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

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020 01:	**Age/Sex**	: 55 Years FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020	**Delivery**	:
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
HEMOGLOBIN, Blood(SLS Hemoglobin)	**10.1**	12.00 - 15.00	g/dl
PACKED CELL VOLUME, Blood(Impedence)	**31.30**	36 - 46	%
TLC, Blood (Flow cytometry)	7670.00	4000 - 11000	/cumm
D.L.C., Blood (Flow Cytometry)			
POLYMORPHS	61.0	44.00 - 68.00	%
LYMPHOCYTES	28.00	25.00 - 44.00	%
EOSINOPHILS	4.0	0.00 - 4.00	%
MONOCYTES	7.00	0.00 - 7.00	%
ABSOLUTE NEUTROPHIL COUNT(Blood, Calculated).	4678.70	2000 - 7000	/Cu mm
ABSOLUTE EOSINOPHIL COUNT BLOOD, (Calculated)	306.80	20 - 500	/Cu mm
PLATELET COUNT, Blood (Impedence)	387.00	150 - 410	1000/Cumm
E.S.R, Blood(Capillary Photometry)	18.00	0.00 - 20.00	1st hour
R B C COUNT, Blood (Impedence)	3.80	3.8 - 4.8	10^12/L
MCV, Blood(Calculated)	**82.37**	83 - 101	fl
MCH, Blood(Calculated)	**26.58**	27.00 - 32.60	Pg
MCHC, Blood(Calculated)	32.27	31.50 - 34.50	gm/dl
RDW, Blood (Calculated)	**14.6**	11.6 - 14.0	%

COMMENTS ON PERIPHERAL SMEAR : (Microscopy, Leishman stain)
The red blood cells show hypochromia anisocytosis & microcytosis. The white cells are normal. 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 ***

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REPORT

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	01:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
FASTING GLUCOSE, Plasma(Hexokinase)	**105.3**	60 - 100	mg/dl

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HbA1c

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	01:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Units
GLYCOSYLATED HEMOGLOBIN (HbA1c) Immunoturbidimetry	6	%

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).

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CORTISOL

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	00:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
CORTISOL (AM), Serum,(CLIA) (Sample collected at 7-9 am)	10.92	4.30 - 22.40	ug/dl

Summary and Explanation of the Test:

Cortisol is the primary glucocorticoid hormone synthesized and secreted by the adrenal cortex.Cortisol is essential for life, regulating carbohydrate, protein, and lipid metabolism,maintaining normal blood pressure, and inhibiting allergic and inflammatory reactions.Cortisol is synthesized and secreted by the cortex of the adrenal gland under the direction of adrenocorticotropic hormone (ACTH). ACTH is secreted in a circadian pattern by the anterior lobe of the pituitary gland in response to corticotropin releasing hormone (CRH) secretion by the hypothalamus.Circulating cortisol levels follow a diurnal pattern in healthy individuals. Levels are highest in the morning after waking and lowest in the evening. Disorders of the hypothalamic-pituitaryadrenal axis override this diurnal pattern. Decreased cortisol levels are induced by either primary or secondary adrenal insufficiency. Addison,s disease is caused by primary adrenal insufficiency due to metabolic errors or destruction of the adrenal cortex. Secondary adrenal insufficiency is caused by pituitary destruction or failure, resulting in loss of ACTH stimulation of the adrenal gland. Cushing,s syndrome is caused by increased levels of cortisol due to either primary or secondary adrenal hyperfunction.4 Causes of primary adrenal hyperfunction are adrenal tumors and nodular adrenal hyperplasia. Secondary adrenal hyperfunction is caused by pituitary overproduction of ACTH or ectopic production of ACTH by a tumor. Increased cortisol levels are induced by pregnancy and by stress due to depression,trauma, surgery, hypoglycemia, alcoholism, uncontrolled diabetes, and starvation. Due to the diurnal pattern of secretion, an assessment of serum cortisol levels at a single timepoint is of little diagnostic value.

Limitations:

Circulating cortisol results from patients receiving Prednisolone or Prednisone (which is converted to Prednisolone in vivo) therapy may be falsely elevated. Heterophilic antibodies in human serum can react with reagent immunoglobulins, interfering with in vitro immunoassays.Patients routinely exposed to animals or to animal serum products can be prone to this interference and anomalous values may be observed.

Comments:

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Lifeline LABORATORY

REPORT

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	00:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 04-Feb-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
CANDIDA ALBICANS ANTIBODY IgA	11.63	Negative <9.0 Borderline 9.0 - 11.0 Positive >11.00	NTU

CLINICAL SIGNIFICANCE

Systemic candidiasis is often characterized by markedly elevated levels of IgG, IgA, and IgM recognizing Candida. However, interpretation of Candida antibody levels is complicated by detection of antibodies in 20-30% of healthy individuals, and blunted antibody responses in immuno- compromised patients at risk for systemic candidiasis. Candida antibody results should be considered within the context of clinical findings and results from other relevant laboratory tests, such as Candida antigen detection and/or culture.

Comments:

CANDIDA ALBICANS ANTIBODY IgG	7.74	Negative <9.0 Borderline 9.0 - 11.0 Positive >11.00	NTU

CLINICAL SIGNIFICANCE

Systemic candidiasis is often characterized by markedly elevated levels of IgG, IgA, and IgM recognizing Candida. However, interpretation of Candida antibody levels is complicated by detection of antibodies in 20-30% of healthy individuals, and blunted antibody responses in immuno- compromised patients at risk for systemic candidiasis. Candida antibody results should be considered within the context of clinical findings and results from other relevant laboratory tests, such as Candida antigen detection and/or culture.

