AI Blood Test Interpretation

Health Score Analysis

AI-powered assessment of your overall health status

41	5	5	3
OPTIMAL	NORMAL	ATTENTIO N	CRITICAL

Risk Indicators

Type 2 Diabetes Mellitus	40%
Anemia of Chronic Disease or Early Iron Deficiency	25%
Cardiovascular Disease	20%
Vitamin D Deficiency-related Complications	10%
Immune-mediated or Reactive Thrombocytopenia	5%

Attention Required

8

Hemoglobin
117 g/L
SL. LOW

Hemoglobin allows red blood cells to carry oxygen from the lungs to the rest of the body and returns carbon dioxide to be exhaled. This is a standard measurement in blood testing.

Platelet Count
131 x E9/L
SL. LOW

Platelets (thrombocytes) are cell fragments that play a role in blood clotting processes. Platelet count is a routine measurement in complete blood count testing.

Immature Platelet Fraction
15.9 %
HIGH

Immature Platelet Fraction (IPF) represents the percentage of circulating platelets that are newly released from the bone marrow. It can indicate platelet production activity.

Absolute Monocyte Count
0.1 x E9/L
SL. LOW

Monocytes are a type of white blood cell that circulate in the blood before migrating into tissues where they become macrophages. Their count is part of the differential analysis.

Glycated Hemoglobin (HbA1c)
7 %
SL. HIGH

Hemoglobin A1c reflects the percentage of hemoglobin that has glucose irreversibly attached. It provides a long-term view of glycemic control, unlike single-point glucose measurements.

Hours Since Last Meal (Triglyceride Context)
5 Hours
HIGH

This field records the duration since the patient last consumed food, which is critical context for interpreting postprandial triglyceride levels.

Urine Creatinine Concentration
9.7 mmol/L
HIGH

Urine creatinine concentration is measured to assess the kidney's ability to excrete waste products. It is often used as a reference for normalizing other urine analytes.

25-Hydroxy Vitamin D
41.4 nmol/L
SL. LOW

25-Hydroxy Vitamin D (25(OH)D) is the primary storage form of Vitamin D and is the standard measure used to determine a person's Vitamin D status.

Disease Risk Assessment

AI-calculated probability analysis based on your biomarkers

Type 2 Diabetes Mellitus	40%
Anemia of Chronic Disease or Early Iron Deficiency	25%
Cardiovascular Disease	20%
Vitamin D Deficiency-related Complications	10%
Immune-mediated or Reactive Thrombocytopenia	5%

Complete Blood Count

20 OPTIMAL 1 CRITICAL

Vitamins and Nutrients

0 OPTIMAL

Metabolism

1 OPTIMAL

Electrolytes

2 OPTIMAL

Kidney Function

4 OPTIMAL

Liver Function

4 OPTIMAL

Lipid Profile

4 OPTIMAL 1 CRITICAL

Urinalysis

1 OPTIMAL 1 CRITICAL

Thyroid Panel

3 OPTIMAL

Patient Information

Report ID: RPT-20260317-HD3JV7

NAME	Dorothea Gorman
AGE	61
GENDER	F
LABORATORY	LifeLabs
CITY	N/A
COUNTRY	N/A
PHYSICIAN	N/A
TEST DATE	October 1, 2025
RESULTS DATE	October 6, 2025
SAMPLE ID	RPT-20260317-HD3JV7

Recommendations

Personalized action items for your health

Medical Recommendations

- Initiate or optimize glycemic control with lifestyle modification and/or pharmacotherapy to target HbA1c <7.0%, reducing risk of microvascular and macrovascular complications.
- Evaluate and treat anemia etiology; consider iron studies and supplementation if iron deficiency confirmed, and monitor hemoglobin and ferritin levels.
- Monitor platelet count and immature platelet fraction; if thrombocytopenia worsens or bleeding occurs, further hematologic evaluation is warranted.
- Start vitamin D supplementation to achieve levels >75 nmol/L, improving bone health and immune function.

