

Recognizing Cirrhosis

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Disclosures

I have nothing to disclose.

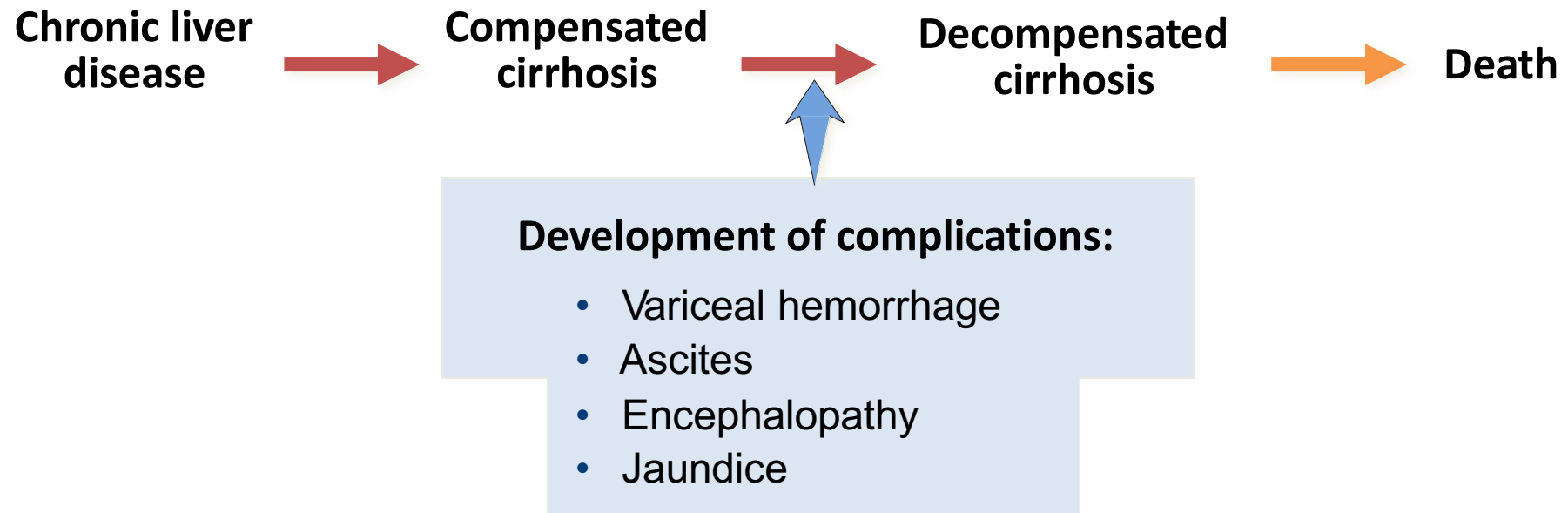
Learning Objectives

Understand the natural history of chronic liver disease.

Recognize cirrhosis.

Identify next steps after determining someone has cirrhosis.

Natural History of Chronic Liver Disease



Natural History of Cirrhosis

Stage	Definition	1-year mortality	Median Survival
1	Compensated without varices	1%	>12 years
2	Compensated with varices	3%	
3	Decompensated with ascites without variceal hemorrhage	20%	~2 years
4	Decompensated with/out ascites with variceal hemorrhage	57%	



Physical Exam

Spider angiomata

Palmar erythema

Gynecomastia

Testicular atrophy

Jaundice

Firm liver

Cirrhosis

Normal



Cirrhosis



Nodules

Markers of Fibrosis/ Cirrhosis

Platelet \leq 150,000

AST/ALT ratio $>$ 0.8 is 90% predictive of \geq F3

AST and ALT can be completely normal

High direct bilirubin

Low serum albumin

Prolonged prothrombin time

Can be helpful but not sensitive or specific for cirrhosis:

