COMPLETE BLOOD COUNT (CBC with E.S.R).

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:36	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
HEMOGLOBIN, Blood(SLS Hemoglobin)	14.3	13.00 - 17.00	g/dl
PACKED CELL VOLUME, Blood(Impedence)	43.1	40 - 50	%
TLC, Blood (Flow cytometry)	4340.00	4000 - 11000	/cumm
D.L.C., Blood (Flow Cytometry)			
POLYMORPHS	**38.00**	44.00 - 68.00	%
LYMPHOCYTES	**53.0**	25.00 - 44.00	%
EOSINOPHILS	2.0	0.00 - 4.00	%
MONOCYTES	7.00	0.00 - 7.00	%
ABSOLUTE NEUTROPHIL COUNT(Blood, Calculated).	**1649.20**	2000 - 7000	/Cu mm
ABSOLUTE EOSINOPHIL COUNT BLOOD, (Calculated)	86.80	20 - 500	/Cu mm
PLATELET COUNT, Blood (Impedence)	245.00	150 - 410	1000/Cumm
E.S.R, Blood(Capillary Photometry)	2.00	0.00 - 15.00	1st hour
R B C COUNT, Blood (Impedence)	4.52	4.5 - 5.5	10^12/L
MCV, Blood(Calculated)	95.35	83 - 101	fl
MCH, Blood(Calculated)	31.64	27.00 - 32.60	Pg
MCHC, Blood(Calculated)	33.18	31.50 - 34.50	gm/dl
RDW, Blood (Calculated)	12.7	11.6 - 14.0	%
COMMENTS ON PERIPHERAL SMEAR : (Microscopy, Leishman stain)	The red blood cells are normocytic and normochromic. The white cell count is normal with reactive lymphocytosis. The platelets are adequate.		

*Test performed by SYSMEX XN-550.
Absolute Neutrophil Count (ANC) <1000 - Markedly increased susceptibility of infectious diseases.
- Absolute Neutrophil Count (ANC) <500 control of endogenous microbial flora impaired.
- Absolute Neutrophil Count (ANC) <200 absent inflammatory processes.
Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

REPORT

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:36	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
FASTING GLUCOSE, Plasma(Hexokinase)	95.0	60 - 100	mg/dl

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Meenu Beri

Consultant Pathologist / Microbiologist

REPORT

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:57	**Age/Sex**	: 29 Years	MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:	
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA			

Investigation	Result	Biological Reference Interval	Units
BLOOD GLUCOSE PP,Plasma,(Hexokinase)	96.0	60.00 - 140.00	mg/dl

Post 75 gms oral glucose : <140 = Normal, 140- 199 = Impaired glucose tolerance, 200 or more = Diabetes.

Conditions in which the post prandial sugar is less than the fasting sugar:

---

1). Excessive increase in insulin. (2). Rapid gastric emptying. (3). Brisk glucose absorption.

The probable causes are :

---

1). Early type II diabetes. (2). Drugs like Salicylates, Beta Blockers, Pentamidine, Alcohol etc.(3). Foods with higher glycaemic index (4). Exercise in between samples. (5). Family history of diabetes. (6). Partial or total gastrectomy.

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

HbA1c

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:36	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Units
GLYCOSYLATED HEMOGLOBIN (HbA1c) Immunoturbidimetry	5.5	%

REFERENCE RANGE:

4.00 - 5.60 %	Normal
5.70 - 6.40 %	Prediabetes (The values should be co-related with Glucose levels)
6.10 - 7.00 %	HbA1C indicates very good control in diabetes
7.10 - 8.00 %	HbA1C indicates adequate control in diabetes
8.10 - 9.00 %	HbA1C indicates suboptimal control in diabetes
>9.00%	HbA1C indicates poor control in diabetes

HbA1c (%)	Average Glucose mg/dl
5	97
6	126
7	154
8	183
9	212
10	240
11	269
12	298

Note :

An estimated average glucose (eAG) can be calculated from the HbA1c values. The A1c test is also used to monitor the glucose control of diabetics over time. This helps to minimize the complications caused by chronically elevated glucose levels, such as progressive damage to kidneys, eyes, cardiovascular system, and nerves.

The A1c test, however, should not be used for screening for cystic fibrosis-related diabetes, people who have had recent severe bleeding or blood transfusions, those with chronic kidney or liver disease, or people with blood disorders such as iron-deficiency anemia, vitamin B12 deficiency anemia, and some Hemoglobin variants (e.g., patients with sickle cell disease or Thalassemia).

