Redcliffe labs

Healthy India Ki Trusted Lab

smart Health Report

An Insightful Health Analytics Report for Easier Understanding

Prepared For

Name

Gender

Patient ID

Age

Your Health Summary

Understand Your Health At A Glance
Your Personalized Health Summary is Now Available.

Your Health at a Glance – A Personalized Journey

Report Sections

1. **Body Summary**
   A visual snapshot of your overall health, simple and easy to understand
2. **Quick Health Highlights**
   Your health scores and a single view of all abnormal results for quick attention
3. **Lab Report Overview**
   Understand at a glance which tests are normal and which are abnormal
4. **Comparative Health Insights**
   See what has improved and what needs attention
5. **Personalized Health Advisory**
   Actionable insights and expert guidance tailored just for you
6. **Doctor's Reference Report**
   Complete lab results with interpretations to share with your healthcare provider

How to Read This Report

This comprehensive health report provides detailed insights into your test results. Each section offers different perspectives on your health status, from visual summaries to detailed analysis and personalized recommendations.

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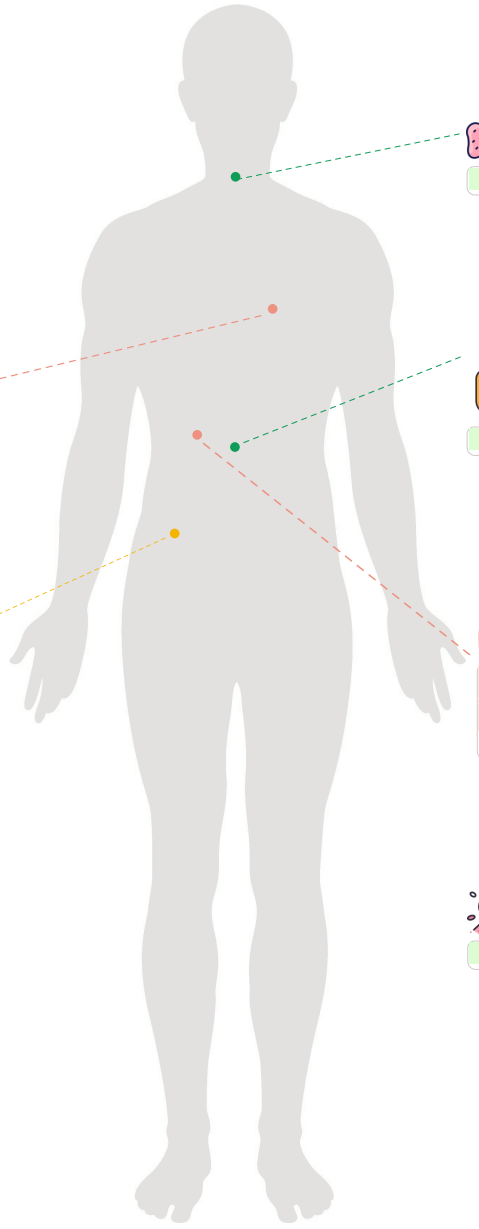
All In Range Borderline Out Of Range

Health Summary



THYROID PROFILE

Everything looks good

CARDIAC PROFILE

Test Name	Result
Homocysteine	18.2
Total Cholesterol	202
Non HDL Cholesterol	154

+ 2 tests Please Watchout

DIABETES MONITORING

Everything looks good

KIDNEY PROFILE

Test Name	Result
Bun/Creatinine Ratio	11.25
Urea / Creatinine Ratio	24.07

Please Watchout

LIVER PROFILE

Test Name	Result
AST / ALT Ratio	1.5

Please Watchout

ELECTROLYTES

Everything looks good

ANEMIA STUDIES

Everything looks good

VITAMIN PROFILE

Test Name	Result
Vitamin - B12	156
Vitamin D 25 - Hydroxy	12.4

Please Watchout

Note: This section offers a quick snapshot of selected parameters. For all parameters and detailed analysis with clinical interpretation, please refer to the following pages

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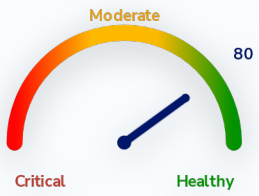
Quick Health Summary

Personal Insights - Health Score

80

Overall, most parameters are within normal ranges, indicating good general health. The Allergy profile may affect your comfort, and the Vitamins and Minerals profile suggests considering a balanced diet rich in fruits, vegetables, and nutritious juices. Incorporate regular activities like walking or yoga, maintain routine check-ups, and consult your healthcare provider if you notice any changes. Remember, small lifestyle adjustments can lead to meaningful improvements in your well-being.



Note - Higher scores tentatively indicate better health status

Summary of Key Health Indicators

Total Parameters Tested	Borderline Results	Out Of Range Results
112	9	5

Health Status by Body System

Profile	Total	Borderline	Out of Range	Key Results
Cardiac Profile	14	3	2	LDL Cholesterol **(128.8)** HDL : LDL ratio **(0.37)** Homocysteine **(18.2)** Total Cholesterol **(202)** Non - HDL Cholesterol **(154)**
Liver Profile	14	0	1	AST / ALT Ratio **(1.5)**
Vitamin Profile	2	1	1	Vitamin D (25-Hydroxy) **(12.4)** Vitamin B12 **(156)**
Allergy Panel	1	0	1	IgE Total **(710.4)**
Inflammation	2	0	0	All In Range
Autoimmune Disorders	1	0	0	All In Range
Electrolytes	5	0	0	All In Range
Muscle injury	1	1	0	Creatine Kinase-CPK **(182)**
Cancer Profile	3	0	0	All In Range

Profile	Total	Borderline	Out of Range	Key Results
Anemia Studies	10	0	0	All In Range
Blood Disorder	16	2	0	• Lymphocytes **(44)** • MPV **(8.7)**
Infectious Diseases	4	0	0	All In Range
Diabetes Monitoring	4	0	0	All In Range
Kidney Profile	12	2	0	• BUN : Creatinine ratio **(11.25)** • Urea : Creatinine ratio **(24.07)**
Pancreas	2	0	0	All In Range
Iron	4	0	0	All In Range
Thyroid Profile	3	0	0	All In Range
Hormones	1	0	0	All In Range
Urinalysis	12	0	0	All In Range

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In Range | Borderline | Out Of Range | No color - Reference range not available

INFLAMMATION

Test Name	Result unit	Range
CRP (Quantitative)	< 1.0 mg/L	< 6
ESR - Erythrocyte Sedimentation Rate	5 mm/hr	< 10

CARDIAC PROFILE

Test Name	Result unit	Range
HIGHLY SENSITIVE C-REACTIVE PROTEIN (hs-CRP)	0.6 mg/L	< 1
Homocysteine	**18.2** umol/L	5.46 - 16.2
Apolipoprotein A-1 (APO-A)	157 mg/dL	104 - 202
Apolipoprotein B (APO-B)	104 mg/dL	66 - 144
Apo B / Apo A1 Ratio	0.66	0.35 - 0.98
Total Cholesterol	**202** mg/dL	< 200
Triglycerides	126 mg/dL	< 150
HDL Cholesterol	48 mg/dL	40 - 80
Non HDL Cholesterol	**154** mg/dL	< 130
LDL Cholesterol	**128.8** mg/dL	30 - 100
V.L.D.L Cholesterol	25.2 mg/dL	< 30
Chol/HDL Ratio	4.21 Ratio	3.5 - 5
HDL/ LDL Ratio	**0.37** Ratio	0.5 - 3
LDL/HDL Ratio	2.68 Ratio	2.5 - 3.5

AUTOIMMUNE DISORDERS

Test Name	Result unit	Range
RHEUMATOID FACTOR, Quantitative	< 1.0 IU/mL	< 30

ELECTROLYTE PROFILE

Test Name	Result unit	Range
Magnesium,Serum	2.3 mg/dl	1.6 - 2.6
Phosphorus	3 mg/dL	2.3 - 4.7
Sodium	137 mmol/L	136 - 145
Potassium	3.5 mmol/L	3.5 - 5.1
Chloride	106 mmol/L	98 - 107

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MUSCLE INJURY

Test Name	Result unit	Range
Creatine Kinase-CPK	**182** U/L	46 - 171

CANCER PROFILE

Test Name	Result unit	Range
CA 19.9 ;PANCREATIC CANCER MARKER, SERUM	5 U/mL	< 37
Prostate Specific Antigen-Total (PSA-Total)	0.3 ng/mL	< 4
CEA; CARCINO EMBRYONIC ANTIGEN, SERUM	2 ng/mL	< 5

ANEMIA STUDIES

Test Name	Result unit	Range
Hemoglobin	14.4 g/dL	13 - 17
PCV	42 %	40 - 50
MCV	88 fl	83 - 101
MCH	30.2 pg	27 - 32
MCHC	34.3 g/dL	31.5 - 34.5
RDW (CV)	12.3 %	11.6 - 14
RDW-SD	40.5 fl	35.1 - 43.9
Mentzer Index	18.33 %	
Ferritin	100.8 ng/mL	21.81 - 274.66
Red blood Cells	Absent /hpf	

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BLOOD DISORDER

Test Name	Result unit	Range
TLC	5.8 10^3/µl	4 - 10
Neutrophils	48 %	40 - 80
Lymphocytes	**44** %	20 - 40
Monocytes	6.5 %	2 - 10
Eosinophils	1 %	1 - 6
Basophils	0.5 %	< 2
Neutrophils.	2.78 10^3/µl	2 - 7
Lymphocytes.	2.55 10^3/µl	1 - 3
Monocytes.	0.38 10^3/µl	0.2 - 1
Eosinophils.	0.06 10^3/µl	0.02 - 0.5
Basophils.	0.03 10^3/µl	0.02 - 0.5
Platelet Count	239 10^3/µl	150 - 410
Mean Platelet Volume (MPV)	**8.7** fL	9.3 - 12.1
PDW	15.7 fL	8.3 - 25
P-LCR	25.3 %	18 - 50
P-LCC	60 %10^9/L	44 - 140

INFECTIOUS DISEASES

Test Name	Result unit	Range
PCT	0.2 %	0.17 - 0.32
Deposit	Absent	
Yeast Cells	Absent	
Protozoa	Absent	

DIABETES MONITORING

Test Name	Result unit	Range
Glycosylated Hemoglobin (HbA1c)	5.5 %	< 5.7
Estimated Average Glucose	111.15 mg/dL	
Glucose Fasting	86 mg/dL	70 - 100
Urine Glucose (sugar)	Negative	

