



CODE/NAME & ADDRESS: C000096875

SRL PSC NEHRU NAGAR HOME COLLECTION

BLDG NO 68, SHOP NO 3, NR ABHYUDAYA CO-OP
BANK BLDG,NEHRU NAGAR, KURLA EAST,

MUMBAI 400024 7777015481

Test Report Status

ACCESSION NO: **0043XA011014**PATIENT ID: DEVIF15115327
CLIENT PATIENT ID: DEVIF15115327

ABHA NO

Results

AGE/SEX :70 Years Female
DRAWN :30/01/2024 09:15:24
RECEIVED :30/01/2024 14:22:00
REPORTED :30/01/2024 17:58:41

Biological Reference Interval Units

AGILUS 60+ (FEMALE) RESULT PENDING
PROTEIN ELECTROPHORESIS, SERUM RESULT PENDING

Preliminary

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HAEMATOLOGY - CBC						
AGILUS 60+ (FEMALE)						
BLOOD COUNTS, EDTA WHOLE BLOOD						
HEMOGLOBIN (HB)	12.6	12.0 - 15.0	g/dL			
RED BLOOD CELL (RBC) COUNT	4.39	3.80 - 4.80	mil/μL			
WHITE BLOOD CELL (WBC) COUNT	7.41	4 - 10	thou/µL			
PLATELET COUNT	240	150 - 410	thou/µL			
RBC AND PLATELET INDICES						
HEMATOCRIT (PCV)	40.3	36.0 - 46.0	%			
MEAN CORPUSCULAR VOLUME (MCV)	91.8	83.0 - 101.0	fL			
MEAN CORPUSCULAR HEMOGLOBIN (MCH)	28.7	27.0 - 32.0	pg			
MEAN CORPUSCULAR HEMOGLOBIN	31.3 Low	31.5 - 34.5	g/dL			
CONCENTRATION(MCHC) RED CELL DISTRIBUTION WIDTH (RDW)	13.9	11.6 - 14.0	%			
MENTZER INDEX	20.9	> 13 Normal	Index			
MENTZER INDEX	20.9	< 13 s/o Thalassaemia, Advise HPLC	Index			
MEAN PLATELET VOLUME (MPV)	11.4 High	6.80 - 10.90	fL			
WBC DIFFERENTIAL COUNT						
NEUTROPHILS	51	40 - 80	%			
LYMPHOCYTES	40	20 - 40	%			
MONOCYTES	7	2 - 10	%			
EOSINOPHILS	2	1 - 6	%			
BASOPHILS	0	< 1 - 2	%			
ABSOLUTE NEUTROPHIL COUNT	3.78	2.0 - 7.0	thou/µL			
ABSOLUTE LYMPHOCYTE COUNT	2.96	1.0 - 3.0	thou/µL			
ABSOLUTE MONOCYTE COUNT	0.52	0.20 - 1.0	thou/µL			
ABSOLUTE EOSINOPHIL COUNT	0.15	0.02 - 0.50	thou/µL			
ABSOLUTE BASOPHIL COUNT	0 Low	0.02 - 0.10	thou/µL			
NEUTROPHIL LYMPHOCYTE RATIO (NLR)	1.3	0.78 - 3.53	RATIO			







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Interpretation(s)
RBC AND PLATELET INDICES-Mentzer index (MCV/RBC) is an automated cell-counter based calculated screen tool to differentiate cases of Iron deficiency anaemia(>13)

(<13) in patients with microcytic anaemia. This needs to be interpreted in line with clinical correlation and suspicion. Estimation of HbA2 remains the gold standard for diagnosing a case of beta thalassaemia trait.

WBC DIFFERENTIAL COUNT-The optimal threshold of 3.3 for NLR showed a prognostic possibility of clinical symptoms to change from mild to severe in COVID positive

patients. When age = 49.5 years old and NLR = 3.3, 46.1% COVID-19 patients with mild disease might become severe. By contrast, when age < 49.5 years old and NLR < 3.3, COVID-19 patients tend to show mild disease.