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

REPORT

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:34	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
CRP-HS, Serum(Immunoturbidimetry)	**1.5**	0.00 - 1.00	mg/L

CVD Risk Assessment

Low : 0.00 - 1.00 mg/L
Average : 1.00 - 3.00 mg/L
High : More Than 3.00 mg/L

Reference Range For :-

Neonates 0.10 - 4.10 mg/L
Children 0.10 - 2.80 mg/L
Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

LIPID PROFILE

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:36	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
CHOLESTROL, SERUM (Enz. Colorimetry)	163.9	80.00 - 200.00	mg/dl
HDL CHOLESTEROL (Enz.Colorimetry)	58.60	30.00 - 60.00	mg/dl
TRIGLYCERIDES, SERUM (Enz.Colorimetry)	69.05	40.00 - 150.00	mg/dl
VLDL CHOLESTEROL (Calculated)	**13.81**	24.00 - 45.00	mg/dl
LDL CHOLESTEROL (Enz.Colorimetry)	91.49	30.00 - 100.00	mg/dl
LDL / HDL RATIO (Calculated)	1.56	0.00 - 3.00	
CHOLESTEROL / HDL RATIO(Calculated)	2.80	0.00 - 4.00	

INTERPRETATION :-
Desirable : Less than 200 mg/dl
Borderline High Risk : 200 to 239 mg/dl
High Risk : 240 mg/dl and over, on repeated values
Optimal Level for Cardiac Patients : Less than 200 mg/dl
TRIGLYCERIDES REFERECE RANGE
> Normal - Less than 150 mg/dL,
> Borderline high - 150 to 199 mg/dL
> High - 200 to 499 mg/dL
> Very high - 500 mg/dL or above
HDL-C : High HDL has generally been found to be protective, decreasing the risk of coronary Artery disease (CAD) in most people. However, some recent studies have shown that in some people with high HDL, the HDL is not protective and may, in fact result in higher risk for CAD than in people with normal HDL levels. In one study it was shown that people with CAD and high HDL had underlying genetic anomalies in enzymes important in lipid turnover. Another study showed that high levels of abnormally large HDL particles were associated with increased risk of CAD. Factors that elevate HDL concentrations include chronic alcoholism, treatment with oral estrogen replacement therapy, extensive aerobic exercise, and treatment with niacin, statins, or fibrates. Smoking reduces levels of HDL cholesterol, while quitting smoking leads to a rise in the plasma HDL level.
LDL Reference Range : Levels in terms of risk for coronary heart disease :
Adult levels:
Optimal <100 mg/dL
Near Optimal/ above optimal 100 -129 mg/dL
Borderline high 130 - 159 mg/dL
High 160 - 189 mg/dL
Very High >=190 mg/dL
Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

Dr. Angeli Misra MD(Path)Lab, Director HOD, Histopathology
Dr. Asha Bhatnagar MBBS, Lab Director, Quality Incharge
Dr. Sagar Tapas MD (Path)HOD, Biochemistry & Immunoassay
Dr. Meenu Beri MD (Path) HOD, Haematology, Cytopathology & Clinical Path
Dr. Dhruti Manek MBBS, MD (Path)
Dr. Jayant Balani MD (Micro) HOD Microbiology

REPORT

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:36	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
IRON, Serum(Ferrozine)	95.1	33.00 - 193.00	ug/dl
UIBC Serum(Ferrozine)	201.3	125.00 - 345.00	ug/dl
TIBC.(Calculated)	296.40	250.00 - 450.00	ug/dl

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

L.F.T WITH G.G.T.P

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:36	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
BILIRUBIN (TOTAL), Serum(Diazo)	0.7	0.00 - 1.20	mg/dl
BILIRUBIN (DIRECT), Serum(Diazo)	**0.33**	0 - 0.30	mg/dl
BILIRUBIN (INDIRECT), Serum(Calculated)	0.37	0.00 - 0.70	mg/dl
TOTAL PROTEINS Serum(Biuret)	7.1	6.40 - 8.30	gms/dl
ALBUMIN, Serum(BCG)	4.9	3.50 - 5.20	gms/dl
GLOBULIN (Calculated)	2.20	2.00 - 3.50	gms/dl
A:G RATIO (Calculated)	**2.23**	1.00 - 2.00	
ALKALINE PHOSPHATASE,Serum(Colorimetry)	54.2	40.00 - 130.00	U/L
SGOT, Serum(IFCC)	23.2	1.00 - 40.00	U/l
SGPT, Serum(IFCC)	25.3	2.00 - 41.00	U/l
GGTP, Serum(Enz.Colorimetry)	28.1	8.00 - 61.00	U/L