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LIVER PROFILE

Test Name	Result unit	Range
Bilirubin Total	0.82 mg/dL	0.2 - 1.2
Bilirubin Direct	0.3 mg/dL	< 0.5
Bilirubin Indirect	0.52 mg/dL	0.2 - 0.7
SGOT/AST	30 U/L	5 - 34
SGPT/ALT	20 U/L	< 55
SGOT/SGPT Ratio	**1.5** %	< 0.99
Alkaline Phosphatase	122 U/L	40 - 150
Total Protein	7.5 g/dL	6.4 - 8.3
Albumin	4.9 g/dL	3.8 - 5
Globulin	2.6 g/dL	2.3 - 3.5
Albumin :Globulin Ratio	1.88	1.2 - 2
Gamma Glutamyl Transferase (GGT)	31 U/L	12 - 64
Bilirubin Urine	Negative	
Urobilinogen	Normal	

KIDNEY PROFILE

Test Name	Result unit	Range
Blood Urea	26 mg/dL	19.05 - 44.08
Bun	12.15 mg/dL	8.9 - 20.6
Creatinine	1.08 mg/dL	0.72 - 1.25
eGFR (CKD-EPI)	85.69 ml/min/1.73 sq m	
Bun/Creatinine Ratio	**11.25**	12 - 20
Urea / Creatinine Ratio	**24.07** mg/dL	25.68 - 42.8
Uric Acid	5.9 mg/dL	3.5 - 7.2
Calcium Serum	9.1 mg/dL	8.4 - 10.2
Urine Protein (Albumin)	Positive(Trace)	
Blood	Negative	
Crystals	Absent	
Cast	Absent	

PANCREAS

Test Name	Result unit	Range
Lipase	36 U/L	< 60
Amylase	55 U/L	28 - 100

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IRON

Test Name	Result unit	Range
Iron	153 ug/dL	65 - 175
TIBC,(Total Iron Binding Capacity)	371 µg/dL	255 - 450
UIBC	218 µg/dL	69 - 240
Transferrin Saturation	41.24 %	20 - 50

VITAMIN PROFILE

Test Name	Result unit	Range
Vitamin - B12	**156** pg/mL	187 - 883
Vitamin D 25 - Hydroxy	**12.4** ng/mL	30 - 100

THYROID PROFILE

Test Name	Result unit	Range
Triiodothyronine (T3)	85.2 ng/dL	35 - 193
Total Thyroxine (T4)	5.8 µg/dL	4.87 - 11.72
Thyroid Stimulating Hormone (Ultrasensitive)	1.5509 µIU/mL	0.35 - 4.94

HORMONES

Test Name	Result unit	Range
Testosterone Total	512 ng/dL	249 - 836

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ALLERGY PANEL

Test Name	Result unit	Range
IMMUNOGLOBULIN IgE TOTAL SERUM	**710.4** IU/mL	28 - 140

URINALYSIS

Test Name	Result unit	Range
Volume	10 ml	
Colour	Pale yellow	
Transparency	Clear	
Reaction (pH)	5.0	4.5 - 8
Specific Gravity	1.030	1 - 1.03
Urine Ketones (Acetone)	Negative	
Leucocyte esterase	Positive(Trace)	
Nitrite	Negative	
Pus Cells (WBCs)	6-8 /hpf	
Epithelial Cells	2-4 /hpf	
Amorphous deposits	Absent	
Bacteria	Absent	

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Comparative Health Summary

● In Range ● Borderline ● Out Of Range

Personal Health Score Change

Your health score is **80/100** (10-04-2026)

Summary of Key Improvements / Declines	Outcome
Total parameters improved	4 of 67 parameters tested earlier
• Basophils. • Glycosylated Hemoglobin (HbA1c) • SGOT/AST • Albumin :Globulin Ratio	
New Out of range parameters detected	1 new issues
• Total Cholesterol	

Parameter-Wise Comparison

Parameter	Current 10-04-2026	Previous	Range	Value Change	Trend
Lymphocytes	● 44	● 49 02-07-2025	20-40 %	-5	Still out of range
Basophils.	● 0.03	● 0 02-07-2025	0.02-0.5 10^3/µl	+0	Improved
Mean Platelet Volume (MPV)	● 8.7	● 8.4 02-07-2025	9.3-12.1 fL	+0.3	Still out of range
Glycosylated Hemoglobin (HbA1c)	● 5.5	● 5.8 02-07-2025	0-5.7 %	-0.3	Improved
SGOT/AST	● 30	● 55 02-07-2025	5-34 U/L	-25	Improved
SGOT/SGPT Ratio	● 1.5	● 1.53 02-07-2025	0-0.99 -	-0	Still out of range
Albumin :Globulin Ratio	● 1.88	● 2.02 02-07-2025	1.2-2.0 -	-0.1	Improved
Bun/Creatinine Ratio	● 11.25	● 9.28 02-07-2025	12-20	+2	Still out of range

Parameter	Current 10-04-2026	Previous	Range	Value Change	Trend
Urea / Creatinine Ratio	24.07	19.86 02-07-2025	25.68-42.8 mg/dL	+4.2	Still out of range
Total Cholesterol	202	196 02-07-2025	0-200 mg/dL	+6	Need Attention
Non HDL Cholesterol	154	147 02-07-2025	0-130 mg/dL	+7	Still out of range
LDL Cholesterol	128.8	126.4 02-07-2025	30-100 mg/dL	+2.4	Still out of range
HDL/ LDL Ratio	0.37	0.39 02-07-2025	0.5-3.0 Ratio	-0	Still out of range
Vitamin - B12	156	< 148 02-07-2025	187-883 pg/mL		Still out of range
Vitamin D 25 - Hydroxy	12.4	12.3 02-07-2025	30-100 ng/mL	+0.1	Still out of range

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Health Advisory

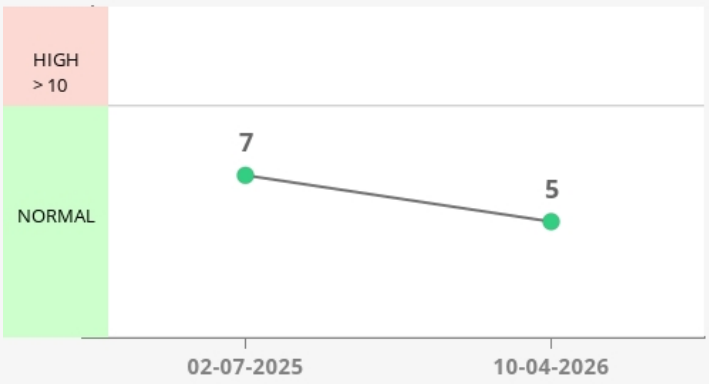
In Range Borderline (BL) Out Of Range

Inflammation

Inflammation is the body's immune system's response to an injury, surgery, or irritation. This natural defense process acts by removing injurious stimuli and initiating the healing process.Inflammation can be chronic (such as arthritis) or acute (like in case of trauma).

ESR - Erythrocyte Sedimentation Rate: 5 mm/hr

IN RANGE

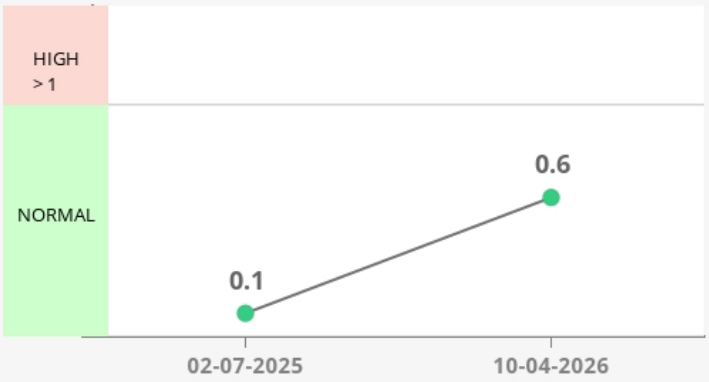


Cardiac Profile

Most people believe they are safe from heart diseases, but in reality, heart diseases are the leading cause of death in the world. There are many different forms of heart disease. Narrowing or blockage of the coronary arteries is the most common cause of heart disease, which are the vessels that supply blood to the heart. This is called coronary artery disease and it occurs slowly over time. It is the main cause of heart attacks.

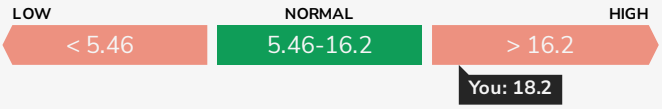
HIGHLY SENSITIVE C-REACTIVE PROTEIN (hs-CRP): 0.6 mg/L