(Reference to - The diagnostic and predictive role of NLR, d-NLR and PLR in COVID-19 patients; A.-P. Yang, et al.; International Immunopharmacology 84 (2020) 106504 This ratio element is a calculated parameter and out of NABL scope.

DR. ALVIN ALVA (MD) CONSULTANT PATHOLOGIST

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REF. DOCTOR: SELF **PATIENT NAME: DEVI BHARATHAN**

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BIO CHEMISTRY						
AGILUS 60+ (FEMALE)	DIO CHEMIOTRI					
ALANINE AMINOTRANSFERASE (ALT/SGPT), SERUM						
ALANINE AMINOTRANSFERASE (ALT/SGPT)	28	10 - 40	U/L			
ASPARTATE AMINOTRANSFERASE (AST/SGOT)	-		·			
ASPARTATE AMINOTRANSFERASE (AST/SGOT)	26	15 - 45	U/L			
BILIRUBIN, TOTAL, SERUM						
BILIRUBIN, TOTAL	0.51	0 - 1.0	mg/dL			
KIDNEY FUNCTION TEST						
BLOOD UREA NITROGEN	11	8 - 21	mg/dL			
CREATININE	0.68	0.4 - 1.2	mg/dL			
		Please note change in referange	rence			
BUN/CREAT RATIO	16.18 High	5 - 15				
URIC ACID	5.0	3.0 - 5.9	mg/dL			
TOTAL PROTEIN	7.0	6.3 - 8.6	g/dL			
ALBUMIN	4.3	3.7 - 5.6	g/dL			
GLOBULIN	2.7	2.0 - 3.5	g/dL			
CALCIUM	9.0	8.1 - 10.4	mg/dL			
SODIUM, SERUM	140	135 - 145	mmol/L			
POTASSIUM, SERUM	3.35 Low	3.9 - 5.3	mmol/L			
CHLORIDE, SERUM	103	96 - 109	mmol/L			
GLUCOSE FASTING,FLUORIDE PLASMA						
FBS (FASTING BLOOD SUGAR)	102	Normal < 100 Impaired fasting glucose:1 125 Diabetes mellitus : >= 126 (on more than one occassi (American diabetes associa guidelines 2017)	5 on)			
PHOSPHORUS, SERUM						
DHOSDHODIIS	4.0	28-15	ma/dl			

PHOSPHORUS

4.0 2.8 - 4.5mg/dL

Dr. Geetha Chandrashekhar, MD **Consultant Pathologist**





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ALKALINE PHOSPHATASE, SERUM

ALKALINE PHOSPHATASE 85 40 - 129 IU/L

Just 1

Dr. Geetha Chandrashekhar, MD Consultant Pathologist





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AGILUS 60+ (FEMALE)

LIPID PROFILE WITH CALCULATED LDL

CHOLESTEROL, TOTAL 223 Desirable : < 200 mg/dL

Borderline : 200-239 High : > 240

 TRIGLYCERIDES
 206 High
 < 160</th>
 mg/dL

 HDL CHOLESTEROL
 34 Low
 LOW: < 40</td>
 mg/dL

HIGH: > 60

CHOLESTEROL LDL 148 High Adult levels: mg/dL

Optimal < 100

Near optimal/above optimal:

100-129

Borderline high: 130-159

High: 160-189Very high: = 190

NON HDL CHOLESTEROL **189 High** Desirable : < 130 mg/dL

Above Desirable: 130 -159 Borderline High: 160 - 189

High: 190 - 219Very high: > / = 220

VERY LOW DENSITY LIPOPROTEIN 41.2 High < OR = 30.0 mg/dL

CHOL/HDL RATIO

6.6 High

Low Risk: 3.3 - 4.4

Average Risk: 4.5 - 7.0

Moderate Risk : 7.1 - 11.0

High Risk : > 11.0

LDL/HDL RATIO **4.4 High** 2.5 - 3.5

Interpretation(s)