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

REPORT

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:36	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
FERRITIN, Serum,(CLIA)	108.6	23.90 - 336.20	ng/ml

Summary and Explanation of the Test:

Ferritin is a compound composed of iron molecules bound to apoferritin, a protein shell. Stored iron represents about 25% of total iron in the body, and most of this iron is stored as ferritin.Ferritin is found in many body cells, but especially those in the liver, spleen, bone marrow, and in reticuloendothelial cells.Ferritin plays a significant role in the absorption, storage, and release of iron. As the storage form of iron, ferritin remains in the body tissues until it is needed for erythropoiesis. When needed, the iron molecules are released from the apoferritin shell and bind to transferrin, the circulating plasma protein that transports iron to the erythropoietic cells.Although dietary iron is poorly absorbed, the body conserves its iron stores carefully, reabsorbing most of the iron released from the breakdown of red blood cells. As a result, the body normally loses only 1 to 2 mg of iron per day, which is generally restored by the iron absorbed in the small intestine from dietary sources.Ferritin is found in serum in low concentrations and is directly proportional to the body~s iron stores.Serum ferritin concentration, when analyzed with other factors such as serum iron, iron-binding capacity, and tissue iron stores, is valuable in the diagnosis of iron-deficiency anemias, anemias of chronic infection, and conditions such as thalassemia and hemochromatosis that are associated with iron overload. Measurement of serum ferritin is particularly valuable in distinguishing iron-deficiency anemias caused by low iron stores from those resulting from inadequate iron utilization.

Limitations:

Serum ferritin values are elevated in the presence of the following conditions and do not reflect actual body iron stores:

- inflammation
- significant tissue destruction
- liver disease
- malignancies such as acute leukemia and Hodgkin,s disease
- therapy with iron supplements

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

KIDNEY FUNCTION TEST (KFT)

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:36	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
UREA Serum(Urease)	16.04	12.00 - 45.00	mg/dl
UREA NITROGEN(Calculated)	7.50	6.00 - 20.00	mg/dl
CREATININE SERUM(Jaffe)	0.76	0.70 - 1.20	mg/dl
URIC ACID, Serum(Colorimetry)	7.0	3.40 - 7.00	mg/dl
CALCIUM, Serum(BAPTA)	9.46	8.60 - 10.00	mg/dl
PHOSPHATE, Serum(Phosphomolybdate)	4.2	2.50 - 4.80	mg/dl
SODIUM, Serum(ISE Indirect)	139.8	130.00 - 149.00	meq/L
POTASSIUM, Serum(ISE Indirect)	5.00	3.50 - 5.00	meq/L
CHLORIDE, Serum(ISE Indirect)	103.2	97.0 - 107.0	meq/L

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

REPORT

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020	13:35	**Age/Sex**	: 29 Years	MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020		**Delivery**	:	
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
MAGNESIUM, Serum(CPZ III)	2.14	1.6 - 2.60	mg/dl

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

FOLATE.

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:35	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
FOLATE, Serum,(CLIA)	10.0	4.50 - 32.20	ng/ml

Summary and Explanation of the Test

Folates are compounds of pteroylglutamic acid (PGA) that function as coenzymes. Folate, with vitamin B12, is essential for DNA synthesis, which is required for normal red blood cell maturation. Humans obtain folate from dietary sources including fruits, green and leafy vegetables, yeast, and organ meats. Folate is absorbed through the small intestine and stored in the liver Low folate intake, malabsorption as a result of gastrointestinal diseases, pregnancy, and drugs such as phenytoin are causes of folate deficiency. Folate deficiency is also associated with chronic alcoholism. Folate and vitamin B12 deficiency impair DNA synthesis, causing macrocytic anemias. These anemias are characterized by abnormal maturation of red blood cell precursors in the bone marrow, the presence of megaloblasts, and decreased red blood cell survival. Since both folate and vitamin B12 deficiency can cause macrocytic anemia, appropriate treatment depends on the differential diagnosis of the deficiency. Serum folate measurement provides an early index of folate status. However, folate is much more concentrated in red blood cells than in serum so the red blood cell folate measurement more closely reflects tissue stores.4 Red blood cell folate concentration is considered the most reliable indicator of folate status.

Limitations

Hemolysis significantly increases folate values due to the high folate concentrations in red blood cells. Methotrexate and leucovorin interfere with folate measurement because these drugs cross-react with folate binding proteins.

