii Learning Groups, and/or any other clinician on the HBV ECHO faculty.