Visit ID	: RDDPL370717	Registration	: 29-Sep-2024 16:45
UHID/MR No	: 371277	Collected	: 29-Sep-2024 16:45
Patient Name	: **Mrs. PRATIBHA**	Received	: 29-Sep-2024 16:45
Age/Gender	: **28Y 0M 0D/Female**	Reported	: 29-Sep-2024 17:39
Ref Doctor	: Dr. PANDEY	Status	: Final report
Client Name	: M G	Client Code	: RDDL326
Ref.Lab	:	Barcode No	: **R912143**

DEPARTMENT OF HEMATOLOGY

RD 1.3

Test Name	Result	Unit	Bio.Ref.Range	Method Name
GLYCOSYLATED HEMOGLOBIN (HbA1c)				
Sample Type : WB EDTA				
Hemoglobin A1C(Glycohemoglobin)				
HbA1c (Glycosylated Hemoglobin)	4.90	%	Non-Diabetic < 6.0 Good Control 6.0-7.0 Weak Control 7.0-8.0 Poor control > 8.0	High-performance liquid chromatography(HPLC)
Estimated Average Glucose	93.93	mg/dL	68-125	

IMPORTANT NOTE: Numerous factors may falsely elevate or lower HbA1c, including anaemia,iron deficiency,renal failure and pregnancy.HbA1c does not take into account glucose variability and two individuals with the same HbA1c may exhibits vastly different glucose profile. other factors such as certain medication (like steroids) or sickness can temporarily increase your blood sugar levels. Anemia and other condition can cause a falsely high HbA1c results,as well,There also couldve been an error in the collection, transport or procesing of the test.

CLINICAL COMMENTS :

Monitoring HbA1c in people with diabetes is important. That's because the higher your HbA1c, the greater your risk of developing diabetes complications such as: diabetic retinopathy. diabetic kidney disease.

In vitro quantitative determination of HbA1c in whole blood is utilized in long term monitoring of glycemia.The HbA1c level correlates with the mean glucose concentration prevailing in the course of the patient's recent history (approx - 6-8 weeks) and therefore provides much more reliable information for glycemia monitoring than do determinations of blood glucose or urinary glucose. It is recommended that the determination of HbA1c be performed at intervals of 4-6 weeks during Diabetes Mellitus therapy. Results of HbA1c should be assessed in conjunction with the patient's medical history, clinical examinations and other findings.

1.Shortened RBC life span –HbA1c test will not be accurate when a person has a condition that affects the average lifespan of red blood cells (RBCs), such as hemolytic anemia or blood loss. When the lifespan of RBCs in circulation is shortened, the A1c result is falsely low and is an unreliable measurement of a person's average glucose over time.

2.Abnormal forms of hemoglobin – The presence of some hemoglobin variants, such as hemoglobin S in sickle cell anemia, may affect certain methods for measuring A1c. In these cases, *fructosamine* can be used to monitor glucose control.

Advised:

1.To follow patient for glycemic control test like fructosamine or glycated albumin may be performed instead.

2.Hemoglobin HPLC screen to analyze abnormal hemoglobin variant.

estimated Average Glucose (eAG) : estimated Average Glucose (eAG) based on value calculated according to National Glycohemoglobin Standardization Program (NGSP) criteria.

AS PER AMERICAN DIABETES ASSOCIATION (ADA):-

Reference Group	HbA1c in %
Non diabetic adults >=18 years	< 5.7
At risk (Prediabetes)	5.7 - 6.4
Diagnosing Diabetes	>= 6.5

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Patient Name	: **Mrs. PRATIBHA**	Received	: 29-Sep-2024 16:45
Age/Gender	: **28Y 0M 0D/Female**	Reported	: 29-Sep-2024 17:03
Ref Doctor	: Dr. PANDEY	Status	: Final report
Client Name	: M G	Client Code	: RDDL326
Ref.Lab	:	Barcode No	: **R912143**