ALANINE AMINOTRANSFERASE (ALT/SGPT), SERUM-ALT test measures the amount of this enzyme in the blood.ALT is found mainly in the liver, but also in smaller amounts in the kidneys, heart, muscles and pancreas. It is commonly measured as a part of a diagnostic evaluation of hepatocellular injury to determine liver health.AST levels increase during acute hepatitis, sometimes due to a viral infection, ischemia to the liver, chronic hepatitis, obstruction of bile ducts, cirrhosis.

increase during acute hepatitis, sometimes due to a viral infection, ischemia to the liver, chronic hepatitis, obstruction of bile ducts, cirrhosis.

ASPARTATE AMINOTRANSFERASE (AST/SGOT), SERUM-Aminotransferase (AST) is an enzyme found in various parts of the body .AST is found in the liver, heart, skeletal muscle, kidneys, brain, and red blood cells, and it is commonly measured clinically as a marker for liver health. AST levels increase during chronic viral hepatitis, blockage of the bile duct, cirrhosis of the liver, liver cancer, kidney failure, hemolytic anemia, pancreatitis, hemochromatosis. AST levels may also increase after a heart attack or strenging activity.

BILIRUBIN, TOTÁL, SERUM-Bilirubin is a yellowish pigment found in bile and is a breakdown product of normal heme catabolism. Bilirubin is excreted in bile and urine, and elevated levels may give yellow discoloration in jaundice. Elevated levels results from increased bilirubin production (eg, hemolysis and ineffective erythropoiesis), decreased bilirubin excretion (eg, obstruction and hepatitis), and abnormal bilirubin metabolism (eg, hereditary and neonatal jaundice).

An elevated bilirubin level in a newborn may be temporary and resolve itself within a few days to two weeks. However, if the bilirubin level is above a critical threshold or rapidly increases, an investigation of the cause is needed so appropriate treatment can be initiated.

Dr. Geetha Chandrashekhar, MD Consultant Pathologist Page 6 Of 10





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Source: Wallach"s Interpretation of Diagnostic tests, 9th ed2) Wallach"s interpretation of diagnostic tests, 9th ed GLUCOSE FASTING, FLUORIDE PLASMA-TEST DESCRIPTION

Normally, the glucose concentration in extracellular fluid is closely regulated so that a source of energy is readily available to tissues and sothat no glucose is excreted in the urine.

Increased in:Diabetes mellitus, Cushing's syndrome (10 – 15%), chronic pancreatitis (30%). Drugs:corticosteroids, phenytoin, estrogen, thiazides. Decreased in : Pancreatic islet cell disease with increased insulin, insulinoma, adrenocortical insufficiency, hypopituitarism, diffuse liver disease,

malignancy(adrenocortical,stomach,fibrosarcoma),infant of a diabetic mother,enzyme deficiency

diseases(e.g.galactosemia), Drugs-insulin, ethanol, propranolol; sulfonylureas, tolbutamide, and other oral hypoglycemic agents.

NOTE: While random serum glucose levels correlate with home glucose monitoring results (weekly mean capillary glucose values), there is wide fluctuation within individuals.Thus, glycosylated hemoglobin(HbA1c) levels are favored to monitor glycemic control.

High fasting glucose level in comparison to post prandial glucose level may be seen due to effect of Oral Hypoglycaemics & Insulin treatment,Renal Glyosuria,Glycaemic

index & response to food consumed, Alimentary Hypoglycemia, Increased insulin response & sensitivity etc.

ALKALINE PHOSPHATASE, SERUM-Alkaline phosphatase (ALP) is a protein found in almost all body tissues. Tissues with higher amounts of ALP include the liver, bile ducts, and bone. Elevated Alkaline Phosphatase levels are seen in Biliary obstruction, Osteoblastic bone tumors, osteomalacia, hepatitis, Hyperparathyroidism, Leukemia,

disease Rickets, Sarcoidosis etc. Lower-than-normal ALP levels seen in Hypophosphatasia, Malnutrition, Protein deficiency,Wilson'''

disease.

