DEMO DEMO

Name: DEMO DEMO
Date of Birth: 04-19-1965
Biological Sex: Male
Age: 60
Height:
Weight:
Fasting:

Telephone: 000-000-0000
Street Address:
Email:

FINAL REPORT

Accession ID: 2985372172

Provider Information

Practice Name: DEMO CLIENT, MD
Provider Name: DEMO CLIENT, MD
Phlebotomist: 0

Telephone: 000-000-0000
Address: 3521 Leonard Ct, Santa Clara, CA 95054

Report Information

Current Result | Previous Result | In Control | Moderate | Risk

Specimen Information

Sample Type	Collection Time	Received Time	Report	Final Report Date
Serum	2025-09-02 00:00 (PST)	2025-09-02 12:04 (PST)	Cardio Zoomer - P2	2025-12-04
EDTA	2025-09-02 00:00 (PST)	2025-09-02 12:04 (PST)	Cardio Zoomer - P2	2025-12-04
Metal Free Urine	2025-09-02 00:00 (PST)	2025-09-02 12:04 (PST)	Cardio Zoomer - P2	2025-12-04

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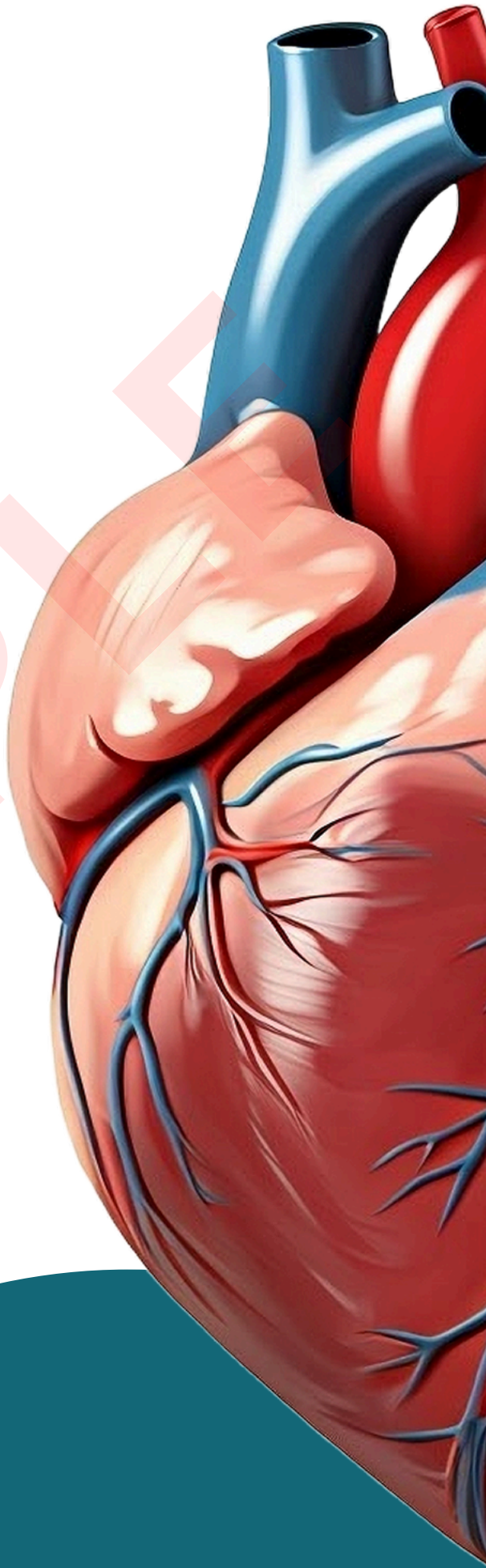
VibrantWellness

Cardio Zoomer

Your Cardiac Health Report



Cardio Zoomer

INTRODUCTION

Vibrant Wellness is pleased to present to you 'Cardio Zoomer' testing to help you make healthy lifestyle choices in consultation with your healthcare provider. Cardio Zoomer is intended to be used to improve functions associated with a general state of health.
Cardio Zoomer is a comprehensive health analytics tool designed to evaluate multiple cardiometabolic pathways and provide insights into cardiovascular health risks. It integrates advanced biomarker analysis across the categories Metabolic Risk, Redox Risk, Omega Fatty Acids, Endothelial Dysfunction, Lipids and Ratios, Ceramides and Ratios, Sterols, Inflammation, Macrophage Recruitment and Plaque, Cardiac Stress and Clotting Risk.

Methodology:

The Vibrant Cardio Zoomer uses Tandem mass spectrometry methodology (LC-MS/MS) for detecting Redox Risk, Amino Acids, Endothelial Dysfunction, Sterols, Ceramides, Trimethylamine N-oxide (TMAO), and Omega Fatty Acids markers and Chemiluminescene Immunoassay methodology for detecting TNF-α. For Metabolic Risk, Lipids, Inflammation, Macrophage Recruitment and Plaque and Cardiac Stress and Clotting risk, we use FDA approved Roche Cobas platform. Urine creatinine is measured using a kinetic colorimetric assay based on the Jaffé method. Redox risk markers are reported as the quantitative result normalized to urine creatinine to account for urine dilution variations.

Interpretation of Report:

The Cardio Zoomer report starts with a summary page which contains the Framingham Risk Score and Reynolds Risk Score to assess overall cardiovascular risk, alongside markers categorized under Metabolic Risk, Redox Risk, Endothelial Dysfunction, Lipids, Ceramides, Sterols, Inflammation, and Macrophage Recruitment and Plaque, followed by an image illustrating the progressive stages of atherosclerosis from initial endothelial damage to plaque formation, serving as a valuable tool for risk stratification by showing the sequential impact of these risk factors. Reference ranges have been established based on cohorts of 500 relatively healthy individuals. This is followed by a complete list of all biomarkers tested with quantitative results to enable a full overview along with the corresponding reference ranges, with results displayed in a quantile-style format using horizontal bars segmented into green (in control), yellow (moderate), and red (risk) zones, positioning the patient's value as a dot to intuitively convey relative risk levels. The illustration for endothelial dysfunction outlines the nitric oxide synthesis pathway, highlighting how markers support vascular health. The lipids and ratios section includes a diagram of lipoprotein metabolism, tracing cholesterol transport and potential atherogenic effects. The sterol balance illustration employs a gauge to represent the equilibrium between cholesterol production and absorption, aiding in identifying imbalances for targeted interventions. The personalized suggestions categorized under adaptogens, antioxidants, and similar groups provide supplement dosages and indicate how these can be obtained from natural food sources to enhance cardiovascular health improvements.

The Vibrant Wellness platform provides tools for you to track and analyze your general wellness profile. Testing for the Cardio Zoomer panel is performed by Vibrant America, a CLIA certified lab CLIA#:05D2078809. Vibrant Wellness provides and makes available this report and any related services pursuant to the Terms of Use Agreement (the "Terms") on its website at www.vibrant-wellness.com. By accessing, browsing, or otherwise using the report or website or any services, you acknowledge that you have read, understood, and agree to be bound by these terms. If you do not agree to these terms, you should not access, browse, or use the report or website. The statements in this report have not been evaluated by the Food and Drug Administration and are meant to be lifestyle choices for potential risk mitigation. Please consult your healthcare provider for medication, treatment, diet, exercise, or lifestyle management as appropriate. This product is not intended to diagnose, treat, or cure any disease or condition.

Please note:

Consider all supplements in relation to medical history and symptoms. Not all recommended supplements are appropriate in all individual cases. It is important that you discuss any modifications to your diet, exercise, and nutritional supplementation with your healthcare provider before making any changes. Pediatric ranges have not been established for these tests. Pediatric ranges have not been established for this test. It is important that you discuss any modifications to your diet, exercise, and nutritional supplementation with your healthcare provider before making any changes.