DEPARTMENT OF HEMATOLOGY

RD 1.3

Test Name	Result	Unit	Bio.Ref.Range	Method Name
CBC-COMPLETE BLOOD COUNT WITH ESR				
Sample Type : WB EDTA				
BLOOD CELLS PARAMETER DONE BY BC 6000 (Flow Cytometer)				
Haemoglobin (Hb)	11.6	g/dL	11.5-15.5	Colorimetric SLS
RBC Count(Red Blood Count)	**3.6 L**	10^6/ul	3.8-4.8	Electrical Impedance
Packed Cell Volume (PCV)-Hematocrit	36.9	%	30.0-55.0	RBC Pulse Height Detection
Mean Corpuscular Volume (MCV)	**101.2 H**	fL	80 - 96	Automated/Calculated
Mean Corpuscular Hemoglobin (MCH)	31.8	pg/cell	28 - 33	Automated/Calculated
Mean Corpuscular Hb concentration (MCHC)	31.40	g/dL	31 - 36	Automated/Calculated
Red Blood Cell Distribution Width Cofficient of Variation (RDW-CV)	**16.3 H**	%	11.7 - 14.4	Automated/Calculated
Red Blood Cell Distribution Width Standard Deviation (RDW-SD)	**60.4 H**	fL	35.0- 46.0	Automated/Calculated
WHITE BLOOD CELL (WBC) PARAMETERS				
Total Leukocyte Count (TLC/WBC COUNT)	**10.03 H**	10^3/µL	4.00-10.0	optical Flow cytometry/Manual
DIFFERENTIAL LEUKOCYTE COUNT(DLC) BY FLOW CYTOMETERY/MICROSCOPIC				
Neutrophils Count	59.0	%	40.0-80.0	Impedance Flow cytometry/Microscopy
Lymphocytes Count	31.0	%	20.0-40.0	Impedance Flow cytometry/Microscopy
Monocytes Count	6.0	%	2 .0- 10 .0	Impedance Flow cytometry/Microscopy
Eosinophils Count	4.0	%	1.0 - 6.0	Impedance Flow cytometry/Microscopy
Basophils Count	0.0	%	0.00 - 2.00	Impedance Flow cytometry/Microscopy
ABSOLUTE LEUKOCYTE COUNTS				
Absolute Neutrophil Count	5.92	10^3/µL	2.00-7.00	Automated Calculated
Absolute Lymphocyte Count	**3.11 H**	10^3/µL	1.00-3.00	Automated Calculated
Absolute Monocyte Count	0.60	10^3ul	0.20 - 1.00	Automated Calculated
Absolute Eosinophils Count	0.40	10^3/ul	0.02-0.50	Automated Calculated
Absolute Basophil Count	00	10^3/µL	0.00-0.10	Automated Calculated

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MC-5776

Visit ID	: RDDPL370717	Registration	: 29-Sep-2024 16:45
UHID/MR No	: 371277	Collected	: 29-Sep-2024 16:45
Patient Name	: **Mrs. PRATIBHA**	Received	: 29-Sep-2024 16:45
Age/Gender	: **28Y 0M 0D/Female**	Reported	: 29-Sep-2024 17:03
Ref Doctor	: Dr. PANDEY	Status	: Final report
Client Name	: M G	Client Code	: RDDL326
Ref.Lab	:	Barcode No	: **R912143**

DEPARTMENT OF HEMATOLOGY

RD 1.3

Test Name	Result	Unit	Bio.Ref.Range	Method Name
PLATELET PARAMETERS				
Platelet Count	247	10^3/µL	150-410	Electrical Impedance/Neubauer Chamber with Microscopy
Plateletcrit (PCT)	0.32	%	0.18 - 0.39	Automated Optical Flowcytometer
Platelet Distribution Width(PDW)	16.0	fL	8.30-18.0	Calculated
Mean Platelet Volume (MPV)	**13.1 H**	fL	7.10-12.50	Automated Calculated
Platelet-Large Cell Count (P-LCC)	**119.00 H**	10^3/µL	45.0-95.0	Automated Calculated
Mentzer Index	27.73	Ratio		Calculated
Neutrophil to Lymphocyte Ratio	1.9			Calculated
Lymphocyte to Monocyte Ratio	5.17			Calculated
SED RATE				
Erythrocyte Sedimentation Rate (ESR)	**50 H**	mm/1st hr.	0 - 20	Modified /Advance Westergren Method

INTERPRETATION: A complete blood count **(CBC)** is a blood test used to evaluate your overall health and detect a wide range of disorders, including anemia, infection and leukemia. A complete blood count test measures several components and features of your blood, including: Red blood cells, which carry oxygen.Some of the most common diseases a CBC detects include anemia, autoimmune disorders, bone marrow disorders, dehydration, infections, inflammation, leukemia, lymphoma, myeloproliferative neoplasms, myelodysplastic syndrome, sickle cell disease, thalassemia, nutritional deficiencies. **WBC** They are important for fighting infections. A lower than normal WBC count may be due to: Bone marrow deficiency or failure (for example, due to infection, tumor, or abnormal scarring) Cancer treating drugs, or other medicines.**DLC** The differential count measures the percentages of each type of leukocyte present. WBC's are composed of granulocytes (neutrophils, eosinophils, and basophils) and non-granulocytes (lymphocytes and monocytes). White blood cells are a major component of the body's immune system.When the MCV is high, they are called macrocytic. When the MCV is low, they are termed microcytic. Erythrocytes containing the normal amount of hemoglobin (normal MCHC) are called normochromic. When the MCHC is abnormally low they are called hypochromic, and when the MCHC is abnormally high, hyperchromic.**Sed rate**, or erythrocyte sedimentation rate (ESR), is a blood test that can reveal inflammatory activity in your body. A sed rate test isn't a stand-alone diagnostic tool, but it can help your doctor diagnose or monitor the progress of an inflammatory disease.A **PCV** (Packed Cell Volume) Test is done to diagnose anemia or polycythemia in patients. It is generally done along with a full blood count test that is conducted to estimate the need for any blood transfusions and monitor the response to the blood transfusion treatment. Blood is a mix of plasma as well as cells.The **RDW** test is commonly used to help diagnose anemia, a condition in which your red blood cells can't carry enough oxygen to the rest of your body. **PCT** A high platelet count can occur when something causes the bone marrow to make too many platelets. When the reason is unknown, it is called primary or essential thrombocytosis. When excess platelets are due to an infection or other condition, it is called secondary thrombocytosis. An erythrocyte sedimentation rate (ESR) is a blood test that that can show if you have inflammation in your body. Inflammation is your immune system's response to injury, infection, and many types of conditions, including immune system disorders, certain cancers, and blood disorders. Erythrocytes are red blood cells.**Neutrophil to lymphocyte Ratio (NLR)** in a grey zone between 2.3-3.0 may serve as early warning of pathological state or process such like cancer, atherosclerosis, infection, inflammation, psychiatric disorders and stress. **Lymphocyte to Neutrophil Ratio** used as a marker of subclinical inflammation. It is calculated by dividing the number of neutrophils by number of lymphocytes, usually from peripheral blood sample, but sometimes also from cells that infiltrate tissue, such as tumor. **Mentzer index** is differentiating iron deficiency anemia from beta thalassemia. The index is calculated from the results of a complete blood count. If the quotient of the mean corpuscular volume (MCV, in fL) divided by the red blood cell count (RBC, in Millions per microLiter) is less than 13, thalassemia is said to be more likely. If the result is greater than 13, then iron-deficiency anemia is said to be more likely.
ADVISE;- PBF(PERIPHERIAL BLOOD FILM) WITH CBCs

