

Name : Mrs. NITHYA KALYANI E  
 PID No. : MED121759036  
 SID No. : 623006940  
 Age / Sex : 46 Year(s) / Female  
 Ref. Dr : MediWheel

Register On : 22/03/2023 10:08 AM  
 Collection On : 22/03/2023 10:49 AM  
 Report On : 22/03/2023 3:09 PM  
 Printed On : 23/03/2023 9:38 AM  
 Type : OP

Investigation Observed Value Unit Biological Reference Interval

## **IMMUNOHAEMATOLOGY**

BLOOD GROUPING AND Rh TYPING (Blood 'A' 'Positive'  
 /Agglutination)

## **HAEMATOLOGY**

### **Complete Blood Count With - ESR**

Haemoglobin (Blood/Spectrophotometry)	12.13	g/dL	12.5 - 16.0
Packed Cell Volume(PCV)/Haematocrit (Blood/Derived from Impedance)	36.82	%	37 - 47
RBC Count (Blood/Impedance Variation)	03.99	mill/cu.mm	4.2 - 5.4
Mean Corpuscular Volume(MCV) (Blood/ Derived from Impedance)	92.23	fL	78 - 100
Mean Corpuscular Haemoglobin(MCH) (Blood/Derived from Impedance)	30.39	pg	27 - 32
Mean Corpuscular Haemoglobin concentration(MCHC) (Blood/Derived from Impedance)	32.96	g/dL	32 - 36
RDW-CV(Derived from Impedance)	11.8	%	11.5 - 16.0
RDW-SD(Derived from Impedance)	38.09	fL	39 - 46
Total Leukocyte Count (TC) (Blood/ Impedance Variation)	7970	cells/cu.mm	4000 - 11000
Neutrophils (Blood/Impedance Variation & Flow Cytometry)	57.50	%	40 - 75
Lymphocytes (Blood/Impedance Variation & Flow Cytometry)	35.40	%	20 - 45
Eosinophils (Blood/Impedance Variation & Flow Cytometry)	02.90	%	01 - 06
Monocytes (Blood/Impedance Variation & Flow Cytometry)	03.70	%	01 - 10
Basophils (Blood/Impedance Variation & Flow Cytometry)	00.50	%	00 - 02

**INTERPRETATION:** Tests done on Automated Five Part cell counter. All abnormal results are reviewed and confirmed microscopically.

Absolute Neutrophil count (Blood/ Impedance Variation & Flow Cytometry)	4.58	10 <sup>3</sup> / µl	1.5 - 6.6
Absolute Lymphocyte Count (Blood/ Impedance Variation & Flow Cytometry)	2.82	10 <sup>3</sup> / µl	1.5 - 3.5
Absolute Eosinophil Count (AEC) (Blood/ Impedance Variation & Flow Cytometry)	0.23	10 <sup>3</sup> / µl	0.04 - 0.44
Absolute Monocyte Count (Blood/ Impedance Variation & Flow Cytometry)	0.29	10 <sup>3</sup> / µl	< 1.0



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<b>Absolute Basophil count</b> (Blood/Impedance Variation & Flow Cytometry)	0.04	10 <sup>3</sup> / µl	< 0.2
<b>Platelet Count</b> (Blood/Impedance Variation)	249	10 <sup>3</sup> / µl	150 - 450
<b>MPV</b> (Blood/Derived from Impedance)	08.96	fL	8.0 - 13.3
<b>PCT</b> (Automated Blood cell Counter)	0.22	%	0.18 - 0.28
<b>ESR (Erythrocyte Sedimentation Rate)</b> (Blood/Automated ESR analyser)	<b>23</b>	mm/hr	< 20

## BIOCHEMISTRY

<b>BUN / Creatinine Ratio</b>	13.6		
<b>Glucose Fasting (FBS)</b> (Plasma - F/GOD-PAP)	<b>108.6</b>	mg/dL	Normal: < 100 Pre Diabetic: 100 - 125 Diabetic: >= 126

**INTERPRETATION:** Factors such as type, quantity and time of food intake, Physical activity, Psychological stress, and drugs can influence blood glucose level.

<b>Glucose, Fasting (Urine)</b> (Urine - F)	Negative	Negative
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<b>Glucose Postprandial (PPBS)</b> (Plasma - PP/GOD-PAP)	<b>167.5</b>	mg/dL	70 - 140
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### **INTERPRETATION:**

Factors such as type, quantity and time of food intake, Physical activity, Psychological stress, and drugs can influence blood glucose level. Fasting blood glucose level may be higher than Postprandial glucose, because of physiological surge in Postprandial Insulin secretion, Insulin resistance, Exercise or Stress, Dawn Phenomenon, Somogyi Phenomenon, Anti- diabetic medication during treatment for Diabetes.