Cardio Zoomer - Summary

Questionnaire Data

DEMOGRAPHICS

Date of Birth	2000-01-01	Biological sex	Male		
Height	70 inches	Weight	160 lbs	Ethnicity	Asian
Please specify:			Chinese		

CARDIAC HEALTH SYMPTOMS

Chest pain or tightness	No symptoms	Shortness of breath	No symptoms	Fatigue or weakness	Mild
Dizziness or fainting	No symptoms	Elevated systemic blood pressure	No symptoms	Lightheadedness or unusual fatigue during or after exercise	No symptoms
Rapid or irregular heartbeat	No symptoms	Palpitations	No symptoms		

SYSTEMIC SYMPTOMS

Hyperpigmented skin patches	No symptoms	Sudden weight fluctuations	Mild	Persistent feeling of hunger or lack of Satiety	No symptoms
Swelling in the hands, feet, or face	No symptoms	Altered urinary patterns	No symptoms	Brain fog	Mild
Yellowing of the skin or eyes	No symptoms	Right upper abdominal discomfort or pain	No symptoms	Frequent infections	No symptoms

MEDICAL BACKGROUND

FAMILY HISTORY

Cardiovascular disease	No	High blood pressure	Yes	High cholesterol	No
Atherosclerosis	No	Peripheral arterial disease	No	Diabetes	Yes
Insulin resistance	No	Kidney disease	No	Liver disease	No
Other, please specify:					

MEDICAL HISTORY

Cardiovascular disease	No	High blood pressure	No	High cholesterol	No
Atherosclerosis	No	Peripheral arterial disease	No	Diabetes	No
Insulin resistance	No	Kidney disease	No	Liver disease	No
Other, please specify:					

Have you had your blood pressure checked recently?	Yes	If yes, then please specify:	Systolic: 110, Diastolic: 75
Have you had any heart-related surgeries or procedures?	No	If yes, then please specify:	
Are you currently on any medications?	No	If yes, then please list:	
Are you currently on any supplements?	Yes	If yes, then please list:	Takes multivitamins and omega-3

Questionnaire Data

DIETARY PATTERNS

Diet high in processed foods and sugars	Sometimes
Balanced diet	Often
High-fat diet	Rarely

LIFESTYLE

On average, how often do you engage in physical activity	Moderately active
On average, how often do you engage in different types of physical activity	Three to four per week
What types of physical activity do you engage in	Aerobic exercise, strength training
How many hours of sleep do you get on average per night	Seven to nine hours
How would you rate your stress levels	Moderate
How often do you engage in any stress-reducing techniques	Occasionally
During the past 6 months, on average, about how many alcoholic drinks did you have per month	One to three per month
Do you smoke or use tobacco products	No
Have you recently experienced significant stress or mental health issues	No

Cardio Zoomer - Summary

Cardio Zoomer Summary

Test Name	Current	Previous	Reference
Reynolds Risk Score (%)	1.5		
Framingham Risk Score (%)	1.6		

The Reynolds Risk Score (RRS) and the Framingham Risk Score (FRS) are effective tools for predicting the 10-year risk of cardiovascular events. They provide a percentage chance for a cardiovascular event in the next 10 years. The respective dial charts have a pointer showing low risk in green, moderate risk in yellow and high risk in red. Several factors including demographics, biomarker status, behavioral risks, health comorbidities, and family history are used to calculate these scores. It is however, important to note that the marker categories below including Metabolic risk, Redox risk, Endothelial dysfunction etc., provide a more comprehensive assessment of risk profile. ***Disclaimer:*** *These risk scores are general tools for estimating cardiovascular risk and should not replace professional medical advice; consult a healthcare provider for an accurate risk assessment and personalized guidance.*

1 Metabolic Risk (6/30)
Metabolic risks such as elevated blood glucose, insulin levels, and insulin resistance significantly contribute to the development and progression of cardiovascular diseases.
Your at risk markers: Glycated Serum Protein, AST (Aspartate Aminotransferase), Protein (Total), Sodium, Chloride, Hemoglobin A1c (HbA1c)

2 Redox Risk (0/6)
Oxidative stress drives the pathogenesis of cardiovascular diseases by causing damage to lipids, proteins, and DNA, leading to endothelial dysfunction, inflammation, and atherosclerosis.
Your at risk markers: N/A

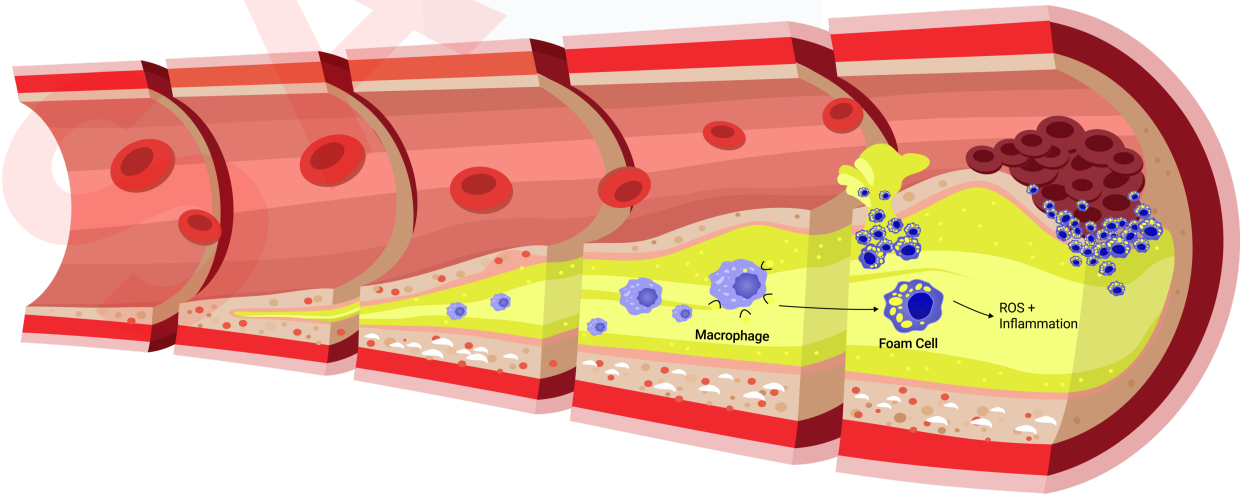
3 Endothelial Dysfunction (4/10)
Endothelial dysfunction, marked by impaired vascular homeostasis, increased vascular inflammation, and disrupted blood flow, plays a crucial role in the initiation and progression of atherosclerosis.
Your at risk markers: Arginine/ADMA, Arginine/SDMA, Homoarginine/ADMA, Homoarginine/SDMA

4 Lipids, Ceramides, and Sterols (4/23)
Dysregulated lipid levels in the bloodstream can damage the inner lining of blood vessels, reduce blood flow, and contribute to plaque formation.
Your at risk markers: Lp(a), Cer(d18:1/24:1), Lathosterol, HDL Direct

5 Inflammation (0/4)
Inflammation underlies the progression of atherosclerosis by contributing to platelet activation, endothelial dysfunction, plaque formation, and rupture.
Your at risk markers: N/A

6 Macrophage Recruitment and Plaque (0/3)
Atherosclerotic risk markers assess key processes such as fibrosis, tissue remodeling, oxidative damage, and inflammation, all of which drive the formation of atherosclerotic lesions.
Your at risk markers: N/A

1 Metabolic Risk | 2 Redox Risk | 3 Endothelial Dysfunction | 4 Lipids, Ceramides, and Sterols | 5 Inflammation | 6 Macrophage Recruitment and Plaque



This illustration depicts the sequential development of atherosclerosis, starting from metabolic imbalance and oxidative stress leading to endothelial dysfunction, lipid accumulation, inflammation, and plaque formation. It highlights how multiple biological risk factors contribute to artery damage and cardiovascular disease.