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Patient Name	: **Mrs. PRATIBHA**	Received	: 29-Sep-2024 16:45
Age/Gender	: **28Y 0M 0D/Female**	Reported	: 29-Sep-2024 17:29
Ref Doctor	: Dr. PANDEY	Status	: Final report
Client Name	: M G	Client Code	: RDDL326
Ref.Lab	:	Barcode No	: **R912142**

DEPARTMENT OF CLINICAL BIOCHEMISTRY

RD 1.3

Test Name	Result	Unit	Bio.Ref.Range	Method Name
Blood Glucose - Fasting	97.19	mg/dl	70 - 110	GOD POD

CLINICAL COMMENT:

Elevated glucose levels (Hyperglycemia) are mostly associated with Diabetes mellitus but may be observed in case of neoplasms, hyperthyroidism, pancreatic and adrenocortical disorders. Hyperglycemia can also be due to effect of drugs (e.g. corticosteroids, estrogens, alcohol, phenytoin, thiazides). Decreased glucose levels (Hypoglycemia) may occur due increased insulin secretion, prolonged fasting or liver disease.

	Normal	Prediabetes	Diabetes
Fasting Glucose	< 100	100-125	>126
2 Hrs Post Prandial Glucose	< 140	140-199	>200

Impaired glucose tolerance (IGT) means that blood glucose is raised beyond normal levels, but not high enough to warrant a diabetes diagnosis. With impaired glucose tolerance you face a much greater risk of developing diabetes and cardiovascular disease.

Reference: American Diabetes Association Association.

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Patient Name	: **Mrs. PRATIBHA**	Received	: 29-Sep-2024 16:45
Age/Gender	: **28Y 0M 0D/Female**	Reported	: 29-Sep-2024 17:57
Ref Doctor	: Dr. PANDEY	Status	: Final report
Client Name	: M G	Client Code	: RDDL326
Ref.Lab	:	Barcode No	: **R912144**

DEPARTMENT OF CLINICAL BIOCHEMISTRY

RD 1.3

Test Name	Result	Unit	Bio.Ref.Range	Method Name
EGFR -(ESTIMATED GLOMERULAR FILTRATION RATE)				
Sample Type : SERUM				
Serum Creatinine	0.73	mg/dL	0.40-1.50	Modified Jaffe's
Estimated gfr By ckd	112.05	mL/min/1.73m2		Calculated
Estimated gfr By Mdrd	100.89	mL/min/1.73m2		Calculated

INTENEDE USE

eGFR can be estimated from prediction equations that take into account the serum creatinine concentration and some or all variables like age, gender, race and body size. GFR estimation is the best overall index of kidney function.

I**NTERPRETATION OF RESULTS**

CKD STAGE	DESCRIPTION	GFR (mL/min/1.73m2)	ASSOCIATED FINDINGS
0	Normal kidney function	>90	No proteinuria
1	Kidney damage with normal or high GFR	>90	Presence of Protein, albumin, cells or casts in urine
2	Mild decrease in GFR	60-89	-
3	Moderate decrease in GFR	30-59	-
4	Severe decrease in GFR	15-29	-
5	END STAGE RENAL DISEASE	<15	-

COMMENTS

Modification of diet in renal disease, (MDRD) equation is most thoroughly validated and superior to all the other methods for estimation of GFR. It does not require weight as a variable and yields an estimated GFR normalized to 1.73m2 body surface area. Using serum creatinine alone gives a poor inference of GFR because they are inversely related and effects of age, sex and race on creatinine production complicate interpretation.