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µIU/mL

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SPECIALISED CHEMISTRY - HORMONE

AGILUS 60+ (FEMALE)

TSH 3RD GENERATION ULTRASENSITIVE, SERUM

TSH (ULTRASENSITIVE)

2.860

Euthyroid: 0.35 - 4.94

Hypothyroid: > 4.94 Hyperthyroid: < 0.35

Pregnant Women (As per American Thyroid Association) 1st Trimester 0.100 - 2.500 2nd Trimester 0.200 - 3.000 3rd Trimester 0.300 - 3.000

Please note change in reference range.

Interpretation(s)

TSH 3RD GENERATION ULTRASENSITIVE, SERUM-TSH stands for thyroid stimulating hormone. This hormone stimulates the Thyroid gland to make thyroid hormones that regulate the way our body uses energy. These also play an important role in regulating weight, temperature, muscle strength, and even your mood. TSH is made in a gland in the brain called the pituitary. When thyroid levels in our body are low, the pituitary gland makes more TSH. When thyroid levels are high, the pituitary gland makes less TSH. TSH levels that are too high or too low can indicate that thyroid is not working correctly.

There is a circadian rhythm of TSH secretion, with peak values at the onset of sleep and nadir concentrations during the afternoon hours. Peak and nadir concentrations differ by approximately +/- 50%. The effect on circulating T4 and T3 concentrations is not significant because of the large size of the extrathyroidal T4 pool. In healthy subjects there is no significant impact of body weight, physical training, body habitus, posture, immobilization, mild to moderate exercise, or ambulatory status on thyroid function, and no significant geographic environmental variation. Nutrition also has a minimal impact except for variation in iodine intake. Subthreshold concentrations of iodine intake are associated with increased TSH secretion, goiter, increased thyroid iodine uptake, decreased T4 production, an increased T3/T4 secretion ratio, and an increased ratio of circulating T3/T4 concentrations. Excessive iodine intake can block thyroid hormone biosynthesis by inhibiting the enzymes involved in the biosynthetic process, resulting in reduced T4 secretion, increased T5H concentrations, goiter, and hypothyroidism if the iodine excess is chronic.

High TSH levels can mean your thyroid is not making enough thyroid hormones, a condition called hypothyroidism. **Low TSH levels** can mean your thyroid is making too much of the hormones, a condition called hyperthyroidism. A TSH test does not explain why TSH levels are too high or too low.

In cases of Subclinical hypothyroidism, a single test can be misleading, so a second test is usually done 2 or 3 months later. In both tests, the blood is taken at the same time of day because TSH levels can fluctuate over the course of 24 hours. Subclinical hypothyroidism is diagnosed when both TSH readings are high but the thyroid hormone thyroxine is still within the normal range.

Being severely overweight and certain medications can also increase TSH. TSH levels are likely to fluctuate more during pregnancy.

TSH values may be transiently altered because of Non thyroidal Illness like severe infections, liver disease, renal failure, heart failure, severe burns, trauma, surgery etc. TSH levels that are slightly or only moderately elevated do not necessarily need to be treated. Some people who have high TSH levels never even develop symptoms.

It is also very common for TSH levels to return to normal in children and teenagers.

REF: 1. TIETZ Fundamentals of Clinical chemistry 2Guidlines of the American Thyroid association during pregnancy and Postpartum, 2011.

There's reduction in both the lower and the upper limit of maternal TSH relative to the non-pregnant TSH reference range. This is because of elevated levels of serum hCG that directly stimulates the TSH receptor, thereby increasing thyroid hormone production. The largest decrease in serum TSH is observed during the first trimester. Thereafter, serum TSH and its reference range gradually increases in the second and third trimesters, but nonetheless remains lower than in non-pregnant women.

