S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: **ABHYUDAY**			**Collected**	: **21/4/2021 10:53:00AM**
Lab No.	: **157100788**	**Age: 32 Years**	**Gender: Male**	**Received**	: **21/4/2021 10:54:06AM**
				Reported	: **21/4/2021 1:54:46PM**
A/c Status	: **P**	**Ref By : Dr. SELF**		**Report Status**	: **Interim**

Test Name	Results	Units	Bio. Ref. Interval
COMPLETE BLOOD COUNT (CBC) (Electrical Impedence & VCS)			
Hemoglobin	15.30	g/dL	13.00 - 17.00
Packed Cell Volume (PCV)	46.60	%	40.00 - 50.00
RBC Count	5.33	mill/mm3	4.50 - 5.50
MCV	87.50	fL	83.00 - 101.00
MCH	28.70	pg	27.00 - 32.00
MCHC	32.80	g/dL	31.50 - 34.50
Red Cell Distribution Width (RDW)	13.60	%	11.60 - 14.00
Total Leukocyte Count (TLC)	7.40	thou/mm3	4.00 - 10.00
Differential Leucocyte Count (DLC)			
Segmented Neutrophils	49.40	%	40.00 - 80.00
Lymphocytes	29.40	%	20.00 - 40.00
Monocytes	7.20	%	2.00 - 10.00
Eosinophils	**13.40**	%	1.00 - 6.00
Basophils	0.60	%	<2.00
Absolute Leucocyte Count			
Neutrophils	3.66	thou/mm3	2.00 - 7.00
Lymphocytes	2.18	thou/mm3	1.00 - 3.00
Monocytes	0.53	thou/mm3	0.20 - 1.00
Eosinophils	**0.99**	thou/mm3	0.02 - 0.50
Basophils	0.04	thou/mm3	0.02 - 0.10
Platelet Count	209.00	thou/mm3	150.00 - 410.00
Mean Platelet Volume	8.80	fL	6.5 - 12.0

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: **ABHYUDAY**			**Collected**	: **21/4/2021 10:53:00AM**
Lab No.	: **157100788**	**Age: 32 Years**	**Gender: Male**	**Received**	: **21/4/2021 10:54:06AM**
				Reported	: **21/4/2021 1:54:46PM**
A/c Status	: **P**	**Ref By : Dr. SELF**		**Report Status**	: **Interim**

Test Name	Results	Units	Bio. Ref. Interval
Normocytic normochromic RBCs TLC is within normal limits. There is mild eosinophilia. Platelets are adequate. No Hemoparasites seen **Advised:** Followup and clinical correlation Result Rechecked, Please Correlate Clinically.			

Note

1. As per the recommendation of International council for Standardization in Hematology, the differential leucocyte counts are additionally being reported as absolute numbers of each cell in per unit volume of blood
2. Test conducted on EDTA whole blood

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: **ABHYUDAY**			**Collected**	: **21/4/2021 10:53:00AM**
Lab No.	: **157100788**	**Age: 32 Years**	**Gender: Male**	**Received**	: **21/4/2021 10:54:06AM**
				Reported	: **21/4/2021 1:54:55PM**
A/c Status	: **P**	**Ref By : Dr. SELF**		**Report Status**	: **Interim**

Test Name	Results	Units	Bio. Ref. Interval
LIVER PANEL 1 (LFT) (Spectrophotometry)			
AST (SGOT)	22	U/L	<50
ALT (SGPT)	19	U/L	<50
Alkaline Phosphatase (ALP)	71	U/L	30 - 120
Bilirubin Total	0.35	mg/dL	0.30 - 1.20
Bilirubin Direct	0.07	mg/dL	<0.30
Bilirubin Indirect	0.28	mg/dL	<1.10
Total Protein	7.55	g/dL	6.40 - 8.30
Albumin	4.50	g/dL	3.50 - 5.20
A : G Ratio	1.48		0.90 - 2.00
THYROID PROFILE,TOTAL, SERUM (CLIA)			
T3, Total	1.21	ng/mL	0.60 - 1.81
T4, Total	11.20	µg/dL	5.01 - 12.45
TSH	2.28	µIU/mL	0.35 - 5.50

Note

1. TSH levels are subject to circadian variation, reaching peak levels between 2 - 4.a.m. and at a minimum between 6-10 pm . The variation is of the order of 50% . hence time of the day has influence on the measured serum TSH concentrations.
2. Alteration in concentration of Thyroid hormone binding protein can profoundly affect Total T3 and/or Total T4 levels especially in pregnancy and in patients on steroid therapy.
3. Unbound fraction (Free,T4 /Free,T3) of thyroid hormone is biologically active form and correlate