Cardio Zoomer - Summary

Metabolic Risk

Glucose Regulation	Current	Previous	Result	Reference
Hemoglobin A1c (HbA1c) (%)	6.0		0 5.6 6.4	≤5.6

Glycosylated hemoglobin A1c (HbA1c) is a critical biomarker that reflects the average blood glucose concentration over the preceding 2 to 3 months. It is extensively used for screening, diagnosing, and monitoring glucose control in individuals with diabetes. In Type 2 diabetes mellitus (T2DM), hyperglycemia, or elevated blood sugar levels, can lead to vascular damage, making cardiovascular disease (CVD) the most prevalent complication associated with T2DM. Hyperglycemia can impair the coronary arteries, causing narrowing and occlusion of the cardiovascular lumen, which results in inadequate or disrupted blood flow to the myocardium, thereby elevating the risk of cardiovascular health complications. HbA1c serves as an essential marker for monitoring glycemic control, a major risk factor for the development of CVD.

Glucose (mg/dL)	77		61 69 100 126	70.0-100.0
Glycated Serum Protein (umol/L)	286		0 285	≤285.0

Glycated serum protein (GSP) is a product of the glycation reaction between glucose and serum proteins in the blood circulation. GSP is used as an indicator of glycemic control along with various other markers in diabetic patients. It reflects the mean plasma glucose levels over the previous 2–3 weeks. GSP levels are significantly elevated in diabetes. Studies have revealed that GSP levels correlate with the intima-media thickness of the carotid arteries and are associated with coronary heart disease.

Insulin Resistance	Current	Previous	Result	Reference
C-peptide (mg/mL)	1.62		0 1.09 4.4	1.1-4.4
Insulin (µU/mL)	5.6		0 2.5 24.9	2.6-24.9
HOMA-IR	1.1		0 0.6 2	0.7-2.0
Adiponectin (ug/mL)	4.7		0 4.4 58.5	4.5-58.5

Metabolic Factors	Current	Previous	Result	Reference
Trimethylamine N-oxide (TMAO) (µM)	5.10		0 10 13	≤10.0
L-Carnitine (nmol/mL)	40.6		0 11.5 43.4	11.6-43.4
Ferritin (ng/mL)	101		0 29 400	30.0-400.0
Leptin (ng/mL)	9.1		0 1 13.4	1.1-13.4

Hepatic Function	Current	Previous	Result	Reference
ALT (Alanine Aminotransferase) (U/L)	39		0 41	≤41.0

Cardio Zoomer - Summary

Metabolic Risk

Hepatic Function	Current	Previous	Result	Reference
AST (Aspartate Aminotransferase) (U/L)	43		0 40	≤40.0

AST (Aspartate Aminotransferase) is an enzyme found in the liver, heart, muscles, and kidneys, and it enters the bloodstream when these tissues are injured. Elevated AST levels, particularly when accompanied by other markers of liver dysfunction, may indicate systemic inflammation and oxidative stress. These conditions can damage the vascular endothelium and promote plaque formation, thereby increasing the likelihood of ischemic events and other cardiovascular complications.

GGT (Gamma-Glutamyl Transferase) (U/L)	15		0 60	≤60.0
Bilirubin (Total) (mg/dL)	0.8		0 1.2	≤1.2
Protein (Total) (g/dL)	8.2		0 6.1 8	6.2-8.0

Elevated total protein levels may reflect increased globulin production, often due to immune activation, chronic inflammation, or conditions like multiple myeloma, or increased albumin from dehydration. While high levels can support immune function and oncotic pressure, they may also indicate underlying issues like liver dysfunction or chronic disease, potentially increasing cardiovascular risk through inflammation or endothelial dysfunction.

Alkaline Phosphatase (U/L)	41		0 39 129	40.0-129.0

Renal Function	Current	Previous	Result	Reference
Sodium (mmol/L)	133		125 135 145	136.0-145.0

Low sodium levels (hyponatremia) disrupt fluid balance, nerve function, and muscle contractions, often signaling underlying conditions like kidney dysfunction, heart failure, or excessive fluid retention. Hyponatremia can lead to cerebral edema, causing neurological symptoms such as confusion, seizures, or coma in severe cases. Chronically low sodium may also contribute to muscle weakness, fatigue, and impaired cardiac function, increasing the risk of arrhythmias and exacerbating cardiovascular disease (CVD). Persistent sodium imbalances can impair vascular regulation and promote systemic inflammation, further elevating the long-term risk of heart failure and ischemic events.

Potassium (mmol/L)	4.0		3 3.4 5.1	3.5-5.1
Chloride (mmol/L)	94		0 97 107	98.0-107.0

Chloride is an electrolyte involved in maintaining fluid balance, acid-base homeostasis, and nerve function. It is considered a renal marker because the kidneys play a central role in regulating chloride levels in the body. Low levels of chloride (hypochloremia) can result from vomiting, diarrhea, or metabolic alkalosis. Abnormal chloride levels disrupt acid-base balance, leading to systemic stress and contributing to the development of hypertension and cardiovascular dysfunction over time. Specifically, hypochloremia has been associated with impaired vascular tone and endothelial dysfunction, both of which elevate the long-term risk of cardiovascular disease (CVD).

Carbon Dioxide (mmol/L)	19		15 17 29	18.0-29.0
Glucose (mg/dL)	77		61 69 100	70.0-100.0
BUN (Blood Urea Nitrogen) (mg/dL)	20		0 7 23	8.0-23.0

Cardio Zoomer - Summary

Metabolic Risk

Renal Function	Current	Previous	Result	Reference
Creatinine (mg/dL)	1.07		0 0.69 1.2	0.7-1.2
eGFR (Estimated Glomerular Filtration Rate) (mL/min/1.73m²)	75		0 59	≥60.0
eGFR (African American) (mL/min/1.73m²)	87		0 59	≥60.0
BUN/Creatinine Ratio	19		0 9 20	10.0-20.0
Serum Osmolality (mOsm/kg)	285.4		0 284 315	285.0-315.0
Uric acid (mg/dL)	3.6		0 3.3 7	3.4-7.0
Cystatin C (mg/L)	0.88		0 0.6 0.95	0.61-0.95

Redox Risk

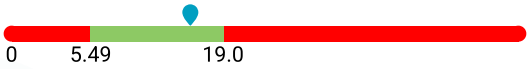
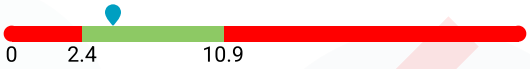
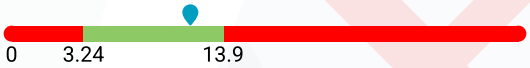
Test Name	Current	Previous	Result	Reference
8-hydroxy-2-deoxyguanosine (8-OHdG) (ug/g)	0.77		0 1.14 4	≤1.14
F2-Isoprostane (ug/g)	<0.05		0 0.1 0.26	≤0.1
Malondialdehyde (ug/g)	21.58		0 72.8 163	≤72.87
Nitrotyrosine (ug/g)	57.41		0 91.3 285	≤91.32
Chlorotyrosine (ug/g)	<1.6		0 3.43 9.92	≤3.43
Urine Creatinine (mg/ml)	1.00		0 0.24 2.16	0.25-2.16

Omega Fatty Acids

Test Name	Current	Previous	Result	Reference
EPA (Eicosapentaenoic acid) (%)	1.56		0 0.14 2.26	0.15-2.26
DPA (Docosapentaenoic acid) (%)	1.07		0 0.44 1.8	0.45-1.8
DHA (Docosahexaenoic acid) (%)	6.89		0 2.41 10.5	2.42-10.52
LA (Linoleic acid) (%)	7.74		0 3.21 10.4	3.22-10.49

