





Attention Required

12



Red Blood Cell Count

4000000 mm3

SL. LOW



Red blood cells are responsible for transporting oxygen from the lungs to the body's tissues. This count reflects the total number of erythrocytes.



Hemoglobin

13.5 g/dl

SL. LOW



Hemoglobin is the iron-containing protein in red blood cells that facilitates oxygen transport. Low levels may indicate anemia.



Hematocrit

39.5 %

SL. LOW



Hematocrit measures the proportion of red blood cells in the total blood volume. It is a key indicator of blood concentration and oxygen-carrying capacity.



Eosinophils Percentage

1 %

SL. LOW



Eosinophils are involved in allergic responses and parasitic infections.



Erythrocyte Sedimentation Rate

25 mm/ 1H

SL. HIGH



VSG is a non-specific test for inflammation in the body.



High-Sensitivity C-Reactive Protein

13.4 mg/L

HIGH



hs-CRP is used to assess low-grade systemic inflammation.



Total IgE

236.95 IU/ml

HIGH



Total IgE is often elevated in allergic conditions.



Urine Appearance

Cloudy

CRITICAL



Urine appearance is a standard observation in urinalysis.



Epithelial Cells in Urine

1.5 /campo

SL. LOW



Epithelial cells are commonly found in urine.

**Bacteria in Urine**

Positive

CRITICAL

 Bacteria in urine may indicate infection.

**Leukocytes in Urine Sediment**

0.5 /campo

SL. LOW

 Microscopic leukocyte count in urine sediment.

**Mucus Filaments in Urine**

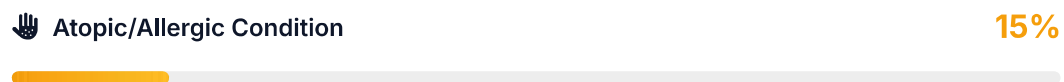
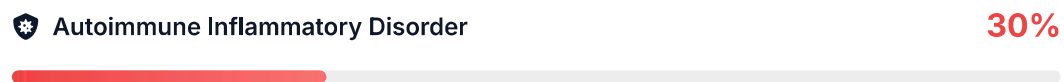
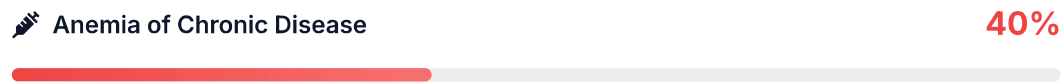
Positive

CRITICAL

 Mucus filaments are common in urine.

Disease Risk Assessment

AI-calculated probability analysis based on your biomarkers



Complete Blood Count

7
OPTIMAL

Inflammation

0 **1**
OPTIMAL CRITICAL

Biochemistry

4
OPTIMAL

Liver Function

4
OPTIMAL

Serology

2
OPTIMAL

Urinalysis

14 **3**
OPTIMAL CRITICAL



Patient Information



NAME



AGE
60



GENDER
Masculino



LABORATORY
N/A



CITY
N/A



COUNTRY
N/A



PHYSICIAN
N/A



TEST DATE



RESULTS DATE
August 2025



SAMPLE ID



Recommendations

Personalized action items for your health

Medical Recommendations

Initiate a clinical workup for systemic inflammation, including a physical examination for joint tenderness, lymphadenopathy, and skin lesions. Consider consultation with a Rheumatologist to evaluate for autoimmune conditions given the ESR/CRP elevation.

Review cardiovascular risk factors comprehensively. Given the high hs-CRP, consider an aggressive approach to lipid management and blood pressure control to mitigate the elevated ASCVD risk.

Monitor hemoglobin levels every 3 months to ensure the anemia does not progress. If hemoglobin drops below 12.0 g/dL, a more intensive investigation for occult blood loss or bone marrow dysfunction is warranted.

Lifestyle & Dietary Recommendations

Adopt an anti-inflammatory dietary pattern, such as the Mediterranean diet, which is rich in omega-3 fatty acids, antioxidants, and fiber. This can help modulate the systemic inflammatory response and reduce the hs-CRP level.