● IN RANGE



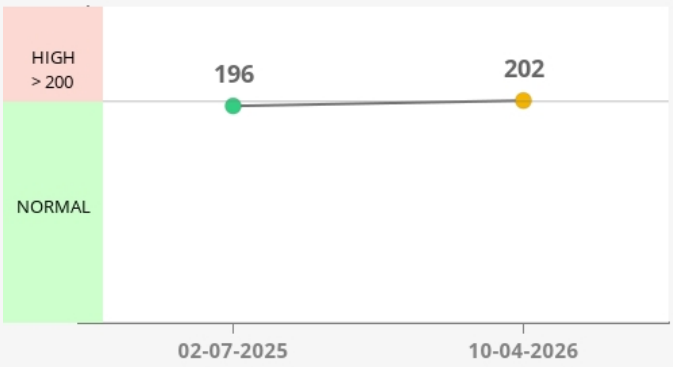
Homocysteine: 18.2 umol/L

● BORDERLINE



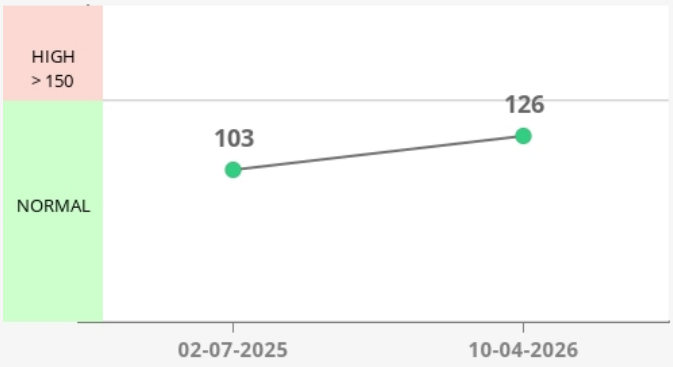
Total Cholesterol: 202 mg/dL

● BORDERLINE



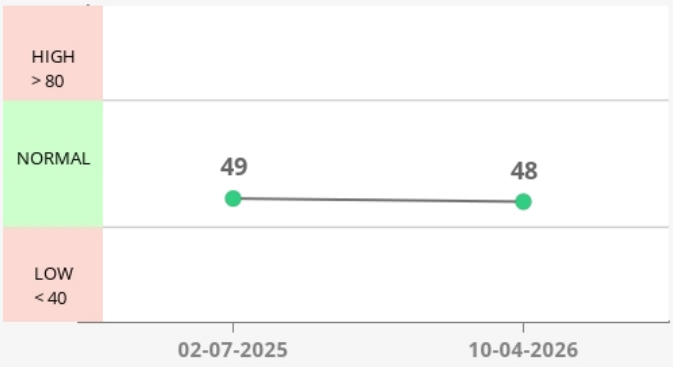
Triglycerides: 126 mg/dL

● IN RANGE



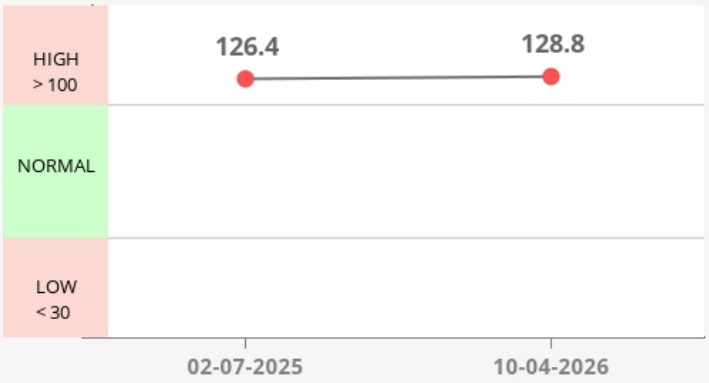
HDL Cholesterol: 48 mg/dL

● IN RANGE



LDL Cholesterol: 128.8 mg/dL

OUT OF RANGE

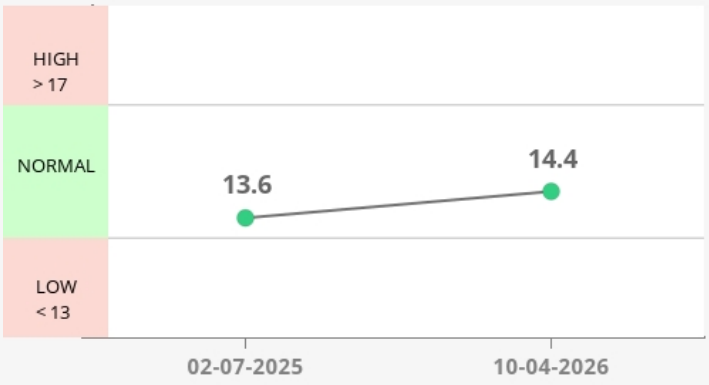


Anemia Profile

Anemia is the condition where your body has less RBCs (red blood cells) or the RBCs don't have enough haemoglobin. Haemoglobin is the protein present in RBCs that help carry oxygen to your body's tissues.

Hemoglobin: 14.4 g/dL

IN RANGE

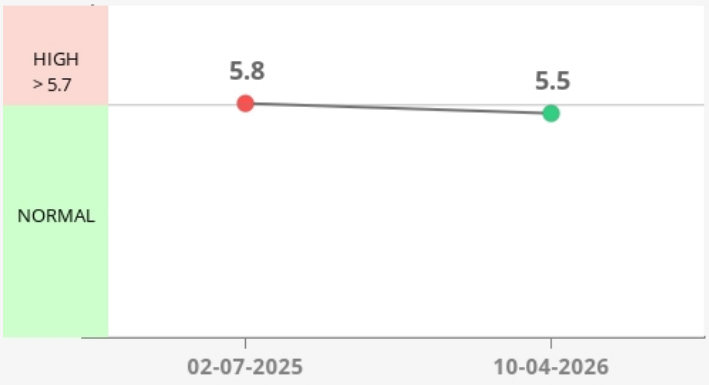


Diabetes

This panel is used to check how much glucose/sugar there is in your blood. Too much blood glucose might indicate diabetes.

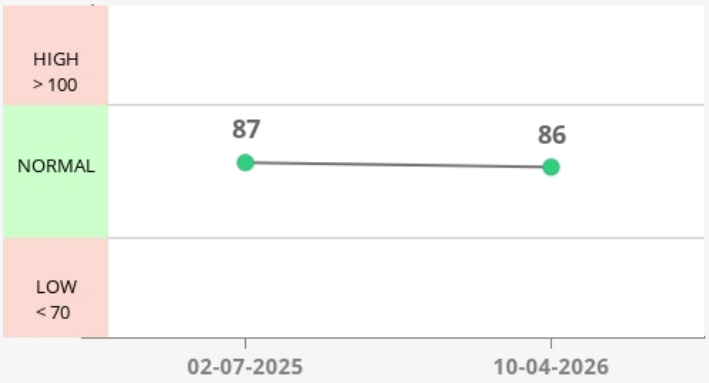
Glycosylated Hemoglobin (HbA1c): 5.5 %

IN RANGE



Glucose Fasting: 86 mg/dL

IN RANGE

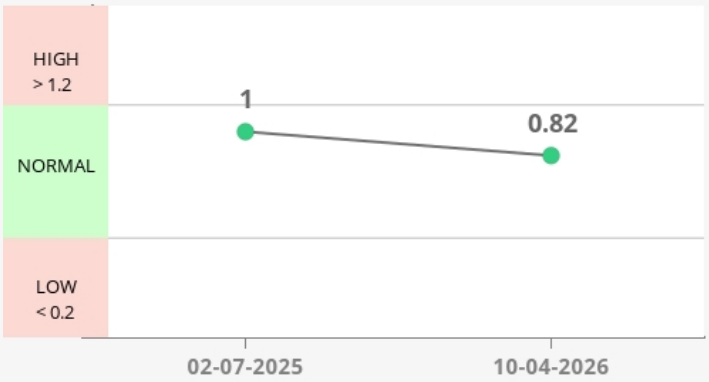


Liver Profile

One of the main functions of your liver is to make proteins that are secreted in your blood. It also makes enzymes which convert food into energy, and processes old muscles and cells. When your liver is damaged, enzymes leak into your blood and appear in the blood test

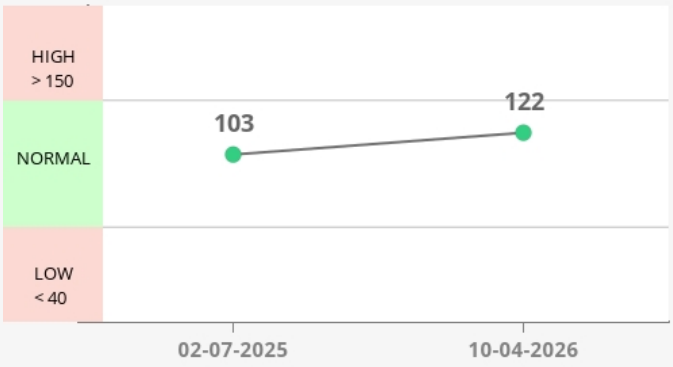
Bilirubin Total: 0.82 mg/dL

IN RANGE



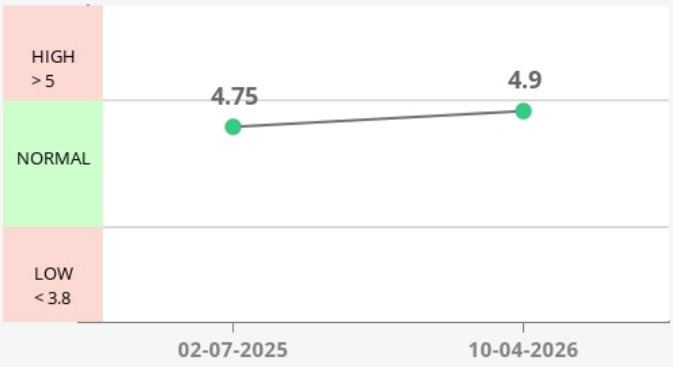
Alkaline Phosphatase: 122 U/L

IN RANGE



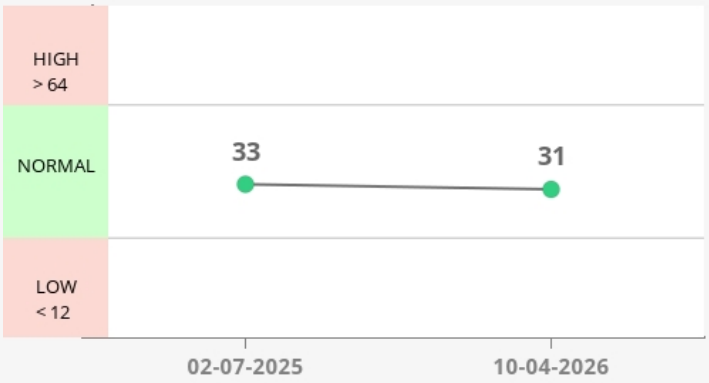
Albumin: 4.9 g/dL

IN RANGE



Gamma Glutamyl Transferase (GGT): 31 U/L

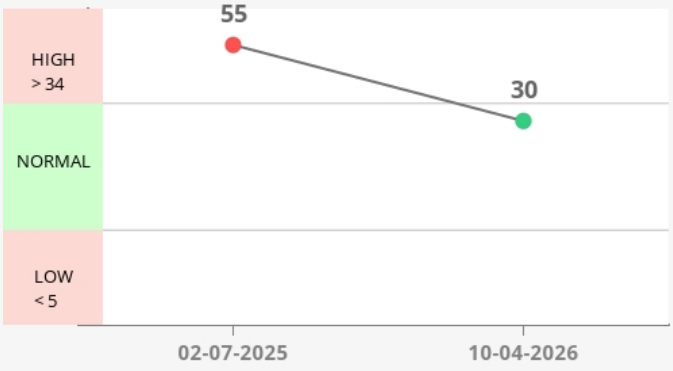
IN RANGE



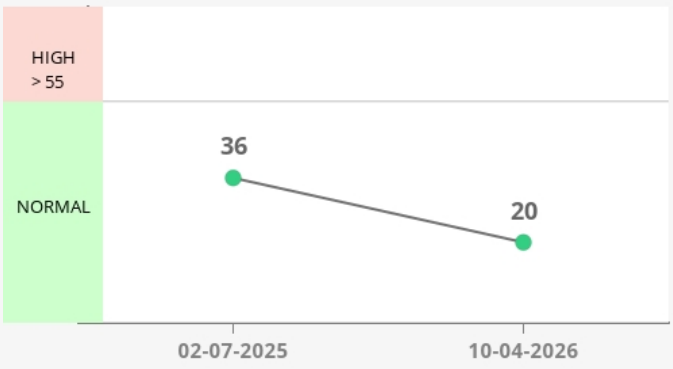
Enzymes

Enzymes found in your liver are responsible for various processes that maintain body functions. These enzymes are leaked into your blood when your liver suffers dysfunction.