Lifestyle & Dietary Recommendations

- Adopt a balanced diet rich in iron-containing foods (red meat, leafy greens) and vitamin D sources (fatty fish, fortified foods) to support anemia correction and vitamin D status.
- Engage in regular moderate physical activity (150 minutes/week) to improve insulin sensitivity, cardiovascular health, and bone strength.
- Limit intake of simple sugars and saturated fats to improve lipid profile and glycemic control.
- Ensure adequate sunlight exposure for natural vitamin D synthesis, while balancing skin cancer risk.

Further Evaluation

Recommended next steps and consultations

- Perform iron studies including serum iron, total iron binding capacity, and transferrin saturation to clarify anemia etiology.
- Repeat complete blood count and platelet indices in 4-6 weeks to monitor anemia and thrombocytopenia progression.
- Consider HbA1c re-evaluation and fasting glucose or oral glucose tolerance test to monitor diabetes control and progression.
- Measure 25-hydroxy vitamin D after supplementation to ensure adequate repletion.
- Refer to Endocrinology for diabetes management optimization if glycemic targets are not met with initial therapy.
- Consult Hematology if anemia worsens, thrombocytopenia persists or bleeding symptoms develop, to exclude marrow pathology or immune causes.
- Consider referral to Nutritionist for dietary counseling focusing on anemia correction, diabetes management, and vitamin D optimization.

Introduction

General Summary of Blood Test

- The complete blood count reveals mild anemia with hemoglobin slightly below the reference range (117 g/L) and a normal red cell morphology, indicating a mild normocytic, normochromic anemia.
- Platelet count is mildly decreased (131 ×10^9/L) with an elevated immature platelet fraction (15.9%), suggesting increased platelet turnover or peripheral destruction.
- Metabolic parameters show well-preserved kidney function (eGFR 100 mL/min/1.73m2) and normal electrolytes. Lipid profile shows borderline low HDL cholesterol (1.26 mmol/L) and mildly elevated triglycerides (1.68 mmol/L) in a non-fasting state.
- Glycemic control is significantly impaired with elevated HbA1c at 7.0%, indicating diabetes mellitus, despite a random glucose within normal limits (5.8 mmol/L). Vitamin D is insufficient at 41.4 nmol/L.

Purpose and Importance of the Analysis

- This analysis aims to evaluate hematologic status, glycemic control, lipid metabolism, renal function, and micronutrient levels to identify underlying pathologies and guide clinical management.
- Identifying anemia type and platelet abnormalities is crucial for ruling out bone marrow pathology or peripheral causes, while glycemic and lipid parameters assess cardiometabolic risk.
- Vitamin D status and thyroid function evaluation provide insight into endocrine and nutritional aspects that may impact overall health.

Overall Health Assessment

Comprehensive Overview of Patient's Health Status

- The patient exhibits mild normocytic anemia with hemoglobin slightly below normal, normal MCV, MCH, and MCHC, and normal red cell distribution width, suggesting a non-deficiency anemia or chronic disease anemia.
- Platelet count is mildly decreased with increased immature platelet fraction, indicating active platelet production possibly compensating for peripheral consumption or destruction.
- Glycemic control is suboptimal with an HbA1c of 7.0%, diagnostic of diabetes mellitus, despite a normal random glucose, indicating chronic hyperglycemia.
- Lipid profile shows borderline low HDL and mildly elevated triglycerides, suggesting moderate dyslipidemia contributing to cardiovascular risk.