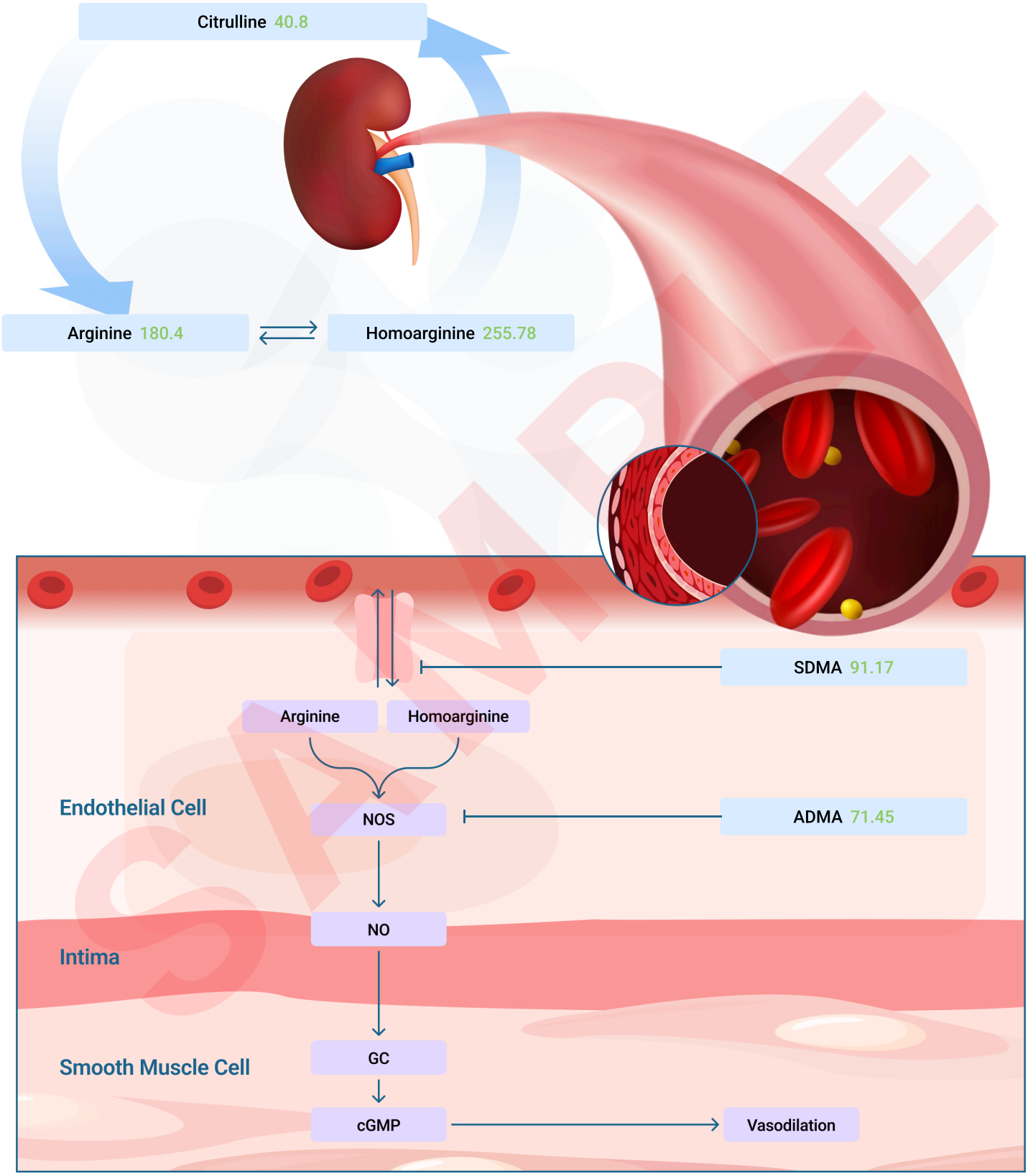
Cardio Zoomer - Summary

Omega Fatty Acids

Test Name	Current	Previous	Result	Reference
AA (Arachidonic Acid) (%)	15.66			5.5-19.01
AA/EPA	4.3			2.5-10.9
Omega-6 Total (%)	28.75			11.03-34.96
Omega-3 Total (%)	11.47			3.25-13.99
Omega-3 Index (%)	8.45			8.0-12.65

Cardio Zoomer - Summary

Endothelial Dysfunction



This diagram illustrates the nitric oxide (NO) production pathway in endothelial cells, demonstrating how arginine and homoarginine support vasodilation (blood vessel widening). It shows how elevated ADMA and SDMA inhibit NO production, leading to endothelial dysfunction and impaired vascular health.

Cardio Zoomer - Summary

Endothelial Dysfunction

Test Name	Current	Previous	Result	Reference
Asymmetric dimethylarginine (ADMA) (ng/mL)	71.45		0 105 125	≤105.0
Symmetric dimethyarginine (SDMA) (ng/mL)	91.17		0 159	≤159.0
Homoarginine (ng/mL)	255.78		0 65.9 265	66.0-265.0
Arginine (nmol/mL)	180.4		0 81.5 249	81.6-249.0
Citrulline (nmol/mL)	40.8		0 18.6 47.5	18.7-47.5
Arginine/ADMA	35.82		5 89.9 849	90.0-849.99

L-arginine is the natural substrate for endothelial nitric oxide synthase (eNOS), driving nitric oxide (NO) production that maintains vascular tone and endothelial health. Asymmetric dimethylarginine (ADMA), a methylated arginine derivative, competitively inhibits eNOS and reduces NO synthesis, leading to endothelial dysfunction. The arginine/ADMA ratio serves as a surrogate marker of NO bioavailability, with a lower ratio reflecting impaired endothelial function. This ratio independently associates with increased cardiovascular risk and mortality. Studies demonstrate that a reduced arginine/ADMA ratio correlates with hypertension, acute coronary syndrome, hypercholesterolemia, hypertriglyceridemia, and hyperhomocysteinemia. Maintaining a higher arginine/ADMA ratio is critical for vascular protection and cardiovascular health.

Arginine/SDMA	24.11		5 74.9 649	75.0-649.99

L-arginine is the natural substrate for endothelial nitric oxide synthase (eNOS), driving nitric oxide (NO) production essential for maintaining vascular tone and endothelial health. Symmetric dimethylarginine (SDMA) is a circulating metabolite that impairs arginine availability, thereby reducing NO production. Elevated SDMA levels are associated with increased incidence of cardiovascular events and mortality. The Arginine/SDMA ratio serves as an important marker of endothelial function, reflecting the balance between the NO precursor L-arginine and SDMA, which limits arginine uptake. A lower ratio indicates reduced NO bioavailability, endothelial dysfunction, and heightened cardiovascular risk. This ratio naturally declines with age due to rising SDMA levels, paralleling vascular impairment. Patients with cardiovascular and cerebrovascular diseases, including transient ischemic attack (TIA) and stroke, show significantly lower ratios compared to healthy or high-risk individuals. Reduced values correlate with disease presence, severity, and worse clinical outcomes. The Arginine/SDMA ratio is a valuable diagnostic and prognostic biomarker for cardiovascular and vascular pathologies.