NOTE

1.National Kidney Disease Education program recommends the use of MDRD equation to estimate or predict GFR in adults (>=20 years) with Chronic Kidney Disease (CKD)

2. MDRD equation is most accurate for GFR <=60 mL/min/1.73m2 .

3.Recalculation of estimated GFR is required for African American race.

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Patient Name	: **Mrs. PRATIBHA**	Received	: 29-Sep-2024 16:45
Age/Gender	: **28Y 0M 0D/Female**	Reported	: 29-Sep-2024 17:57
Ref Doctor	: Dr. PANDEY	Status	: Final report
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Ref.Lab	:	Barcode No	: **R912144**

DEPARTMENT OF CLINICAL BIOCHEMISTRY

RD 1.3

Test Name	Result	Unit	Bio.Ref.Range	Method Name
LIVER FUNCTION TEST (LFT)				
Sample Type : SERUM				
JAUNDICE PROFILE				
Bilirubin Total	0.64	mg/dL	0.20 -1.20	Diazotized Sulfanilic Acid DSA
Bilirubin Direct	0.12	mg/dL	0.00 - 0.30	Diazotized Sulfanilic Acid (DSA)
Bilirubin Indirect	0.52	mg/dL	0.00 - 1.10	Calculated
HEPATIC ENZYME				
Aspartate Transaminase (AST/SGOT)	28.66	U/L	0.00 - 40.0	IFCC without pyridoxal phosphate
Alanine Amino Transferase (ALT/SGPT)	16.85	U/L	5.00-45.0	IFCC without pyridoxal phosphate
Alkaline Phosphatase (ALP)	139.46	IU/L	44-147	IFCC
SGOT/SGPT Ratio	1.70	g/dL	0.00 - 3.50	Calculated
LIVER PLASMA PROTEIN				
Total Protein	8.01	g/dL	6.4-8.3	Biuret
Serum Albumin	4.99	g/dL	3.5 - 5.2	Bromocresol Green
Serum Globulin	3.02	g/dL	2.3-4.5	Calculated
Albumin/Globulin Ratio (A/G)	1.65	g/dL	1.00-2.50	Calculated

CLINICAL COMMENTS: Liver function tests can be suggested in case of hepatitis, liver cirrhosis and monitor possible side effects of medications. A variety of diseases and infections can cause acute or chronic damage to the liver, causing inflammation (hepatitis), scarring (cirrhosis), bile duct obstructions, liver tumors, and liver dysfunction. Alcohol, drugs, some herbal supplements, and toxins can also inure the liver. A significant amount of liver damage may occur before symptoms such as jaundice, dark urine, light-colored stools, itching (pruritus), nausea, fatigue, diarrhea, and unexplained weight loss or gain appear. Early detection of liver injury is essential in order to minimize damage and preserve liver function.**Alanine aminotransferase (ALT)** A very high level of ALT is frequently seen with acute hepatitis. Moderate increases may be seen with chronic hepatitis. People with blocked bile ducts, cirrhosis, and liver cancer may have ALT concentrations that are only moderately elevated or close to normal. **Aspartate aminotransferase (AST)** A very high level of AST is frequently seen with acute hepatitis. AST may be normal to moderately increased with chronic hepatitis. In people with blocked bile ducts, cirrhosis, and liver cancer, AST concentrations may be moderately increased or close to normal. When liver damage is due to alcohol, AST often increases much more than ALT (this is a pattern seen with few other liver diseases). AST is also increased after heart attacks and with muscle injury.AST is a less sensitive and less specific marker of liver injury than ALT. AST is more elevated than ALT in alcohol-induced liver injury. AST could elevated more than ALT like: (i) alcoholic liver disease results in mitochondrial toxicity and pyridoxal phosphate, which is a co-factor for AST; (ii) Wilson disease results in subclinical haemolysis and release of AST; (iii) the presence of liver cirrhosis; once liver cirrhosis is established, AST remains higher than ALT because of destroyed sinusoidal architecture, which results in impaired clearance of AST.**Alkaline phosphatase (ALP)** may be significantly increased with obstructed bile ducts, cirrhosis, liver cancer, and also with bone disease. **Bilirubin** is increased in the blood when too much is being produced, less is being removed, due to bile duct obstructions, or to problems with bilirubin processing. It is not uncommon to see high bilirubin levels in newborns, typically 1 to 3 days old. **Albumin** is often normal in liver disease but may be low due to decreased production, especially in liver cirrhosis. **Total protein (TP)** is typically normal with liver disease. **Gamma-glutamyl transferase (GGT)** test may be used to help determine the cause of an elevated ALP. Both ALP and GGT are elevated in bile duct and liver disease, but only ALP will be elevated in bone disease. Increased GGT levels are also seen with alcohol consumption and with conditions, such as congestive heart failure.