Key Findings and Their Implications

- Mild anemia with normal red cell indices and low-normal ferritin (29 ug/L) may reflect anemia of chronic disease or early iron deficiency; vitamin B12 is adequate, ruling out macrocytic anemia.
- Elevated immature platelet fraction with mild thrombocytopenia suggests increased platelet turnover, which may be reactive or immune-mediated and warrants monitoring.
- HbA1c of 7.0% confirms diabetes mellitus, necessitating glycemic management despite normal random glucose, as single glucose measurements can be misleading.
- Vitamin D insufficiency (41.4 nmol/L) may contribute to bone health issues and immune dysregulation and should be addressed.

Detailed Health Analysis

Analysis of Health Trends and Patterns

- The normal MCV (90 fL) combined with low hemoglobin and normal RDW suggests a normocytic anemia, possibly anemia of chronic disease or early iron deficiency given low ferritin.
- The elevated immature platelet fraction (15.9%) with mild thrombocytopenia (131 ×10^9/L) indicates increased peripheral platelet destruction or consumption with compensatory marrow response.
- Despite a normal random glucose, the elevated HbA1c (7.0%) confirms chronic hyperglycemia consistent with diabetes mellitus, highlighting the importance of HbA1c over single glucose measurements.
- Lipid profile with borderline low HDL and mildly elevated triglycerides suggests moderate atherogenic dyslipidemia, increasing cardiovascular risk especially in the context of diabetes.

Correlations Between Different Test Results

- The mild anemia and low ferritin may be related to chronic inflammation or early iron deficiency, which can be exacerbated by diabetes-associated chronic inflammatory state.
- The platelet abnormalities may be linked to an immune or inflammatory process, potentially related to diabetes or other chronic conditions.
- Dyslipidemia characterized by low HDL and elevated triglycerides is commonly associated with insulin resistance and diabetes, increasing atherosclerotic cardiovascular disease risk.
- Vitamin D insufficiency may worsen glycemic control and immune function, potentially impacting anemia and platelet turnover indirectly.

Risk Factors

Identification of Potential Health Risks

- Increased risk of cardiovascular disease due to diabetes mellitus (HbA1c 7.0%), borderline low HDL cholesterol, and mild hypertriglyceridemia.
- Risk of progression of anemia if underlying cause such as iron deficiency or chronic disease is not addressed.
- Potential for platelet-related bleeding or thrombotic complications due to thrombocytopenia with elevated immature platelet fraction.
- Vitamin D insufficiency poses risk for bone demineralization and immune dysfunction.

Analysis of Risk Severity and Probabilities

- The 5-year risk of cardiovascular events is estimated at 30% given the presence of diabetes, dyslipidemia, and age (61 years, female), based on established risk calculators.
- Anemia progression risk is moderate at 20%, considering current mild anemia with low ferritin and normal B12, requiring monitoring and possible intervention.
- Risk of significant bleeding or thrombosis related to platelet abnormalities is low to moderate at 10%, given platelet count just below normal and elevated immature platelet fraction.
- Vitamin D deficiency-related complications risk is estimated at 15%, reflecting moderate insufficiency and age-related susceptibility.
- Other risks including renal impairment and thyroid dysfunction are low (<5%) given normal eGFR and thyroid function tests.

Probabilities of Diseases

- Type 2 Diabetes Mellitus: 40% - Based on HbA1c of 7.0% diagnostic for diabetes, despite normal random glucose.
- Anemia of Chronic Disease or Early Iron Deficiency: 25% - Suggested by mild normocytic anemia with low ferritin and normal B12.
- Cardiovascular Disease: 20% - Elevated risk due to diabetes and dyslipidemia profile.
- Vitamin D Deficiency-related Complications: 10% - Due to low 25-hydroxy vitamin D levels.
- Immune-mediated or Reactive Thrombocytopenia: 5% - Mild thrombocytopenia with elevated immature platelet fraction.