- APRI \geq 1.0
- FIB-4 \geq 3.25

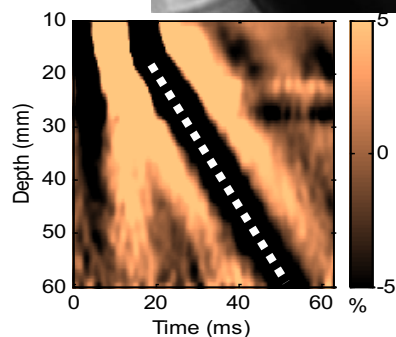
Imaging of the Liver

Nodular hepatic contour

Secondary findings related to portal hypertension

- Enlarged spleen
- Ascites
- Varices

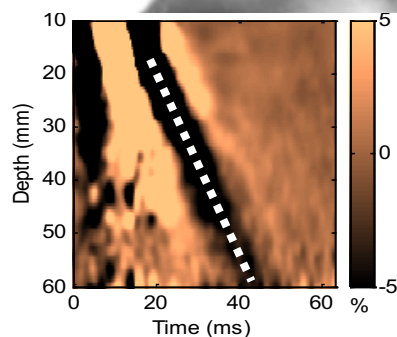
HCV: Transient Elastography



$V_s = 1.0$ m/s
 $E = 3.0$ kPa

F0

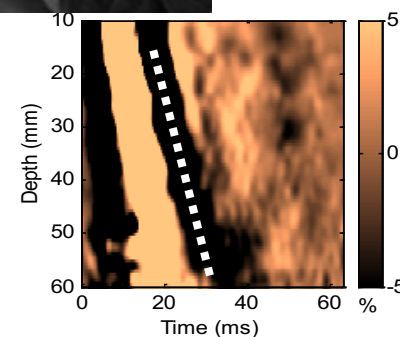
F1



$V_s = 1.6$ m/s
 $E = 7.7$ kPa

F2

F3



$V_s = 3.0$ m/s
 $E = 27.0$ kPa

F4

Cirrhosis: What is not helpful

Level of AST and ALT

- Levels can be completely normal
- Women 19 IU/L
- Men 30 IU/L

Ammonia

- “Blood ammonia levels cause as much confusion in those requesting the measurement as in the patients in whom they are being measured”*

“Normal ultrasound”

Cirrhosis: What do I do now?