SGOT/AST: 30 U/L — IN RANGE



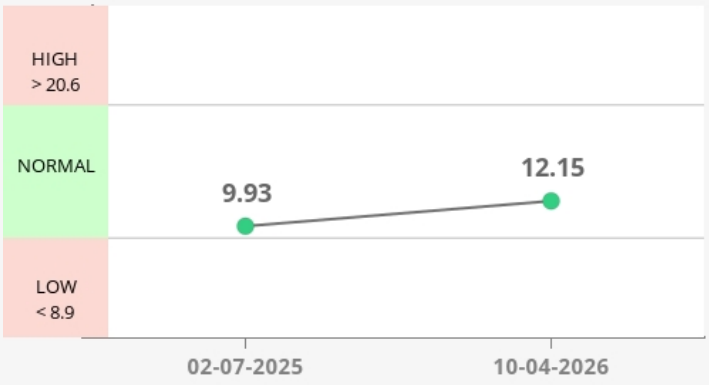
SGPT/ALT: 20 U/L — IN RANGE



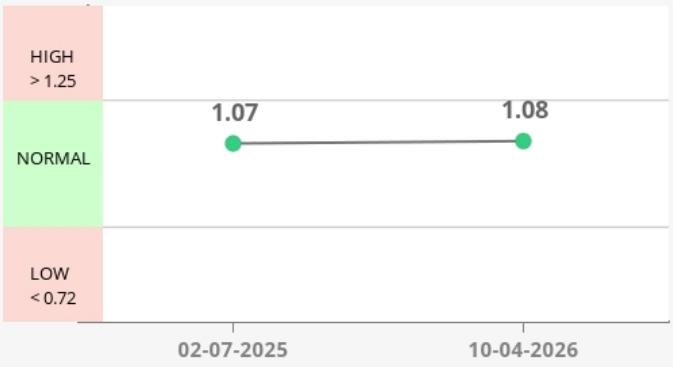
Kidney Profile

This panel is used to check healthy functioning of your kidneys. Kidneys filter blood in your body to remove waste products - these waste products are produced when breakdown of proteins (present in food, muscles and other cells) occurs in the body to generate energy

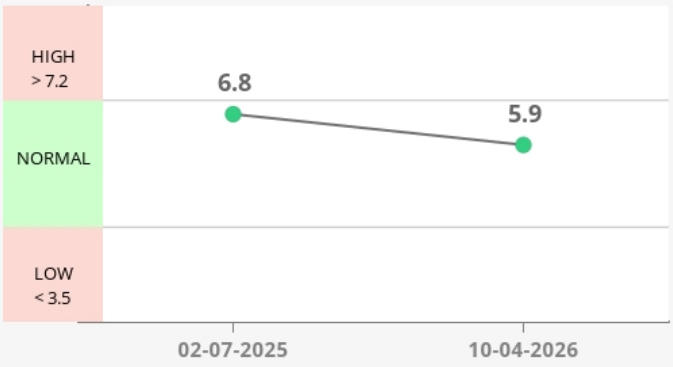
Bun: 12.15 mg/dL — IN RANGE



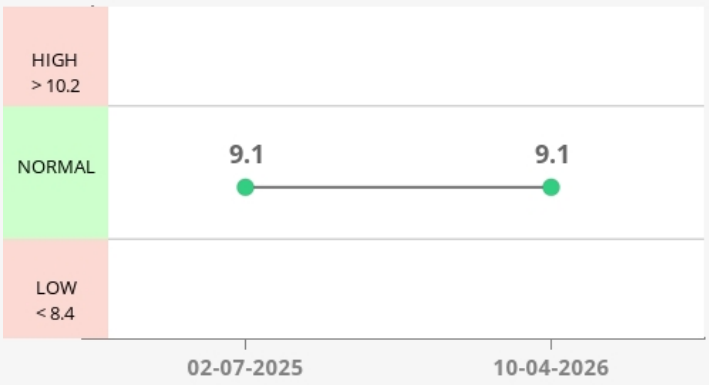
Creatinine: 1.08 mg/dL — IN RANGE



Uric Acid: 5.9 mg/dL — IN RANGE



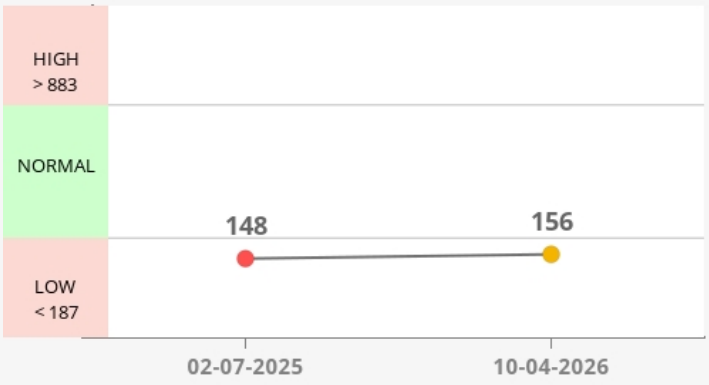
Calcium Serum: 9.1 mg/dL — IN RANGE



Vitamins Profile

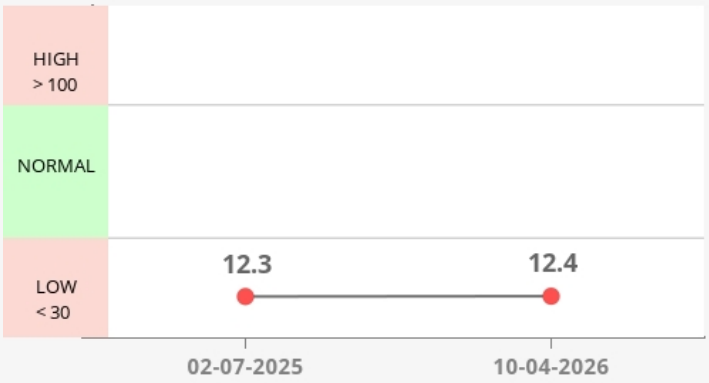
Vitamins are considered essential nutrients because they perform hundreds of roles in your body. They help maintain bones, heal wounds, and strengthen your immune system. They also convert food into energy, and repair cellular damage

Vitamin - B12: 156 pg/mL — BORDERLINE



Vitamin D 25 - Hydroxy: 12.4 ng/mL

OUT OF RANGE

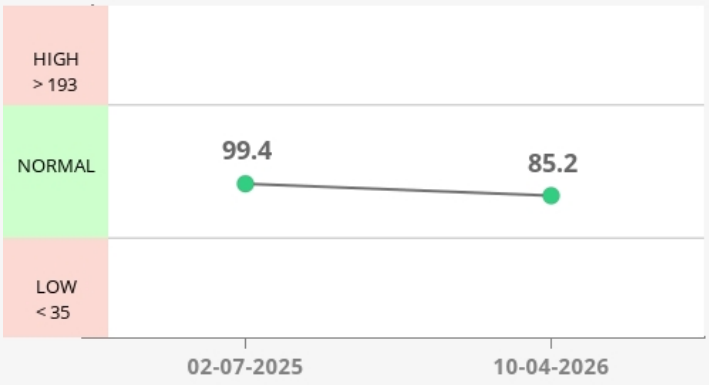


Thyroid

This panel is used to check the imbalance in your thyroid gland. A healthy thyroid gland is very important for metabolism, controlling body temperature, regulation of mood, muscle strength and regulation of body weight

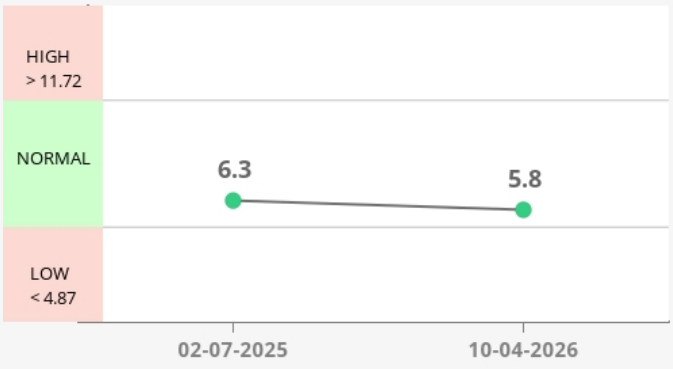
Triiodothyronine (T3): 85.2 ng/dL

IN RANGE



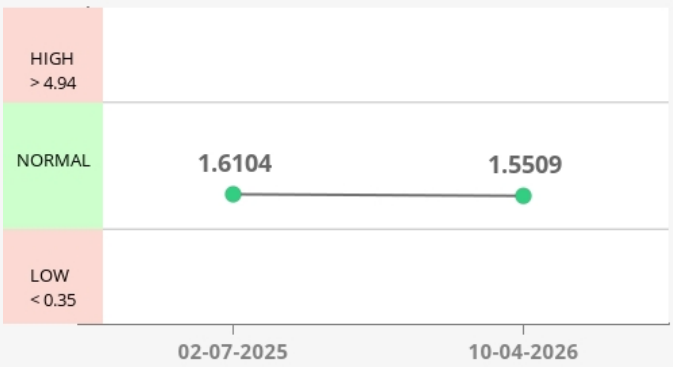
Total Thyroxine (T4): 5.8 µg/dL

IN RANGE



Thyroid Stimulating Hormone (Ultrasensitive): 1.5509 µIU/mL

IN RANGE

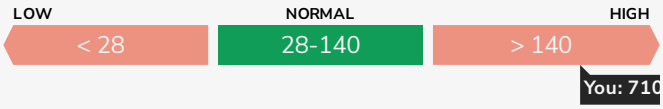


Allergy Panel

Allergy is an exaggerated response of the body's immune system to natural substances (Dust, Food, Pet dander, Mold) in the environment that does not bother most other people.That can result in a lot of symptoms such as sneezing, runny nose, itching, asthma, rashes, or swelling.

