AUD Lab Interpretation Cheat-Sheet

When to Think Alcohol From Labs

- Mild transaminitis with AST > ALT
- AST:ALT ratio ≥ 2:1 increases suspicion
- Elevated GGT without alternative explanation
- Macrocytosis (MCV > 100)
- Unexplained thrombocytopenia

Common Lab Patterns in Chronic Alcohol Use

Lab	What It Reflects	Typical Alcohol Pattern	Clinical Use
AST / ALT	Hepatocellular injury	AST > ALT (often 2:1)	Suggestive, not diagnostic
GGT	Enzyme induction	Elevated with chronic use	Sensitive, low specificity
MCV	Bone marrow toxicity	Macrocytosis	Slow to normalize
Platelets	Marrow suppression / portal HTN	Low in advanced disease	Late finding

Alcohol-Specific Biomarkers

Test	Detection Window	Best Use	Limitations
PEth	~2–4 weeks	Monitoring sustained drinking	Cost; availability varies
Urine ETG / ETS	24–72 hrs	Recent use detection	False positives possible
CDT	~2–3 weeks heavy use	Sustained heavy drinking	Less sensitive than PEth

Timeline: What Normalizes — and When

- AST / ALT: improve within weeks; normalize in 1–3 months (if no cirrhosis)
- GGT: falls within 2–6 weeks
- MCV: may take 2–4 months
- PEth: declines over 2–4 weeks; useful for monitoring trends

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What Labs Do Not Tell You

- They do not diagnose alcohol use disorder
- Normal labs do not rule out problematic drinking
- They cannot quantify daily drink count
- Severe AUD can exist with normal LFTs

Clinical Pearl

- PEth is most useful for longitudinal monitoring
- AST > ALT raises suspicion but is not diagnostic
- Alcohol use disorder is diagnosed clinically, not biochemically