

## TLC Hematology Test Report

### Patient Information:

- Name: John Doe
- Sample Collection Date: 2024-11-18
- Age: 28
- Report Generation Date: 2024-11-19
- Gender: Male

### Result of Hematology Test

Parameter	Observed Value	Normal Range	Interpretation
Red Blood Cells (RBC)	3.5 million/ $\mu$ L	4.7–6.1 million/ $\mu$ L (men)	Indicates anemia or bone marrow suppression.
Hemoglobin (Hb)	9.8 g/dL	13.5–17.5 g/dL (men)	Suggests iron deficiency anemia or chronic disease.
White Blood Cells (WBC)	15,000 cells/ $\mu$ L	4,000–11,000 cells/ $\mu$ L	Indicates infection, inflammation, or stress.
Platelet Count	90,000/ $\mu$ L	150,000–450,000/ $\mu$ L	Points to thrombocytopenia or bleeding disorders.
ESR (Erythrocyte Sedimentation Rate)	35 mm/hr	< 20 mm/hr (men)	Sign of active inflammation or chronic disease.
Reticulocyte Count	0.5%	0.5–2.5%	Suggests inadequate bone marrow response.
Peripheral Smear	Abnormal RBC morphology	Normal cell shape and size	Indicates conditions like sickle cell anemia.

### Notes on the Abnormal Report:

- RBC and Hemoglobin:** A low count combined with low hemoglobin often points to anemia. Further tests, like iron studies, may be needed.
- WBC:** A significantly elevated WBC count could indicate bacterial infections or even leukemia.
- Platelet Count:** A decreased count can lead to bleeding risks and is often linked to viral infections or autoimmune conditions.
- ESR:** A high ESR is a general marker of inflammation but is not disease-specific.
- Peripheral Smear:** Abnormalities in cell shape or size provide direct insights into specific conditions such as hemolytic anemia or leukemia.