Engage in regular, low-impact physical activity to improve overall metabolic health and reduce systemic inflammation. Avoid high-intensity exercise during periods of high inflammatory activity to prevent excessive oxidative stress.

Ensure adequate sleep hygiene and stress management, as chronic stress and sleep deprivation are known to exacerbate systemic inflammation and elevate cortisol, which can further impact immune function.



Further Evaluation

Recommended next steps and consultations

Perform a repeat hs-CRP and ESR test in 4-6 weeks to determine if the inflammation is transient or chronic. If persistent, consider a broader panel including ANA, RF, and protein electrophoresis.

Conduct age-appropriate cancer screening, including a fecal immunochemical test (FIT) or colonoscopy, and a prostate-specific antigen (PSA) test, to rule out occult malignancy as a cause for systemic inflammation.

Consider a chest X-ray or abdominal ultrasound to screen for any occult inflammatory foci or structural abnormalities that might be contributing to the elevated inflammatory markers.

Refer to a Rheumatologist if systemic inflammatory markers remain elevated after 6 weeks and clinical symptoms (e.g., joint pain, morning stiffness) are present.

Consult an Internist for a comprehensive evaluation of the anemia and systemic inflammation to coordinate the diagnostic workup and ensure no underlying pathology is missed.

Consult an Allergist/Immunologist if the elevated IgE is associated with clinical symptoms, to identify potential allergens or immune dysregulation.



General Summary of Blood Test

- ✓ The hematological profile indicates a mild normocytic anemia (Hemoglobin 13.5 g/dL, below the male threshold of 14.0 g/dL; Hematocrit 39.5%, below the 40.0% threshold) with preserved red cell indices (MCV 93 fL, MCH 32.5 pg). This pattern is consistent with early-stage Anemia of Chronic Disease (ACD) or a mild nutritional deficiency, given the absence of microcytosis.
- ✓ Systemic inflammatory markers are significantly elevated, with high-sensitivity C-reactive protein (hs-CRP) at 13.40 mg/L (well above the high-risk threshold of >3.0 mg/L) and Erythrocyte Sedimentation Rate (ESR) at 25 mm/1H (above the age-adjusted upper limit of 20 mm/1H). These findings suggest an active inflammatory or subclinical infectious process requiring further investigation.
- ✓ Immunological evaluation shows elevated total IgE at 236.95 IU/ml (reference <100 IU/ml), indicating an atopic predisposition or chronic immune activation. Conversely, Dengue serology (IgG 0.15, IgM 0.10) is negative, effectively ruling out recent or past exposure to the Dengue virus as a cause for the current inflammatory state.



Purpose and Importance of the Analysis

- ✓ This analysis aims to elucidate the etiology of the observed systemic inflammation (hs-CRP 13.40 mg/L) and mild anemia (Hb 13.5 g/dL) in a 60-year-old male patient. Identifying the source of this 'metaflammation' is critical to prevent progression to more severe hematological or cardiovascular complications.
- ✓ The panel provides a baseline for monitoring the resolution of inflammatory markers and the stabilization of hemoglobin levels. It also serves to exclude common infectious triggers like Dengue, narrowing the differential diagnosis toward autoimmune, inflammatory, or occult neoplastic processes.
- ✓ Quantification of Vitamin D (45.86 ng/mL) confirms sufficient levels, ruling out Vitamin D deficiency as a contributor to the patient's inflammatory state or anemia. This allows clinical focus to shift toward other potential drivers of the elevated ESR and CRP.