Homoarginine/ADMA	3.58		0 1.55 2.99	1.56-2.99

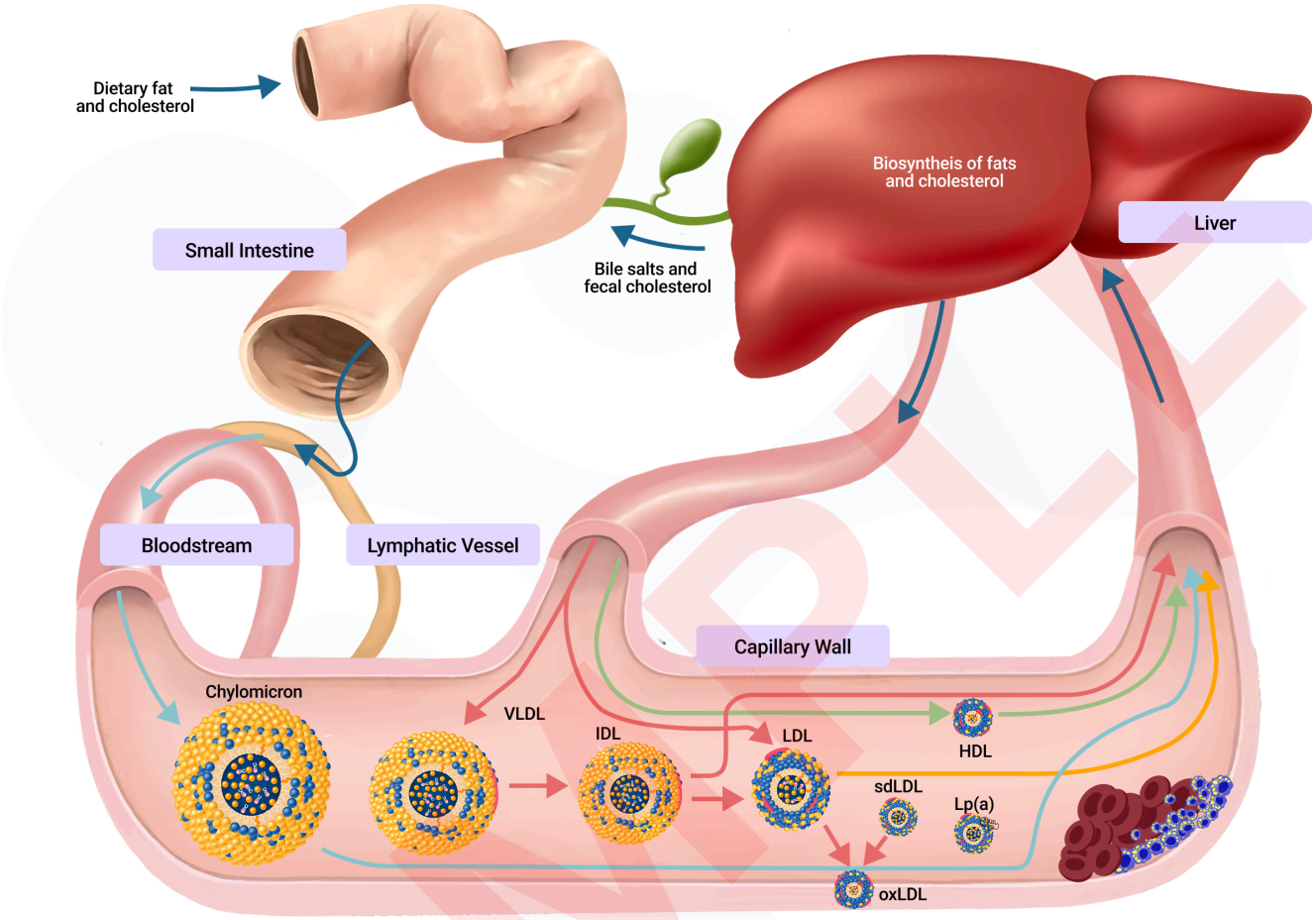
A high homoarginine/ADMA ratio reflects enhanced vascular protection and nitric oxide pathways, independently predicting reduced long-term cardiovascular mortality, even though such values may fall outside the reference range established using a healthy reference cohort.

Homoarginine/SDMA	2.81		0 0.99 2.11	1.0-2.11

A high homoarginine/SDMA ratio supports endothelial health and reduces inflammation, correlating with lower cardiovascular risk and better overall prognosis, even though such values may fall outside the reference range established using a healthy reference cohort.

Choline (nmol/mL)	25.5		0 6.7 31	6.8-31.0

Lipids and Ratios



This figure shows the journey of dietary fats and cholesterol through digestion, absorption, and circulation. It highlights the formation of different lipoproteins (chylomicrons, VLDL, LDL, HDL, and Lp(a)) and their roles in cholesterol transport, and how oxidized LDL contributes to plaque formation and accumulation.

Lipids	Current	Previous	Result	Reference
Cholesterol (mg/dL)	72		0 199 240	≤199.0
Triglycerides (mg/dL)	22		0 149 200	≤149.0

Cardio Zoomer - Summary

Lipids and Ratios

Lipids	Current	Previous	Result	Reference
HDL Direct (mg/dL)	53		0 34 55	≥56.0

High-density lipoproteins (HDL) are one of the five major groups of lipoproteins (chylomicrons, VLDL, IDL, LDL, and HDL). Unlike larger lipoproteins, HDL usually removes fat molecules from cells. Thus, HDL is also called "good cholesterol," since it carries the cholesterol in the blood back to the liver, where it is broken down which helps to eliminate excess cholesterol in the body. HDL-C test is a measure of the amount of high-density cholesterol particles in the blood. Higher levels of HDL indicate healthy cholesterol processing as HDL protects against the build-up of plaque inside arteries. Low HDL levels are linked to an increased risk of developing cardiovascular diseases (CVD). Factors that lead to reduced HDL levels include smoking, obesity, hypertriglyceridemia, lack of physical activity, usage of steroids (androgens, progestogens, anabolic), drugs (probucol, thiazides, beta-adrenergic blockers), and antibiotics (neomycin).

Non-HDL-C	18.80		0 130	≤130.0
LDL Direct (mg/dL)	12		0 99 129	≤99.0
sdLDL (mg/dL)	6.7		0 50	≤50.0
Lp(a) (mg/dL)	47		0 29	≤29.0

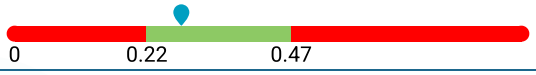
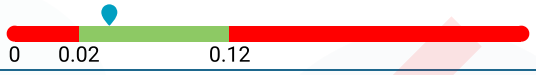
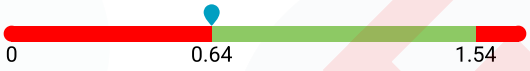
Lipoprotein(a) [Lp(a)] is a type of lipoprotein produced by the liver. It can be considered as a variant of low-density lipoprotein (LDL) that is attached to an additional protein, apolipoprotein(a). The apo(a) component is what differentiates Lp(a) from regular LDL particles. Lp(a) is involved in the transportation of triglycerides and cholesterol from the liver to tissues. However, it is also found colocalized with oxidized phospholipid molecules at plaque sites. This colocalization suggests that Lp(a) may promote endothelial dysfunction, inflammation, and calcification at these sites. Lp(a) is considered both pro-inflammatory and pro-thrombotic. Moreover, while Lp(a)'s structure allows it to carry cholesterol and other lipids like LDL, the presence of apo(a) also contributes to its atherogenic properties. Apo(a) can promote thrombosis, which is also atherogenic. Unlike LDL levels, Lp(a) levels are mainly determined by genetics and are not affected by lifestyle factors. As a result, Lp(a) levels can remain high even when LDL levels are low or controlled, making it an independent risk factor for cardiovascular diseases (CVD). Assessing Lp(a) levels is crucial for CVD risk assessment and early intervention.

Apolipoprotein A-1 (mg/dL)	152		0 119	≥120.0
Apolipoprotein B (mg/dL)	88		0 89 119	≤89.0

Lipid Ratios	Current	Previous	Result	Reference
TC/HDL-C	1.35		0 3.4 5	≤3.4
TG/VLDL-C	14.46		2 30	≤30.0
ApoB/ApoA-1	0.58		0 0.69 0.9	≤0.69
HDL-C/TG	0.41		0 3	≤3.0

Cardio Zoomer - Summary

Ceramides and Ratios

Ceramides	Current	Previous	Result	Reference
Cer(d18:1/16:0) (µmol/L)	0.28			0.23-0.47
Cer(d18:1/18:0) (µmol/L)	0.04			0.03-0.12
Cer(d18:1/24:1) (µmol/L)	0.64			0.65-1.7

