

Advanced Metabolic Lab Panel Request Guide & EHR Script

Core Goal: Establish Comprehensive Baseline & Longitudinal Cardiometabolic Telemetry Beyond Crude Glucose · By Cat Clark

1. Why Fasting Glucose and HbA1c Alone Miss Early Metabolic Dysfunction

Standard screening panels frequently rely on fasting glucose and HbA1c alone. Because pancreatic beta cells compensate for peripheral insulin resistance by hyper-secreting insulin, fasting glucose and HbA1c can remain within normal reference ranges for years while hyperinsulinemia, atherogenic particle proliferation, and hepatic steatosis progress silently. In STEP 1 (PMID: 33567185) and SURMOUNT-1 (PMID: 35658024), incretin therapy reversed prediabetes in 84% to 95% of participants while improving lipid and inflammatory profiles. Tracking these biomarkers establishes objective proof of metabolic restoration.

2. The SAF Biomarker Request Checklist (Bring to Your Prescriber)

Request	Biomarker / Panel Name	Clinical Rationale & What It Measures	Baseline Result	Follow-Up (3-6 Mo)
[]	Fasting Insulin & Fasting Glucose (HOMA-IR)	Quantifies hepatic and peripheral insulin sensitivity via $HOMA-IR = (Fasting\ Insulin \times Fasting\ Glucose) / 405$. Detects compensatory hyperinsulinemia before A1c rises.	Insulin: _____ HOMA: _____	Insulin: _____ HOMA: _____
[]	Hemoglobin A1c (HbA1c)	Measures 90-day glycated hemoglobin mean to track glycemic trajectory and prediabetes reversal.	_____ %	_____ %
[]	Apolipoprotein B (ApoB) & Standard Lipid Panel	Directly counts total atherogenic lipoprotein particles (VLDL, IDL, LDL); superior to calculated LDL-C in insulin resistance and hypertriglyceridemia.	ApoB: _____ TG/HDL: _____	ApoB: _____ TG/HDL: _____
[]	High-Sensitivity C-Reactive Protein (hs-CRP)	Measures systemic vascular and visceral adipose inflammation (SELECT trial cardiovascular risk reduction marker, PMID: 37952131).	_____ mg/L	_____ mg/L
[]	Comprehensive Metabolic Panel (CMP) & eGFR	Evaluates hepatic transaminases (ALT/AST for MASLD improvement), renal filtration (eGFR/creatinine for protein target safety), and electrolytes.	ALT/AST: _____ eGFR: _____	ALT/AST: _____ eGFR: _____

Request	Biomarker / Panel Name	Clinical Rationale & What It Measures	Baseline Result	Follow-Up (3-6 Mo)
[]	Thyroid Function (TSH, Free T4, Free T3)	Screens for thyroid dysfunction affecting basal metabolic rate; during steep caloric deficits, peripheral T4-to-T3 conversion can decline.	TSH: _____ FT4/FT3: _____	TSH: _____ FT4/FT3: _____
[]	Micronutrient & Anemia Screen	Ferritin, Iron Panel, Vitamin B12, 25-OH Vitamin D, RBC Magnesium: Essential when delayed gastric emptying reduces total food volume.	Ferr: _____ B12/VitD: _____	Ferr: _____ B12/VitD: _____

3. Word-for-Word Consultation Script & Anthropometric Companion Metrics

"Doctor, because GLP-1 therapy alters endocrine signaling, visceral adiposity, and nutrient intake volume, I want to establish baseline numbers beyond standard fasting glucose. Today I am requesting a Fasting Insulin alongside my CMP to calculate HOMA-IR, an ApoB and hs-CRP to track cardiometabolic risk, and Ferritin, Vitamin B12, and Vitamin D baselines. Please include the ICD-10 diagnostic codes for metabolic syndrome screening, insulin resistance, or nutritional monitoring on the requisition."

- **Pair Labs with Waist-to-Height Ratio & DEXA:** Per the 2025 Lancet Diabetes & Endocrinology Commission (Rubino et al.), pair blood biomarkers with monthly waist circumference at the navel and, where accessible, a baseline and 6-month DEXA body composition scan.

Clinical Citations: Wilding JPH et al., NEJM 2021 (PMID: 33567185) · Lincoff AM et al., SELECT Trial NEJM 2023 (PMID: 37952131) · Rubino F et al., Lancet Diabetes Endocrinol 2025.

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