IMMUNOGLOBULIN IgE TOTAL SERUM: 710.4 IU/mL

● OUT OF RANGE



LABORATORY REPORT

Redcliffe labs

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Super Health Full Body Checkup - Comprehensive (Male)

Complete Blood Count (CBC)

Test Description	Value(s)	Unit(s)	Reference Range
RBC Parameters			
Hemoglobin *Spectrophotometry (Cyanide Free)*	14.4	g/dL	13.0 - 17.0
RBC Count *Electrical impedance*	4.8	10^6/µl	4.5 - 5.5
PCV *Calculated*	42	%	40 - 50
MCV *Calculated*	88	fl	83 - 101
MCH *Calculated*	30.2	pg	27 - 32
MCHC *Calculated*	34.3	g/dL	31.5 - 34.5
RDW (CV) *Calculated*	12.3	%	11.6 - 14.0
RDW-SD *Calculated*	40.5	fl	35.1 - 43.9
WBC Parameters			
TLC *Electrical impedance and microscopy*	5.8	10^3/µl	4 - 10
Differential Leucocyte Count			
Neutrophils *Semicounductor Laser Based Flow Cytometry*	48	%	40-80
Lymphocytes *Semicounductor Laser Based Flow Cytometry*	**44 H***	%	20-40
Monocytes *Semicounductor Laser Based Flow Cytometry*	6.5	%	2-10
Eosinophils *Semicounductor Laser Based Flow Cytometry*	1	%	1-6
Basophils *Semicounductor Laser Based Flow Cytometry*	0.5	%	<2
Absolute Leukocyte Counts ***Calculated***			
Neutrophils. *Calculated*	2.78	10^3/µl	2 - 7
Lymphocytes. *Calculated*	2.55	10^3/µl	1 - 3
Monocytes. *Calculated*	0.38	10^3/µl	0.2 - 1.0
Eosinophils. *Calculated*	0.06	10^3/µl	0.02 - 0.5

Note :- (H* - High , L* - Low ,CL* - Critical Low,CH* - Critical High)

Dr. ShashiKant D.
MD Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range
Basophils. *Calculated*	0.03	10^3/µl	0.02 - 0.5
Platelet Parameters			
Platelet Count *Electrical impedance*	239	10^3/µl	150 - 410
Mean Platelet Volume (MPV) *Electric Impedance*	**8.7 L***	fL	9.3 - 12.1
PCT *Electric Impedance*	0.2	%	0.17 - 0.32
PDW *Calculated*	15.7	fL	8.3 - 25.0
P-LCR *Calculated*	25.3	%	18 - 50
P-LCC *Calculated*	60	%10^9/L	44 - 140
Mentzer Index *Calculated*	18.33	%	> 13

Interpretation:
CBC provides information about red cells, white cells and platelets. Results are useful in the diagnosis of anemia, infections, leukemias, clotting disorders and many other medical conditions.

Mentzer index- This anemia calculator is based on a simple calculation from two values: mean corpuscular volume, MCV (given in femtoliters — fl) and red blood cell count, RBC (in a million per mm³). The Mentzer index formula is the following: Mentzer index = MCV / RBC. If the result is <13, thalassemia is more probable. Otherwise, if the result is >13, then iron deficiency anemia is the most probable. If the index equals 13, the test results are inconclusive.

Note :- (H* - High , L* - Low ,CL* - Critical Low,CH* - Critical High)

Dr. ShashiKant D.
MD Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range
Erythrocyte Sedimentation Rate (ESR)			
ESR - Erythrocyte Sedimentation Rate *MODIFIED WESTERGREN*	5	mm/hr	0 - 10

Interpretation:
ESR is also known as Erythrocyte Sedimentation Rate. An ESR test is used to assess inflammation in the body. Many conditions can cause an abnormal ESR, so an ESR test is typically used with other tests to diagnose and monitor different diseases. An elevated ESR may occur in inflammatory conditions including infection, rheumatoid arthritis ,systemic vasculitis, anemia, multiple myeloma , etc. Low levels are typically seen in congestive heart failure, polycythemia ,sickle cell anemia, hypo fibrinogenemia , etc.

Reference- Dacie and lewis practical hematology

Dr. ShashiKant D.
MD Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range
HbA1C (Glycosylated Haemoglobin)			
Glycosylated Hemoglobin (HbA1c) *HPLC*	5.5	%	<5.7
Estimated Average Glucose *Calculated*	111.15	mg/dL	Refer Table Below

Interpretation:
Interpretation For HbA1c% 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
Therapeutic goals for glycemic control	Age > 19 years Goal of therapy: < 7.0 Age < 19 years Goal of therapy: <7.5

Note:
1. Since HbA1c reflects long term fluctuations in the blood glucose concentration, a diabetic patient who is recently under good control may still have a high concentration of HbA1c. Converse is true for a diabetic previously under good control but now poorly controlled.
2. Target goals of < 7.0 % may be beneficial in patients with short duration of diabetes, long life expectancy and no significant cardiovascular disease. In patients with significant complications of diabetes, limited life expectancy or extensive co-morbid conditions, targeting a goal of < 7.0 % may not be appropriate.

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 ADA criteria for correlation between HbA1c & Mean plasma glucose levels.

HbA1c(%)	Mean Plasma Glucose (mg/dL)	HbA1c(%)	Mean Plasma Glucose (mg/dL)
6	126	12	298
8	183	14	355
10	240	16	413

Dr. ShashiKant D.
MD Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range
Blood Sugar Fasting			
Glucose Fasting *Hexokinase*	86	mg/dL	70 - 100

Interpretation:

Status	Fasting plasma glucose in mg/dL
Normal	70 - 100
Impaired fasting glucose	101 - 125
Diabetes	≥126

Reference : American Diabetes Association

Comment :
Blood glucose determinations in commonly used as an aid in the diagnosis and treatment of diabetes. Elevated glucose levels (hyperglycemia) may also occur with pancreatic neoplasm, hyperthyroidism, and adrenal cortical hyper function as well as other disorders. Decreased glucose levels (hypoglycemia) may result from excessive insulin therapy insulinoma, or various liver diseases.

Note
1.The diagnosis of Diabetes requires a fasting plasma glucose of > or = 126 mg/dL or a random / 2 hour plasma glucose value of > or = 200 mg/dL with symptoms of diabetes mellitus.
2.Very high glucose levels (>450 mg/dL in adults) may result in Diabetic Ketoacidosis.

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Liver Function Test (LFT)

Test Description	Value(s)	Unit(s)	Reference Range
Bilirubin Total *Diazonium salt*	0.82	mg/dL	0.2 - 1.2
Bilirubin Direct *Diazo Reaction*	0.3	mg/dL	0.0 - 0.5 mg/dL
Bilirubin Indirect *Calculated*	0.52	mg/dL	0.2 - 0.7
SGOT/AST *Enzymatic [NADH (without P5P)]*	30	U/L	5 - 34 U/L
SGPT/ALT *Enzymatic [NADH (without P5P)]*	20	U/L	0 to 55 U/L
SGOT/SGPT Ratio *Calculated*	**1.5 H***	-	<1.00
Alkaline Phosphatase *Para-nitrophenyl-phosphate*	122	U/L	40 - 150 U/L
Total Protein *Photometric (Biuret)*	7.5	g/dL	6.4-8.3
Albumin *Colorimetric BCG*	4.9	g/dL	3.8 - 5.0
Globulin *Calculation*	2.6	g/dL	2.3 - 3.5 g/dL
Albumin :Globulin Ratio *Calculated*	1.88	-	1.2 - 2.0
Gamma Glutamyl Transferase (GGT) *Photometric (L-Gamma glutamyl-3-Carboxy-4-Nitroani*	31	U/L	12 to 64 U/L

Interpretation:
The liver filters blood, metabolizes nutrients, detoxifies harmful substances, and produces blood clotting proteins. Liver cells contain enzymes that facilitate these functions. When cells are damaged, enzymes leak into the blood, detectable through blood tests.

Key enzymes tested:
1. AST (SGOT): may indicate tissue injury / damage in muscles or liver.
2. ALT (SGPT): Primarily in the liver. Elevated ALT and AST suggest liver damage.
3. Alkaline Phosphatase & GGT: Linked to bile production and flow. Elevated levels may indicate bile flow issues related to the liver, gallbladder, or bile ducts.

Blood proteins, **albumin and globulin**, are essential for growth, development, and health.
1. Low protein: May indicate bleeding, liver disorders, malnutrition, or agammaglobulinemia.
2. High protein (Hyperproteinemia): Often due to dehydration or increased protein production.
3. Low albumin: Caused by poor diet, kidney, or liver disease.
4. High albumin: Usually due to severe dehydration.

Note :- (H* - High , L* - Low ,CL* - Critical Low,CH* - Critical High)

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Kidney Function Test (KFT)

Test Description	Value(s)	Unit(s)	Reference Range
Blood Urea *Ureas*	26	mg/dL	19.05-44.08
Bun *Calculated*	12.15	mg/dL	8.9 - 20.6
Creatinine *Kinetic alkaline picrate*	1.08	mg/dL	0.72 - 1.25 mg/dL
eGFR (CKD-EPI) *	85.69	ml/min/1.73 sq m	Normal Or High: >= 90 Mild Or Decrease: 60-89 Mild To Moderate Decrease: 45-59 Mild To Severe Decrease: 30-44 Severe Decrease: 15-29 Kidney Failure: < 15
Bun/Creatinine Ratio *Calculated*	**11.25 L***		12 - 20
Urea / Creatinine Ratio * *Calculated*	**24.07 L***	mg/dL	25.68 - 42.8
Uric Acid *Uricase*	5.9	mg/dL	3.5 - 7.2 mg/dL
Calcium Serum *Arsenazo III*	9.1	mg/dL	8.4 - 10.2
Phosphorus *Phosphomolybdate*	3	mg/dL	2.3 - 4.7
Sodium *Ion-Selective Electrode Diluted (Indirect)*	137	mmol/L	136 - 145
Potassium *Ion-Selective Electrode Diluted (Indirect)*	3.5	mmol/L	3.5 - 5.1
Chloride *Ion-Selective Electrode Diluted (Indirect)*	106	mmol/L	98 - 107

Interpretation:
Kidney function tests is a collective term for a variety of individual tests and procedures that can be done to evaluate how well the kidneys are functioning. Many conditions can affect the ability of the kidneys to carry out their vital functions. Some lead to a rapid (acute) decline in kidney function others lead to a gradual (chronic) decline in function. Both result in a buildup of toxic waste substances done on urine samples, as well as on blood samples. A number of symptoms may indicate a problem with your kidneys. These include : high blood pressure, blood in urine, frequent urges to urinate, difficulty beginning urination, painful urination, swelling in the hands and feet due to a buildup of fluids in the body. A single symptom may not mean something serious. However, when occurring simultaneously, these symptoms suggest that your kidneys are not working properly. Kidney function tests can help determine the reason. Ionized calcium this test if you have signs of kidney or parathyroid disease. The test may also be done to monitor progress and treatment of these diseases.**"eGFR test is applicable for patients aged 18 years or more."**

Note :- (H* - High , L* - Low ,CL* - Critical Low,CH* - Critical High)

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range
Lipid Profile			
Total Cholesterol *Enzymatic (Cholesterol Oxidase)*	**202 H***	mg/dL	<200
Triglycerides *Photometric (Glycerol phosphate oxidase)*	126	mg/dL	<150
HDL Cholesterol *Accelerator Selective Detergent*	48	mg/dL	40-60
Non HDL Cholesterol *Calculated*	**154 H***	mg/dL	<130
LDL Cholesterol *Calculated*	**128.8 H***	mg/dL	<100
V.L.D.L Cholesterol *Calculated*	25.2	mg/dL	< 30
Chol/HDL Ratio *Calculated*	4.21	Ratio	3.5 - 5.0
HDL/ LDL Ratio *Calculated*	**0.37 L***	Ratio	0.5 - 3.0
LDL/HDL Ratio *Calculated*	2.68	Ratio	2.5 - 3.5

Interpretation:
Lipid level assessments must be made following 9 to 12 hours of fasting, otherwise assay results might lead to erroneous interpretation. NCEP recommends of 3 different samples to be drawn at intervals of 1 week for harmonizing biological variables that might be encountered in single assays.

