| | | | |
|---|---|---|---|
| Patient Name | : **MR. SHIRISH R KOWARKAR** | Patient ID / Billing ID | : 27378 / 59143 |
| Age / Sex | : 71 years / Male | Specimen Collected at | : DIRECT - OM |
| Ref. Doctor | : Dr. RAMESH SUBRAMANIAM | Sample Collected On | : 13/02/2024 12:33 |
| Ref. Client Name | : DIRECT - OM | Billed On | : 13/02/2024 09:23 |
| Sample ID | : O00021130224 | Reported On | : 13/02/2024 13:07 |

# ASPIRA TOTUS

## HAEMATOLOGY REPORT

| Test Name | Observed Value | Unit | Biological Reference Interval | Method |
|---|---|---|---|---|
| **EXTENDED CBC HAEMOGRAM / ESR** | | | | |
| **Haemoglobin** | 15.9 | g/dl | 13-17 | Photometry |
| **RED BLOOD CELLS** | | | | |
| **Erythrocytes (RBC)** | 5.50 | 10^6/µl | 4.5-5.5 | Optical |
| **Hematocrit (HCT)** | 48.6 | % | 40-50 | Calculated |
| **MCV** | 88.3 | fL | 83-101 | Measured |
| **MCH** | 28.9 | pg | 27-32 | Calculated |
| **MCHC** | 32.7 | g/dl | 31.5-34.5 | Calculated |
| **RDW SD** | 12.9 | % | 11.6-14.0 | Measured |
| **RBC MORPHOLOGY** | | | | |
| **Hyper** | 0.2 | % | - | Light Scatter |
| **Hypo** | 7.4 | % | - | Light Scatter |
| **Macro** | 0.3 | % | - | Light Scatter |
| **Micro** | 0.4 | % | - | Light Scatter |
| **WHITE BLOOD CELLS** | | | | |
| **Total WBC Count** | 7690 | /cu.m.m | 4000-10000 | Flowcytometry |
| **DIFFERENTIAL COUNT** | | | | |
| **Neutrophils** | 73.2 | % | 40-80 | Peroxidase |
| **Lymphocytes** | **11.5** | % | 20-40 | Peroxidase |
| **Eosinophils** | 4.1 | % | 1-6 | Peroxidase |
| **Monocytes** | 7.9 | % | 2-10 | Peroxidase |
| **Basophils** | 1.1 | % | 0-2 | Peroxidase |
| **Atypical Lymphocytes (LUC)** | 2.3 | % | - | Peroxidase |

| | | | |
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**ABSOLUTE COUNT**

| | | | | |
|---|---|---|---|---|
| **Neutrophils** | 5629 | /uL | 2000-7000 | Peroxidase |
| **Lymphocytes** | **884** | /uL | 1000-3000 | Peroxidase |
| **Eosinophils** | 315 | /uL | 20-500 | Peroxidase |
| **Monocytes** | 607 | /uL | 200-1000 | Peroxidase |
| **Basophils** | 84 | /uL | 20-100 | Peroxidase |

**PLATELETS**

| | | | | |
|---|---|---|---|---|
| **Platelet Count** | 295000 | /cu.m.m | 150000-410000 | Optical |
| **Mean Platelet Volume (MPV)** | 7.5 | fL | - | Measured |
| **PCT** | 0.22 | % | - | Calculated |
| **PDW** | 49.3 | % | - | Calculated |
| **Large Platelet** | 4000 | /cu.m.m | - | Optical |

**Note:**

- Immature Platelet Fraction (IPF) applicable in cases of Platelets less than 50,000 / cumm.
- Haemograms are reviewed and confirmed microscopically.

**Interpretation:**

Immature Platelet Fraction more than 10% indicates recovery of platelet count within 48 hours.

References: Dacie and Lewis Practical hematology, Eleventh Edition

| | | | | |
|---|---|---|---|---|
| **Erythrocyte Sedimentation Rate (ESR)** | 02 | mm/hr | < 15 | Capillary Photometry |

**Interpretation:**

High ESR is not diagnostics of any disease but just indicative of some inflammatory process. ESR is to be used to monitor outcome of therapy. Microcytic anemia can increase ESR. High ESR can also be seen in apparently healthy adults.