***** Not in NABL scope

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: **ABHYUDAY**			**Collected**	: **21/4/2021 10:53:00AM**
Lab No.	: **157100788**	**Age: 32 Years**	**Gender: Male**	**Received**	: **21/4/2021 10:54:06AM**
				Reported	: **21/4/2021 1:54:55PM**
A/c Status	: **P**	**Ref By : Dr. SELF**		**Report Status**	: **Interim**

Test Name	Results	Units	Bio. Ref. Interval

more closely with clinical status of the patient than total T4/T3 concentration

4. Values <0.03 uIU/mL need to be clinically correlated due to presence of a rare TSH variant in some individuals

BED NO/ WARD NO *

BED NO/ WARD NO *	OPD

UHID/CR NO *

UHID/CR NO *	23026/UHID

***** Not in NABL scope

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: **ABHYUDAY**			**Collected**	: **21/4/2021 10:53:00AM**
Lab No.	: **157100788**	**Age: 32 Years**	**Gender: Male**	**Received**	: **21/4/2021 10:54:06AM**
				Reported	: **21/4/2021 1:55:03PM**
A/c Status	: **P**	**Ref By : Dr. SELF**		**Report Status**	: **Interim**

Test Name	Results	Units	Bio. Ref. Interval
KIDNEY PANEL; KFT,SERUM (Spectrophotometry, Indirect ISE)			
Urea	**15.00**	mg/dL	17.00 - 43.00
Creatinine	0.72	mg/dL	0.67 - 1.17
Uric Acid	6.16	mg/dL	3.50 - 7.20
Calcium, Total	9.79	mg/dL	8.80 - 10.60
Phosphorus	3.17	mg/dL	2.40 - 4.40
Alkaline Phosphatase (ALP)	71	U/L	30 - 120
Total Protein	7.55	g/dL	6.40 - 8.30
Albumin	4.50	g/dL	3.50 - 5.20
A : G Ratio	1.48		0.90 - 2.00
Sodium	139.60	mEq/L	136.00 - 146.00
Potassium	4.22	mEq/L	3.50 - 5.10
Chloride	103.10	mEq/L	101.00 - 109.00

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: **ABHYUDAY**			**Collected**	: **21/4/2021 10:53:00AM**
Lab No.	: **157100788**	**Age: 32 Years**	**Gender: Male**	**Received**	: **21/4/2021 10:54:06AM**
				Reported	: **21/4/2021 1:55:07PM**
A/c Status	: **P**	**Ref By : Dr. SELF**		**Report Status**	: **Interim**

Test Name	Results	Units	Bio. Ref. Interval
HbA1c (GLYCOSYLATED HEMOGLOBIN), BLOOD (HPLC)			
HbA1c	5.3	%	4.00 - 5.60
Estimated average glucose (eAG)	105	mg/dL	

Interpretation
HbA1c result is suggestive of non diabetic adults (>=18 years)/ well controlled Diabetes in a known Diabetic

Note: Presence of Hemoglobin variants and/or conditions that affect red cell turnover must be considered, particularly when the HbA1C result does not correlate with the patient's blood glucose levels.

FACTORS THAT INTERFERE WITH HbA1C MEASUREMENT	FACTORS THAT AFFECT INTERPRETATION OF HBA1C RESULTS
Hemoglobin variants,elevated fetal hemoglobin (HbF) and chemically modified derivatives of hemoglobin (e.g. carbamylated Hb in patients with renal failure) can affect the accuracy of HbA1c measurements	Any condition that shortens erythrocyte survival or decreases mean erythrocyte age (e.g.,recovery from acute blood loss, hemolytic anemia, HbSS, HbCC, and HbSC) will falsely lower HbA1c test results regardless of the assay method used.Iron deficiency anemia is associated with higher HbA1c

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: **ABHYUDAY**			**Collected**	: **21/4/2021 10:53:00AM**
Lab No.	: **157100788**	**Age: 32 Years**	**Gender: Male**	**Received**	: **21/4/2021 10:54:06AM**
				Reported	: **21/4/2021 1:55:13PM**
A/c Status	: **P**	**Ref By : Dr. SELF**		**Report Status**	: **Interim**

Test Name	Results	Units	Bio. Ref. Interval
ERYTHROCYTE SEDIMENTATION RATE (ESR) (Westergren)	5	mm/hr	0 - 15

Note

1. C-Reactive Protein (CRP) is the recommended test in acute inflammatory conditions.
2. Test conducted on EDTA whole blood at 37°C.

