Comprehensive Testing Plan

Cardiovascular | Methylation | Iron | Hormones | Inflammation Autoimmune | Kidney | CIRS | Cognitive | Cancer Screening

Patient: Jim Gurtner | DOB: 11/6/1961 | Age: 64 | Vegan
Generated: May 08, 2026

DISCLAIMER: This document is for personal informational purposes only. It is not medical advice. Review all findings with qualified healthcare providers.

Overview

This testing plan covers all 37 recommended tests across 17 categories. Completed: 0. Pending: 14. Other: 23.

Autoimmune

Anti-Intrinsic Factor Ab

Done **Priority: high**

Result: Negative
Why: Rules out pernicious anemia as cause of declining B12. Negative means B12 absorption mechanism is intact.
Reference: Ref: Negative
Linked: mthfr, gut

Anti-Parietal Cell Ab

Done **Priority: high**

Result: Negative
Why: Rules out autoimmune gastritis (which destroys acid-producing cells). Negative is reassuring for gut health.
Reference: Ref: <=20 (Negative)
Linked: gut

ANA Screen

Done **Priority: moderate**

Result: Negative
Why: Screens for systemic autoimmune diseases (lupus, scleroderma, etc.). Negative is reassuring.
Reference: Ref: Negative

Rheumatoid Factor

Done **Priority: moderate**

Result: <10 IU/mL (Normal)
Why: Screens for rheumatoid arthritis and other autoimmune conditions. Normal.
Reference: Ref: <14 IU/mL

CIRS

CIRS Panel (C4a, MMP-9, VEGF, MSH, TGF-b1, VIP)

Pending **Priority: critical**

Result: --

Why: THE single most important outstanding test. Last tested 2018 - VEGF was critically low at 11, MMP-9 2x normal, C4a elevated. CIRS is the root cause driving hormonal collapse (DHEA-S crash), low leptin, and chronic inflammation. Cannot advance Shoemaker protocol without current markers.

Reference: C4a: <2830 | MMP-9: <332 | VEGF: 31-86 | MSH: 35-81

Linked: cirs, hormones

Urine Mycotoxin Panel

Pending **Priority: high**

Result: --

Why: Never tested. Would confirm or rule out active mycotoxin exposure. With HLA 4/3/53 multisusceptible genotype, Jim cannot clear mycotoxins naturally - need to know current burden.

Reference: RealTime Labs or Mosaic Diagnostics (formerly Great Plains)

Linked: cirs

Cardiovascular

NT-proBNP

Done **Priority: urgent**

Result: 87 pg/mL (Normal)
Why: Father died of cardiomyopathy at 63. Jim is 64. NT-proBNP screens for cardiac strain and heart failure. Normal result rules out active heart failure but does NOT rule out structural heart disease (30% of stage B HF patients have normal NT-proBNP).
Reference: Ref: <125 pg/mL
Linked: cardiovascular

Lp(a)

Done **Priority: urgent**

Result: <10 nmol/L (Optimal)
Why: Genetic cardiovascular risk factor that cannot be modified by lifestyle. Jim's is optimally low - one fewer risk factor to worry about.
Reference: Ref: <75 optimal
Linked: cardiovascular

Echocardiogram

Pending **Priority: critical**

Result: --
Why: Father died of cardiomyopathy at 63. Jim is 64. HFE hemochromatosis allows iron deposition in cardiac muscle. NT-proBNP was normal BUT 30% of structural heart disease patients have normal NT-proBNP. Echo assesses chamber size, wall thickness, valve function, and ejection fraction.
Reference: Structural heart assessment
Linked: cardiovascular, hemochromatosis

OxLDL / MPO / Lp-PLA2

Pending **Priority: high**

Result: --
Why: Oxidized LDL, Myeloperoxidase, and Lp-PLA2 measure active arterial inflammation and plaque vulnerability. LDL particle number is HIGH (1763) - need to know if these particles are oxidized and dangerous.
Reference: OxLDL: <60 | MPO: <470 | Lp-PLA2: <200
Linked: cardiovascular

Cardiac MRI (T2-star)

Pending **Priority: moderate**

Result: --
Why: T2-star mapping specifically detects myocardial iron loading - the most dangerous consequence of hemochromatosis given Jim's family history of cardiomyopathy. More sensitive than echo for iron deposition.
Reference: T2*: >20ms normal

Linked: hemochromatosis, cardiovascular

CAC Score

Pending **Priority: moderate**

Result: --

Why: Coronary Artery Calcium score quantifies atherosclerotic calcification. Non-invasive CT scan. Given years of homocysteine at 39.1 damaging arteries, this would show if calcium has deposited.