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DEPARTMENT OF CLINICAL BIOCHEMISTRY

RD 1.3

Test Name	Result	Unit	Bio.Ref.Range	Method Name
KIDNEY FUNCTION TEST (KFT) WITH CALCIUM				
Sample Type : SERUM				
RENAL PARAMETER				
Blood Urea	26.38	mg/dL	15 - 40	Urease Glutamate Dehydrogenase
Serum Creatinine	0.73	mg/dL	0.40-1.50	Modified Jaffe's
Blood Urea Nitrogen (BUN)	12.33	mg/dL	6.0 - 20.0	Calculated
RATIO				
Urea / Creatinine Ratio	36.14	Ratio	10.7-42.8	Calculated
Bun/ Creatinine Ratio	16.89	Ratio	10.0-20.0	Calculated
PURINE COMPOUND (Break Down Product)				
Uric Acid (UA)	4.80	mg/dL	2.40 - 6.00	Uricase peroxidase
CHEMICAL ELEMENTS (MINERALS)				
Total Calcium	9.17	mg/dL	8.5 - 10.5	Arsenazo III Method
ELECTROLYTE PROFILE (*)				
*Sodium (Na+)	140.20	mmol/L	135 - 150	Indirect Potentiometery ISE
*Potassium (K+)	4.30	mmol/L	3.5 - 5.5	Indirect Potentiometery ISE
*Serum Chloride (Cl-)	105.80	mmol/L	94 - 110	Indirect Potentiometery ISE

Note: ***Electrolyte profile(Profile is not a scope of nabl)**

COMMENTS- Urea is a non-proteinous nitrogen compound formed in the liver from ammonia as an end product of protein metabolism. Increased levels are found in acute renal failure, chronic glomerulonephritis, congestive heart failure, decreased renal perfusion, diabetes, excessive protein ingestion, gastrointestinal (GI) bleeding, hyperalimentation, hypovolemia, ketoacidosis, muscle wasting from starvation, neoplasms, pyelonephritis, shock, urinary tract obstruction, nephrotoxic drugs. Decreased levels are seen in inadequate dietary protein, low-protein/high-carbohydrate diet, malabsorption syndromes, pregnancy, severe liver disease and certain drugs.Creatinine is catabolic product of creatinine phosphate, which is excreted by filtration through the glomerulus and by tubular secretion. Creatinine clearance is an acceptable clinical measure of glomerular filtration rate (GFR). Increased levels are seen in acute/chronic renal failure, urinary tract obstruction, hypothyroidism, nephrotoxic drugs, shock, dehydration, congestive heart failure, diabetes. Decreased levels are found in muscular dystrophy. BUN is directly related to protein intake and nitrogen metabolism and inversely related to the rate of excretion of urea. Blood urea nitrogen (BUN) levels reflect the balance between the production and excretion of urea. Increased levels are seen in renal failure (acute or chronic), urinary tract obstruction, dehydration, shock, burns, CHF, GI bleeding, nephrotoxic drugs. Decreased levels are seen in hepatic failure, nephrotic syndrome, cachexia (low-protein and high-carbohydrate diets). BUN/Creatinineratio is decreased in acute tubular necrosis, advanced liver disease, low protein intake and following hemodialysis. **BUN/Creatinine ratio** is increased in dehydration, GI bleeding, and increased catabolism. Uric acid levels show diurnal variation. The level is usually higher in the morning and lower in the evening. Increased levels are seen in starvation, strenuous exercise, malnutrition, or lead poisoning, gout, renal disorders, increased breakdown of body cells in some cancers (including leukemia, lymphoma, and multiple myeloma) or cancer treatments, hemolytic anemia, sickle cell anemia, or heart failure, pre-eclampsia, liver disease (cirrhosis), obesity, psoriasis, hypothyroidism, low blood levels of parathyroid hormone (PTH), certain drugs, foods that are very high in purines - such as organ meats, red meats, some seafood and beer. Decreased levels are seen in liver disease, Wilson's disease, Syndrome of inappropriate ant diuretic hormone (SIADH), certain drugs.**Electrolyte profile**(* profile is not a scope of nabl) disturbance showing Extreme fatigue. A prolonged bout of diarrhea or vomiting. Signs of dehydration. Unexplained confusion, muscle cramps, numbness or tingling.certain electrolyte is too high, the kidney might try to release more of it in your urine. Electrolyte imbalances can cause problems with many different bodily systems, which may even be life-threatening Symptoms of severe electrolyte disorders can include Dizziness,Brain swelling,Shock, A fast or abnormal heart rate,Confusion,Irritability,Nausea and vomiting,Lethargy.