GLUCOSE, RANDOM (R), PLASMA (GOD-POD)	75.00	mg/dL	70.00 - 140.00
FERRITIN, SERUM (CLIA)	69.30	ng/mL	22.00 - 322.00

Note: Increase in serum ferritin due to inflammatory conditions (Acute phase response) can mask a diagnostically low result

Comments

Serum ferritin appears to be in equilibrium with tissue ferritin and is a good indicator of storage iron in normal subjects and in most disorders. In patients with some hepatocellular diseases, malignancies and inflammatory diseases, serum ferritin is a disproportionately high estimate of storage iron because serum ferritin is an acute phase reactant. In such disorders iron deficiency anemia may exist with a normal serum ferritin concentration. In the presence of inflammation, persons with low serum ferritin are likely to respond to iron therapy.

Increased Levels

- Iron overload - Hemochromatosis, Thalassemia & Sideroblastic anemia
- Malignant conditions - Acute myeloblastic & Lymphoblastic leukemia, Hodgkin's disease & Breast carcinoma
- Inflammatory diseases - Pulmonary infections, Osteomyelitis, Chronic UTI, Rheumatoid arthritis, SLE, burns
- Acute & Chronic hepatocellular disease

Decreased Levels

Iron deficiency anemia

IRON STUDIES, SERUM
(Spectrophotometry)

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: **ABHYUDAY**			**Collected**	: **21/4/2021 10:53:00AM**
				Received	: **21/4/2021 10:54:06AM**
Lab No.	: **157100788**	**Age: 32 Years**	**Gender: Male**	**Reported**	: **21/4/2021 1:55:13PM**
A/c Status	: **P**	**Ref By : Dr. SELF**		**Report Status**	: **Interim**

Test Name	Results	Units	Bio. Ref. Interval
Iron	**61.00**	µg/dL	65.00 - 175.00
Total Iron Binding Capacity (TIBC)	331.00	µg/dL	250.00 - 425.00
Transferrin Saturation	**18.43**	%	20.00 - 50.00

Comments

Iron is an essential trace mineral element which forms an important component of hemoglobin, metallocompounds and Vitamin A. Deficiency of iron, leads to microcytic hypochromic anemia. The toxic effects of iron are deposition of iron in various organs of the body and hemochromatosis.

Total Iron Binding capacity (TIBC) is a direct measure of the protein Transferrin which transports iron from the gut to storage sites in the bone marrow. In iron deficiency anemia, serum iron is reduced and TIBC increases.

Transferrin Saturation occurs in Idiopathic hemochromatosis and Transfusional hemosiderosis where no unsaturated iron binding capacity is available for iron mobilization. Similar condition is seen in congenital deficiency of Transferrin.

PROLACTIN, SERUM (CLIA)	3.78	ng/mL	2.10 - 17.70

Note: 1. Since prolactin is secreted in a pulsatile manner and is also influenced by a variety of physiologic stimuli, it is recommended to test 3 specimens at 20-30 minute intervals after pooling.
2. Major circulating form of Prolactin is a nonglycosylated monomer, but several forms of Prolactin linked with immunoglobulin occur which can give falsely high Prolactin results.
3. Macroprolactin assay is recommended if prolactin levels are elevated, but signs and symptoms of hyperprolactinemia are absent or pituitary imaging studies are normal

Clinical Use

- Diagnosis & management of pituitary adenomas
- Differential diagnosis of male & female hypogonadism

Increased Levels

- **Physiologic:** Sleep, stress, postprandially, pain, coitus
- **Systemic disorders:** Chest wall or thoracic spinal cord lesions, Primary / Secondary hypothyroidism, Adrenal insufficiency, Chronic renal failure, Cirrhosis
- **Medications:**

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: ABHYUDAY			Collected	: 21/4/2021 10:53:00AM
Lab No.	: 157100788	Age: 32 Years	Gender: Male	Received	: 21/4/2021 10:54:06AM
				Reported	: 21/4/2021 1:55:13PM
A/c Status	: P	Ref By : Dr. SELF		Report Status	: Interim

