

## INTERACTIVE GUIDE:

# Cirrhosis Progression

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**The Need for Early Identification:** Physiological changes associated with cirrhosis can lead to decompensation complications, including hepatic encephalopathy

**Cirrhosis may be difficult to identify before complications emerge<sup>1,2</sup>**

A physical exam alone is often insufficient to detect **compensated cirrhosis<sup>2</sup>**



UP TO  
40%

of patients with cirrhosis are asymptomatic for long periods<sup>1,3</sup>

• **Some patients are at higher risk** for the development of cirrhosis and its complications<sup>1</sup>



### Compensated cirrhosis<sup>3</sup>

Despite substantial fibrosis, patients with compensated cirrhosis have:

- Few/no symptoms
- Sufficient liver function

MEDIAN SURVIVAL OF >12 YEARS<sup>4</sup>

### Decompensated cirrhosis<sup>3-5</sup>

Decompensation brings a high risk of death unless transplantation occurs, as patients have:

- Extensive liver damage and dysfunction
- Severe complications, including gastroesophageal varices, ascites, and hepatic encephalopathy

MEDIAN SURVIVAL OF <2 YEARS<sup>4</sup>

EARLIER DIAGNOSIS OF CIRRHOSIS IS IMPORTANT FOR SURVIVAL OUTCOMES<sup>4-6</sup>

**Progressive portal hypertension and hepatic insufficiency due to cirrhosis can cause decompensation of liver function<sup>3,4</sup>**

**Portal hypertension<sup>3,4,\*</sup>:**



Results from both an increase in resistance to portal flow and an increase in portal venous inflow

- Can lead to the development of portosystemic collateral vessels and portosystemic shunting
- Splanchnic vasodilation maintains the portal hypertensive state

\*Baveno criteria help stratify risk of portal hypertension based on liver stiffness and platelet count.<sup>7</sup>

**Hepatic insufficiency can lead to<sup>3,4</sup>:**

- Impaired metabolism and toxin buildup (eg, ammonia)
- Altered gut flora
- Jaundice (increased bilirubin)
- Decreased clotting factor production

**Hepatic encephalopathy (HE), variceal hemorrhage, and ascites are the most common complications of decompensation<sup>8</sup>**

50%

of patients in one study had  $\geq 1$  decompensating event when diagnosed with cirrhosis<sup>9,t</sup>

**Of the patients with decompensation<sup>9,t</sup>:**

83%

had ascites

30%

had HE

21%

had variceal bleeding

THESE DATA UNDERSCORE THE IMPORTANCE OF DETECTING CIRRHOSIS EARLY IN THE PATIENT JOURNEY<sup>9</sup>

<sup>t</sup>Data from a retrospective study that included patients (N=476) diagnosed with liver cirrhosis at a non-transplant hospital in Vienna from January 2015 to March 2020. Etiology of cirrhosis, sex, weight, height, presence of ascites or HE, medication, diabetes, endoscopy reports of varices, and imaging reports were assessed at baseline.<sup>9</sup>

**Screening patients who are at risk for liver fibrosis may help expedite diagnosis of cirrhosis before complications emerge<sup>5,6</sup>**

Utilization of the fibrosis-4 index (FIB-4)—a noninvasive, easy-to-use tool to stratify fibrosis risk—can help guide management decisions, including the need for further testing and/or referral to a liver specialist<sup>5,6</sup>

- **FIB-4 calculates fibrosis risk** using age and lab values from routine blood work<sup>6</sup>



[Click here to learn more about FIB-4 and to access a FIB-4 calculator](#)



Early detection of cirrhosis allows for increased monitoring and interventions to manage and reduce the risk of complications<sup>5,6</sup>

Learn more about cirrhosis and HE at [understandingHE.com/HCP](https://www.understandingHE.com/HCP)

**References:** 1. Heidelberg JJ, Bruderly M. *Am Fam Physician*. 2006;74(5):756-762. 2. de Bruyn G et al. *BMC Med Inform Decis Mak*. 2001;1:6. 3. Poordad FF. *Curr Med Res Opin*. 2015;31(5):925-937. 4. Garcia-Tsao G. In: Goldman L et al, eds: *Goldman-Cecil Medicine*. 26th ed. Elsevier; 2016:990-998.e3. 5. Rinella ME et al. *Hepatology*. 2023;77(5):1797-1835. 6. Cusi K et al. *Endocr Pract*. 2022;28(5):528-562. 7. de Franchis R et al. *J Hepatol*. 2022;76(4):959-974. 8. Garcia-Tsao G et al. *Hepatology*. 2017;65(1):310-335. 9. Schwarz M et al. *PLoS One*. 2023;18(8):e0290352.

