

**Dr. Vinay Chopra**  
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 Chairman & Consultant Pathologist

**Dr. Yugam Chopra**  
 MD (Pathology)  
 CEO & Consultant Pathologist

|                       |                                        |                          |                        |
|-----------------------|----------------------------------------|--------------------------|------------------------|
| <b>NAME</b>           | : Mr. PRAHALAD                         | <b>PATIENT ID</b>        | : 1736010              |
| <b>AGE/ GENDER</b>    | : 46 YRS/MALE                          | <b>REG. NO./LAB NO.</b>  | : 012501270011         |
| <b>COLLECTED BY</b>   | :                                      | <b>REGISTRATION DATE</b> | : 27/Jan/2025 09:18 AM |
| <b>REFERRED BY</b>    | :                                      | <b>COLLECTION DATE</b>   | : 27/Jan/2025 09:20AM  |
| <b>BARCODE NO.</b>    | : 01524482                             | <b>REPORTING DATE</b>    | : 27/Jan/2025 11:47AM  |
| <b>CLIENT CODE.</b>   | : KOS DIAGNOSTIC LAB                   |                          |                        |
| <b>CLIENT ADDRESS</b> | : 6349/1, NICHOLSON ROAD, AMBALA CANTT |                          |                        |

| Test Name | Value | Unit | Biological Reference interval |
|-----------|-------|------|-------------------------------|
|-----------|-------|------|-------------------------------|

## CLINICAL CHEMISTRY/BIOCHEMISTRY

### LIPID PROFILE : BASIC

|                                                                          |        |       |                                                                                                                                      |
|--------------------------------------------------------------------------|--------|-------|--------------------------------------------------------------------------------------------------------------------------------------|
| CHOLESTEROL TOTAL: SERUM<br><i>by CHOLESTEROL OXIDASE PAP</i>            | 172.62 | mg/dL | OPTIMAL: < 200.0<br>BORDERLINE HIGH: 200.0 - 239.0<br>HIGH CHOLESTEROL: > OR = 240.0                                                 |
| TRIGLYCERIDES: SERUM<br><i>by GLYCEROL PHOSPHATE OXIDASE (ENZYMATIC)</i> | 149.27 | mg/dL | OPTIMAL: < 150.0<br>BORDERLINE HIGH: 150.0 - 199.0<br>HIGH: 200.0 - 499.0<br>VERY HIGH: > OR = 500.0                                 |
| HDL CHOLESTEROL (DIRECT): SERUM<br><i>by SELECTIVE INHIBITION</i>        | 46.83  | mg/dL | LOW HDL: < 30.0<br>BORDERLINE HIGH HDL: 30.0 - 60.0<br>HIGH HDL: > OR = 60.0                                                         |
| LDL CHOLESTEROL: SERUM<br><i>by CALCULATED, SPECTROPHOTOMETRY</i>        | 95.94  | mg/dL | OPTIMAL: < 100.0<br>ABOVE OPTIMAL: 100.0 - 129.0<br>BORDERLINE HIGH: 130.0 - 159.0<br>HIGH: 160.0 - 189.0<br>VERY HIGH: > OR = 190.0 |
| NON HDL CHOLESTEROL: SERUM<br><i>by CALCULATED, SPECTROPHOTOMETRY</i>    | 125.79 | mg/dL | OPTIMAL: < 130.0<br>ABOVE OPTIMAL: 130.0 - 159.0<br>BORDERLINE HIGH: 160.0 - 189.0<br>HIGH: 190.0 - 219.0<br>VERY HIGH: > OR = 220.0 |
| VLDL CHOLESTEROL: SERUM<br><i>by CALCULATED, SPECTROPHOTOMETRY</i>       | 29.85  | mg/dL | 0.00 - 45.00                                                                                                                         |
| TOTAL LIPIDS: SERUM<br><i>by CALCULATED, SPECTROPHOTOMETRY</i>           | 494.51 | mg/dL | 350.00 - 700.00                                                                                                                      |
| CHOLESTEROL/HDL RATIO: SERUM<br><i>by CALCULATED, SPECTROPHOTOMETRY</i>  | 3.69   | RATIO | LOW RISK: 3.30 - 4.40<br>AVERAGE RISK: 4.50 - 7.0                                                                                    |