<b>Urine Glucose(PP-2 hours)</b> (Urine - PP)	<b>Trace</b>	Negative
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<b>Blood Urea Nitrogen (BUN)</b> (Serum/Urease UV / derived)	9.0	mg/dL	7.0 - 21
<b>Creatinine</b> (Serum/Modified Jaffe)	0.66	mg/dL	0.6 - 1.1
<b>Uric Acid</b> (Serum/Enzymatic)	4.5	mg/dL	2.6 - 6.0

### Liver Function Test

<b>Bilirubin(Total)</b> (Serum)	0.72	mg/dL	0.1 - 1.2
<b>Bilirubin(Direct)</b> (Serum/Diazotized Sulfanilic Acid)	0.28	mg/dL	0.0 - 0.3
<b>Bilirubin(Indirect)</b> (Serum/Derived)	0.44	mg/dL	0.1 - 1.0
<b>SGOT/AST (Aspartate Aminotransferase)</b> (Serum/Modified IFCC)	18.4	U/L	5 - 40
<b>SGPT/ALT (Alanine Aminotransferase)</b> (Serum)	17.2	U/L	5 - 41
<b>GGT(Gamma Glutamyl Transpeptidase)</b> (Serum/IFCC / Kinetic)	17.6	U/L	< 38



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<u>Investigation</u>	<u>Observed Value</u>	<u>Unit</u>	<u>Biological Reference Interval</u>
<b>Alkaline Phosphatase (SAP)</b> (Serum/Modified IFCC)	97.2	U/L	42 - 98
<b>Total Protein</b> (Serum/Biuret)	7.36	gm/dL	6.0 - 8.0
<b>Albumin</b> (Serum/Bromocresol green)	3.89	gm/dL	3.5 - 5.2
<b>Globulin</b> (Serum/Derived)	3.47	gm/dL	2.3 - 3.6
<b>A : G RATIO</b> (Serum/Derived)	1.12		1.1 - 2.2
<b><u>Lipid Profile</u></b>			
<b>Cholesterol Total</b> (Serum/CHOD-PAP with ATCS)	196.7	mg/dL	Optimal: < 200 Borderline: 200 - 239 High Risk: >= 240
<b>Triglycerides</b> (Serum/GPO-PAP with ATCS)	91.5	mg/dL	Optimal: < 150 Borderline: 150 - 199 High: 200 - 499 Very High: >= 500
<b>HDL Cholesterol</b> (Serum/Immuno-inhibition)	<b>36.0</b>	mg/dL	Optimal(Negative Risk Factor): >= 60 Borderline: 50 - 59 High Risk: < 50
<b>LDL Cholesterol</b> (Serum/Calculated)	<b>142.4</b>	mg/dL	Optimal: < 100 Above Optimal: 100 - 129 Borderline: 130 - 159 High: 160 - 189 Very High: >= 190
<b>VLDL Cholesterol</b> (Serum/Calculated)	18.3	mg/dL	< 30
<b>Non HDL Cholesterol</b> (Serum/Calculated)	160.7	mg/dL	Optimal: < 130 Above Optimal: 130 - 159 Borderline High: 160 - 189 High: 190 - 219 Very High: >= 220

**INTERPRETATION:** The reference ranges are based on fasting condition. Triglyceride levels change drastically in response to food, increasing as much as 5 to 10 times the fasting levels, just a few hours after eating. Fasting triglyceride levels show considerable diurnal variation too. There is evidence recommending triglycerides estimation in non-fasting condition for evaluating the risk of heart disease and screening for metabolic syndrome, as non-fasting sample is more representative of the usual circulating level of triglycerides during most part of the day.

**INTERPRETATION:** 1.Non-HDL Cholesterol is now proven to be a better cardiovascular risk marker than LDL Cholesterol. 2.It is the sum of all potentially atherogenic proteins including LDL, IDL, VLDL and chylomicrons and it is the "new bad cholesterol" and is a co-primary target for cholesterol lowering therapy.