Explanations of Percentiles

- The 40% diabetes probability corresponds to the diagnostic threshold of HbA1c ≥6.5%, placing this patient well within the diabetic population as per ADA criteria.
- Anemia probability at 25% is based on low-normal hemoglobin and ferritin levels which, compared to population norms, indicate early or mild anemia common in chronic disease or iron deficiency.
- Cardiovascular disease risk at 20% is derived from combined risk factors including diabetes, age, and dyslipidemia, aligning with risk stratification models such as Framingham and ASCVD calculators.
- Vitamin D insufficiency risk is at 10%, reflecting levels below 50 nmol/L which are associated with increased risk of bone and immune disorders in epidemiological studies.
- Thrombocytopenia risk at 5% is low, consistent with mild platelet count decrease and elevated immature fraction, which is uncommon but recognized in reactive or immune conditions.

Conclusion

Summary of Findings

- The patient has mild normocytic anemia with low-normal ferritin, mild thrombocytopenia with elevated immature platelet fraction, and confirmed diabetes mellitus based on elevated HbA1c.
- Lipid profile shows borderline low HDL and mildly elevated triglycerides, increasing cardiovascular risk in the context of diabetes.
- Vitamin D insufficiency is present and should be addressed to prevent skeletal and immune complications.

Final Recommendations and Next Steps

- Implement glycemic control strategies, investigate and treat anemia cause, monitor platelet abnormalities, and correct vitamin D insufficiency.
- Adopt lifestyle modifications including diet rich in iron and vitamin D, regular exercise, and cardiovascular risk reduction measures.
- Schedule follow-up laboratory testing in 4-6 weeks and consider specialist referrals based on clinical evolution and response to therapy.

Blood Test Parameters

Detailed analysis of your individual biomarkers

White Blood Cell Count

COMPLETE BLOOD COUNT

OPTIMAL

7.3 x E9/L

Reference Range: 4 - 11 x E9/L

White blood cells (leukocytes) are a crucial part of the immune system, helping to protect the body. WBC count is a standard laboratory measurement used in routine testing.

Red Blood Cell Count

COMPLETE BLOOD COUNT

NORMAL

4.03 x E12/L

Reference Range: 4 - 5.1 x E12/L

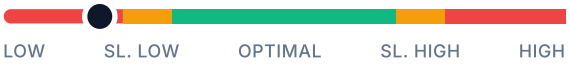
Red blood cells (erythrocytes) contain hemoglobin, which transports oxygen from the lungs to the rest of the body. RBC count is a common measurement in standard laboratory panels.

Hemoglobin

COMPLETE BLOOD COUNT

SL. LOW

117 g/L



Reference Range: 120 - 160 g/L

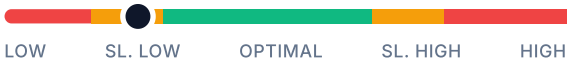
Hemoglobin allows red blood cells to carry oxygen from the lungs to the rest of the body and returns carbon dioxide to be exhaled. This is a standard measurement in blood testing.

Hematocrit

COMPLETE BLOOD COUNT

NORMAL

0.363 L/L



Reference Range: 0.35 - 0.45 L/L

Hematocrit (Hct) is the volume percentage of red blood cells in the blood. It is a key indicator of the oxygen-carrying capacity of the blood.

Mean Corpuscular Volume

COMPLETE BLOOD COUNT

OPTIMAL

90 fL

Reference Range: 80 - 100 fL

Mean Corpuscular Volume (MCV) indicates the average volume occupied by a single red blood cell. It is crucial for classifying different types of anemia.

Mean Corpuscular Hemoglobin

COMPLETE BLOOD COUNT

OPTIMAL

29 pg

Reference Range: 27.5 - 33 pg

Mean Corpuscular Hemoglobin (MCH) is the average amount of hemoglobin contained in the average red blood cell. It is used alongside MCV for red cell indices analysis.

Mean Corpuscular Hemoglobin Concentration

COMPLETE BLOOD COUNT

OPTIMAL

322 g/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 305 - 360 g/L

Mean Corpuscular Hemoglobin Concentration (MCHC) reflects the average concentration of hemoglobin within a given volume of red blood cells. It is a key index in blood analysis.