DR. SONAL PRIYA CONSULTANT PATHOLOGIST

Dr. Geetha Chandrashekhar, MD Consultant Pathologist





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SPECIALISED CHEMISTRY - VITAMIN

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VITAMIN B12(CYANOCOBALAMINE), SERUM

VITAMIN B12 301 187 - 883 pg/mL

PHYSICAL EXAMINATION, URINE

LYELLOW COLOR **APPEARANCE CLEAR**

CHEMICAL EXAMINATION, URINE

5.0 4.6 - 8.0SPECIFIC GRAVITY 1.003 - 1.035 1.004 **PROTEIN** NOT DETECTED NOT DETECTED **GLUCOSE NOT DETECTED** NOT DETECTED **KETONES** NOT DETECTED NOT DETECTED **BLOOD** NOT DETECTED **NOT DETECTED** NOT DETECTED **BILIRUBIN** NOT DETECTED UROBILINOGEN NORMAL NORMAL NITRITE NOT DETECTED NOT DETECTED NOT DETECTED LEUKOCYTE ESTERASE NOT DETECTED

MICROSCOPIC EXAMINATION, URINE

NOT DETECTED /HPF NOT DETECTED RED BLOOD CELLS /HPF PUS CELL (WBC'S) 0-1 0-5 /HPF **EPITHELIAL CELLS** 0-5 0 - 1

NOT DETECTED **CASTS** NOT DETECTED **CRYSTALS**

BACTERIA NOT DETECTED NOT DETECTED YEAST NOT DETECTED NOT DETECTED

REMARKS Chemical Examination done by Automated Dipstik Method

Microscopic Examination done by Automated Flow Cytometry

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Interpretation(s)

VITAMIN B12(CYANOCOBALAMINE), SERUM-Test description

1.Measures the amount of Vitamin B12/ Cyanocobalamin or Methyl cobalamin in blood.2. Done in Anemic conditions like Megaloblastic anemia, pernicious anemia, dietary folate deficiencies, 3. Workup of neuropathies especially due to diabetes. 4. Nerve health and it is monitored in treatment of nerve damage. 5. Important vitamin for women of childbearing age and for older people.

1.Part of water-soluble B complex of vitamins. 2. It is essential in DNA synthesis, hematopoiesis & CNS integrity.3.Source for B12 is dietary foods like milk, yoghurt, eggs, meat, fortified cereals, bread. 4. Absorption depends on the HCl secreted by the stomach and occurs in intestines. 5. It is part of enterohepatic circulation, hence excreted in feces(approx. 0.1% per day)

Test interpretation

Higher than normal levels are in patients on Vitamin supplements or patients with COPD, CRF, Diabetes, Liver cell damage, Obesity, Polycythemia.

Decreased levels seen in

Inflammatory bowel disease, Pernicious anemia - genetic deficiency of intrinsic factor - necessary for Vit B12 absorption, Strict vegetarianslead to sub-clinical B12 deficiency- high among elderly patients, Malabsorption due to gastrectomy, smoking, pregnancy, multiple myeloma & hemodialysis, Alcohol & drugs like amino salicylic acid, anticonvulsants, cholestyramine, cimetidine, Hyperthyroidism (High levels of thyroid), Seen in mothers of children with (NTD) Neural tube defects- hence fortification and supplements are advised in expecting mothers

Recommendations-1.To prevent biotin interference the patient should be atleast 8 hours fasting before submitting the sample. 2. Vit B12 and Folic acid evaluated together

in macrocytic anemias to avoid methyl folate trap. Carmel's composite criteria for inadequate Vit B12 status: Serum vitamin B12 < 148 pmol/L, or 148-258 pmol/L and MMA > 0.30µmol/L, or tHcy > 13 nmol/L (females) and >15 nmol/L (males). **Associated Test**-Holo-TC: Marker of vitamin B12 status -specificity and sensitivity better than serum vitamin B12, hence recommended in boderline and deficient cases for

confirmation.

References-O-Leary F, Samman S. Vitamin B12 in health and disease. Nutrients. 2010 Mar;2(3):299-316.

End Of Report

Please visit www.srlworld.com for related Test Information for this accession

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