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<u>Investigation</u>	<u>Observed Value</u>	<u>Unit</u>	<u>Biological Reference Interval</u>
<b>Total Cholesterol/HDL Cholesterol Ratio</b> (Serum/Calculated)	5.5		Optimal: < 3.3 Low Risk: 3.4 - 4.4 Average Risk: 4.5 - 7.1 Moderate Risk: 7.2 - 11.0 High Risk: > 11.0
<b>Triglyceride/HDL Cholesterol Ratio</b> <b>(TG/HDL)</b> (Serum/Calculated)	2.5		Optimal: < 2.5 Mild to moderate risk: 2.5 - 5.0 High Risk: > 5.0
<b>LDL/HDL Cholesterol Ratio</b> (Serum/ Calculated)	4		Optimal: 0.5 - 3.0 Borderline: 3.1 - 6.0 High Risk: > 6.0
<b><u>Glycosylated Haemoglobin (HbA1c)</u></b>			
<b>HbA1C</b> (Whole Blood/Ion exchange HPLC by D10)	6.4	%	Normal: 4.5 - 5.6 Prediabetes: 5.7 - 6.4 Diabetic: >= 6.5

**INTERPRETATION:** If Diabetes - Good control : 6.1 - 7.0 % , Fair control : 7.1 - 8.0 % , Poor control >= 8.1 %

**Estimated Average Glucose** (Whole Blood) 136.98 mg/dL

**INTERPRETATION: Comments**

HbA1c provides an index of Average Blood Glucose levels over the past 8 - 12 weeks and is a much better indicator of long term glycemic control as compared to blood and urinary glucose determinations. Conditions that prolong RBC life span like Iron deficiency anemia, Vitamin B12 & Folate deficiency, hypertriglyceridemia, hyperbilirubinemia, Drugs, Alcohol, Lead Poisoning, Asplenia can give falsely elevated HbA1C values. Conditions that shorten RBC survival like acute or chronic blood loss, hemolytic anemia, Hemoglobinopathies, Splenomegaly, Vitamin E ingestion, Pregnancy, End stage Renal disease can cause falsely low HbA1c.

**IMMUNOASSAY**

**THYROID PROFILE / TFT**

<b>T3 (Triiodothyronine) - Total</b> (Serum/ Chemiluminescent Immunometric Assay (CLIA))	1.44	ng/ml	0.7 - 2.04
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**INTERPRETATION:**

**Comment :**

Total T3 variation can be seen in other condition like pregnancy, drugs, nephrosis etc. In such cases, Free T3 is recommended as it is Metabolically active.

<b>T4 (Tyroxine) - Total</b> (Serum/ Chemiluminescent Immunometric Assay (CLIA))	11.72	µg/dl	4.2 - 12.0
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**INTERPRETATION:**

**Comment :**

Total T4 variation can be seen in other condition like pregnancy, drugs, nephrosis etc. In such cases, Free T4 is recommended as it is Metabolically active.



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<u>Investigation</u>	<u>Observed Value</u>	<u>Unit</u>	<u>Biological Reference Interval</u>
<b>TSH (Thyroid Stimulating Hormone)</b> (Serum /Chemiluminescent Immunometric Assay (CLIA))	2.75	µIU/mL	0.35 - 5.50

**INTERPRETATION:**

Reference range for cord blood - upto 20  
1 st trimester: 0.1-2.5  
2 nd trimester 0.2-3.0  
3 rd trimester : 0.3-3.0  
(Indian Thyroid Society Guidelines)

**Comment :**

- 1.TSH reference range during pregnancy depends on Iodine intake, TPO status, Serum HCG concentration, race, Ethnicity and BMI.
- 2.TSH Levels are subject to circadian variation, reaching peak levels between 2-4am and at a minimum between 6-10PM.The variation can be of the order of 50%,hence time of the day has influence on the measured serum TSH concentrations.
- 3.Values&#amp;#2264;0.03 µIU/mL need to be clinically correlated due to presence of rare TSH variant in some individuals.

## CLINICAL PATHOLOGY

### Urine Analysis - Routine

<b>Colour</b> (Urine)	Pale Yellow		Yellow to Amber
<b>Appearance</b> (Urine)	Clear		Clear
<b>Protein</b> (Urine)	Negative		Negative
<b>Glucose</b> (Urine)	Negative		Negative
<b>Pus Cells</b> (Urine)	2-3	/hpf	NIL
<b>Epithelial Cells</b> (Urine)	1-2	/hpf	NIL
<b>RBCs</b> (Urine)	Nil	/hpf	NIL

-- End of Report --



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Thanks for your reference

ECHOCARDIOGRAM WITH COLOUR DOPPLER:

LVID d ... 4.8 cm  
LVID s ... 2.9 cm  
EF ... 70 %  
IVS d ... 0.5 cm  
IVS s ... 0.8 cm  
LVPW d ... 0.4 cm  
LVPW s ... 1.1 cm  
LA ... 2.9 cm  
AO ... 2.7 cm  
TAPSE ... 22mm

Left ventricle , Left atrium normal.

Right ventricle, Right atrium normal.

No regional wall motion abnormality present.

Mitral valve, Aortic valve, Tricuspid valve & Pulmonary valve normal.