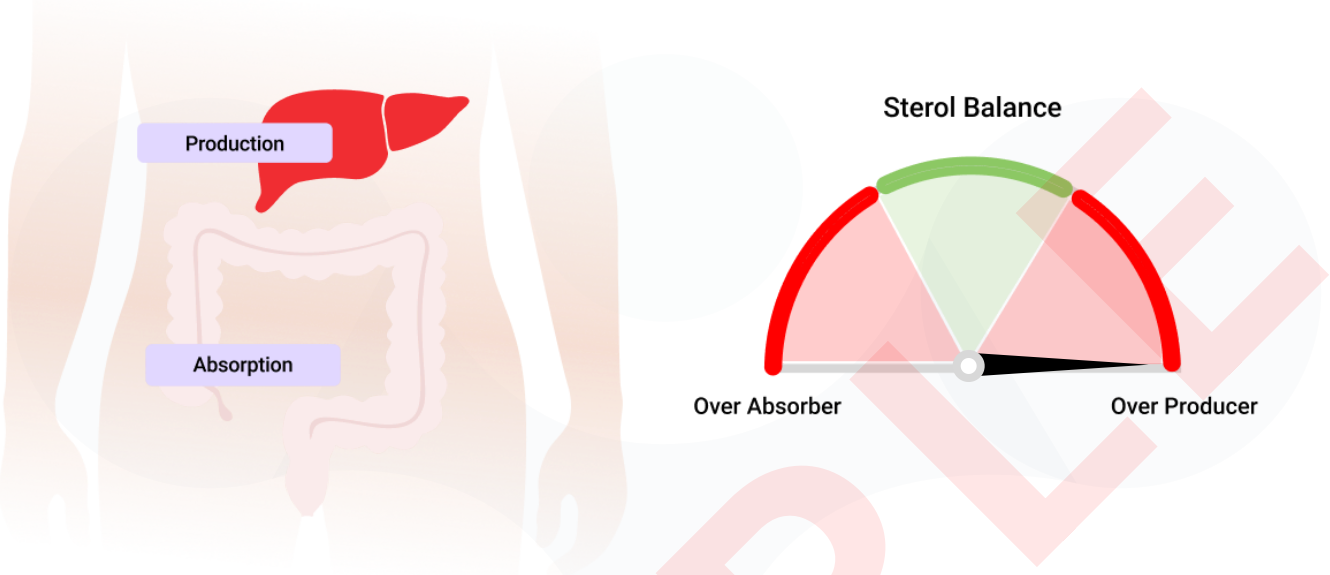
Low levels suggest balanced sphingolipid turnover, associated with better endothelial function and reduced atherogenic potential. This correlates with lower cardiovascular risk and better overall prognosis; even though such values may fall outside the reference range established using a healthy reference cohort.

Ceramide Ratios	Current	Previous	Result	Reference
Cer(d18:1/16:0)/Cer(d18:1/24:0)	0.05			≤0.1
Cer(d18:1/18:0)/Cer(d18:1/24:0)	0.02			≤0.04
Cer(d18:1/24:1)/Cer(d18:1/24:0)	0.31			≤0.44

Cardio Zoomer - Summary

Sterols

Sterol Balance Score



This image illustrates the balance between cholesterol absorption in the intestine and internal cholesterol production in the liver. The sterol balance score helps identify whether an individual is an "over absorber" or "over producer" of cholesterol, guiding personalized lipid management strategies.

Production Markers	Current	Previous	Result	Reference
Desmosterol (ug/ml)	<0.08		0 — 2	≤2.0
Lathosterol (ug/ml)	6.09		0 — 5.5	≤5.5

Cholesterol is a type of lipid in the body that is mainly produced by the liver, but it can also be obtained from food. Although cholesterol is important, high levels are implicated in cardiovascular diseases (CVD) because they can be deposited on arterial walls, forming atherosclerotic plaques. Lathosterol is a sterol intermediate in the Bloch pathway that aids in the endogenous synthesis of cholesterol in the liver. Consequently, serum levels of lathosterol serve as a biomarker for hepatic cholesterol synthesis. Elevated lathosterol levels indicate increased cholesterol synthesis, as seen in hypercholesterolemia (high blood cholesterol) patients who often have high lathosterol levels. Statin therapy is used to inhibit endogenous cholesterol synthesis, thereby reducing lathosterol levels. Since lathosterol reflects cholesterol levels, which increase the risk of CVD, it is important to quantify lathosterol levels to assess cardiac health.

Absorption Markers	Current	Previous	Result	Reference
Beta-Sitosterol (ug/ml)	0.46		0 — 7.5	≤7.5
Campesterol (ug/ml)	0.49		0 — 2.1	≤2.1

Cardio Zoomer - Summary

Inflammation

Test Name	Current	Previous	Result	Reference
hsCRP (mg/L)	0.9		0 0.9 3	≤0.9
Homocysteine (µmol/L)	9		0 9 14	≤9.0
IL-6 (pg/mL)	<1.5		0 6.9	≤6.9
TNF-α (pg/ml)	<2		0 8	≤8.0

Macrophage Recruitment and Plaque

Test Name	Current	Previous	Result	Reference
MPO (pmol/L)	524.0		0 599 2999	≤599.9
PLAC (nmol/min/mL)	40		0 224	≤224.0
oxLDL (U/L)	33.6		0 99.1	≤99.1

Cardiac Stress and Clotting Risk

Test Name	Current	Previous	Result	Reference
NTproBNP (pg/mL)	36		0 184 449	≤184.0
Troponin - T (ng/L)	<6		0 22	≤22.0
Creatine Kinase (U/L)	163		0 29 223	30.0-223.0

Cardio Zoomer - Summary

Suggestions

Adaptogens

Adaptogens are natural compounds designed to help the body adapt to stress and maintain physiological balance during physical, emotional, or environmental challenges. These agents work by modulating stress hormone pathways, supporting adrenal function, or enhancing cellular energy production and resilience. Based on individual health assessments, this report provides recommendations for reducing stress to help with conditions identified. These recommendations serve as guidance and must be reviewed with a qualified healthcare provider to ensure proper selection, dosage, and duration of use. Responsible use of adaptogens is essential to optimize stress resilience while avoiding potential interactions with existing medications.

SUPPLEMENTS

Milk Thistle	420 mg/day

FOOD SOURCES

Fiber

Milk Thistle Seed

Antioxidants

Antioxidants are protective compounds designed to neutralize free radicals and reduce oxidative stress that can damage cells, proteins, and DNA throughout the body. These agents work by donating electrons to unstable molecules, supporting cellular repair mechanisms, or enhancing the body's natural antioxidant defense systems. Based on individual health assessments, this report provides recommendations for appropriate antioxidant supplementation tailored to the specific cellular protection needs identified. These recommendations serve as guidance and must be reviewed with a qualified healthcare provider to ensure proper selection, dosage, and duration of use. Responsible use of antioxidants is essential to optimize cellular protection while maintaining proper balance in natural oxidative processes.

SUPPLEMENTS

Coenzyme Q10	100 mg/day	**Polyphenols**	600 mg/day	**Pycnogenol**	50 mg/day
Resveratrol	1500 mg/day	**Tocotrienols**	100 mg/day		

Suggestions

FOOD SOURCES

Fruits
Red Grape, Apricot, Mango, Apple, Berry, Blackberry, Blueberry, Cherry, Elderberry, Plum

Vegetables
Spinach, Potato, Artichoke, Asparagus, Red Onion, Barley Germ, Chili Pepper, Endive, French Maritime Pine Bark Extract, Globe Artichoke

Dairy
Soy Yogurt

Fiber
Flaxseed, Hazelnut, Oat, Peanut, Sunflower Seed, Walnut, Whole Grain, Almond, Black Bean, Cereal

Animal Protein
Fatty Fish, Liver, Organ Meats (heart)

Botanicals

Botanicals are plant-derived compounds designed to support health and wellness through natural bioactive substances found in herbs, roots, leaves, and other plant materials. These agents work by providing phytochemicals that can modulate various physiological processes to promote optimal function, reduce inflammation, or support immune health. Based on individual health assessments, this report provides recommendations for appropriate botanical supplements tailored to the specific health concerns identified. These recommendations serve as guidance and must be reviewed with a qualified healthcare provider to ensure proper selection, dosage, and duration of use. Responsible use of botanicals is essential to optimize health benefits and minimize potential interactions or adverse effects.