National Lipid Association Recommendations (NLA-2014)	Total Cholesterol (mg/dL)	Triglyceride (mg/dL)	LDL Cholesterol (mg/dL)	Non HDL Cholesterol (mg/dL)
Optimal	<200	<150	<100	<130
Above Optimal			100-129	130 - 159
Borderline High	200-239	150-199	130-159	160 - 189
High	>=240	200-499	160-189	190 - 219
Very High	-	>=500	>=190	>=220

HDL Cholesterol	
Low	High
<40	>=60

Risk Stratification for ASCVD (Atherosclerotic Cardiovascular Disease) by Lipid Association of India.

Risk Category	A. CAD with > 1 feature of high risk group
Extreme risk group	B. CAD with >1 feature of very high risk group of recurrent ACS (within 1 year) despite LDL-C <or = 50 mg/dl or poly vascular disease
Very High Risk	1.Established ASCVD 2.Diabetes with 2 major risk factors of evidence of end organ damage 3. Familial Homozygous Hypercholesterolemia
	1. Three major ASCVD risk factors 2. Diabetes with 1 major risk factor or no evidence

Note :- (H* - High , L* - Low ,CL* - Critical Low,CH* - Critical High)

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range

High Risk	of end organ damage 3. CHD stage 3B or 4. 4 LDL >190 mg/dl 5. Extreme of a single risk factor 6. Coronary Artery Calcium - CAC > 300 AU 7. Lipoprotein a >/= 50 mg/dl 8. Non stenotic carotid plaque
Moderate Risk	2 major ASCVD risk factors
Low Risk	0-1 major ASCVD risk factors

Major ASCVD (Atherosclerotic cardiovascular disease) Risk Factors

1. Age >/=45 years in Males & >/= 55 years in Females	3. Current Cigarette smoking or tobacco use
2. Family history of premature ASCVD	4. High blood pressure
5. Low HDL	

Newer treatment goals and statin initiation thresholds based on the risk categories proposed by Lipid Association of India in 2020.

Risk Group	Treatment Goals		Consider Drug Therapy	
	LDL-C (mg/dl)	Non-HDL (mg/dl)	LDL-C (mg/dl)	Non-HDL (mg/dl)
Extreme Risk Group Category A	<50 (Optional goal <OR = 30)	<80 (Optional goal <OR = 60)	>OR = 50	>OR = 80
Extreme Risk Group Category B	>OR = 30	>OR = 60	> 30	> 60
Very High Risk	<50	<80	>OR = 50	>OR = 80
High Risk	<70	<100	>OR = 70	>OR = 100
Moderate Risk	<100	<130	>OR = 100	>OR = 130
Low Risk	<100	<130	>OR = 130*	>OR = 160

*** After an adequate non-pharmacological intervention for at least 3 months.**

References : Management of Dyslipidaemia for the Prevention of Stroke : Clinical practice Recommendations from the Lipid Association of India. Current Vascular Pharmacology,2022,20,134-155.

Note :- (H* - High , L* - Low ,CL* - Critical Low,CH* - Critical High)

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range
Lipase			
Lipase *1,2-O-dilauryl-rac-glycero-3-glutaric acid-(6-met*	36	U/L	<60

Interpretation:
Pancreas is the major and primary source of serum lipase though lipases are also present in liver, stomach, intestine, WBC, fat cells and milk. In acute pancreatitis, serum lipase becomes elevated at the same time as amylase and remains high for 7-10 days. Increased
lipase activity rarely lasts longer than 14 days. Prolonged increase suggests poor prognosis or presence of a cyst. The combined use of serum lipase and serum amylase is effective in ruling out acute pancreatitis.

Increased levels
Acute & Chronic pancreatitis
Obstruction of pancreatic duct
Non pancreatic conditions like renal diseases, acute cholecystitis, intestinal obstruction, duodenal ulcer, alcoholism, diabetic ketoacidosis and following endoscopic retrograde cholangiopancreatography

(*) Parameter(s) are outside the scope of tests recognized under the NABL M(EL)T Scheme.

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range

Amylase

Amylase *2-Chloro-4-nitrophenyl-a-D-maltotrioside*	55	U/L	28 - 100

Interpretation:

1. Amylase levels are significantly increased in patients with acute pancreatitis, pancreatic duct obstruction, carcinoma pancreas, ovaries, or lungs, cholecystitis, macroamylasemia, renal disease, pancreatic pseudocyst, procedures like Endoscopic retrograde cholangiopancreatography and acute alcohol poisoning.
2. In acute pancreatitis, elevated amylase levels usually parallel lipase concentrations, although lipase levels may take a bit longer to rise than blood amylase levels and will remain elevated longer.
3. Amylase levels are raised in aspirin, diuretics, oral contraceptives, corticosteroids, indomethacin, ethyl alcohol and opiate intake

(*) Parameter(s) are outside the scope of tests recognized under the NABL M(EL)T Scheme.

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Iron Studies

Test Description	Value(s)	Unit(s)	Reference Range
Iron *Ferene*	153	ug/dL	65 - 175
TIBC,(Total Iron Binding Capacity) *Calculated*	371	µg/dL	255 - 450
UIBC *Ferene*	218	µg/dL	69 - 240
Transferrin Saturation *Calculated*	41.24	%	20 - 50

Interpretation:
Increased levels due to iron ingestion or ineffective erythropoiesis.Decreased levels due to infection, inflammation, malignancy, menstruation and Fe deficiency.Needs to be taken into consideration with TIBC. Transferrin Saturation:- Low level Transferrin Saturation can indicate iron deficiency, erythropoiesis, infection, or inflammation. High level Transferrin Saturation can indicate recent ingestion of dietary iron,ineffective erythropoiesis,haemochromatosis or liver disease.High TIBC, UIBC, or transferrin usually indicates iron deficiency, but they are also increased in pregnancy and with the use of oral contraceptives. Low TIBC, UIBC, or transferrin may occur if someone has:Hemochromatosis, Certain types of anemia due to accumulated iron,Malnutrition,kidney disease that causes a loss of protein in urine.

(*) Parameter(s) are outside the scope of tests recognized under the NABL M(EL)T Scheme.

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range
C-Reactive Protein (CRP), Quantitative			
CRP (Quantitative) *Immunoturbidimetry*	< 1.0	mg/L	0 - 5

Interpretation:
Increased CRP level:
1. A high or increasing amount of CRP in the blood suggests the presence of inflammation but will not identify its location or the cause.
2. Suspected bacterial infection—a high CRP level can provide indication that patient has an infection.
3. Chronic inflammatory disease—high levels of CRP suggest a flare-up if you have a chronic inflammatory disease or that treatment has not been effective.

If the CRP level is initially elevated and drops, it means that the inflammation or infection is subsiding and/or responding to treatment.

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range

High Sensitivity C-Reactive Protein (Hs-CRP)

HIGHLY SENSITIVE C-REACTIVE PROTEIN (hs-CRP) *immunoturbidimetric*	0.6	mg/L	< 1.00

Interpretation:

Cardio CRP In mg/L	Cardiovascular Risk
<1	Low
1-3	Average
3-10	High
>10	Persistent elevation may represent Non cardiovascular inflammation

Note: To assess vascular risk, it is recommended to test hsCRP levels 2 or more weeks apart and calculate the average

Comments:
High sensitivity C Reactive Protein (hsCRP) significantly improves cardiovascular risk assessment as it is a strongest predictor of future coronary events. It reveals the risk of future Myocardial infarction and Stroke among healthy men and women, independent of traditional risk factors. It identifies patients at risk of first Myocardial infarction even with low to moderate lipid levels. The risk of recurrent cardiovascular events also correlates well with hsCRP levels. It is a powerful independent risk determinant in the prediction of incident Diabetes.

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range

Rheumatoid Factor (RF), Quantitative

RHEUMATOID FACTOR, Quantitative *Immunoturbidimetry*	< 1.0	IU/mL	Negative <30 Weakly positive 30 to 50 Positive >50

Interpretation:
Approximately 85% of patients with Rheumatoid arthritis have detectable RA. It may also be seen in other medical conditions like Sjogren's syndrome and SLE.

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range

Ferritin

Ferritin *CMIA*	100.8	ng/mL	21.81 - 274.66

Interpretation:

MALES	21.81-274.66 ng/mL
FEMALES	4.63-204.00 ng/mL

1.Increased ferritin is seen in iron overload as in multiple blood transfusions, hemochromatosis and anemia of chronic disorders.
2. Decreased ferritin levels are seen in iron deficiency anemia, early stage before iron deficiency manifests as anemia.
3. Increased ferritin is also seen in liver disease,alcoholism, inflammatory conditions, leukemia, Hodgkin's disease and some malignancies.
4. Levels of ferritin are used for monitoring of iron levels during pregnancy, dialysis and during iron therapy

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range
Vitamin B12 / Cyanocobalamin			
Vitamin - B12 *CMIA*	**156 L***	pg/mL	187 - 883

Interpretation:
Low Values are a sign of a vitamin B12 deficiency. People with this deficiency are likely to have or develop symptoms.
Causes of vitamin B12 deficiency include:Not enough vitamin B12 in diet (rare except with a strict vegetarian diet), Diseases that cause malabsorption (for example, celiac disease and Crohn's disease), Lack of intrinsic factor, Above normal heat production (for example, with hyperthyroidism), Pregnancy. Increased vitamin B12 levels are uncommon. Usually excess vitamin B12 is removed in the urine. Conditions that can increase B12 levels include: Liver disease (such as cirrhosis or hepatitis), Myeloproliferative disorders (for example, polycythemia vera and chronic myelocytic leukemia).
Vitamin B12: Low Levels can cause malabsorption, Lack of intrinsic factor, Above normal heat production (for example, with hyperthyroidism), Pregnancy.High Level Liver disease, Myeloproliferative disorders (for example, polycythemia vera and chronic myelocytic leukemia).
1. Out of 140 healthy indian population, 91% of Vitamin B 12 concentrations was at lower level: 59.00 pg/ml and upper level: 700.00 pg/ml

"Patients on Biotin supplement may have interference in some immunoassays. Ref: Arch Pathol Lab Med—Vol 141, November 2017. With individuals taking high dose Biotin (more than 5 mg per day) supplements, at least 8-hour wait time before blood draw is recommended."