Test Name	Results	Units	Bio. Ref. Interval

- **Psychiatric medications** like Phenothiazine, Haloperidol, Risperidone, Domperidone, Fluoexetine, Amitriptylene, MAO inhibitors etc.,
- **Antihypertensives:** Alphamethyldopa, Reserpine, Verapamil
- **Opiates:** Heroin, Methadone, Morphine, Apomorphine
- **Cimetidine / Ranitidine**

- **Prolactin secreting pituitary tumors:** Prolactinoma, Acromegaly
- **Miscellaneous**: Epileptic seizures, Ectopic secretion of prolactin by non-pituitary tumors, pressure / transaction of pituitary stalk, macroprolactinemia
- **Idiopathic**

Decreased levels

- Pituitary deficiency: Pituitary necrosis / infarction
- Bromocriptine administration
- Pseudohypoparathyroidism

VITAMIN B12; CYANOCOBALAMIN, SERUM (CLIA)	185.00	pg/mL	180.00 - 914.00

Interpretation : Normal

Notes

1. Interpretation of the result should be considered in relation to clinical circumstances.
2. It is recommended to consider supplementary testing with plasma Methylmalonic acid (MMA) or plasma homocysteine levels to determine biochemical cobalamin deficiency in presence of clinical suspicion of deficiency but indeterminate levels. Homocysteine levels are more sensitive but MMA is more specific
3. False increase in Vitamin B12 levels may be observed in patients with intrinsic factor blocking antibodies, MMA measurement should be considered in such patients
4. The concentration of Vitamin B12 obtained with different assay methods cannot be used interchangeably due to differences in assay methods and reagent specificity

VITAMIN D, 25 - HYDROXY, SERUM (CLIA)	149.72	nmol/L	

Interpretation

LEVEL	REFERENCE RANGE IN nmol/L	COMMENTS

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: ABHYUDAY			Collected	: 21/4/2021 10:53:00AM
Lab No.	: 157100788	Age: 32 Years	Gender: Male	Received	: 21/4/2021 10:54:06AM
				Reported	: 21/4/2021 1:55:13PM
A/c Status	: P	Ref By : Dr. SELF		Report Status	: Interim

Test Name	Results	Units	Bio. Ref. Interval
Deficient	< 50	High risk for developing bone disease	
Insufficient	50-74	Vitamin D concentration which normalizes Parathyroid hormone concentration	
Sufficient	75-250	Optimal concentration for maximal health benefit	
Potential intoxication	>250	High risk for toxic effects	

Note

- The assay measures both D2 (Ergocalciferol) and D3 (Cholecalciferol) metabolites of vitamin D.
- 25 (OH)D is influenced by sunlight, latitude, skin pigmentation, sunscreen use and hepatic function.
- Optimal calcium absorption requires vitamin D 25 (OH) levels exceeding 75 nmol/L.
- It shows seasonal variation, with values being 40-50% lower in winter than in summer.
- Levels vary with age and are increased in pregnancy.
- A new test Vitamin D, Ultrasensitive by LC-MS/MS is also available

Comments

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
- Dietary deficiency
- Vitamin D malabsorption
- Severe Hepatocellular disease
- Drugs like Anticonvulsants

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: ABHYUDAY			**Collected**	: 21/4/2021 10:53:00AM
Lab No.	: 157100788	**Age:** 32 Years	**Gender:** Male	**Received**	: 21/4/2021 10:54:06AM
				Reported	: 21/4/2021 1:55:13PM
A/c Status	: P	**Ref By :** Dr. SELF		**Report Status**	: Interim

Test Name	Results	Units	Bio. Ref. Interval

- Nephrotic syndrome

Increased levels

Vitamin D intoxication

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: **ABHYUDAY**			**Collected**	: **21/4/2021 10:53:00AM**
				Received	: **21/4/2021 10:54:06AM**
Lab No.	: **157100788**	**Age: 32 Years**	**Gender: Male**	**Reported**	: **21/4/2021 1:55:21PM**
A/c Status	: **P**	**Ref By : Dr. SELF**		**Report Status**	: **Interim**

Test Name	Results	Units	Bio. Ref. Interval
LIPID SCREEN, SERUM (Enzymatic)			
Cholesterol, Total	187.00	mg/dL	<200.00
Triglycerides	**270.00**	mg/dL	<150.00
HDL Cholesterol	45.10	mg/dL	>40.00
LDL Cholesterol, Calculated	87.90	mg/dL	<100.00
VLDL Cholesterol,Calculated	**54.00**	mg/dL	<30.00
Non-HDL Cholesterol	**142**	mg/dL	<130

Interpretation

REMARKS	TOTAL CHOLESTEROL in mg/dL	TRIGLYCERIDE in mg/dL	LDL CHOLESTEROL in mg/dL	NON HDL CHOLESTEROL in 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

Note

1. Measurements in the same patient can show physiological & analytical variations. Three serial samples 1 week apart are recommended for Total Cholesterol, Triglycerides, HDL& LDL Cholesterol.
2. NLA-2014 recommends a complete lipoprotein profile as the initial test for evaluating cholesterol.