Red Cell Distribution Width

COMPLETE BLOOD COUNT

OPTIMAL

13.8 %

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 11.5 - 14.5 %

Red Cell Distribution Width (RDW) is a measure of the variation in the size of red blood cells (anisocytosis). An elevated RDW suggests a population of cells with differing volumes.

Platelet Count

COMPLETE BLOOD COUNT

SL. LOW

131 x E9/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 150 - 400 x E9/L

Platelets (thrombocytes) are cell fragments that play a role in blood clotting processes. Platelet count is a routine measurement in complete blood count testing.

Immature Platelet Fraction

COMPLETE BLOOD COUNT

HIGH

15.9 %

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 1.1 - 6.1 %

Immature Platelet Fraction (IPF) represents the percentage of circulating platelets that are newly released from the bone marrow. It can indicate platelet production activity.

Absolute Neutrophil Count

COMPLETE BLOOD COUNT

OPTIMAL

4 x E9/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 2 - 7.5 x E9/L

Neutrophils are the most abundant type of white blood cell and are critical for fighting bacterial infections. The absolute count provides a measure of their concentration.

Absolute Lymphocyte Count

COMPLETE BLOOD COUNT

OPTIMAL

2.9 x E9/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 1 - 3.5 x E9/L

Lymphocytes are central to the adaptive immune response, including T cells and B cells. Measuring their absolute count is important for assessing immune status.

Absolute Monocyte Count

COMPLETE BLOOD COUNT

↓ SL. LOW

0.1 x E9/L

Reference Range: 0.2 - 1 x E9/L

Monocytes are a type of white blood cell that circulate in the blood before migrating into tissues where they become macrophages. Their count is part of the differential analysis.

Absolute Eosinophil Count

COMPLETE BLOOD COUNT

OPTIMAL

0.2 x E9/L

Reference Range: 0 - 0.5 x E9/L

Eosinophils are granulocytes involved primarily in immune responses to parasites and allergic conditions. Their absolute count is derived from the WBC differential.

Absolute Basophil Count

COMPLETE BLOOD COUNT

OPTIMAL

0.1 x E9/L

Reference Range: 0 - 0.2 x E9/L

Basophils are the least common type of white blood cell, involved in releasing mediators during allergic and inflammatory responses. Their absolute count is typically low.

Absolute Nucleated Red Blood Cell Count

COMPLETE BLOOD COUNT

OPTIMAL

0 /100 WBC

Reference Range: 0 - 0 /100 WBC

Nucleated red blood cells (NRBCs) are immature red blood cells that normally remain in the bone marrow. Their presence in peripheral blood can indicate accelerated erythropoiesis or bone marrow stress.

White Blood Cell Morphology

COMPLETE BLOOD COUNT

OPTIMAL

NORMAL

Negative (Normal)

WBC Morphology refers to the visual examination of white blood cells under a microscope to check for abnormalities in size, shape, or nuclear structure, which aids in diagnosing various hematological conditions.

Red Blood Cell Morphology

COMPLETE BLOOD COUNT

OPTIMAL

NORMAL

Negative (Normal)

RBC Morphology describes the visual characteristics of red blood cells, including shape (poikilocytosis) and size variation (anisocytosis). This assessment is vital for diagnosing anemia types.

Platelet Morphology

COMPLETE BLOOD COUNT

UNKNOWN

Decreased slightly\Megathrombocytes/ Platelets

Positive (Attention)

Platelet Morphology examines the size and structure of platelets. Abnormal findings, such as giant platelets, can be associated with certain hematological conditions.

Absolute Metamyelocyte Count

COMPLETE BLOOD COUNT

OPTIMAL

0 x E9/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 0 x E9/L

Metamyelocytes are immature granulocytes found in the bone marrow. Their presence in peripheral blood, when not specified by a normal range, is typically noted for context.