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UHID/MR No	: 371277	Collected	: 29-Sep-2024 16:45
Patient Name	: **Mrs. PRATIBHA**	Received	: 29-Sep-2024 16:45
Age/Gender	: **28Y 0M 0D/Female**	Reported	: 29-Sep-2024 17:57
Ref Doctor	: Dr. PANDEY	Status	: Final report
Client Name	: M G	Client Code	: RDDL326
Ref.Lab	:	Barcode No	: **R912144**

DEPARTMENT OF CLINICAL BIOCHEMISTRY

RD 1.3

Test Name	Result	Unit	Bio.Ref.Range	Method Name
LIPID PROFILE (CIRCULATING LIPOPROTEIN)				
Total Cholesterol	159.60	mg/dL	Desirable <200 Moderate Risk 200-239 High >240	Cholesterol Oxidase,Esterase,Peroxidase
BODY FAT STUDY (COMMON)				
Triglycerides (TG)	75.76	mg/dL	Optimal <150 Border line 150-199 High 200-499 Very High >500	GPO-POD
GOOD CHOLESTEROL				
HDL Cholesterol	41.30	mg/dL	40 - 60	Direct measure Method
BAD CHOLESTEROL				
LDL Cholesterol	103.15	mg/dL	Optimal 100 Near Optimal 100-129 Border Line High 130-159 High 160-189 very High >190	CALCULATED
VLDL - Cholesterol	15.15	mg/dL	Less than 33.0 mg/dL	Calculated
Cholestrol/HDL-Cholestro Ratio	3.86	mg/dL	Less than 4.0 mg/dL	Calculated
LDL / HDL Cholestrol Ratio	2.50	Ratio	1.5-3.5	Calculated
HDL / LDL Cholestrol Ratio	0.40	Ratio	<3.50	Calculated

CLINICAL COMMENTS: Lipid Profile is the blood test useful in screening the abnormalities associated with lipids. The results of this test can assess approximate risks for cardiovascular disease (Heart attack, Heart Failure, stroke, coronary artery disease), certain forms of pancreatitis, Hypertriglyceridemia (indicative of insulin resistance) and certain genetic disorders. Total cholesterol is an estimate of all the cholesterol in the blood. Thus, higher total cholesterol may be due to high levels of HDL or high levels of LDL. So knowing the breakdown is important. High-density lipoprotein (HDL) is good cholesterol. HDL helps carry bad cholesterol out of the bloodstream and arteries. It plays a very important role in preventing clogged arteries. So, the higher the HDL number, the better. Low-density lipoprotein (LDL) is bad cholesterol. High LDL levels increase the risk of heart disease. Your actual LDL goal depends on whether or not you have existing risk factors for heart disease, such as diabetes or high blood pressure. Very Low-density lipoprotein (VLDL) is a type of bad cholesterol that contains the highest amount of triglycerides. The higher your VLDL level, the more likely you are to have a heart attack or stroke. Triglycerides are a type of blood fat that has been linked to heart disease and diabetes. If you have high triglycerides, your total cholesterol and LDL levels may be high, as well. Lifestyle plays a large role in your triglyceride level. Smoking, excessive drinking, uncontrolled diabetes, and medications such as estrogen, steroids, and some acne treatments can contribute to high triglyceride levels. Total cholesterol to HDL ratio is useful in predicting the risk of developing atherosclerosis (plaque build-up inside the arteries).

NOTE: 10-12 hours fasting is mandatory for lipid profile.In case of the lipemic or highly turbid due to lipoproteins mainly chylomicrons,the test cannot be performed on the specimen but the patient can request for this test again after consuming a fat free diet for at least a weak.

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Visit ID	: RDDPL370717	Registration	: 29-Sep-2024 16:45
UHID/MR No	: 371277	Collected	: 29-Sep-2024 16:45
Patient Name	: **Mrs. PRATIBHA**	Received	: 29-Sep-2024 16:45
Age/Gender	: **28Y 0M 0D/Female**	Reported	: 29-Sep-2024 18:04
Ref Doctor	: Dr. PANDEY	Status	: Final report
Client Name	: M G	Client Code	: RDDL326
Ref.Lab	:	Barcode No	: **R912144**

DEPARTMENT OF CLINICAL BIOCHEMISTRY

RD 1.3

Test Name	Result	Unit	Bio.Ref.Range	Method Name
BASIC IRON PROFILE				
Iron	63.90	ug/dL	37.0-145.0	Ferrozine-no Deproteinization
Unsaturated Iron Binding Capacity (UIBC)	258.80	µg/dL	120.0-347.0	NiTRO-PSAP
Total Iron Binding Capacity-(TIBC)	322.70	µg/dL	240.0-450.0	Spectrophotometry
Transferrin Saturation	19.80	%	13.0-45.0	Calculated

CLINICAL COMMENTS:

Iron is an essential nutrient that, among other functions, is needed in small quantities to help form normal red blood cells (RBCs). It is a critical part of hemoglobin, the protein in RBCs that binds oxygen in the lungs and releases it as blood circulates to other parts of the body. The body cannot produce iron and must absorb it from the foods we eat or from supplements.

Serum iron test: measures the level of iron in the liquid portion of the blood.

Transferrin test: directly measures the level of transferrin in the blood. Transferrin is the protein that transports iron around in the body. Under normal conditions, transferrin is typically one-third saturated with iron. This means that about two-thirds of its capacity is held in reserve.

TIBC (total iron-binding capacity): measures the total amount of iron that can be bound by proteins in the blood. Since transferrin is the primary iron-binding protein, the TIBC test is a good indirect measurement of transferrin availability.

UIBC (unsaturated iron-binding capacity): The UIBC test determines the reserve capacity of transferrin, i.e., the portion of transferrin that has not yet been saturated with iron. UIBC also reflects transferrin levels.