SUPPLEMENTS

Berberine	1.5 mg/day	**Curcumin**	500 mg/day	**Anthocyanins**	320 mg/day
Artichokes	3 g/day	**Cinnamon**	1 g/day	**Garlic Extract**	250 mg/day
Gymnema	500 mg/day	**Nigella Sativa**	3 g/day	**Olive Oil**	1 tsp/day
Orange Juice	500 ml/day				

FOOD SOURCES

Fruits
Orange, Red Grape, Blackberry, Blueberry, Cherry, Elderberry, Plum, Raspberry, Strawberry, Berberis Vulgaris (barberry)

Vegetables
Artichoke, Red Onion, Barberry, Cinnamon Bark, Eggplant, Garlic Bulb (allium Sativum), Goldenseal, Ivy Gourd, Leaves of Gymnema Sylvestre, Olive Oil

Fiber
Black Seeds (kalonji), Prickly Pear Cactus

Animal Protein
Fish, Poultry, Red Meat

Cardio Zoomer - Summary

Suggestions

Drugs

Drugs are a medications designed to prevent, manage, or treat a wide range of diseases and conditions, such as cardiovascular disorders, diabetes, and other chronic or acute illnesses. These agents work by targeting specific physiological processes to alleviate symptoms, restore function, or slow disease progression. Based on individual health assessments, this report provides recommendations for appropriate medications tailored to the specific conditions identified. These recommendations serve as guidance and must be reviewed with a qualified healthcare provider to ensure proper selection, dosage, and duration of therapy. Responsible use of medications is essential to optimize therapeutic outcomes and minimize potential risks or side effects.

DRUGS

Insulin Sensitizer (Metformin)	500 mg/day	**GLP-1 Receptor Agonists (Liraglutide, Semaglutide)**	0.6 mg/day	**PCSK9 Inhibitors (Evolocumab, Alirocumab)**	140 mg/day
SGLT2 Inhibitors (Empagliflozin, Dapagliflozin)	10 mg/day	**Statin (Rosuvastatin, Atorvastatin)**	10 mg/day	**Statin (Simvastatin)**	10 mg/day

Nutrients

Nutrients are a diverse group of essential vitamins, minerals, and compounds designed to support fundamental cellular processes, energy production, and overall physiological function throughout the body. These agents work by serving as cofactors in enzymatic reactions, supporting cellular repair mechanisms, or providing building blocks for optimal metabolic function. Based on individual health assessments, this report provides recommendations for appropriate nutrient supplementation tailored to the specific deficiencies or requirements identified. These recommendations serve as guidance and must be reviewed with a qualified healthcare provider to ensure proper selection, dosage, and duration of supplementation. Responsible use of nutrients is essential to optimize absorption and utilization while preventing potential imbalances or toxicity.

SUPPLEMENTS

Vitamin C	500 mg/day	**Omega-3 Fatty Acids**	1 g/day	**Folic Acid**	400 mcg/day
L-Arginine	30 mg/day	**L-Carnitine**	100 g/day	**Vitamin B3**	500 mg/day
Vitamin E	200 IU/day	**Calcium**	1000 mg/day	**Chromium**	200 mcg/day
Lysine	38 mg/kg/day				

FOOD SOURCES

Fruits
Orange, Apricot, Banana, Mango, Apple, Berry, Citrus Fruit, Pomegranate, Cantaloupe, Date

Vegetables
Spinach, Avocado, Lentil, Pea, Potato, Beans, Brussels Sprout, Tomato, Asparagus, Kale

Dairy
Yogurt, Milk, Cheese, Butter, Buttermilk, Cottage Cheese

Fiber
Nuts, Seed, Soybean, Flaxseed, Oat, Peanut, Sunflower Seed, Walnut, Whole Grain, Barley

Animal Protein
Chicken, Beef, Fish, Poultry, Red Meat, Tuna, Egg, Fatty Fish, Pork, Salmon

Patient Name: DEMO DEMO
Date of Birth: 04-19-1965 Accession ID: 2985372172
Service Date: 2025-09-02 00:00 (PST)

Cardio Zoomer

Metabolic Risk

Glucose Regulation	Current	Previous	Result	Reference
Hemoglobin A1c (HbA1c) (%)	6.0		0 5.6 6.4	≤5.6
Glucose (mg/dL)	77		61 69 100 126	70.0-100.0
Glycated Serum Protein (umol/L)	286		0 285	≤285.0
Insulin Resistance	**Current**	**Previous**	**Result**	**Reference**
C-peptide (mg/mL)	1.62		0 1.09 4.4	1.1-4.4
Insulin (µU/mL)	5.6		0 2.5 24.9	2.6-24.9
HOMA-IR	1.1		0 0.6 2	0.7-2.0
Adiponectin (ug/mL)	4.7		0 4.4 58.5	4.5-58.5
Metabolic Factors	**Current**	**Previous**	**Result**	**Reference**
Trimethylamine N-oxide (TMAO) (µM)	5.10		0 10 13	≤10.0
L-Carnitine (nmol/mL)	40.6		0 11.5 43.4	11.6-43.4
Ferritin (ng/mL)	101		0 29 400	30.0-400.0
Leptin (ng/mL)	9.1		0 1 13.4	1.1-13.4
Hepatic Function	**Current**	**Previous**	**Result**	**Reference**
ALT (Alanine Aminotransferase) (U/L)	39		0 41	≤41.0
AST (Aspartate Aminotransferase) (U/L)	43		0 40	≤40.0
GGT (Gamma-Glutamyl Transferase) (U/L)	15		0 60	≤60.0
Bilirubin (Total) (mg/dL)	0.8		0 1.2	≤1.2
Protein (Total) (g/dL)	8.2		0 6.1 8	6.2-8.0
Alkaline Phosphatase (U/L)	41		0 39 129	40.0-129.0
Renal Function	**Current**	**Previous**	**Result**	**Reference**
Sodium (mmol/L)	133		125 135 145	136.0-145.0
Potassium (mmol/L)	4.0		3 3.4 5.1	3.5-5.1

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Cardio Zoomer

Metabolic Risk

Renal Function	Current	Previous	Result	Reference
Chloride (mmol/L)	94		0 97 107	98.0-107.0
Carbon Dioxide (mmol/L)	19		15 17 29	18.0-29.0
Glucose (mg/dL)	77		61 69 100	70.0-100.0
BUN (Blood Urea Nitrogen) (mg/dL)	20		0 7 23	8.0-23.0
Creatinine (mg/dL)	1.07		0 0.69 1.2	0.7-1.2
eGFR (Estimated Glomerular Filtration Rate) (mL/min/1.73m²)	75		0 59	≥60.0
eGFR (African American) (mL/min/1.73m²)	87		0 59	≥60.0
BUN/Creatinine Ratio	19		0 9 20	10.0-20.0
Serum Osmolality (mOsm/kg)	285.4		0 284 315	285.0-315.0
Uric acid (mg/dL)	3.6		0 3.3 7	3.4-7.0
Cystatin C (mg/L)	0.88		0 0.6 0.95	0.61-0.95

Redox Risk

Test Name	Current	Previous	Result	Reference
8-hydroxy-2-deoxyguanosine (8-OHdG) (ug/g)	0.77		0 1.14 4	≤1.14
F2-Isoprostane (ug/g)	<0.05		0 0.1 0.26	≤0.1
Malondialdehyde (ug/g)	21.58		0 72.8 163	≤72.87
Nitrotyrosine (ug/g)	57.41		0 91.3 285	≤91.32
Chlorotyrosine (ug/g)	<1.6		0 3.43 9.92	≤3.43
Urine Creatinine (mg/ml)	1.00		0 0.24 2.16	0.25-2.16

Endothelial Dysfunction

Test Name	Current	Previous	Result	Reference
Asymmetric dimethylarginine (ADMA) (ng/mL)	71.45		0 105 125	≤105.0
Symmetric dimethyarginine (SDMA) (ng/mL)	91.17		0 159	≤159.0