Specimen Type : EDTA Whole Blood

**END OF REPORT**

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| Age / Sex | : 71 years / Male | Specimen Collected at | : DIRECT - OM |
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| Ref. Client Name | : DIRECT - OM | Billed On | : 13/02/2024 09:23 |
| Sample ID | : O00022130224 | Reported On | : 13/02/2024 13:58 |

## ASPIRA TOTUS

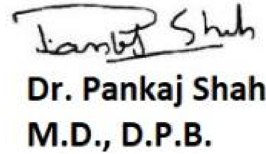
### BIOCHEMISTRY REPORT

| Test Name | Observed Value | Unit | Biological Reference Interval | Method |
|---|---|---|---|---|
| **GLUCOSE FASTING** | | | | |
| **Glucose Fasting (Plasma)** | 100 | mg/dl | 74 - 106 | Hexokinase |

**Interpretation :**

Fasting Blood Sugar more than 126 mg/dl on more than one occasion can indicate Diabetes Mellitus.

**END OF REPORT**



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|---|---|---|---|
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| Ref. Client Name | : DIRECT - OM | Billed On | : 13/02/2024 09:23 |
| Sample ID | : O00023130224 | Reported On | : 13/02/2024 13:59 |

## ASPIRA TOTUS

### BIOCHEMISTRY REPORT

| Test Name | Observed Value | Unit | Biological Reference Interval | Method |
|---|---|---|---|---|
| **BIOCHEMISTRY TOTUS** | | | | |
| **Creatinine** | 1.23 | mg/dl | 0.70 - 1.30 | Alk. picrate IDMS |
| **SGOT (AST)** | 16 | U/L | 15 - 37 | UV - P5P |
| **SGPT (ALT)** | 23 | U/L | 16 - 63 | UV - P5P IFCC |
| **Blood Urea Nitrogen BUN** | 8 | mg/dl | 7 - 18 | Urease with GLDH |
| **Blood Urea** | 17.12 | mg/dl | 15 - 38 | Calculated |
| **Uric Acid** | 4.7 | mg/dL | 3.5 - 7.2 | Uricase-Colorimetric |
| **Calcium Total** | 9.5 | mg/dl | 8.5 - 10.1 | OCPC |
| **Bilirubin Total** | 0.6 | mg/dL | 0.2 - 1.0 | Jendrassik Grof |
| **Bilirubin Direct** | 0.15 | mg/dL | 0.0 - 0.2 | Diazotization |
| **Bilirubin Indirect** | 0.45 | mg/dL | 0.2 - 0.8 | Calculated |

**END OF REPORT**

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|---|---|---|---|
| Patient Name | : **MR. SHIRISH R KOWARKAR** | Patient ID / Billing ID | : 27378 / 59143 |
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| Ref. Doctor | : Dr. RAMESH SUBRAMANIAM | Sample Collected On | : 13/02/2024 12:32 |
| Ref. Client Name | : DIRECT - OM | Billed On | : 13/02/2024 09:23 |
| Sample ID | : O00023130224 | Reported On | : 13/02/2024 15:44 |