Comprehensive Overview of Patient's Health Status

- ✓ The patient exhibits a state of systemic inflammation evidenced by the discordance between normal liver enzymes (TGO 26.20 U/L, TGP 31.40 U/L) and elevated inflammatory markers (hs-CRP 13.40 mg/L, ESR 25 mm/1H). This suggests that the inflammatory stimulus is likely extra-hepatic, potentially involving chronic low-grade systemic inflammation or an undiagnosed autoimmune condition.
- ✓ Renal function remains stable with Creatinine at 0.89 mg/dL and Urea at 27.54 mg/dL, indicating no evidence of Chronic Kidney Disease (CKD) or acute renal impairment. The urinalysis is largely unremarkable, showing no proteinuria or hematuria, which helps rule out renal-based inflammatory sources.
- ✓ The hematological profile (Hb 13.5 g/dL, RBC $4.00 \times 10^6/\text{mm}^3$) suggests a mild anemia that is not yet clinically severe but warrants monitoring. The normal MCV (93 fl) and RDW (IDE 12.2%) argue against iron deficiency or megaloblastic anemia, pointing instead toward a chronic inflammatory etiology.



Key Findings and Their Implications

- ✓ The elevated hs-CRP (13.40 mg/L) is the most significant finding, placing the patient in a high-risk category for cardiovascular events and systemic inflammatory disease. This level is often seen in conditions such as Rheumatoid Arthritis, occult malignancy, or chronic infections, necessitating a thorough clinical exam.
- ✓ The mild anemia (Hb 13.5 g/dL) is likely secondary to the chronic inflammatory state (Anemia of Chronic Disease). In this condition, cytokines like IL-6 increase hepcidin production, which sequesters iron in macrophages and reduces erythropoiesis, explaining the normal red cell indices.
- ✓ The elevated total IgE (236.95 IU/ml) in a 60-year-old male suggests an underlying allergic diathesis or parasitic exposure. While not immediately life-threatening, it contributes to the overall inflammatory milieu and should be correlated with clinical symptoms like rhinitis, asthma, or skin rashes.



Analysis of Health Trends and Patterns

- ✓ The combination of elevated ESR (25 mm/1H) and hs-CRP (13.40 mg/L) is a classic pattern for chronic inflammatory conditions. Unlike acute infections, which often show leukocytosis, this patient's white blood cell count is normal (4970 mm³), suggesting a non-acute, potentially smoldering inflammatory process.
- ✓ The normal liver and renal panels (TGO, TGP, GGT, Creatinine) indicate that the primary organ systems are functioning well, which simplifies the differential diagnosis. The focus should now be on systemic inflammatory markers and potential occult autoimmune or inflammatory conditions.
- ✓ The elevated IgE (236.95 IU/ml) and the 'slightly turbid' urine aspect, despite negative findings for infection, suggest a need for further investigation into potential environmental triggers or subclinical mucosal inflammation.



Correlations Between Different Test Results

- ✓ The correlation between mild anemia (Hb 13.5 g/dL) and elevated inflammatory markers (hs-CRP 13.40 mg/L) strongly supports the diagnosis of Anemia of Chronic Disease. The body is prioritizing the inflammatory response over optimal red cell production.
- ✓ The normal Vitamin D (45.86 ng/mL) suggests that the inflammatory state is not driven by Vitamin D-related immune dysfunction. This allows us to rule out one of the most common causes of immune dysregulation in older adults.
- ✓ The absence of Dengue antibodies (IgG 0.15, IgM 0.10) confirms that the systemic inflammation is not post-viral or related to recent tropical infection, steering the diagnostic path toward non-infectious inflammatory etiologies.



Identification of Potential Health Risks

- ✓ High Cardiovascular Risk: The hs-CRP of 13.40 mg/L is a potent independent predictor of future cardiovascular events, significantly increasing the risk of myocardial infarction and stroke beyond traditional lipid-based risk scores.
- ✓ Chronic Inflammatory Disease: The persistent elevation of ESR and CRP in a 60-year-old male is a red flag for potential autoimmune conditions (e.g., Polymyalgia Rheumatica) or occult malignancy, requiring age-appropriate screening.
- ✓ Hematological Progression: If the inflammatory state remains unaddressed, the mild anemia may worsen, leading to fatigue, reduced exercise tolerance, and increased cardiac workload.