  
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| LDL /HDL RATIO: SERUM<br><i>by CALCULATED, SPECTROPHOTOMETRY</i>          | 2.05  | RATIO | MODERATE RISK: 7.10 - 11.0<br>HIGH RISK: > 11.0<br>LOW RISK: 0.50 - 3.0<br>MODERATE RISK: 3.10 - 6.0<br>HIGH RISK: > 6.0 |
| TRIGLYCERIDES/HDL RATIO: SERUM<br><i>by CALCULATED, SPECTROPHOTOMETRY</i> | 3.19  | RATIO | 3.00 - 5.00                                                                                                              |

**INTERPRETATION:**

- Measurements in the same patient can show physiological & analytical variations. Three serial samples 1 week apart are recommended for Total Cholesterol, Triglycerides, HDL & LDL Cholesterol.
- As per NLA-2014 guidelines, all adults above the age of 20 years should be screened for lipid status. Selective screening of children above the age of 2 years with a family history of premature cardiovascular disease or those with at least one parent with high total cholesterol is recommended.
- Low HDL levels are associated with increased risk for Atherosclerotic Cardiovascular disease (ASCVD) due to insufficient HDL being available to participate in reverse cholesterol transport, the process by which cholesterol is eliminated from peripheral tissues.
- NLA-2014 identifies Non HDL Cholesterol (an indicator of all atherogenic lipoproteins such as LDL, VLDL, IDL, Lp(a), Chylomicron remnants) along with LDL-cholesterol as co-primary target for cholesterol lowering therapy. Note that major risk factors can modify treatment goals for LDL & Non HDL.
- Additional testing for Apolipoprotein B, hsCRP, Lp(a) & LP-PLA2 should be considered among patients with moderate risk for ASCVD for risk refinement



  
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## ENDOCRINOLOGY

### THYROID STIMULATING HORMONE (TSH)

THYROID STIMULATING HORMONE (TSH): SERUM **5.81<sup>H</sup>**  $\mu$ IU/mL 0.35 - 5.50

by CMA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

3rd GENERATION, ULTRASENSITIVE

#### INTERPRETATION:

| AGE                 | REFERENCE RANGE ( $\mu$ IU/mL) |
|---------------------|--------------------------------|
| 0 – 5 DAYS          | 0.70 – 15.20                   |
| 6 Days – 2 Months   | 0.70 – 11.00                   |
| 3 – 11 Months       | 0.70 – 8.40                    |
| 1 – 5 Years         | 0.70 – 7.00                    |
| 6 – 10 Years        | 0.60 – 5.50                    |
| 11 - 15             | 0.50 – 5.50                    |
| > 20 Years (Adults) | 0.27 – 5.50                    |
| PREGNANCY           |                                |
| 1st Trimester       | 0.10 - 3.00                    |
| 2nd Trimester       | 0.20 - 3.00                    |
| 3rd Trimester       | 0.30 - 4.10                    |

**NOTE:-TSH levels are subjected to circadian variation, reaching peak levels between 2-4 a.m and at a minimum between 6-10 pm. The variation is of the order of 50 %. Hence time of the day has influence on the measured serum TSH concentration.**

**USE:-** TSH controls biosynthesis and release of thyroid hormones T4 & T3. It is a sensitive measure of thyroid function, especially useful in early or subclinical hypothyroidism, before the patient develops any clinical findings or goitre or any other thyroid function abnormality.

#### INCREASED LEVELS:

- 1.Primary or untreated hypothyroidism, may vary from 3 times to more than 100 times normal depending on degree of hypofunction.
- 2.Hypothyroid patients receiving insufficient thyroid replacement therapy.
- 3.Hashimotos thyroiditis.
- 4.DRUGS: Amphetamines, Iodine containing agents and dopamine antagonist.
- 5.Neonatal period, increase in 1st 2-3 days of life due to post-natal surge.

#### DECREASED LEVELS:

- 1.Toxic multi-nodular goitre & Thyroiditis.
- 2.Over replacement of thyroid hormone in treatment of hypothyroidism.
- 3.Autonomously functioning Thyroid adenoma
- 4.Secondary pituitary or hypothalamic hypothyroidism
- 5.Acute psychiatric illness
- 6.Severe dehydration.
- 7.DRUGS: Glucocorticoids, Dopamine, Levodopa, T4 replacement therapy, Anti-thyroid drugs for thyrotoxicosis.



  
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8.Pregnancy: 1st and 2nd Trimester

**LIMITATIONS:**

- 1.TSH may be normal in central hypothyroidism, recent rapid correction of hyperthyroidism or hypothyroidism, pregnancy, phenytoin therapy.
- 2.Autoimmune disorders may produce spurious results.

\*\*\* End Of Report \*\*\*



  
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