Note :- (H* - High , L* - Low ,CL* - Critical Low,CH* - Critical High)

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
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Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range
Vitamin D 25 Hydroxy			
Vitamin D 25 - Hydroxy *CMIA*	**12.4 L***	ng/mL	Deficiency : < 10 ng/mL Insufficient : 10-30 ng/mL Sufficient : >30-100 ng/mL Hypervitaminosis : > 100 ng/mL

Interpretation:
25-Hydroxy vitamin D represents the main body reservoir and transport form. Mild to moderate deficiency is associated with Osteoporosis / Secondary Hyperparathyroidism while severe deficiency causes Rickets in children and Osteomalacia in adults. Prevalence of Vitamin D deficiency is approximately >50% specially in the elderly. This assay is useful for diagnosis of vitamin D deficiency and Hypervitaminosis D. It is also used for differential diagnosis of causes of Rickets & Osteomalacia and for monitoring Vitamin D replacement therapy.

Note :- (H* - High , L* - Low ,CL* - Critical Low,CH* - Critical High)

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
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Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range

Thyroid Profile Total

Triiodothyronine (T3) *CMIA*	85.2	ng/dL	35 - 193 ng/dL
Total Thyroxine (T4) *CMIA*	5.8	µg/dL	4.87 - 11.72 ug/dL
Thyroid Stimulating Hormone (Ultrasensitive) *CMIA*	1.5509	µlU/mL	0.35 - 4.94

Interpretation:

Pregnancy	Refrence Range TSH
1st Trimester	0 .1 - 2.5
2nd Trimester	0.2 - 3.0
3rd Trimester	0.3 - 3.0

Clinical Use:
1. Diagnose Hypothyroidism & Hyperthyroidism
2. Monitor T4 therapy
3. Measure subnormal TSH levels

Increased TSH: Primary hypothyroidism, Subclinical hypothyroidism, TSH-dependent hyperthyroidism, Thyroid hormone resistance
Decreased TSH: Graves' disease, Autonomous thyroid hormone secretion, TSH deficiency
Thyroid malfunction (hyper or hypo) affects T3 & T4 levels. Pituitary or hypothalamic issues also influence thyroid activity.

1. Primary Hypothyroidism: High TSH levels.
2. Secondary/Tertiary Hypothyroidism: Low TSH levels.
3. Euthyroid Sick Syndrome: Abnormal thyroid test results due to non-thyroidal illnesses (NTI).
TBG levels are stable in healthy individuals but may be altered by pregnancy, estrogens, androgens, steroids, or glucocorticoids, causing inaccurate T3 & T4 readings.

TSH	T4	T3	Interpretation
High	Normal	Normal	Mild (subclinical) hypothyroidism
High	Low	Low Or Nomral	Hypothyroidism
Low	Normal	Normal	Mild (subclinical) hyperthyroidism
Low	High Or Normal	High Or Normal	Hyperthyroidism
Low	Low Or Normal	Low Or Normal	Nonthyroidal illness; pituitary (secondary) hypothyroidism
Normal	High	High	Thyroid hormone resistance syndrome (a mutation in the thyroid hormone receptor decreases thyroid hormone function)

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME :			
DOB/Age/Gender :		Report STATUS :	
Patient ID / UHID :		Barcode NO :	
Referred BY :		Sample Type :	
Sample Collected :		Report Date :	

Test Description	Value(s)	Unit(s)	Reference Range

Testosterone Total

Testosterone Total *CMIA*	512	ng/dL	249 - 836

Interpretation:

Age in Years	Reference Ranges ng/dL
Males 20-49	249 - 836
Males ≥ 50 years	193 - 740
Females 20-49	8.4 - 48.1
Females ≥ 50	2.9- 40.8

Reference values for Males (7-18 years) characterized by Tanner Stage

Tanner Stage	5-95th percentiles (ng/dL)
1	2.31 - 30.28
2	3.75 - 282.06
3	8.65 - 681.78
4	17.88 - 785.6
5	13.27 - 906.15

Reference values for females (8-18 years) characterized by Tanner Stage

Tanner Stage	5-95th percentiles (ng/dL)
1	0.58 - 33.17
2	4.33 - 23.07
3	6.92 - 42.97
4	15.29 - 1.86
5	15.00 - 102.38

Note

1. All applications that require measurement of very low level of testosterone (eg hypogonadal men, children, virilization or intersex disorders in women etc) recommended test is Testosterone total, Ultrasensitive
2. LC-MS/MS is the gold standard for steroid hormone assays due to increased sensitivity & specificity as compared to immunoassays

Clinical Use

Assessment of testicular function in males

Increased levels

1. Precocious puberty (Males)
2. Androgen resistance
3. Testotoxicosis
4. Congenital Adrenal Hyperplasia

Decreased levels

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Patient NAME	:		
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Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range

1. Delayed puberty (Males)
2. Gonadotropin deficiency
3. Testicular defects
4. Systemic diseases

Prostate Specific Antigen (PSA) Total

Prostate Specific Antigen-Total (PSA-Total) *CMIA*	0.3	ng/mL	0 - 4

Interpretation:

Age (years)	Ranges
< 40	<1.4
40 - 49	<2.0
50 - 59	<3.1
60 - 69	<4.1
>=70	<4.4

Prostate Specific Antigen (PSA) is a single-chain glycoprotein normally found in the cytoplasm of the epithelial cells lining the acini and ducts of the prostate gland. PSA is detected in the serum of males with normal, benign hyperplastic and malignant prostate tissue and in patients with prostatitis. PSA is not detected (or detected at very low levels) in the serum of males without prostate tissue (because of radical prostatectomy or cytoprostatectomy) or in the serum of most females. The fact that PSA is unique to prostate tissue makes it a suitable marker for monitoring men with cancer of the prostate. PSA is also useful for determining possible recurrence after therapy when used in conjunction with other diagnostic indices. PSA levels increase in men with cancer of the prostate. After radical prostatectomy PSA levels routinely fall to a very low level, which may not be seen in patients undergoing radiation therapy. Monitoring PSA levels appears to be useful in detecting residual disease and early recurrence of tumor. Therefore, serial PSA levels can help determine the success of prostatectomy and the need for further treatment, such as radiation, endocrine of chemotherapy and in the monitoring of the effectiveness of therapy.
PSA levels should not be interpreted as absolute evidence of presence or the absence of malignant disease. Before treatment, patients with confirmed prostate carcinoma frequently have levels of PSA within the range observed in healthy individuals. Elevated levels of PSA can be observed in the patients with nonmalignant disease. Measurement of PSA should always be used in conjunction with other diagnostic procedures, including information from the patients and clinical evaluation.
The concentration of total PSA in a given specimen determined with assays from different manufacturers can vary due to differences in assay methods, calibration, and reagent specificity.

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
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Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range
Magnesium			
Magnesium,Serum *Serum, Biochemical*	2.3	mg/dl	1.6 - 2.6

Interpretation:
Moderate or severe magnesium deficiency is usually due to losses of magnesium from gastrointestinal tract or kidneys as in vomiting and diarrhoea in former and alcohol, diabetes mellitus (osmotic diuresis), loop diuretics(furosemide) and aminoglycoside antibiotics in latter. Symptomatic hypermagnesemia is almost always caused by excessive intake with concomitant renal failure, thereby decreasing the ability of the kidneys to excrete excess magnesium.

Creatine Phosphokinase (CPK)			
Creatine Kinase-CPK *NAC (N-acetyl-L-cysteine)*	**182 H***	U/L	46 - 171

Interpretation:
High CPK levels may be seen in patients who have Brain injury or stroke, Convulsions, Delirium tremens, Dermatomyositis or polymyositis, Electric shock, Heart attack, Inflammation of the heart muscle (myocarditis), Lung tissue death (pulmonary infarction), Muscular dystrophies, Myopathy.

Note :- (H* - High , L* - Low ,CL* - Critical Low,CH* - Critical High)

Dr. Sonali Pahuja
Consultant Pathologist

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Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range

Carcinoembryonic Antigen (CEA)

CEA; CARCINO EMBRYONIC ANTIGEN, SERUM *CMIA*	2	ng/mL	<=5.0

Interpretation:

REFERENCE GROUP	REFERENCE RANGE IN ng/mL
Non Smokers	<3.0
Smokers	<5.0

Note :
1. This test is not recommended for cancer screening in the general population.
2. False negative / positive results are observed in patients receiving mouse monoclonal antibodies for diagnosis or therapy.
3. Patients with confirmed carcinoma may show normal pre-treatment CEA levels. Hence this assay, regardless of level, should not be interpreted as absolute evidence for presence or absence of malignant disease. The assay value should be used in conjunction with findings from clinical evaluation and other diagnostic procedures.
4. Persistently elevated CEA levels are usually indicative of progressive malignant disease and poor therapeutic response.

Clinical Use
1. Monitoring patients with Colorectal, Gastrointestinal, Lung & Breast carcinoma
2. Diagnosis of occult metastatic disease and / or residual disease

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME :			
DOB/Age/Gender :		Report STATUS :	
Patient ID / UHID :		Barcode NO :	
Referred BY :		Sample Type :	
Sample Collected :		Report Date :	

Test Description	Value(s)	Unit(s)	Reference Range

CA 19.9 (Pancreatic Cancer Marker)

CA 19.9 ;PANCREATIC CANCER MARKER, SERUM *CMIA*	5	U/mL	0-37.0 U/mL

Interpretation:
Note :
1. This test is not recommended to screen Pancreatic cancer in the general population.
2. False negative/positive results are observed in patients receiving mouse monoclonal antibodies for diagnosis or therapy
3. This assay, regardless of level, should not be interpreted as absolute evidence for the presence or absence of malignant disease. The assay value should be used in conjunction with findings from clinical evaluation and other diagnostic procedures.
4. Persistently elevated CA 19-9 levels are usually indicative of progressive malignant disease and poor therapeutic response

Clinical Use :
1. An aid in the management of Pancreatic cancer patients
2. Monitor the course of disease and predict recurrence in patients with Pancreatic carcinoma

DISEASE	PERCENTAGE POSITIVITY OF CA 19.9
Pancreatic cancer	80
Hepatobiliary cancer	67
Gastric cancer	40-50
Hepatocellular cancer	30-50
Colorectal cancer	30
Breast cancer	15
Pancreatitis	10-20
Benign Gastrointestinal diseases	10-20

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range

Immunoglobulin IgE (IgE Total), Serum

IMMUNOGLOBULIN IgE TOTAL SERUM *Immunoturbidimetric*	**710.4 H***	IU/mL	28.0 - 140.0

Interpretation:

REFERANCE Ranges	Unit
Age group	IU/mL
Neonates	<1.5
Infants in 1st year of life	<15
Children aged 1-5 years	<60
Children aged 6-9 years	<90
Children aged 10-15 years	<200
Adults	<100

The level of serum IgE rises during childhood and reaches adult levels during the teens. IgE is the mediator of the allergic response. Patients with atopic disease, including allergic asthama, allergic rhinitis, and atopic dermatitis commonly have moderately elevated serum IgE levels. Total serum IgE levels may also be elevated in the presence of some clinical conditions that are not related to allergy. These clinical conditions include parasitic infections, immunodeficiency states, autoimmune diseases, Hodgkins disease, bronchopulmonary aspergillosis, IgE myeloma, and Sezary syndrome.