## ASPIRA TOTUS

### BIOCHEMISTRY REPORT

| Test Name | Observed Value | Unit | Biological Reference Interval | Method |
|---|---|---|---|---|
| **LIPID PROFILE** | | | | |
| **Total Cholesterol** | **226** | mg/dl | Desirable : < 200<br>Borderline High : 201 - 240<br>High : > 240 | Cholestrol Oxidase Esterase Peroxidase |
| **Triglycerides** | **386** | mg/dl | Normal : < 150<br>Borderline High : 151 - 199<br>High : ≥ 200 | Enzymatic , Endpoint |
| **HDL Cholesterol** | 47 | mg/dl | < 40 Low<br>≥ 60 High | Direct Measure PEG |
| **Non HDL Cholesterol** | **179** | mg/dl | Desirable : < 130<br>Boderline high : 130 - 159<br>High : ≥ 160 | Calculated |
| **LDL Cholesterol** | 111 | mg/dl | Optimal : <100<br>Near / Above Optimal : 101 - 129<br>Borderline High : 130 - 159<br>High : ≥ 160 | Calculated |
| **VLDL Cholesterol** | **77.20** | mg/dl | Below 30 | Calculated |
| **CHOL/HDL Ratio** | **4.81** | | Desirable/Low Risk : 3.3 - 4.4<br>Borderline/Middle Risk :4.5 - 7.1<br>Elevated/High Risk : 7.2 - 11.0 | Calculated |
| **Cholesterol LDL/HDL Ratio** | 2.36 | | Desirable/Low Risk : 0.5 - 3.0<br>Borderline/Middle Risk : 3.1 - 6.0<br>Elevated/High Risk : >6.1 | Calculated |

**Specimen Type : Serum**

**Appearance of Serum** Clear

**Remark:**

**Triglyceride level is >300 mg/dl hence LDL value is measured by Direct measure method & reported.**

**END OF REPORT**

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| Ref. Client Name | : DIRECT - OM | Billed On | : 13/02/2024 09:23 |
| Sample ID | : O00023130224 | Reported On | : 13/02/2024 14:52 |

## ASPIRA TOTUS

### IMMUNOLOGY REPORT

| Test Name | Observed Value | Unit | Biological Reference Interval | Method |
|---|---|---|---|---|
| **THYROID PANEL 1, TOTAL** | | | | |
| **Tri-iodothyronine (T3)** | 72.34 | ng/dl | Adults<br>Euthyroid :60 to 181<br>Hypothyroid :less than 60<br>Hyperthyroid :greater than 181 | CLIA |
| **Thyroxine (T4)** | **4.4** | µg/dL | Hypothyroid 0.0- 5.5<br>Euthyroid 4.5 - 10.9<br>Hyperthyroid 10.8-19.1<br>Pregnant Euthyroid6.4- 10.7<br>Cord Blood (0 day) 7.4 - 13.0<br>Neonatal (1-4 days) 14.0 - 28.4<br>2-20 Weeks - 7.2 - 15.7 | CLIA |
| **TSH-Ultrasensitive** | 1.739 | µIU/mL | 0.55-4.78 | CLIA |

**Specimen Type : Serum**

**Medical Remark :** **Kindly correlate clinically.**

**Interpretation :**

It is especially useful in the differential diagnosis of primary (thyroid) from secondary (pituitary) and tertiary (hypothalamus) hypothyroidism. In primary hypothyroidism,TSH levels are significantly elevated, while in secondary and tertiary hypothyroidism, TSH levels are low. Low TSH levels can be observed in conditions such as goiter, noncancerous tumors or Graves's disease and during the first trimester of pregnancy. High TSH can be observed in surgery, psychiatric medications, radiation therapy or an autoimmune disease.

**Disclaimer:**

1. TSH results may vary due to different instruments and methodology.
2. Results may vary due to reasons such as medication, with time of administration and time of blood collection.
3. There are minimal & transient variations in thyroid function indicators during the normal menstrual cycle & pregnancy.
4. Systemic disease states, referred to as nonthyroidal illnesses, are associated with a variety of alternations in thyroid hormone metabolism.
5. Acute trauma, including surgery, also is associated with alterations in thyroid function indicators.
6. Various medications interfere with results such as NSAIDS, Beta blockers, PPIs, Aspirin etc.