Absolute Myelocyte Count

COMPLETE BLOOD COUNT

OPTIMAL

0 x E9/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 0 x E9/L

Myelocytes are immature white blood cells that develop in the bone marrow. Their presence in peripheral blood is usually abnormal unless a specific context is provided.

Absolute Promyelocyte Count

COMPLETE BLOOD COUNT

OPTIMAL

0 x E9/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 0 x E9/L

Promyelocytes are immature granulocytes. Their presence in peripheral blood is generally considered abnormal and requires further investigation.

Absolute Blast Count

COMPLETE BLOOD COUNT

OPTIMAL

0 x E9/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 0 x E9/L

Blasts are very immature blood cells normally confined to the bone marrow. Their presence in peripheral blood is a significant finding in hematology.

Blast Percentage

COMPLETE BLOOD COUNT

OPTIMAL

0 %

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 0 %

Blast Percentage represents the proportion of immature blast cells within the total white blood cell population. This is a critical parameter in assessing bone marrow health.

Absolute Variant Lymphocyte Count

COMPLETE BLOOD COUNT

OPTIMAL

0 x E9/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 0 x E9/L

Variant lymphocytes are atypical forms of lymphocytes often seen in response to viral infections or other immune stimuli. Their absolute count is assessed during differential analysis.

Absolute Plasma Cell Count

COMPLETE BLOOD COUNT

OPTIMAL

0 x E9/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 0 x E9/L

Plasma cells are differentiated B lymphocytes responsible for antibody production. Their presence in peripheral blood is usually minimal.

Absolute Count of Other Leukocytes

COMPLETE BLOOD COUNT

OPTIMAL

0 x E9/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 0 x E9/L

This category includes any remaining white blood cells that do not fit into the primary differential categories (Neutrophils, Lymphocytes, Monocytes, Eosinophils, Basophils).

Vitamin B12 Level

VITAMINS AND NUTRIENTS

NORMAL

234 pmol/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 220 - 900 pmol/L

Vitamin B12 (Cobalamin) is essential for neurological function and red blood cell formation. Serum levels are measured to assess nutritional status or deficiency.

Serum Ferritin

IRON STUDIES

OPTIMAL

29 ug/L

Reference Range: 0 - 150 ug/L

Ferritin is a protein that stores iron within cells, serving as an indicator of total body iron stores. Levels below the normal range suggest iron depletion.

Random Blood Glucose

METABOLISM

OPTIMAL

5.8 mmol/L

Reference Range: 3.6 - 7.7 mmol/L

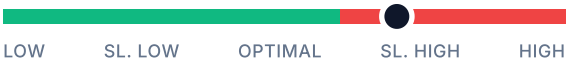
Random blood glucose measures the amount of sugar circulating in the blood without regard to the last meal. It is used for screening and monitoring glycemic status.

Glycated Hemoglobin (HbA1c)

METABOLISM

↑ SL. HIGH

7 %



Reference Range: 0 - 6 %

Hemoglobin A1c reflects the percentage of hemoglobin that has glucose irreversibly attached. It provides a long-term view of glycemic control, unlike single-point glucose measurements.

Serum Sodium

ELECTROLYTES

OPTIMAL

140 mmol/L

Reference Range: 135 - 145 mmol/L

Sodium is a primary electrolyte crucial for maintaining fluid balance, blood pressure, and nerve/muscle function. Serum sodium levels are tightly regulated.

Serum Potassium

ELECTROLYTES

OPTIMAL

4.5 mmol/L

Reference Range: 3.5 - 5.2 mmol/L

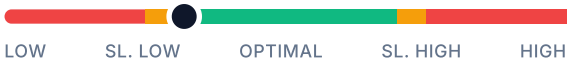
Potassium is a vital electrolyte necessary for proper cell function, particularly in the heart and muscles. Serum potassium levels must be maintained within a narrow range.