Note :- (H* - High , L* - Low ,CL* - Critical Low,CH* - Critical High)

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range

Homocysteine

Homocysteine *CMIA*	**18.2 H***	umol/L	5.46 - 16.20

Interpretation:
Homocysteine is a sulphur containing amino acid. There is an association between elevated levels of circulating homocysteine and various vascular and cardiovascular disorders. Clinically the measurement of homocysteine is considered important to diagnose homocystinuria, to identify individuals with or at risk of developing cobalamin or folate deficiency & to assess risk factor for Cardiovascular Disease (CVD) for which the recommendations are:

1. Specially useful in young CVD patients (< 40 yrs.)
2. In known cases of CVD, high homocysteine levels should be used as a prognostic marker for CVD events and mortality
3. CVD patients with homocysteine levels >15 µmol/L belong to a high risk group?

Increased homocysteine levels with low vitamin concentrations should be handled as a potential vitam in deficiency case.

Apolipoproteins A1 & B

Apolipoprotein A-1 (APO-A) *Tina-quant*	157	mg/dL	104-202
Apolipoprotein B (APO-B) *Tina-quant*	104	mg/dL	66 - 144
Apo B / Apo A1 Ratio *Calculated*	0.66		0.35 - 0.98

Interpretation:
Apolipoprotein A1

AGE RANGE	GENDER	NORMAL RANGE
0-1 YEAR	MALE	61-164 mg/dL
	FEMALE	59-169 mg/dL
>1 to 12 YEARS	MALE	93-172 mg/dL
	FEMALE	86-179 mg/dL
>12 to 60 YEARS	MALE	95-186 mg/dL
	FEMALE	101-223mg/dL
> 60 YEARS	MALE	73-186 mg/dL
	FEMALE	91-224 mg/dL

Apolipoprotein B (APO-B)

AGE RANGE	GENDER	NORMAL RANGE
0-1 YEAR	MALE	16-124 mg/dL

(*) Parameter(s) are outside the scope of tests recognized under the NABL M(EL)T Scheme.

Dr. Sonali Pahuja
Consultant Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range

	FEMALE	17-120 mg/dL
>1 to 12 YEARS	MALE	48-125 mg/dL
	FEMALE	51-126 mg/dL
>12 to 60 YEARS	MALE	49-173 mg/dL
	FEMALE	53-182 mg/dL
> 60 YEARS	MALE	54-163 mg/dL
	FEMALE	64-182 mg/dL

Apolipoprotein B is a more powerful independent predictor of Coronary Heart Disease (CAD) than LDL Cholesterol. It is useful in assessing the risk of CAD and to classify Hyperlipidemias. Apolipoprotein studies help in monitoring coronary bypass surgery patients with regard to risk and severity of re -stenosis. They are also useful in assessing risk of re-infarction in patients of Myocardial infarction.
Apolipoprotein A1 is one of the apoproteins of high density lipoproteins (HDL) which is inversely related to the risk of CAD. Individuals with Tangier disease have < 1% of normal Apo A1. Levels <90 mg/dL indicate increased risk of Atherosclerotic disease.

As per recommendations of National Cholesterol Education Program (NCEP) the clinical significance of results is as follows:

Apolipoprotein B

RESULT IN mg/dL	REMARKS
<23.0	Abetalipoproteinemia/Hypobetalipoproteinemia
23-45	Hypobetalipoproteinemia
46 - 135	Normal
<135	Hyperapobetalipoproteinemia/Increased CAD risk

Apo B to A1 Ratio

Ratio	REMARKS
0.35-0.98	Desirable
>0.98	Increased CAD risk

(*) Parameter(s) are outside the scope of tests recognized under the NABL M(EL)T Scheme.

Dr. Sonali Pahuja
Consultant Pathologist

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Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Urine Routine and Microscopic Examination

Test Description	Value(s)	Unit(s)	Reference Range
Physical Examination			
Volume *Visual*	10	ml	-
Colour *Visual*	Pale yellow	-	Pale yellow
Transparency *Visual*	Clear	-	Clear
Deposit *Visual*	Absent	-	Absent
Chemical Examination			
Reaction (pH) *Double Indicator*	5.0	-	4.5 - 8.0
Specific Gravity *Ion Exchange*	1.030	-	1.000 - 1.030
Urine Glucose (sugar) *Oxidase / Peroxidase*	Negative	-	Negative
Urine Protein (Albumin) *Acid / Base Colour Excahnge*	**Positive(Trace) H***	-	Negative
Urine Ketones (Acetone) *Legals Test*	Negative	-	Negative
Blood *Peroxidase Hemoglobin*	Negative	-	Negative
Leucocyte esterase *Leucocyte Esterase*	**Positive(Trace) H***	-	Negative
Bilirubin Urine *Coupling Reaction*	Negative	-	Negative
Nitrite *Griless Test*	Negative	-	Negative
Urobilinogen *Ehrlichs Test*	Normal	-	Normal
Microscopic Examination			
Pus Cells (WBCs) *Wet Mount*	**6-8 H***	/hpf	0 - 5
Epithelial Cells *Wet Mount*	2-4	/hpf	0 - 4
Red blood Cells *Wet Mount*	Absent	/hpf	Absent
Crystals *Wet Mount*	Absent	-	Absent
Cast *Wet Mount*	Absent	-	Absent
Yeast Cells *Wet Mount*	Absent	-	Absent

Note :- (H* - High , L* - Low ,CL* - Critical Low,CH* - Critical High)

Dr. ShashiKant D.
MD Pathologist

Patient NAME	:		
DOB/Age/Gender	:	Report STATUS	:
Patient ID / UHID	:	Barcode NO	:
Referred BY	:	Sample Type	:
Sample Collected	:	Report Date	:

Test Description	Value(s)	Unit(s)	Reference Range
Amorphous deposits *Wet Mount*	Absent	-	Absent
Bacteria *Wet Mount*	Absent	-	Absent
Protozoa *Wet Mount*	Absent	-	Absent

Interpretation:
URINALYSIS- Routine urine analysis assists in screening and diagnosis of various metabolic, urological, kidney and liver disorders.

Protein: Elevated proteins can be an early sign of kidney disease. Urinary protein excretion can also be temporarily elevated by strenuous exercise, orthostatic proteinuria, dehydration, urinary tract infections and acute illness with fever

Glucose: Uncontrolled diabetes mellitus can lead to presence of glucose in urine. Other causes include pregnancy, hormonal disturbances, liver disease and certain medications.

Ketones: Uncontrolled diabetes mellitus can lead to presence of ketones in urine. Ketones can also be seen in starvation, frequent vomiting, pregnancy and strenuous exercise.

Blood: Occult blood can occur in urine as intact erythrocytes or haemoglobin, which can occur in various urological, nephrological and bleeding disorders.

Leukocytes: An increase in leukocytes is an indication of inflammation in urinary tract or kidneys. Most common cause is bacterial urinary tract infection.

Nitrite: Many bacteria give positive results when their number is high. Nitrite concentration during infection increases with length of time the urine specimen is retained in bladder prior to collection.

pH: The kidneys play an important role in maintaining acid base balance of the body. Conditions of the body producing acidosis/ alkalosis or ingestion of certain type of food can affect the pH of urine.

Specific gravity: Specific gravity gives an indication of how concentrated the urine is. Increased specific gravity is seen in conditions like dehydration, glycosuria and proteinuria while decreased specific gravity is seen in excessive fluid intake, renal failure and diabetes insipidus.

Bilirubin: In certain liver diseases such as biliary obstruction or hepatitis, bilirubin gets excreted in urine.

Urobilinogen: Positive results are seen in liver diseases like hepatitis and cirrhosis and in cases of haemolytic anaemia.

*** End Of Report ***

Note :- (H* - High , L* - Low ,CL* - Critical Low,CH* - Critical High)

Dr. ShashiKant D.
MD Pathologist

LABORATORY REPORT

Redcliffe labs

Bio-Rad CDM System

PATIENT REPORT

Patient Data

Sample ID:
Patient ID:
Name:
Physician:
Sex:
DOB:

Comments:

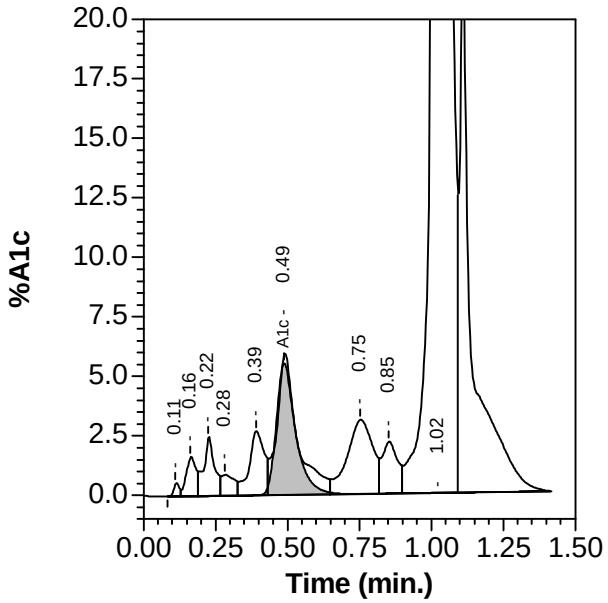
Analysis Data

Analysis Performed:
Injection Number:
Run Number:
Rack ID:
Tube Number:
Report Generated:
Operator ID:

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
Unknown	---	0.1	0.110	2050
A1a	---	0.7	0.161	11225
A1b	---	1.1	0.222	17877
F	---	0.5	0.281	7653
LA1c	---	1.5	0.391	25320
A1c	5.5	---	0.487	71980
P3	---	3.2	0.752	53115
P4	---	1.3	0.850	22408
Ao	---	87.4	1.022	1466184

Total Area: 1,677,812

HbA1c (NGSP) = 5.5 %



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2. It is to be presumed that the tests performed pertain to the specimen/sample attributed to the Customer's name or identification. It is presumed that the verification particulars have been cleared out by the customer or his/her representation at the point of generation of said specimen / sample. It is hereby clarified that the reports furnished are restricted solely to the given specimen only.

3. It is to be noted that variations in results may occur between different laboratories and over time, even for the same parameter for the same Customer. The assays are performed and conducted in accordance with standard procedures, and the reported outcomes are contingent on the specific individual assay methods and equipment(s) used, as well as the quality of the received specimen.

4. This report shall not be deemed valid or admissible for any medico-legal purposes.

5. The Customers assume full responsibility for apprising the Company of any factors that may impact the test finding. These factors, among others, includes dietary intake, alcohol, or medication / drug(s) consumption, or fasting. This list of factors is only representative and not exhaustive.