Treat HCV

Abdominal ultrasound and AFP for HCC surveillance

Stop all NSAIDs

Endoscopy for esophageal varices screening

If decompensated or MELD \geq 15, referral to specialist

AASLD Recommendations: Surveillance Strategies

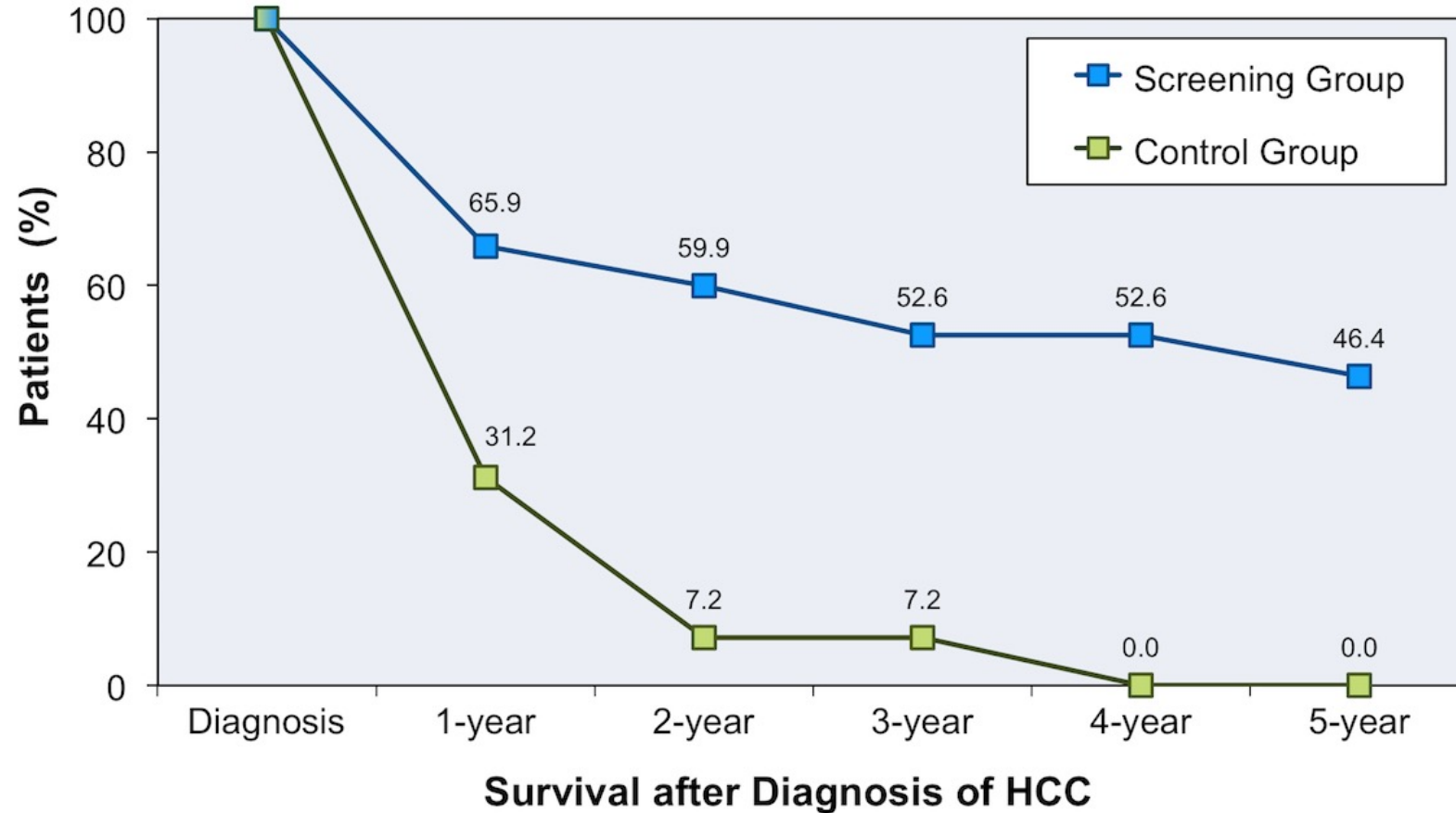
Surveillance using US, with or without AFP, every 6 months

An AFP >20 ng/mL requires a more sensitive imaging study (CT or MRI)

A lesion of >1 cm on US requires a more sensitive imaging study (CT or MRI)

Marrero JA, Heimbach JK. Diagnosis, Staging, and Management of Hepatocellular Carcinoma: 2018 Practice Guidance by the American Association for the Study of Liver Diseases. *Hepatology*. 2018 Aug;68(2):723-750. doi: 10.1002/hep.29913. PMID: 29624699.

Impact of Screening on Survival after Diagnosis of HCC



<https://www.hepatitisc.uw.edu> . Zhang BH, Yang BH, Tang ZY. Randomized controlled trial of screening for hepatocellular carcinoma. J Cancer Res Clin Oncol. 2004;130:417-2

CHILD-TURCOTTE-PUGH SCORE (CTP)

Child-Turcotte-Pugh Classification for Severity of Cirrhosis			
Clinical and Lab Criteria	Points*		
	1	2	3
Encephalopathy	None	Grade 1 or 2	Grade 3 or 4
Ascites	None	Mild to moderate (diuretic responsive)	Severe (diuretic refractory)
Bilirubin (mg/dL)	< 2	2-3	>3
Albumin (g/dL)	> 3.5	2.8-3.5	<2.8
Prothrombin time Seconds prolonged <i>or</i> International normalized ratio	<4 <1.7	4-6 1.7-2.3	>6 >2.3
*Child-Turcotte-Pugh Class obtained by adding score for each parameter (total points)			
Class A = 5 to 6 points			
Class B = 7 to 9 points			
Class C = 10 to 15 points			

Key Points

Clinical diagnosis of cirrhosis is important

Transition from compensated cirrhosis to decompensated cirrhosis carries a significant change in mortality

Treat HCV in patients with cirrhosis

Abdominal ultrasound and AFP for HCC surveillance q 6 months

Continue to perform HCC surveillance in patients with cirrhosis even after they have been cured from HCV

Questions?