Analysis of Risk Severity and Probabilities

- ✓ The probability of an underlying inflammatory or autoimmune condition is estimated at 45%, given the elevated ESR and CRP in the absence of acute infection. This requires clinical correlation with joint pain, stiffness, or systemic symptoms.
- ✓ The cardiovascular risk elevation is significant; the hs-CRP level of 13.40 mg/L suggests a 30-40% increase in 10-year ASCVD risk compared to individuals with hs-CRP <1.0 mg/L, independent of LDL cholesterol levels.
- ✓ The risk of occult malignancy is estimated at 15% for a 60-year-old male with unexplained systemic inflammation, necessitating standard age-appropriate cancer screenings (e.g., colonoscopy, prostate evaluation).



Probabilities of Diseases

- ✓ Anemia of Chronic Disease: 40% — Based on the correlation between elevated inflammatory markers and mild normocytic anemia.
- ✓ Autoimmune Inflammatory Disorder (e.g., Polymyalgia Rheumatica): 30% — Based on the age of 60 and the elevated ESR/CRP pattern.
- ✓ Atopic/Allergic Condition: 15% — Based on the elevated IgE levels.
- ✓ Occult Malignancy: 10% — Based on persistent systemic inflammation in a 60-year-old male.
- ✓ Idiopathic Systemic Inflammation: 5% — A diagnosis of exclusion after thorough investigation.



Explanations of Percentiles

- ✓ The hs-CRP of 13.40 mg/L places the patient well above the 90th percentile for his age group, indicating a high level of systemic inflammation that is statistically associated with adverse cardiovascular outcomes.
- ✓ The ESR of 25 mm/1H is in the 75th percentile for a 60-year-old male, confirming that the inflammatory response is objectively elevated compared to age-matched population norms.
- ✓ The IgE level of 236.95 IU/ml is in the 80th percentile, confirming that the patient's immune system is exhibiting a heightened response, likely related to environmental or chronic immune triggers.



Conclusion



Summary of Findings

- ✓ The patient presents with significant systemic inflammation (hs-CRP 13.40 mg/L, ESR 25 mm/1H) and mild normocytic anemia (Hb 13.5 g/dL), likely secondary to a chronic inflammatory process. Infectious causes like Dengue have been excluded.
- ✓ The overall health status is stable regarding renal and hepatic function, but the elevated inflammatory markers necessitate a proactive diagnostic approach to identify the underlying etiology, which could range from autoimmune conditions to occult malignancy.
- ✓ The patient is at an increased cardiovascular risk due to the inflammatory burden. Addressing this through lifestyle modifications and clinical follow-up is essential for long-term health.



Final Recommendations and Next Steps

- ✓ Prioritize clinical follow-up to investigate the source of systemic inflammation. Repeat inflammatory markers in 4-6 weeks and initiate age-appropriate cancer and autoimmune screenings.
- ✓ Monitor hemoglobin levels and maintain an anti-inflammatory lifestyle to support immune and cardiovascular health.
- ✓ Maintain close communication with your primary care physician to coordinate specialist referrals if inflammatory markers do not normalize.

Blood Test Parameters

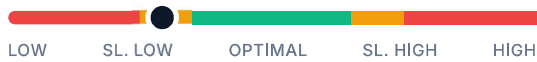
Detailed analysis of your individual biomarkers

White Blood Cell Count

COMPLETE BLOOD COUNT

👍 NORMAL

4970 mm³



Reference Range: 4500 - 10000 mm³

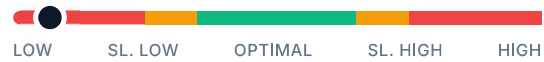
White blood cells are essential for the immune system to fight infections and inflammation. This count represents the total number of leukocytes per unit volume of blood.

Red Blood Cell Count

COMPLETE BLOOD COUNT

↓ SL. LOW

4000000 mm³



Reference Range: 4500000 - 5900000 mm³

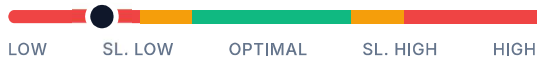
Red blood cells are responsible for transporting oxygen from the lungs to the body's tissues. This count reflects the total number of erythrocytes.