**END OF REPORT**

| | | | |
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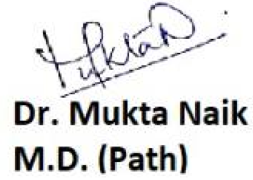
| Ref. Client Name | : DIRECT - OM | Billed On | : 13/02/2024 09:23 |
| Sample ID | : O00023130224 | Reported On | : 13/02/2024 14:52 |



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## ASPIRA TOTUS

### IMMUNOLOGY REPORT

| Test Name | Observed Value | Unit | Biological Reference Interval | Method |
|---|---|---|---|---|
| **ASPIRA VITAE** | | | | |
| **Vitamin D Total-25 Hydroxy (Serum)** | **22.08** | ng/mL | Deficiency : < 10<br>Insufficiency : 10–30<br>Sufficiency : 30–100<br>Toxicity : >100 | CLIA |

**Remark :** **Kindly correlate clinically.**

**Interpretation :**

1. Vitamin D is a fat soluble vitamin and exists in two main forms as cholecalciferol (vitamin D3) which is synthesized in skin from 7-dehydrocholesterol in response to sunlight exposure and Ergocalciferol (vitamin D2) present mainly in dietary sources. Both cholecalciferol are converted to 25 (OH)vitamin D in liver.
2. Testing for 25 (OH) vitamin D is recommended as it is the best indicator of vitamin D nutritional status as obtained from sunlight exposure and dietary intake. For diagnosis of vitamin Ddeficiencay it is recommended to have clinical correlation with serum 25 (OH) vitamin D, serum calcium, serum PTH and serum alkaline phosphatase.
3. During monitoring of oral vitamin D therapy-suggested testing of serum 25(OH) vitamin D is after 12 weeks or d months of treatment. However, the required dosage of vitamin D supplements and time to achieve sufficient vitamin D levels show significant seasonal (especially winter) & individual variability depending on age, body fat, sun exposure, physical activity, genetic factors (especially variable vitamin D receptor response), associated liver or renal disease, malabsorption syndromes and calcium or magnesium deficiency influencing the vitamin D metabolism vitamin D toxicity is known but very rare. Kindly correlate clinically, repeat with fresh sample if indicated. Vitamin D is essential for the formation and maintenance of strong, healthy bones.

| Test Name | Observed Value | Unit | Biological Reference Interval | Method |
|---|---|---|---|---|
| **Vitamin B12**<br>**Cyanocobalamin (Serum)** | **1024** | pg/mL | 211 - 911 | CLIA |

**Remark:** **Kindly correlate clinically.**

**Interpretation:**

Decreased serum B12 level causes macrocytic anemia and pancytopenia. Vit. B12 levels are deceased in magaloblastic anemia, gastrectomy, peripheral neuropathies, chronic alcoholism and treated epilepsy. Dietary sources of vitamin B12 are meat, eggs, milk and milk products.

**END OF REPORT**

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| Ref. Client Name | : DIRECT - OM | Billed On | : 13/02/2024 09:23 |
| Sample ID | : O00021130224 | Reported On | : 13/02/2024 15:42 |

## ASPIRA TOTUS

### HAEMATOLOGY REPORT

| Test Name | Observed Value | Unit | Biological Reference Interval | Method |
|---|---|---|---|---|
| **HBA1C GLYCATED HAEMOGLOBIN** | | | | |
| **HbA1C**<br>**(EDTA Whole Blood)** | 5.2 | % | < 5.7 % : Normal *<br>5.7 % to 6.4% : Pre-diabetes<br>6.5 % or higher : Diabetes | HPLC |
| **Estimated Blood Glucose (eBG)** | 102.54 | mg/dl | | Calculated |

**Interpretation :**

- HbA1c is used for monitoring diabetic control. It reflects the estimated blood glucose (eBG) over three months.
- Trends in HbA1c are a better indicator of diabetic control than a solitary test.
- HbA1c Estimation can get affected in Anemia, Chronic renal failure.
- HbA1c is falsely low in diabetics with hemolytic disease. Fructosamine is recommended in these patients which indicates diabetics control over 15 days.

**Remark :**

Icterus / lipemic sample & HbF concentration more than 10% may interfere with the assay.
If Homozygous Hemoglobinopathy is detected ,fructoseamine is recommended for monitoring diabetic status.

**Reference :**

*** https://www.diabetes.org/a1c/diagnosis**

**END OF REPORT**

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