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

THYROID PROFILE

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:36	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
FT3 Serum, (CLIA)	4.53	3.80 - 6.00	pmol/L
FREE T4, Serum,(CLIA)	12.19	7.00 - 15.96	pmol/l
TSH, Serum,(CLIA)	0.744	0.45 - 5.33	uIU/ml

*Pregnancy

	Units	First Trimester	Second Timester	Third Trimester
Free T4	pmol/L	6.00 - 16.28	5.19 - 13.86	5.77 - 15.79

* PHYSIOLOGICAL ALTERATIONS IN THYROID VALUES
* REFERENCE RANGE :-

Pregnancy

	Units	First Trimester	Second Timester	Third Trimester
TSH	µIU/mL	0.05 - 3.70	0.31 - 4.35	0.41 - 5.18

*Referenge range has been changed due to change in testing platform.

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

Dr. Angeli Misra MD(Path)Lab, Director HOD, Histopathology
Dr. Asha Bhatnagar MBBS, Lab Director, Quality Incharge
Dr. Sagar Tapas MD (Path)HOD, Biochemistry & Immunoassay
Dr. Meenu Beri MD (Path) HOD, Haematology, Cytopathology & Clinical Path
Dr. Dhruti Manek MBBS, MD (Path)
Dr. Jayant Balani MD (Micro) HOD Microbiology

REPORT

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:35	**Age/Sex**	: 29 Years	MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:	
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA			

Investigation	Result	Biological Reference Interval	Units
INSULIN FASTING, Serum,(CLIA)	9.40	2.60 - 24.90	uU/ml
Comments:			
INSULIN PP, Serum,(CLIA)	11.83	4.00 - 56.00	mU/L

Summary and Explanation of the Test

Insulin is a protein hormone that is synthesized, stored, and secreted by the beta cells located in the islets of Langerhans in the pancreas. Insulin is responsible for regulating glucose concentrations in the blood. Initially in the beta cells, insulin exists as a large molecule (MW ~12000) called preproinsulin.

Insulin is released in response to the presence of glucose in the blood typically after the ingestion of a meal. A normal healthy individual produces 40 to 50 units of insulin each day. The half-life of insulin in serum or plasma is 5 to 10 minutes. Approximately 50% of the insulin released into the portal circulation is cleared by the liver. Insulin binds to receptor cells located on cell membranes of target tissues. The target tissues are primarily liver, fat, and muscle tissue. Insulin lowers glucose concentrations in the blood by stimulating glycogenolysis in the liver, triglyceride synthesis in adipose tissue, and protein synthesis in muscle. Recent studies have indicated that insulin and insulin receptors may play a role in learning and memory. The interruption of insulin production and insulin receptor activity may lead to deficits in learning and memory formation. Increased insulin production is common in the development of cancers. If insulin production is not stimulated, blood glucose levels will not be lowered and hyperglycemia results. Fasting hyperglycemia supports the diagnosis of diabetes mellitus.

There are two types of diabetes mellitus: type I or insulin-dependent diabetes mellitus (IDDM) and type II or non-insulin-dependent diabetes mellitus (NIDDM). Insulin therapy is used for insulin-dependent diabetes mellitus (IDDM) patients and many non-insulin-dependent diabetes mellitus (NIDDM) patients. In type I diabetes (IDDM) there is a deficiency of insulin. This can be the result of autoimmune destruction of the beta cells or the presence of autoantibodies to insulin. Many factors can play a role in the development of Type II diabetes (NIDDM). Type II diabetes (NIDDM) can result if there is a decreased biological response to circulating insulin (insulin resistance) or if there is decreased or diminished insulin secretion due to beta cell failure. Insulin levels are not typically used in the diagnosis or management of diabetic patients. Insulin levels can be useful in evaluating patients with fasting hypoglycemia, in determining insulin resistance in the general population, and in assessing abnormalities in beta cell secretory function. Insulin levels are used in studying the pathophysiology of diabetes.

Limitations

Heterophilic antibodies in human serum can react with reagent immunoglobulins, interfering with in vitro immunoassays. Patients routinely exposed to animals or to animal serum roducts can be prone to this interference and anomalous values may be observed. Additional information may be required for diagnosis. Insulin autoantibodies in human serum may interfere and cause discordant results.