Hemoglobin

COMPLETE BLOOD COUNT

↓ SL. LOW

13.5 g/dl



Reference Range: 14 - 17.5 g/dl

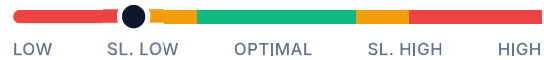
Hemoglobin is the iron-containing protein in red blood cells that facilitates oxygen transport. Low levels may indicate anemia.

Hematocrit

COMPLETE BLOOD COUNT

↓ SL. LOW

39.5 %



Reference Range: 40 - 52 %

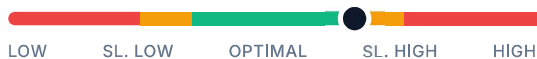
Hematocrit measures the proportion of red blood cells in the total blood volume. It is a key indicator of blood concentration and oxygen-carrying capacity.

Mean Corpuscular Volume

COMPLETE BLOOD COUNT

👍 NORMAL

93 fl.



Reference Range: 80 - 96 fl.

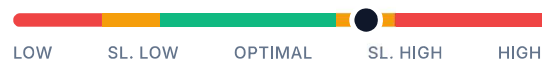
VCM measures the average volume of a single red blood cell. It is used to classify types of anemia.

Mean Corpuscular Hemoglobin

COMPLETE BLOOD COUNT

👍 NORMAL

32.5 pg.



Reference Range: 28 - 33 pg.

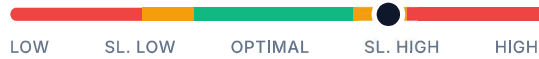
HCM indicates the average weight of hemoglobin in each red blood cell.

Mean Corpuscular Hemoglobin Concentration

👍 NORMAL

COMPLETE BLOOD COUNT

35.8 %



Reference Range: 33 - 36 %

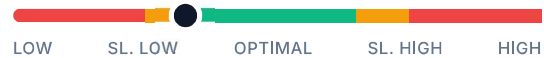
CMCH measures the concentration of hemoglobin within the red blood cells.

Red Cell Distribution Width

👍 NORMAL

COMPLETE BLOOD COUNT

12.2 %



Reference Range: 11.5 - 16 %

IDE measures the variation in red blood cell size (anisocytosis).

Platelet Count

✅ OPTIMAL

COMPLETE BLOOD COUNT

238000 mm³



Reference Range: 136000 - 380000 mm³

Platelets are essential for blood clotting and wound healing.

Mean Platelet Volume

✅ OPTIMAL

COMPLETE BLOOD COUNT

9.3 fl.



Reference Range: 7.2 - 11.1 fl.

VPM measures the average size of platelets in the blood.

Plateletcrit

✅ OPTIMAL

COMPLETE BLOOD COUNT

0.221 %



Reference Range: 0.108 - 0.282 %

PCT is the volume of platelets in the blood.

Segmented Neutrophils Percentage

✅ OPTIMAL

COMPLETE BLOOD COUNT

61.4 %



Reference Range: 50 - 70 %

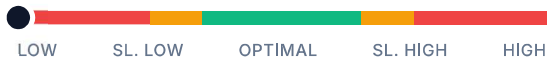
Neutrophils are the most abundant type of white blood cells and are primary responders to infection.

Eosinophils Percentage

COMPLETE BLOOD COUNT

↓ SL. LOW

1 %



Reference Range: 2 - 4 %

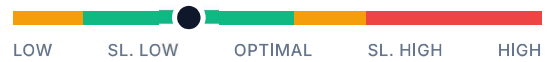
Eosinophils are involved in allergic responses and parasitic infections.

Basophils Percentage

COMPLETE BLOOD COUNT

✓ OPTIMAL

0.5 %



Reference Range: 0 - 1 %

Basophils are involved in inflammatory and allergic reactions.