Reference: Score: 0 ideal | >100 moderate | >400 high

Linked: cardiovascular

GI

Fasting Gastrin

Done **Priority: high**

Result: 23 pg/mL (Normal)
Why: Screens for atrophic gastritis, Zollinger-Ellison, and gastric acid abnormalities. Normal at 23.
Reference: Ref: <=100 pg/mL
Linked: gut

Repeat GI-MAP (or Genova GI Effects)

Pending **Priority: critical**

Result: --
Why: 2020 GI-MAP showed major dysbiosis: H. pylori with antibiotic resistance, Clostridia 20x overgrown, Geotrichum (fungal) HIGH, SIgA 131 (critically low), Akkermansia undetectable. The gut microbiome has likely changed significantly in 6 years. Cannot guide current gut treatment - especially H. pylori status - without current data.
Reference: Comprehensive stool analysis with PCR. Confirms current H. pylori status, microbiome composition, inflammation markers.
Linked: gut

SIBO Breath Test (Lactulose, 3-hour)

Pending **Priority: critical**

Result: --
Why: PERSISTENT BURPING is highly suggestive of SIBO (Small Intestinal Bacterial Overgrowth) - bacteria fermenting carbs in the small intestine where they do not belong. SIBO is extremely common downstream of long-term H. pylori (which suppresses stomach acid). A stool test does NOT diagnose SIBO - you need a separate breath test. This complements (not overlaps) the GI Effects test.
Reference: 3-hour lactulose breath test measures hydrogen and methane. Hydrogen+ = bacterial overgrowth. Methane+ = archaea (often constipation pattern). Hydrogen sulfide variant available.
Linked: gut

Upper Endoscopy with Biopsies

Pending **Priority: moderate**

Result: --
Why: Direct visualization of stomach/duodenum. Can confirm H. pylori status, assess for atrophic changes, check for celiac disease, and evaluate iron absorption sites.
Reference: Procedural
Linked: gut

Genetic

HFE Gene Test

Done **Priority: urgent**

Result: C282Y/H63D Compound Het

Why: Confirms hereditary hemochromatosis genotype. Compound heterozygote has only 1-2% penetrance for clinical iron overload, but requires lifelong monitoring.

Reference: Genotype confirmed

Linked: hemochromatosis

Hematology

CBC with Differential

Done **Priority: urgent**

Result: WBC 3.7 LOW, PLT 151 borderline
Why: Complete blood count reveals pancytopenia pattern: WBC LOW, RBC low-normal, PLT borderline. All three cell lines affected = bone marrow production issue, likely from MTHFR-driven folate/B12 insufficiency.
Reference: WBC: 3.8-10.8 | RBC: 4.20-5.80 | PLT: 140-400
Linked: pancytopenia, mthfr

Hormones

Pregnenolone

Done **Priority: high**

Result: 41 ng/dL (Low)
Why: The "mother hormone" upstream of ALL steroid hormones. Low at 41 confirms insufficient raw material for DHEA, testosterone, cortisol production.
Reference: Ref: 22-237 | Optimal: >50
Linked: hormones, cirs

Cortisol AM

Done **Priority: moderate**

Result: 10.0 mcg/dL
Why: Morning cortisol screens for adrenal insufficiency. At lower edge of optimal (10-20). Improved from 7.9 to 10.0.
Reference: Ref: 4.0-22.0 | Optimal: 10-20
Linked: hormones, cirs

Testosterone

Done **Priority: high**

Result: 442 ng/dL (Below 500 target)
Why: Below functional optimal of 500. Improving from 275 baseline but insufficient pregnenolone/DHEA limits further recovery.
Reference: Ref: 250-827 | Optimal: >500
Linked: hormones

DHEA-S

Done **Priority: urgent**

Result: 40 mcg/dL (Critical)
Why: Crashed from 121 to 40 (67% decline). Classic CIRS pattern of pregnenolone steal. Linked to cardiovascular mortality, immune dysfunction, cognitive decline.
Reference: Ref: 20-217 | Optimal: >150
Linked: hormones, cirs

Inflammatory

hs-CRP

Done **Priority: urgent**

Result:	0.3 mg/L (Optimal)
Why:	Tracks systemic inflammation driving CIRS, atherosclerosis, and the gut-tinnitus inflammation model. Excellent at 0.3 (was 1.14 in 2018).
Reference:	Ref: <1.0 optimal
Linked:	cirs, cardiovascular

Iron

Iron Panel (Full)

Done **Priority: urgent**

Result: Fe 107, TIBC 271, Sat 39%, Ferritin 28

Why: Confirmed C282Y/H63D hemochromatosis requires regular iron monitoring. Saturation improved from 53% to 39%. Ferritin paradoxically low at 28 (target 50-80) - may need to ease iron-blocking strategies.