Aorta normal.

Inter atrial septum intact.

Inter ventricular septum intact.

No pericardial effusion .

Doppler:

Mitral valve : E: 1.04 m/s      A: 0.78m/s

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E/A Ratio:1.34    E/E: 12.82

Aortic valve: AV Jet velocity: 1.95 m/s

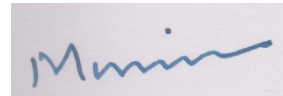
Tricuspid valve: TV Jet velocity: 1.86 m/s

TRPG:13.82mmHg.

Pulmonary valve: PV Jet velocity:1.50 m/s

IMPRESSION:

1. Normal chambers & Valves.
2. No regional wall motion abnormality present.
3. Normal LV systolic function.
4. Pericardial effusion - Nil.
5. No pulmonary artery hypertension.



Dr. S. MANIKANDAN. MD.DM.(Cardio)  
Cardiologist

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REAL - TIME 2D & 4D ULTRASOUND DONE WITH VOLUSON 730 EXPERT .

### SONOGRAM REPORT

#### WHOLE ABDOMEN

Suboptimal imaging due to poor penetration of USG with thick abdominal wall.

Liver: The liver is normal in size and shows uniform echotexture with no focal abnormality. There is no intra or extra hepatic biliary ductal dilatation.

Gallbladder: The gall bladder contracted (post prandial status).

Pancreas: The pancreas shows a normal configuration and echotexture.

The pancreatic duct is normal.

Spleen: The spleen is normal.

Kidneys: The right kidney measures 10.1 x 4.7 cm. Normal architecture.

The collecting system is not dilated.

The left kidney measures 10.3 x 4.8 cm. Normal architecture.

The collecting system is not dilated.

Urinary

bladder: The urinary bladder is smooth walled and uniformly transonic.

There is no intravesical mass or calculus.

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Uterus: The uterus is anteverted, and measures 7.5 x 3.5 cm.  
Myometrial echoes are homogeneous.  
The endometrium is central and normal measures 8.1 mm in thickness.  
Few small nabothian follicles noted around the endo cervix.

Ovaries: The right ovary measure 2.6 x 2.2 cm.  
The left ovary measures 2.4 x 2.4 cm.  
No significant mass or cyst is seen in the ovaries.  
Parametria are free.

RIF: Iliac fossae are normal.  
No mass or fluid collection is seen in the right iliac fossa.  
The appendix is not visualized.  
There is no free or loculated peritoneal fluid.  
No para aortic lymphadenopathy is seen.

IMPRESSION :

- No significant abnormality.

DR. T. ANNIE STALIN MBBS., F.USG.,  
SONOLOGIST.  
REG. NO: 85764.

DR.T.ANNIE STALIN MBBS.,F.USG.,  
SONOLOGIST.

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*Thanks for your reference*  
DIGITAL MAMMOGRAM OF BOTH BREASTS

Both breasts were studied in medio - lateral oblique and craniocaudal views.

Right breast:

Breast is composed of glandular tissue interspersed with connective tissue.

No evidence of micro / macro calcification noted in it.

Normal vascular markings are seen in right breast.

The skin, nipple, areola and subcutaneous tissues appear normal.

No evidence of significant axillary lymphadenopathy.

Left breast:

Breast is composed of glandular tissue interspersed with connective tissue.

No evidence of micro / macro calcification noted in it.

Normal vascular markings are seen in left breast.

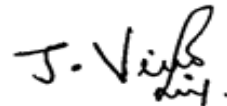
The skin, nipple, areola and subcutaneous tissues appear normal.

No evidence of significant axillary lymphadenopathy.

USG SCREENING : No mass / cyst / duct dilatation.

IMPRESSION:

- ✓ No significant abnormality demonstrated - BIRADS - 1 (Normal).



DR. J. VINOLIN NIVETHA, M.D.R.D.,  
Consultant Radiologist.  
Reg. No: 115999.

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**DIGITAL X- RAY CHEST PA VIEW**

Trachea appears normal.

Cardiothoracic ratio is within normal limits.

Bilateral lung fields appear normal.

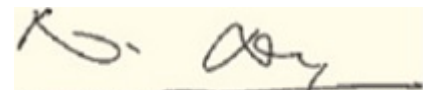
Both costophrenic angles appear normal.

Visualised bony structures appear normal.

Extra thoracic soft tissues shadow grossly appears normal.

**IMPRESSION:**

- **NO SIGNIFICANT ABNORMALITY DEMONSTRATED.**



**DR. DANIEL STANLEY PETER, M.D.R.D.,**  
Consultant Radiologist  
Reg. No: 82342