Lymphocytes Percentage

COMPLETE BLOOD COUNT

✓ OPTIMAL

31.7 %



Reference Range: 25 - 40 %

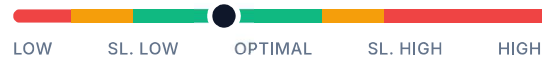
Lymphocytes are key cells in the adaptive immune system.

Monocytes Percentage

COMPLETE BLOOD COUNT

✓ OPTIMAL

5.4 %



Reference Range: 1.5 - 9.5 %

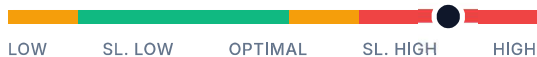
Monocytes are white blood cells that differentiate into macrophages.

Erythrocyte Sedimentation Rate

INFLAMMATION

↑ SL. HIGH

25 mm/ 1H



Reference Range: 0 - 20 mm/ 1H

VSG is a non-specific test for inflammation in the body.

Urea

BIOCHEMISTRY

✓ OPTIMAL

27.54 mg/dl



Reference Range: 16.6 - 48.5 mg/dl

Urea is a waste product filtered by the kidneys. It is used to assess kidney function.

Creatinine

BIOCHEMISTRY

✓ OPTIMAL

0.89 mg/dl



Reference Range: 0.7 - 1.2 mg/dl

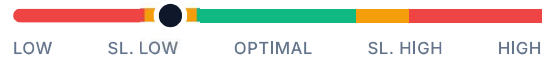
Creatinine is a standard marker for kidney function.

Albumin

BIOCHEMISTRY

👍 NORMAL

3.66 g/dL



Reference Range: 3.5 - 5.2 g/dL

Albumin is essential for maintaining oncotic pressure and transporting substances.

Aspartate Aminotransferase

LIVER FUNCTION

✓ OPTIMAL

26.2 U/L



Reference Range: 0 - 40 U/L

ASAT is used to monitor liver health.

Alanine Aminotransferase

LIVER FUNCTION

✓ OPTIMAL

31.4 U/L



Reference Range: 0 - 41 U/L

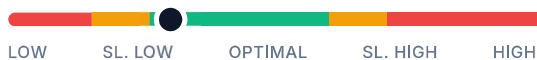
ALAT is a key enzyme for assessing liver function.

Gamma-Glutamyl Transferase

LIVER FUNCTION

✓ OPTIMAL

21.43 U/L



Reference Range: 11 - 50 U/L

GGT is a sensitive marker for liver and biliary conditions.

Alkaline Phosphatase

LIVER FUNCTION

✓ OPTIMAL

72.59 U/L



Reference Range: 40 - 130 U/L

ALP is used to assess liver and bone conditions.

Total Acid Phosphatase

BIOCHEMISTRY

✓ OPTIMAL

3 U/L



Reference Range: 0 - 4.2 U/L

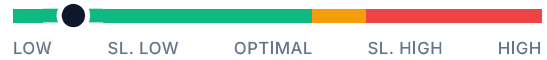
Acid phosphatase measurement.

Prostatic Acid Phosphatase

BIOCHEMISTRY

✓ OPTIMAL

0.6 U/L



Reference Range: 0 - 3.5 U/L

Prostatic acid phosphatase is used in prostate evaluation.

IgG anti-Dengue Antibody

SEROLOGY

✓ OPTIMAL

0.15 index



Reference Range: 0 - 1 index

IgG antibodies indicate past exposure to the Dengue virus.

IgM anti-Dengue Antibody

SEROLOGY

✓ OPTIMAL

0.1 index



Reference Range: 0 - 1 index

IgM antibodies indicate recent or current infection with the Dengue virus.

Total Vitamin D

VITAMINS

✓ OPTIMAL

45.86 ng/mL



Reference Range: 30 - 1500 ng/mL

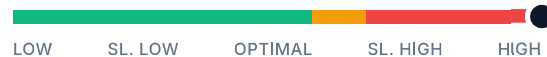
Vitamin D is essential for bone health and immune function.