Comments:

CANDIDA ALBICANS ANTIBODY IgM	3.24	Negative <9.0 Borderline 9.0 - 11.0 Positive >11.00	NTU

CLINICAL SIGNIFICANCE

Systemic candidiasis is often characterized by markedly elevated levels of IgG, IgA, and IgM recognizing Candida. However, interpretation of Candida antibody levels is complicated by detection of antibodies in 20-30% of healthy individuals, and blunted antibody responses in immuno- compromised patients at risk for systemic candidiasis. Candida antibody results should be considered within the context of clinical findings and results from other relevant laboratory tests, such as Candida antigen detection and/or culture.

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LIPID PROFILE

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	01:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
CHOLESTROL, SERUM (Enz. Colorimetry)	**203.2**	80.00 - 200.00	mg/dl
HDL CHOLESTEROL (Enz.Colorimetry)	68.90	40.00 - 70.00	mg/dl
TRIGLYCERIDES, SERUM (Enz.Colorimetry)	120.26	40.00 - 150.00	mg/dl
VLDL CHOLESTEROL (Calculated)	24.05	24.00 - 45.00	mg/dl
LDL CHOLESTEROL (Enz.Colorimetry)	**110.25**	30.00 - 100.00	mg/dl
LDL / HDL RATIO (Calculated)	1.60	0.00 - 3.00	
CHOLESTEROL / HDL RATIO(Calculated)	2.95	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:

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REPORT

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	01:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
IRON, Serum(Ferrozine)	45.6	33.00 - 193.00	ug/dl
UIBC Serum(Ferrozine)	**445.3**	135.00 - 392.00	ug/dl
TIBC.(Calculated)	**490.90**	250.00 - 450.00	ug/dl

Comments:

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

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	01:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
BILIRUBIN (TOTAL), Serum(Diazo)	0.2	0.00 - 1.20	mg/dl
BILIRUBIN (DIRECT), Serum(Diazo)	0.11	0 - 0.30	mg/dl
BILIRUBIN (INDIRECT), Serum(Calculated)	0.09	0.00 - 0.70	mg/dl
TOTAL PROTEINS Serum(Biuret)	6.7	6.40 - 8.30	gms/dl
ALBUMIN, Serum(BCG)	4.2	3.50 - 5.20	gms/dl
GLOBULIN (Calculated)	2.50	2.00 - 3.50	gms/dl
A:G RATIO (Calculated)	1.68	1.00 - 2.00	
ALKALINE PHOSPHATASE,Serum(Colorimetry)	**113.7**	35.00 - 105.00	U/L
SGOT, Serum(IFCC)	19.8	1.00 - 32.00	U/l
SGPT, Serum(IFCC)	21.7	2.00 - 33.00	U/l
GGTP, Serum(Enz.Colorimetry)	**38.7**	5.00 - 36.00	U/L

Comments:

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Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	01:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
FERRITIN, Serum,(CLIA)	**6.6**	11.00 - 306.8	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:

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KIDNEY FUNCTION TEST (KFT)

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020 01:	**Age/Sex**	: 55 Years FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020	**Delivery**	:
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA		

Investigation	Result	Biological Reference Interval	Units
UREA Serum(Urease)	23.99	12.00 - 45.00	mg/dl
UREA NITROGEN(Calculated)	11.21	6.00 - 20.00	mg/dl
CREATININE SERUM(Jaffe)	0.65	0.50 - 0.90	mg/dl
URIC ACID, Serum(Colorimetry)	**6.2**	2.40 - 5.70	mg/dl
CALCIUM, Serum(BAPTA)	8.83	8.60 - 10.00	mg/dl
PHOSPHATE, Serum(Phosphomolybdate)	3.9	2.50 - 4.80	mg/dl
SODIUM, Serum(ISE Indirect)	139.4	130.00 - 149.00	meq/L
POTASSIUM, Serum(ISE Indirect)	4.35	3.50 - 5.00	meq/L
CHLORIDE, Serum(ISE Indirect)	105.90	97.0 - 107.0	meq/L

Comments:

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Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	00:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
TRANSFEERRIN.	**412.74**	200.00 - 360.00	mg/dl

Comments:

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THYROID PROFILE

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	01:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
FT3 Serum, (CLIA)	4.56	3.80 - 6.00	pmol/L
FREE T4, Serum,(CLIA)	9.4	7.00 - 15.96	pmol/l
TSH, Serum,(CLIA)	**5.50**	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:

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VITAMIN B12.

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	01:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
VITAMIN B12, Serum,(ECLIA)	247.50		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

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* kindly Correlate Clinically

Comments:

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VITAMIN D, 25 - HYDROXY

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020 01:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020	**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA			

Investigation	Result	Biological Reference Interval	Units
VITAMIN D, 25-HYDROXY, Serum,(CLIA)	**73.4**	75.00 - 250.00	nmol/L

Comments:

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ISO 9001:2015 043-A

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Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	00:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
IgG SERUM (Immunoturbidimetric)	10.7	7.00 - 16.00	g/L
Comments:			
IgM SERUM (Immunoturbidimetric)	1.41	0.40 - 2.30	g/L
Comments:			
IgA SERUM (Immunoturbidimetric)	1.20	0.70 - 4.00	g/L
Comments:			

*** END OF REPORT ***

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IgE

Reference No.	: 142001502	**Reg. Date**	: 30-Jan-2020	00:	**Age/Sex**	: 55 Years	FEMALE
Patient	: MRS. ANJU SAHNI	**Print Date**	: 30-Jan-2020		**Delivery**	:	
Ref. Doctor	: TARUN JAIN	**Hospital / NH**	: NA				

Investigation	Result	Biological Reference Interval	Units
IgE SERUM, (ECLIA)	**208.0**	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 ***

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