Reference: Sat: 20-48%, Ferritin: 24-380 ng/mL

Linked: hemochromatosis

Kidney

UACR + Renal Ultrasound

Pending **Priority: high**

Result: --

Why: eGFR declined from 97 to 70 in 6 years (4.5x normal aging rate). UACR detects early kidney damage from albuminuria. Renal ultrasound checks for structural causes (stones, cysts, obstruction). Meets KDIGO referral criteria.

Reference: UACR: <30 mg/g normal

Linked: egfr

Metabolic

HbA1c

Done **Priority: high**

Result: 5.2%
Why: 3-month blood sugar average. Screens for insulin resistance and diabetes. Consistently excellent at 5.2% across all tests.
Reference: Ref: <5.7% | Optimal: <5.4%

Fasting Insulin

Done **Priority: high**

Result: 4.4 uIU/mL (Optimal)
Why: More sensitive than glucose for detecting early insulin resistance. Optimal at 4.4 (below 5 target).
Reference: Ref: <18.4 | Optimal: <5

Methylation

Homocysteine

Done **Priority: urgent**

Result: 8.5 umol/L
Why: MTHFR 677++ reduces homocysteine recycling by 70%. Was 39.1 in 2018 (10x stroke risk). Current 8.5 is near 6-8 optimal target - methylation protocol is working.
Reference: Ref: <15.2 | Optimal: 6-8
Linked: mthfr, cardiovascular

Vitamin B12

Done **Priority: high**

Result: 416 pg/mL (Declining)
Why: MTHFR 677++ requires adequate B12 for methylation. Declining from 659 to 416. However, MMA is normal (92), suggesting tissue B12 is adequate despite low serum levels.
Reference: Ref: 200-1100 | Optimal: >600
Linked: mthfr, pancytopenia

MMA (serum + urine)

Done **Priority: high**

Result: 92 nmol/L / 0.6 mmol/mol (Normal)
Why: Functional B12 marker. Normal MMA means B12 is adequate at the tissue level even though serum B12 is declining. This is a key reassurance.
Reference: Serum: 69-390 | Urine: 0.3-2.2
Linked: mthfr

RBC Folate

Pending **Priority: high**

Result: --
Why: Plasma folate was critically low at 2.5 in 2018 but has never been properly retested. RBC folate is superior - measures intracellular folate status over 120 days. Essential for MTHFR 677++ management.
Reference: Optimal: >600 ng/mL
Linked: mthfr, pancytopenia

Minerals

Selenium / Copper / Iodine

Pending **Priority: moderate**

Result: --

Why: Selenium is critical for thyroid function and antioxidant defense (GPx enzyme). Copper/zinc ratio affects inflammation. Iodine for thyroid hormone synthesis.

Reference: Se: 70-150 | Cu: 70-155 | Iodine: varies

Neurovascular

Transcranial Doppler

Pending Priority: moderate

Result: --

Why: With head rotation - assesses vertebral artery blood flow during cervical movement. Directly tests the vertebral artery compression hypothesis underlying tinnitus.

Reference: Dynamic vascular assessment

Prostate

PSA (Total + Free)

Done Priority: moderate

Result: 1.1 ng/mL (Normal), 27% Free

Why: Baseline prostate screen, especially important when starting DHEA (can convert to androgens). Safe at 1.1 with 27% free (>25% is favorable).

Reference: Ref: 25%

Thyroid

Thyroid Panel

Done **Priority: moderate**

Result: TSH 1.67 (Optimal)
Why: Comprehensive thyroid assessment. TSH improved to optimal 1-2 range. T3/T4 normal. No autoimmune thyroid disease.
Reference: TSH: 0.40-4.50 | FT4: 0.8-1.8 | FT3: 2.3-4.2

Vitamins

Vitamin D

Done Priority: high

Result: 50 ng/mL (At lower goal)
Why: At lower edge of 50-80 target. Highly variable history. Needs consistent supplementation + 20-30 min sunlight daily.
Reference: Ref: 30-100 | Optimal: 50-80

Vitamin E / CoQ10 (serum)

Pending Priority: moderate

Result: --
Why: CoQ10 is depleted 40-50% by HFE hemochromatosis. Need serum level to confirm 300mg/day supplementation is achieving adequate tissue levels. Vitamin E is a fat-soluble antioxidant partner to CoQ10.
Reference: CoQ10: 0.5-1.5 mg/L | Vit E: 5.5-17 mg/L
Linked: hemochromatosis