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

Dr. Angeli Misra MD(Path)Lab, Director HOD, Histopathology
Dr. Asha Bhatnagar MBBS, Lab Director, Quality Incharge
Dr. Sagar Tapas MD (Path)HOD, Biochemistry & Immunoassay
Dr. Meenu Beri MD (Path) HOD, Haematology, Cytopathology & Clinical Path
Dr. Dhruti Manek MBBS, MD (Path)
Dr. Jayant Balani MD (Micro) HOD Microbiology

VITAMIN B12.

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:36	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
VITAMIN B12, Serum,(ECLIA)	240.70		pg/ml

Category Range (pg/mL)	Range (pg/mL)
Normal	197-771
Deficient	<197.00

Summary and Explanation of the Test

Vitamin B12, or cyanocobalamin, is a complex corrinoid compound containing four pyrrole rings that surround a single cobalt atom. Humans obtain vitamin B12 exclusively from animal dietary sources, such as meat, eggs, and milk. Vitamin B12 requires intrinsic factor, a protein secreted by the parietal cells in the gastric mucosa, for absorption. Vitamin B12 and intrinsic factor form a complex that attaches to receptors in the ileal mucosa, where proteins known as trans-cobalamins transport the vitamin B12 from the mucosal cells to the blood and tissues. Most vitamin B12 is stored in the liver as well as in the bone marrow and other tissues. Vitamin B12 and folate are critical to normal DNA synthesis, which in turn affects erythrocyte maturation. Vitamin B12 is also necessary for myelin sheath formation and maintenance. The body uses its B12 stores very economically, reabsorbing vitamin B12 from the ileum and returning it to the liver so that very little is excreted.

Clinical and laboratory findings for B12 deficiency include neurological abnormalities, decreased serum B12 levels, and increased excretion of methylmalonic acid. The impaired DNA synthesis associated with vitamin B12 deficiency causes macrocytic anemias. These anemias are characterized by abnormal maturation of erythrocyte precursors in the bone marrow, which results in the presence of megaloblasts and in decreased erythrocyte survival. Pernicious anemia is a macrocytic anemia caused by vitamin B12 deficiency that is due to lack of intrinsic factor. Low vitamin B12 intake, gastrectomy, diseases of the small intestine, malabsorption, and trans-cobalamin deficiency can also cause vitamin B12 deficiency.

Limitations

---

* kindly Correlate Clinically

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

Dr. Angeli Misra MD(Path)Lab, Director HOD, Histopathology
Dr. Asha Bhatnagar MBBS, Lab Director, Quality Incharge
Dr. Sagar Tapas MD (Path)HOD, Biochemistry & Immunoassay
Dr. Meenu Beri MD (Path) HOD, Haematology, Cytopathology & Clinical Path
Dr. Dhruti Manek MBBS, MD (Path)
Dr. Jayant Balani MD (Micro) HOD Microbiology

VITAMIN D, 25 - HYDROXY

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:36	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
VITAMIN D, 25-HYDROXY, Serum,(CLIA)	85.7	75.00 - 250.00	nmol/L

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

Dr. Angeli Misra MD(Path)Lab, Director HOD, Histopathology
Dr. Asha Bhatnagar MBBS, Lab Director, Quality Incharge
Dr. Sagar Tapas MD (Path)HOD, Biochemistry & Immunoassay
Dr. Meenu Beri MD (Path) HOD, Haematology, Cytopathology & Clinical Path
Dr. Dhruti Manek MBBS, MD (Path)
Dr. Jayant Balani MD (Micro) HOD Microbiology

Lifeline LABORATORY

REPORT

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:34	**Age/Sex**	: 29 Years	MALE	
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:		
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
HOMOCYSTEINE, Serum (CLIA)	10.8	0.00 - 15.00	umol/L

Interpretation

Group	Folate supplemented	Nonsupplemented
Fasting/basal tHcy, µmol/L		
Pregnancy	8	10
Children < 15 years	8	10
Adults 15-65 years	12	15
Elderly > 65 years	16	20

Summary

Homocysteine (Hcy) is a thiol-containing amino acid produced by the intracellular demethylation of methionine. Total homocysteine (tHcy) represents the sum of all forms of Hcy including forms of oxidized, proteinbound and free. Elevated levels of tHcy has emerged as an important risk factor in the assessment of cardiovascular disease. Excess Hcy in the blood stream may cause injuries to arterial vessels due to its irritant nature, and result in inflammation and plaque formation, which may eventually cause blockage of blood flow to the heart. Elevated tHcy levels are caused by four major factors, including:
1. Genetic deficiencies in enzymes involved in Hcy metabolism such as cystathionine beta-synthase (CBS), methionine synthase (MS), and methylenetetrahydrofolate reductase (MTHFR);
2. Nutritional deficiency in B vitamins such as B6, B12 and folate;
3. Renal failure for effective amino acid clearance;
4. Drug interactions, such as with nitric oxide, methotrexate and phenytoin that interfere with Hcy metabolism. Elevated levels of tHcy are also linked with Alzheimer disease, Neuropsychiatric diseases and Osteoporosis.
Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

