ACLF & Critically Ill Patients With Cirrhosis

Definition, prognosis, and organ-system management of acute-on-chronic liver failure: brain, cardiovascular, respiratory, kidney, infection, coagulopathy, nutrition, transplant, and palliative care.

2023 AASLD Practice Guidance
Acute-on-Chronic Liver Failure and Management of Critically Ill Cirrhosis
Hepatology 2023;78:1621–1655

FORMAT *51 numbered guidance statements — narrative consensus format (not GRADE-rated); grouped by organ system.*

1 Definition & Prognostic Scoring

GS	STATEMENT
1	ACLF requires all: acute onset with rapid deterioration; liver failure (↑bilirubin, ↑INR) in CLD ± cirrhosis; ≥1 extrahepatic organ failure (neuro/circulatory/respiratory/renal)
2	Use organ-failure scores (NACSELD, CLIF-C, AARC) over conventional scores (MELD/MELD-Na) for prognosis in critically ill cirrhosis/ACLF
3	Serial ACLF-score calculation may aid ongoing prognostic assessment

2 Brain Failure (Hepatic Encephalopathy)

GS	STATEMENT
4	Use West Haven criteria + GCS to characterize brain failure; Grade 3–4 HE or GCS < 8 = severe
5	Consider ICU admission for Grade 3–4 HE
6	Investigate/treat precipitants; start empiric HE therapy
7	Workup for liver-unrelated causes of altered mental status (alcohol withdrawal, structural injury), esp. first episode or no response to therapy
8	Treat with lactulose (PO/PR) or PEG if ileus risk; rifaximin add-on role unclear in ACLF
9	Short-half-life sedation (propofol, dexmedetomidine) for intubated patients
10	Routine brain imaging not warranted if presentation resembles prior HE episodes
11	Routine ammonia testing not recommended

3 Cardiovascular Failure

GS	STATEMENT
12	Early baseline assessment of volume status, perfusion, cardiac function in all critically ill cirrhosis patients
13	Bedside echo useful for volume/cardiac assessment in hypotension/shock
14	Judicious volume resuscitation guided by hemodynamic monitoring; balanced crystalloids ± albumin
15	Target MAP 65 mmHg in septic shock; invasive monitoring as needed
16	Norepinephrine first-line vasopressor; vasopressin second-line
17	Consider adrenal insufficiency screening/empiric hydrocortisone (50 mg IV q6h or 200 mg/d infusion ×7d or until ICU d/c) for refractory shock on high-dose vasopressors

4 Respiratory Failure

GS	STATEMENT
18	Investigate/treat pulmonary comorbidities (hydrothorax, ascites, hepatopulmonary syndrome); therapeutic thoracentesis/paracentesis if respiratory compromise
19	HFNC for acute hypoxemic respiratory failure in ACLF; monitor for escalation need
20	Lung-protective ventilation (6–10 mL/kg PBW) for non-ALI mechanical ventilation
21	Lung-protective strategy (6 mL/kg PBW, plateau < 30 cmH_2O) for ACLF with ALI
22	Low PEEP for mild ALI (P/F 200–300); high PEEP may be needed for moderate–severe ALI

5 Kidney Failure / HRS-AKI

GS	STATEMENT
23	AKI: after stopping diuretics + treating precipitants, volume challenge with IV albumin 1 g/kg (max 100 g/d) ×48h
24	Vasoconstrictors + albumin (20–40 g/d) for Stage ≥2 HRS-AKI without contraindications; no recommendation for Stage 1
25	Terlipressin (0.5–2.0 mg IV q6h or 2 g/24h infusion) for Stage ≥2 HRS-AKI without ACLF-3 or major cardiopulmonary/vascular disease
26	Norepinephrine as alternative to terlipressin — may be preferred in shock
27	Individualize RRT; generally for HRS-AKI failing pharmacotherapy in transplant candidates
28	LT is definitive treatment for HRS-AKI but must be weighed against multiorgan failure/LT candidacy

6 Infection

GS	STATEMENT
29	Full infection workup (diagnostic paracentesis, blood/urine cultures, CXR) in hospitalized cirrhosis, esp. ACLF
30	Repeat workup with any clinical change (new/worsening ascites, HE, AKI, organ failure)
31	Choose antibiotics based on etiology, severity, acquisition mode, local resistance
32	Minimize PPI use and Foley catheters to prevent infection/ACLF
33	Broaden coverage (MDR/fungal) if nosocomial infection or ACLF not responding after 48h

7 Coagulopathy

GS	STATEMENT
34	Global hemostasis tests (thrombin generation, viscoelastic) better capture status but not yet clinically validated
35	INR should not be used to gauge bleeding risk in cirrhosis/ACLF
36	Therapeutic anticoagulation has similar nonportal-hypertensive bleeding rates to the general population

8 Nutrition

GS	STATEMENT
37	Early nutrition support team involvement in hospitalized ACLF
38	Objective nutrition risk assessment (e.g., NUTRIC) at ICU admission
39	Measure energy/protein needs by indirect calorimetry if available, else predictive equations
40	Use ideal body weight (not actual) for predictive equations
41	Initial caloric target 12–25 kcal/kg; upper limit for non-obese, escalate with clinical course
42	No protein restriction — standard ICU protein support 1.2–2.0 g/kg IBW/day
43	Enteral over parenteral nutrition absent contraindications
44	Hold enteral nutrition on high-dose vasopressors (>0.15 µg/kg/min norepinephrine-equivalent)
45	Monitor malnourished patients for refeeding syndrome (hypokalemia, hypophosphatemia, arrhythmia)
46	Target blood glucose 140–180 mg/dL

9 Transplant & Palliative Care

GS	STATEMENT
47	Expedited LT may be indicated in selected ACLF/critical illness patients; outcome predictors remain uncertain
48	Futility decisions based on expedited-LT candidacy, resources, and ACLF reversibility potential
49	Consider palliative care consult to define prognosis/goals of care
50	Any care-team member can deliver primary palliative care; specialists + hepatology collaborate when available
51	Disease-directed care (transplant evaluation/listing) does not preclude palliative care

AASLD 2023 Practice Guidance on Acute-on-Chronic Liver Failure and Management of Critically Ill Patients With Cirrhosis. *Hepatology.* 2023;78(5):1621–1655.