Transferrin saturation: a calculation that reflects the percentage of transferrin that is saturated with iron (100 x serum iron/TIBC).

Serum ferritin: reflects the amount of stored iron in the body.

INCREASED IN:

- Hemosiderosis of excessive iron intake (e.g. repeated blood transfusion, iron therapy, iron containing vitamins).
- Decreased formation of RBCs (thalassemia, pyridoxal deficiency anaemia).
- Increased destruction of RBCs (hemolytic anaemia).
- Acute liver damage
- Progesteronal birth control pills & pregnancy
- Premenstrual elevation
- cute iron toxicity
- **DECREASED IN:**
- Iron deficiency anaemia
- Normochromic anaemia of infections & chronic diseases
- Nephrosis -Menstruation
- Diurnal variation: Normal in mid morning, low values in mid afternoon, and very low values near midnight.

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Visit ID	: RDDPL370717	Registration	: 29-Sep-2024 16:45
UHID/MR No	: 371277	Collected	: 29-Sep-2024 16:45
Patient Name	: **Mrs. PRATIBHA**	Received	: 29-Sep-2024 16:45
Age/Gender	: **28Y 0M 0D/Female**	Reported	: 29-Sep-2024 18:00
Ref Doctor	: Dr. PANDEY	Status	: Final report
Client Name	: M G	Client Code	: RDDL326
Ref.Lab	:	Barcode No	: **R912144**

DEPARTMENT OF IMMUNOLOGY

RD 1.3

Test Name	Result	Unit	Bio.Ref.Range	Method Name
VITAMIN B12 : Cobalamin				
Sample Type : SERUM				
VITAMIN				
Vitamin B-12 (Methylcobalamin)	352.50	pg/mL	211-911	CLIA(Chemiluminescent immunoassay)

SIGNIFICANCE OF THE TEST

Vitamin B12 performs many important functions in the body, but the most significant function is to act as coenzyme for reducing ribonucleotides to deoxyribonucleotides, a step in the formation of genes. **Inadequate dietary intake is not the commonest cause for cobalamine deficiency.** The most common cause is malabsorption either due to atrophy of gastric mucosa or diseases of terminal ileum. Cobalamine deficiency leads to Megaloblastic anemia and demyelination of large nerve fibres of spinal cord. Normal body stores are sufficient to last for 3-6 years. Sources of Vitamin B12 are liver, shellfish, fish, meat, eggs, milk, cheese & yogurt.

Decreased levels:

Lack of Intrinsic factor: Total or partial gastrectomy, Atrophic gastritis, Intrinsic factor antibodie.
Malabsorption: Regional ileitis, resected bowel, Tropical Sprue, Celiac disease, pancreatic insufficiency, bacterial overgrowth & achlorhydria
Loss of ingested vitamin B12: fish tapeworm
Dietary deficiency: Vegetarians
Congenital disorders: Orotic aciduria & transcobalamine deficiency
Increased demand: Pregnancy specially last trimester
Increased levels: Chronic renal failure, Congestive heart failure, Acute & Chronic Myeloid Leukemia, Polycythemia vera, Carcinomas with liver metastasis, Liver disease, Drug induced cholestasis & Protein malnutrition

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Visit ID	: RDDPL370717	Registration	: 29-Sep-2024 16:45
UHID/MR No	: 371277	Collected	: 29-Sep-2024 16:45
Patient Name	: **Mrs. PRATIBHA**	Received	: 29-Sep-2024 16:45
Age/Gender	: **28Y 0M 0D/Female**	Reported	: 29-Sep-2024 18:00
Ref Doctor	: Dr. PANDEY	Status	: Final report
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Ref.Lab	:	Barcode No	: **R912144**

DEPARTMENT OF IMMUNOLOGY

RD 1.3

Test Name	Result	Unit	Bio.Ref.Range	Method Name
Vitamin D, 25-hydroxy cholecalciferol				
Vitamin D	**15.5 L**	ng/mL	< 20 Deficiency 20- 30 Insufficiency 30-100 Sufficiently >100 Toxicity	CLIA(Chemiluminescent immunoassay)

SUMMARY AND EXPLANATION

As calciferol (Vitamin D) enters the circulation, it is metabolized to several forms, the major of these being 25-hydroxycalciferol (25-OH-D). The first step in the metabolism of vitamin D, 25 hydroxylation, occurs mainly in the liver. Only a small amount of 25-OH-D is metabolized in the kidney to other dihydroxyvitamin D metabolites in man.Since 25-OH-D is the predominant circulating form of vitamin D in the normalpopulation, it is considered to be the most reliable index of vitamin D status. The two principal forms of **25-OH-D are cholecalciferol (vitamin D3) and ergocalciferol (vitamin D2)**.Vitamin D3 is derived mainly from actions of ultraviolet light on the skin while D2 is derived solely from dietary sources. Vitamin D promotes absorption of calcium and phosphorus and mineralization of bones and teeth. Deficiency in children causes Rickets and in adults leads to Osteomalacia. It can also lead to Hypocalcemia and Tetany. Vitamin D status is best determined by measurement of 25 hydroxy vitamin D, as it is the major circulating form and has longer half life (2-3 weeks) than 1,25 Dihydroxy vitamin D (5-8 hrs).