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Cardio Zoomer

Endothelial Dysfunction

Test Name	Current	Previous	Result	Reference
Homoarginine (ng/mL)	255.78		0 65.9 265	66.0-265.0
Arginine (nmol/mL)	180.4		0 81.5 249	81.6-249.0
Citrulline (nmol/mL)	40.8		0 18.6 47.5	18.7-47.5
Arginine/ADMA	35.82		5 89.9 849	90.0-849.99
Arginine/SDMA	24.11		5 74.9 649	75.0-649.99
Homoarginine/ADMA	3.58		0 1.55 2.99	1.56-2.99
Homoarginine/SDMA	2.81		0 0.99 2.11	1.0-2.11
Choline (nmol/mL)	25.5		0 6.7 31	6.8-31.0

Lipids and Ratios

Lipids	Current	Previous	Result	Reference
Cholesterol (mg/dL)	72		0 199 240	≤199.0
Triglycerides (mg/dL)	22		0 149 200	≤149.0
HDL Direct (mg/dL)	53		0 34 55	≥56.0
Non-HDL-C	18.80		0 130	≤130.0
LDL Direct (mg/dL)	12		0 99 129	≤99.0
sdLDL (mg/dL)	6.7		0 50	≤50.0
Lp(a) (mg/dL)	47		0 29	≤29.0
Apolipoprotein A-1 (mg/dL)	152		0 119	≥120.0
Apolipoprotein B (mg/dL)	88		0 89 119	≤89.0

Lipid Ratios	Current	Previous	Result	Reference
TC/HDL-C	1.35		0 3.4 5	≤3.4
TG/VLDL-C	14.46		2 30	≤30.0
ApoB/ApoA-1	0.58		0 0.69 0.9	≤0.69

Patient Name: DEMO DEMO
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Cardio Zoomer

Lipids and Ratios

Lipid Ratios	Current	Previous	Result	Reference
HDL-C/TG	0.41		0 3	≤3.0

Ceramides and Ratios

Ceramides	Current	Previous	Result	Reference
Cer(d18:1/16:0) (µmol/L)	0.28		0 0.22 0.47	0.23-0.47
Cer(d18:1/18:0) (µmol/L)	0.04		0 0.02 0.12	0.03-0.12
Cer(d18:1/24:1) (µmol/L)	0.64		0 0.64 1.54	0.65-1.7

Ceramide Ratios	Current	Previous	Result	Reference
Cer(d18:1/16:0)/Cer(d18:1/24:0)	0.05		0 0.1	≤0.1
Cer(d18:1/18:0)/Cer(d18:1/24:0)	0.02		0 0.04	≤0.04
Cer(d18:1/24:1)/Cer(d18:1/24:0)	0.31		0 0.44	≤0.44

Sterols

Test Name	Current	Previous	Result	Reference
Desmosterol (ug/ml)	<0.08		0 2	≤2.0
Lathosterol (ug/ml)	6.09		0 5.5	≤5.5
Beta-Sitosterol (ug/ml)	0.46		0 7.5	≤7.5
Campesterol (ug/ml)	0.49		0 2.1	≤2.1

Inflammation

Test Name	Current	Previous	Result	Reference
hsCRP (mg/L)	0.9		0 0.9 3	≤0.9
Homocysteine (µmol/L)	9		0 9 14	≤9.0
IL-6 (pg/mL)	<1.5		0 6.9	≤6.9
TNF-α (pg/ml)	<2		0 8	≤8.0

Patient Name: DEMO DEMO
Date of Birth: 04-19-1965 Accession ID: 2985372172
Service Date: 2025-09-02 00:00 (PST)

Cardio Zoomer

Macrophage Recruitment and Plaque

Test Name	Current	Previous	Result	Reference
MPO (pmol/L)	524.0		0 599 2999	≤599.9
PLAC (nmol/min/mL)	40		0 224	≤224.0
oxLDL (U/L)	33.6		0 99.1	≤99.1

Cardiac Stress and Clotting Risk

Test Name	Current	Previous	Result	Reference
NTproBNP (pg/mL)	36		0 184 449	≤184.0
Troponin - T (ng/L)	<6		0 22	≤22.0
Creatine Kinase (U/L)	163		0 29 223	30.0-223.0

Omega Fatty Acids

Test Name	Current	Previous	Result	Reference
EPA (Eicosapentaenoic acid) (%)	1.56		0 0.14 2.26	0.15-2.26
DPA (Docosapentaenoic acid) (%)	1.07		0 0.44 1.8	0.45-1.8
DHA (Docosahexaenoic acid) (%)	6.89		0 2.41 10.5	2.42-10.52
LA (Linoleic acid) (%)	7.74		0 3.21 10.4	3.22-10.49
AA (Arachidonic Acid) (%)	15.66		0 5.49 19.0	5.5-19.01
AA/EPA	4.3		0 2.4 10.9	2.5-10.9
Omega-6 Total (%)	28.75		0 11.0 34.9	11.03-34.96
Omega-3 Total (%)	11.47		0 3.24 13.9	3.25-13.99
Omega-3 Index (%)	8.45		0 2.65 7.99 12.6	8.0-12.65

Risk and Limitations

This test has been developed and its performance characteristics determined by Vibrant America LLC., a CLIA and CAP certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration. Vibrant Wellness provides additional contextual information on these tests and provides the report in a more descriptive fashion.

Vibrant Cardio Zoomer panel does not demonstrate absolute positive and negative predictive values for any condition. Its clinical utility has not been fully established. Clinical history and current symptoms of the individual must be considered by the healthcare provider prior to any interventions. Test results should be used as one component of a healthcare provider's clinical assessment.

Vibrant Cardio Zoomer panel testing is performed at Vibrant America, a CLIA and CAP certified laboratory. Vibrant America has effective procedures in place to protect against technical and operational problems. However, such problems may still occur. Examples include failure to obtain the result for a specific test due to circumstances beyond Vibrant's control. Vibrant may re-test a sample to obtain these results but upon re-testing the results may still not be obtained. As with all medical laboratory testing, there is a small chance that the laboratory could report incorrect results. A tested individual may wish to pursue further testing to verify any results. The information in this report is intended for educational purposes only. While every attempt has been made to provide current and accurate information, neither the author nor the publisher can be held accountable for any errors or omissions.

Tested individuals may find their experience is not consistent with Vibrant's selected peer reviewed scientific research findings of relative improvement for study groups. The science in this area is still developing and many personal health factors affect diet and health. Since subjects in the scientific studies referenced in this report may have had personal health and other factors different from those of tested individuals, results from these studies may not be representative of the results experienced by tested individuals. Further, some recommendations may or may not be attainable, depending on the tested individual's physical ability or other personal health factors. A limitation of this testing is that many of these scientific studies may have been performed in selected populations only. The interpretations and recommendations are done in the context of these studies, but the results may or may not be relevant to tested individuals of different or mixed ethnicities. Please note that pediatric ranges have not been established for these tests. Interference studies have not been established for individuals on immunosuppressive drugs.

Based on test results and other medical knowledge of the tested individual, health care providers might consider additional independent testing, or consult another health care provider or a genetic counselor. The suggested supplements and dosages in this report are based on current research and are not intended as medical advice. Individual needs may vary, and these suggestions should not replace professional medical guidance. Consult with a qualified healthcare provider before starting any new supplement regimen, especially if you have preexisting health conditions or are taking medications. For specific scientific references supporting these suggestions, please contact our support team.

Vibrant Wellness makes no claims as to the diagnostic or therapeutic use of its tests or other informational materials. Vibrant Wellness reports and other information do not constitute medical advice and are not a substitute for professional medical advice. Please consult your healthcare practitioner with questions regarding test results, or before beginning any course of supplementation, dietary or lifestyle changes. The supplement recommendations and dosage guidelines provided are intended for general informational purposes only and should not replace professional medical advice; nal dosage decisions must be made in consultation with your healthcare provider. Vibrant disclaims any liability for adverse effects, outcomes, or consequences arising from the use of these suggestions.

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