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: **ABHYUDAY**			**Collected**	: **21/4/2021 10:53:00AM**
				Received	: **21/4/2021 10:54:06AM**
Lab No.	: **157100788**	**Age: 32 Years**	**Gender: Male**	**Reported**	: **21/4/2021 1:55:21PM**
A/c Status	: **P**	**Ref By : Dr. SELF**		**Report Status**	: **Interim**

Test Name	Results	Units	Bio. Ref. Interval

3. Friedewald equation to calculate LDL cholesterol is most accurate when Triglyceride level is < 400 mg/dL. Measurement of Direct LDL cholesterol is recommended when Triglyceride level is > 400 mg/dL
4. NLA-2014 identifies Non HDL Cholesterol(an indicator of all atherogeniclipoproteins such as LDL , VLDL, IDL, Lpa, Chylomicron remnants)along with LDL-cholesterol as co- primary target for cholesterol lowering therapy. Note that major risk factors can modify treatment goals for LDL &Non HDL.
5. Apolipoprotein B is an optional, secondary lipid target for treatment once LDL & Non HDL goals have been achieved
6. Additional testing for Apolipoprotein B, hsCRP,Lp(a) & LP-PLA2 should be considered among patients with moderate risk for ASCVD for risk refinement

Treatment Goals as per Lipid Association of India 2016

RISK CATEGORY	TREATMENT GOAL		CONSIDER THERAPY	
	LDL CHOLESTEROL (LDL-C)(mg/dL)	NON HDL CHLOESTEROL (NON HDL-C) (mg/dL)	LDL CHOLESTEROL (LDL-C)(mg/dL)	NON HDL CHLOESTEROL (NON HDL-C) (mg/dL)
Very High	<50	<80	>=50	>=80
High	<70	<100	>=70	>=100
Moderate	<100	<130	>=100	>=130
Low	<100	<130	>=130*	>=160*

*In low risk patient, consider therapy after an initial non-pharmacological intervention for at least 3 months

Dr Amber Agarwal
MD, Microbiology
Chief of Laboratory
Dr Lal PathLabs Ltd

Dr Dinesh Garg
MD, Pathology
Consultant Pathologist
Dr Lal PathLabs Ltd

Dr Satish K. Saini
MD, Pathology
Chief of Laboratory
Dr Lal PathLabs Ltd

Result/s to follow:
CORTISOL, MORNING, SERUM, HOMOCYSTEINE, QUANTITATIVE, SERUM

S38 - O P JINDAL INSTITUTE OF CANCER & RESEARCH
Dabra B.O

Name	: ABHYUDAY			**Collected**	: 21/4/2021 10:53:00AM
				Received	: 21/4/2021 10:54:06AM
Lab No.	: 157100788	**Age:** 32 Years	**Gender:** Male	**Reported**	: 21/4/2021 1:55:21PM
A/c Status	: P	**Ref By :** Dr. SELF		**Report Status**	: Interim

Test Name	Results	Units	Bio. Ref. Interval

IMPORTANT INSTRUCTIONS

*Test results released pertain to the specimen submitted.*All test results are dependent on the quality of the sample received by the Laboratory. *Laboratory investigations are only a tool to facilitate in arriving at a diagnosis and should be clinically correlated by the Referring Physician .*Sample repeats are accepted on request of Referring Physician within 7 days post reporting.*Report delivery may be delayed due to unforeseen circumstances. Inconvenience is regretted.*Certain tests may require further testing at additional cost for derivation of exact value. Kindly submit request within 72 hours post reporting.*Test results may show interlaboratory variations.*The Courts/Forum at Delhi shall have exclusive jurisdiction in all disputes/claims concerning the test(s) & or results of test(s).*Test results are not valid for medico legal purposes. *Contact customer care Tel No. +91-11-39885050 for all queries related to test results.
(#) Sample drawn from outside source.