High-Sensitivity C-Reactive Protein

INFLAMMATION

⚠ HIGH

13.4 mg/L



Reference Range: 0 - 6 mg/L

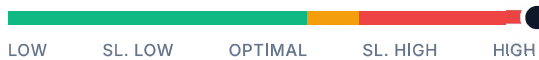
hs-CRP is used to assess low-grade systemic inflammation.

Total IgE

IMMUNOLOGY

▲ HIGH

236.95 IU/ml



Reference Range: 0 - 100 IU/ml

Total IgE is often elevated in allergic conditions.

Urine Color

URINALYSIS

✓ OPTIMAL

Yellow

✓ Normal

Urine color is a standard observation in urinalysis.

Urine Appearance

URINALYSIS

✗ CRITICAL

Cloudy

✗ Attention

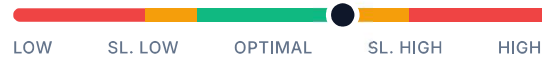
Urine appearance is a standard observation in urinalysis.

Urine Density

URINALYSIS

✓ OPTIMAL

1.02



Reference Range: 1.005 - 1.025

Urine density reflects kidney concentrating ability.

Urine pH

URINALYSIS

✓ OPTIMAL

6



Reference Range: 6 - 6

Urine pH is a standard measurement in urinalysis.

Urine Reaction

URINALYSIS

✓ OPTIMAL

Normal

✓ Normal

Urine reaction assessment.

Leukocytes in Urine

URINALYSIS

✓ OPTIMAL

Negative

✓ Normal

Leukocytes in urine may indicate infection or inflammation.

Nitrites in Urine

URINALYSIS

✓ OPTIMAL

Negative

✓ Normal

Nitrites in urine are often associated with bacterial infection.

Proteins in Urine

URINALYSIS

✓ OPTIMAL

Negative

✓ Normal

Proteinuria can be a sign of kidney issues.

Glucose in Urine

URINALYSIS

✓ OPTIMAL

Normal

✓ Normal

Glucose in urine can indicate diabetes.

Ketones in Urine

URINALYSIS

✓ OPTIMAL

Negative

✓ Normal

Ketones in urine can indicate metabolic changes.

Urobilinogen in Urine

URINALYSIS

✓ OPTIMAL

Normal

✓ Normal

Urobilinogen levels are used to assess liver function.

Bilirubin in Urine

URINALYSIS

✓ OPTIMAL

Negative

✓ Normal

Bilirubin in urine can indicate liver or biliary issues.

Blood in Urine

URINALYSIS

✓ OPTIMAL

Negative

✓ Normal

Hematuria can indicate various urinary tract conditions.

Hemoglobin in Urine

URINALYSIS

✓ OPTIMAL

Negative

✓ Normal

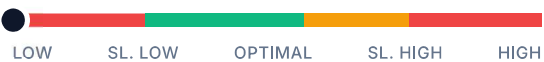
Hemoglobinuria can indicate hemolysis or urinary tract conditions.

Epithelial Cells in Urine

URINALYSIS

↓ SL. LOW

1.5 /campo



Reference Range: 2 - 3 /campo

Epithelial cells are commonly found in urine.

Bacteria in Urine

URINALYSIS

✗ CRITICAL

Positive

✗ Attention

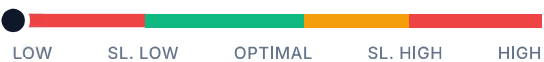
Bacteria in urine may indicate infection.

Leukocytes in Urine Sediment

URINALYSIS

↓ SL. LOW

0.5 /campo



Reference Range: 1 - 2 /campo

Microscopic leukocyte count in urine sediment.

Mucus Filaments in Urine

URINALYSIS

⌘ CRITICAL

Positive

⌘ Attention

Mucus filaments are common in urine.

Crystals in Urine

URINALYSIS

✓ OPTIMAL

Negative

✓ Normal

Crystals in urine can be associated with stone formation.

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.