URINE ROUTINE EXAMINATION

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:36	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval
PHYSICAL EXAMINATION (Manual)		
COLOUR	AMBER	YELLOW
TRANSPARENCY	CLEAR	CLEAR
pH (Reagent strip, methyl red phenophthalein and bromothymol blue)	5.00	4.6 - 8.0
SPECIFIC GRAVITY (Reagent strip (bromothymol blue)	1.020	1.001 - 1.035
2. CHEMICAL EXAMINATION		
SUGAR (Reagent Strip, GOD/POD)	NEGATIVE	NEGATIVE
PROTEIN Reagent Strip (protein error of a pH indicator)	NEGATIVE	NEGATIVE
KETONE BODIES Reagent Strip (legals test)	NEGATIVE	NEGATIVE
NITRITE, Reagent Strip (Griess test)	NEGATIVE	NEGATIVE
BLOOD, Reagent Strip (peroxidase method)	NEGATIVE	NEGATIVE
3. MICROSCOPIC EXAMINATION (Manual)		
WBC/HPF	2-3/HPF	<5/HPF
RBC/HPF	NIL	NIL
EPITHELIAL/HPF	1-2/HPF	<15/HPF
CASTS	NIL	
CRYSTALS	NIL	
BACTERIA	NIL	NIL
YEAST CELLS	NIL	NIL

*Test Performed on Roche cobas u411, from urine.

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

IgE

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:35	**Age/Sex**	: 29 Years	MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:	
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA			

Investigation	Result	Biological Reference Interval	Units
IgE SERUM, (ECLIA)	74.07	0.00 - 100.00	IU/mL

COMMENTS

Immunoglobulin E (IgE) : It most significant parameter for allergic information. The level of IgE is low during the first year of life and it gradually increases with age and reaches adult levels after 10 years. IgE is a major mediator of allergic response, therefore its measurement can provide useful information for differential diagnosis of atopic and non-atopic disease.

Increased Levels of IgE seen in: 1). Atopic/Non-atopic disorders 2). Hyper IgE syndrome 3). Parasitic infections 4). Pulmonary Aspergillosis 5). Immunodeficiency states 6). Autoimmune diseases.

Uses:

- To evaluate children with strong family history of allergies and adults having allergic respiratory disease, helps establish the diagnosis and define the allergens.
- To confirm sensitivity to foods in patients with Anaphylactic sensitivity or with Asthma, Angioedema or Cutaneous disease.
- To evaluate sensitivity to insect venom allergens clinically.
- To confirm the presence of IgE antibodies to certain occupational allergens.

Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist

PROLACTIN

Reference No.	: 20011582	**Reg. Date**	: 13-Jan-2020 13:35	**Age/Sex**	: 29 Years MALE
Patient	: MR. SHIVA VIG	**Print Date**	: 13-Jan-2020	**Delivery**	:
Ref. Doctor	: KUBBA	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
PROLACTIN SERUM, by ECLIA Method	15.10	4.04 - 15.20	ng/ml

Comments

Prolactin is synthesized in the anterior pituitary and is secreted in episodes. The target organ for prolactin is the mammary gland, the development and differentiation of which is promoted by this hormone. High concentrations of prolactin have an inhibiting action on steroidogenesis of the ovaries and on hypophyseal gonadotropin production and secretion. During pregnancy the concentration of prolactin rises under the influence of elevated estrogen and progesterone production. The stimulating action of prolactin on the mammary gland leads post partum to lactation. Hyperprolactinemia (in men and women) is the main cause of fertility disorders. The determination of prolactin is utilized in the diagnosis of anovular cycles, hyperprolactinemic amenorrhea and galactorrhea, gynecomastia and azoo-spermia.

Note

Prolactin Value may be high in early morning samples or soon after waking up. Pooled sample is advised for an accurate estimation of Prolactin Levels.
Comments:

*** END OF REPORT ***

+91-11-49575700
+91-8130415737
lifelinelab@lifelinelaboratory.com
www.lifelinelaboratory.com
H-11, Green Park Extension,
New Delhi - 110 016

Consultant Pathologist / Microbiologist