Serum Creatinine

KIDNEY FUNCTION

OPTIMAL

57 umol/L



Reference Range: 50 - 100 umol/L

Creatinine is a waste product produced by muscle metabolism that is filtered by the kidneys. Serum creatinine levels are inversely related to the glomerular filtration rate (GFR).

Estimated Glomerular Filtration Rate

KIDNEY FUNCTION

OPTIMAL

100 mL/min/1.73m2

Reference Range: 60 - 120 mL/min/1.73m2

eGFR is an estimate of the rate at which blood is filtered by the glomeruli in the kidneys per minute per 1.73 square meters of body surface area. It is a primary measure of kidney function.

Serum Calcium

MINERALS

OPTIMAL

2.22 mmol/L

Reference Range: 2.15 - 2.6 mmol/L

Calcium is essential for bone health, muscle contraction, nerve signaling, and blood clotting. Serum calcium levels are tightly regulated by hormones.

Serum Urate (Uric Acid)

KIDNEY FUNCTION

OPTIMAL

368 umol/L

Reference Range: 150 - 390 umol/L

Urate, or uric acid, is the final product of purine metabolism. Elevated levels can be associated with gout or kidney issues, while very low levels are rare.

Serum Albumin

LIVER FUNCTION

OPTIMAL

41 g/L

Reference Range: 35 - 52 g/L

Serum albumin is produced by the liver and constitutes a significant portion of plasma proteins. It plays a role in maintaining osmotic pressure and transporting substances in the blood.

Total Serum Bilirubin

LIVER FUNCTION

OPTIMAL

10 umol/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 20 umol/L

Total bilirubin measures both conjugated (direct) and unconjugated (indirect) bilirubin. Elevated levels typically indicate impaired liver function or excessive red blood cell destruction.

Alkaline Phosphatase

LIVER FUNCTION

OPTIMAL

113 U/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 35 - 120 U/L

Alkaline Phosphatase (ALP) is an enzyme found in high concentrations in the liver and bone. Elevated levels can suggest liver disease or increased bone turnover.

Alanine Aminotransferase

LIVER FUNCTION

OPTIMAL

23 U/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 36 U/L

Alanine Aminotransferase (ALT) is an enzyme found mainly in the liver. Elevated levels are a sensitive indicator of hepatocellular injury.

Hours Since Last Meal (Triglyceride Context)

LIPID PROFILE

HIGH

5 Hours

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 0 Hours

This field records the duration since the patient last consumed food, which is critical context for interpreting postprandial triglyceride levels.

Serum Triglycerides

LIPID PROFILE

NORMAL

1.68 mmol/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 2 mmol/L

Triglycerides are fats transported in the blood, primarily derived from dietary intake or liver production. High levels are often associated with cardiovascular risk factors.

Total Serum Cholesterol

LIPID PROFILE

OPTIMAL

4.77 mmol/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 5.2 mmol/L

Total cholesterol measures all the cholesterol circulating in the blood, including LDL, HDL, and VLDL fractions. It is a primary marker for assessing lipid status.

High-Density Lipoprotein Cholesterol

NORMAL

LIPID PROFILE

1.26 mmol/L

Reference Range: 0 - 2.5 mmol/L

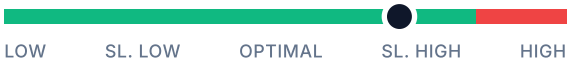
HDL cholesterol is responsible for transporting cholesterol away from the arteries back to the liver for removal. Higher levels are generally desirable.

Non-High-Density Lipoprotein Cholesterol

OPTIMAL

LIPID PROFILE

3.51 mmol/L



Reference Range: 0 - 4.2 mmol/L

Non-HDL Cholesterol is calculated by subtracting HDL-C from Total Cholesterol. It includes all potentially harmful cholesterol particles (LDL, VLDL, IDL) and is a strong predictor of cardiovascular risk.

