

Lab Test Analysis Report

Patient's Name: [Unknown]

Test Date: [Unknown]

Test Type: Comprehensive Lab Report

Detailed Medical Interpretation of Lab Test Results for M. Barseghian Vardan

General Explanation

This comprehensive lab report provides a detailed overview of M. Barseghian Vardan's hematological profile, biochemical markers, protein markers, and tested vitamins levels. The lab tests were performed on January 20, 2025. Overall, the tests cover critical health parameters such as blood cell counts, liver functions, kidney markers, inflammation indicators, and certain vitamin levels.

Key Findings

1. **Hematology Parameters:**

- **Red Blood Cells (RBCs):**** Count of 4.82 T/L is within the normal range (4.30-5.75 T/L).
- **Hemoglobin:**** 14.0 g/dL, within normal (13.5-17.2 g/dL).
- **Hematocrit:**** 40.9%, normal (39.5-50.5%).
- **Mean Corpuscular Volume (MCV):**** 84.9 fL, normal (80.0-99.0 fL).
- **Mean Corpuscular Hemoglobin (MCH):**** 29.0 pg, normal (27.0-33.5 pg).
- **Leukocytes (White Blood Cells):**** 4.96 G/L, within range (3.90-10.20 G/L).
- **Platelets:**** 164 G/L, normal (150-450 G/L).

2. **Biochemistry:**

- **Uric Acid:**** Extremely low at 0.10 mmol/L (normal range 0.22-0.45 mmol/L) which is not typical unless influenced by medications or certain health conditions.
- **Potassium:**** Normal at 3.8 mmol/L in a range of (3.5-4.5 mmol/L).
- **C-Reactive Protein (CRP):**** Low at 2.1 mg/L, indicating no significant inflammation.

3. **Protein & Vitamins:**

- **Prostate-Specific Antigen (PSA):** Low normal at 0.78 ng/mL (<4.00 ng/mL), reducing concerns of prostate issues.
- **Vitamin B12:** Low at 116 pmol/L (normal range is 138-652 pmol/L), suggesting potential deficiency.

Interconnections and Marker Relationships

- The low uric acid level could be due to dietary factors, over-hydration, or possible treatment effects.
- The vitamin B12 deficiency, if persistent, could potentially lead to anemia, but currently, red blood cell parameters remain within normal limits.
- Inflammation markers (CRP) being low rules out acute inflammation as a concern at this time.

Possible Causes and Health Implications

- **Low Uric Acid:** This uncommon finding may reflect dietary habits, renal excretion anomalies, or medication effects (e.g., uric acid-lowering drugs). Rare conditions affecting purine metabolism could also cause this.
- **Vitamin B12 Deficiency:** Could be due to dietary insufficiencies (common in vegetarians), malabsorption issues, chronic gastritis, or certain medications (e.g., metformin).
- **Other Hematological and Biochemical Markers:** Generally normal, indicating no evident issues with basic blood and kidney function as well as systemic inflammation.

Next Steps and Recommendations

- **Investigate Low Vitamin B12:** Recommend dietary assessment or supplementation. Consider medical evaluation for malabsorption syndromes or medication review.
- **Monitor Uric Acid Levels:** Reassess considering patient's clinical history, medication, diet, and renal function.
- **Follow-up Consultations:** Engage with healthcare provider for further evaluation if symptoms like fatigue, neurological issues, or other concerns manifest.

Conclusion

M. Barseghian Vardan's lab tests indicate general stability in blood markers and infection/inflammation indicators. However, the notable findings of low uric acid and vitamin B12

warrant further evaluation. The patient's overall health management should focus on lifestyle adjustments to address nutritional gaps and ongoing monitoring of these markers.

Health Tips

- Opt for a balanced diet rich in vitamin B12 sources like lean meats, fish, and fortified cereals or consider supplementation if dietary intake is insufficient.
- Stay hydrated but balanced to prevent excess dilutional effects on lab parameters.
- Regular check-ups and re-evaluation of lab results can help in early detection and management of potential arising issues.