Decreased Levels Inadequate exposure to sunlight
NOTE

1.The assay measures both D2 (Ergocalciferol) and D3 (Cholecalciferol) metabolites of vitamin D.
2.25 (OH)D is influenced by sunlight, latitude, skin pigmentation, sunscreen use and hepatic function.
3. Optimal calcium absorption requires vitamin D 25 (OH) levels exceeding 30 ngl/mL
4.It shows seasonal variation, with values being 40-50% lower in winter than in summer.
5. Levels vary with age and are increased in pregnancy.

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MC-5776

Visit ID	: RDDPL370717	Registration	: 29-Sep-2024 16:45
UHID/MR No	: 371277	Collected	: 29-Sep-2024 16:45
Patient Name	: **Mrs. PRATIBHA**	Received	: 29-Sep-2024 16:45
Age/Gender	: **28Y 0M 0D/Female**	Reported	: 29-Sep-2024 17:53
Ref Doctor	: Dr. PANDEY	Status	: Final report
Client Name	: M G	Client Code	: RDDL326
Ref.Lab	:	Barcode No	: **R912144**

DEPARTMENT OF IMMUNOLOGY

RD 1.3

Test Name	Result	Unit	Bio.Ref.Range	Method Name
THYROID PROFILE - T3, T4 & TSH (TFT)				
Sample Type : SERUM				
Triiodothyronine (T3)	1.06	ng/mL	0.58-1.62	Chemiluminescent immunoassay (CLIA)
Thyroxine (T4)	8.74	µg/dl	5.0-14.5	Chemiluminescent immunoassay (CLIA)
Thyroid Stimulating Hormone	5.00	µIU/ml	0.35-5.1	Chemiluminescent immunoassay (CLIA)

Comments:

Thyroid tests to check how well your thyroid is working and to find the cause of problems such as hyperthyroidism or hypothyroidism. The thyroid is a small, butterfly-shaped gland in the front of your neck that makes two thyroid hormones: thyroxine (T_4) and triiodothyronine (T_3).Having more thyroid hormones than you need speeds up your body functions and causes symptoms that include: Weight loss, even though you may be eating more than usual. Rapid or irregular heartbeat. Feeling nervous or irritable.thyroid function test, looks at levels of thyroid-stimulating hormone (TSH) and thyroxine (T4) in the blood. Doctors may refer to this as "free" T4 (FT4). A high level of TSH and a low level of T4 in the blood could mean you have an underactive thyroid. If you have a thyroid problem that is not treated properly, serious health complications can result. An overactive thyroid (hyperthyroidism) can lead to a number of problems including: eye problems, such as bulging eyes, blurred or double vision or even vision loss.T3 is physiologically more active than T4 & plays an important role in maintaining euthyroidism.T3 circulates in free form (0.3 %) and in bound form (99.7%). T4 is predominantly bound to carrier protein - thyroid binding globulin (TBG-99.9%). T4 assay aids in diagnosis of hyperthyroidism - primary or secondary hypothyroidism & thyroid hormone resistances. T4 tre must also be associated with the other tre of the thyroid assessment, such as TSH & T3 as well as with the clinical examina on to the patient TSH levels are subject to circadian varia on, reaching peak levels between 2am to 4am and at a minimum between 6pm to 10pm. The varia on is of the order of 50%; hence time of the day has influence on the measured serum TSH concentrations. Significant numbers of parents particularly those above 55 years of age have a serum TSH level between 4.68 & 10 µIU/ml. This borderline eleva on may be due to presence of SUBCLINICAL HYPOTHYROIDISM. Thyroid profile and an -thyroid (an TPO & TG) an bodies es ma on is suggested in all such cases. Very low serum TSH values are observed in patients who are being treated for hypothyroidism. In such pa ents Serum Free T3 & Free T4 estimation may also be performed.

In Pregancy as per American Thyroid Association Reference range for TSH is as follows:-

Level	Total T3(ng/ml)	Total T4(ug/dl)	TSH(uIU/ml)	Free T3(pmol/L)	Free T4(ng/dl)
1st Trimester	1.25-2.93	4.60-10.50	0.10-2.5	3.2-6.8	0.7-2.0
2nd Trimester	1.54-4.00	6.92-12.38	0.20-3.0	3.1-5.9	0.5-1.60
3rd Trimester	1.54-4.00	5.98-12.98	0.30-3.0	3.1-5.9	0.6-1.60

All reports must be interpreted by treating physician only.

- **Disclaimer:The test results mentioned here should be interpreted in view of clinical situation of patient. In case of any suspicion regarding any parameter, repeat test with fresh sample essential to conclude. As per company policy, Sample storage is only for 24hrs after that recheck will not be possible. "This test is done by Red Drop Diagnostics pvt Ltd"**

*** End of Report ***

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