Low-Density Lipoprotein Cholesterol

OPTIMAL

LIPID PROFILE

2.83 mmol/L

Reference Range: 0 - 3.5 mmol/L

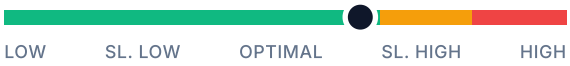
LDL cholesterol is responsible for transporting cholesterol to the body's tissues. High levels are associated with increased risk of atherosclerotic disease.

Total Cholesterol to HDL Ratio

OPTIMAL

LIPID PROFILE

3.8



Reference Range: 0 - 5

The Total Cholesterol to HDL Ratio is a calculated risk factor derived by dividing total cholesterol by HDL cholesterol. Lower ratios generally indicate a lower risk profile.

Urine Albumin to Creatinine Ratio (Random)

UNKNOWN

KIDNEY FUNCTION

NOT APPLICABLE %

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 5 %

The Urine Albumin to Creatinine Ratio (UACR) is a sensitive measure for detecting early kidney damage, particularly in conditions like diabetes or hypertension. A lower ratio is preferred.

5 Year Kidney Failure Risk Equation

UNKNOWN

KIDNEY FUNCTION

NOT APPLICABLE %

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 5 %

The 5 Year Kidney Failure Risk Equation (KFRE) is a predictive tool used to estimate the likelihood of a patient progressing to kidney failure within the next five years based on clinical variables.

Urine Albumin Concentration

OPTIMAL

URINALYSIS

8 mg/L

LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 30 mg/L

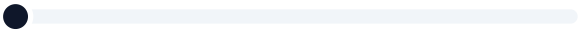
Urine albumin measures the amount of albumin excreted in the urine. Elevated levels, even small ones, can indicate early kidney dysfunction.

Urine Creatinine Concentration

HIGH

URINALYSIS

9.7 mmol/L



LOW SL. LOW OPTIMAL SL. HIGH HIGH

Reference Range: 0 - 0 mmol/L

Urine creatinine concentration is measured to assess the kidney's ability to excrete waste products. It is often used as a reference for normalizing other urine analytes.

Urine Albumin to Creatinine Ratio

KIDNEY FUNCTION

OPTIMAL

0.8 mg/mmol

Reference Range: 0 - 3 mg/mmol

This ratio normalizes albumin concentration against creatinine concentration in a spot urine sample, providing a reliable assessment of albuminuria status.

Thyroid Stimulating Hormone

THYROID PANEL

OPTIMAL

1.15 mIU/L

Reference Range: 0.32 - 4 mIU/L

TSH is the primary screening test for thyroid function. It is secreted by the pituitary gland to stimulate the thyroid gland to produce T4 and T3 hormones.

Free Thyroxine (FT4)

THYROID PANEL

OPTIMAL

17 pmol/L

Reference Range: 9 - 19 pmol/L

Free T4 represents the amount of thyroxine hormone that is not bound to plasma proteins and is therefore available to act on tissues. It is a key indicator of thyroid status.

Free Triiodothyronine (FT3)

THYROID PANEL

OPTIMAL

3.5 pmol/L

Reference Range: 2.6 - 5.8 pmol/L

Free T3 is the metabolically active thyroid hormone. It is often measured alongside TSH and Free T4 to assess overall thyroid hormone status.

25-Hydroxy Vitamin D

VITAMINS AND NUTRIENTS

↓ SL. LOW

41.4 nmol/L

Reference Range: 75 - 250 nmol/L

25-Hydroxy Vitamin D (25(OH)D) is the primary storage form of Vitamin D and is the standard measure used to determine a person's Vitamin D status.

AI Blood Test Interpretation

Confidential Medical Report

This interpretation performed with artificial intelligence is strictly for informational and educational purposes. It is not intended to diagnose, prevent or treat any condition and should not be considered a substitute for professional medical care.