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Branch	: NAGERCOIL	SID No.	: 92249
Name	: Mr. THIRU NEELAKANDAN	IP / OP No	N/A
Age/Gender	17 Y / Male	Registered on	25/05/2021 16:16
Patient UID	87372	Collected on	25/05/2021 17:09
Referred Client	SIVA HOSPITALS, KOTTAR	Reported on	25/05/2021 19:35
Referred By	N/A	Sample Type	SODIUM CITRATE
Aadhar No			
Passport No			

Test Report

Test Name	Results	Flag	Units	Bio. Ref. Interval
*D-DIMER SODIUM CITRATE Immunoturbidimetry MISPA i2	0.13		ug/ml	0 - 0.5

COMMENT

During coagulation sequence of reactions occur in the body in response to variety of external and/or internal stimuli. The enzymatic cascade reaction terminates in the conversion of fibrinogen to fibrin by the enzyme thrombin. The fibrin gel is then converted to a stable fibrin clot. The fibrin network is dissolved by the enzyme plasmin to generate cross -linked fibrin degradation products (FDP). D dimer is the smallest plasmin resistant molecular unit present within FDP. An elevated D. dimer may be due VTE, DIC, recent surgery, trauma, infection, liver disease, pregnancy, eclampsia, heart disease, in some cancers and in elderly people. A normal or low D. dimer helps to rule out clotting as the cause of symptoms.

Note:

1. D dimer half-life is approximately 8 hours in circulation of individuals with normal renal function. Patients with stabilized clots and not undergoing active fibrin deposition and plasmin activation may not give detectable D dimer elevations, anti-coagulant therapy.
2. In PE, the larger the clot size, higher the expected level of circulating D dimer. Conversely, the amount of D-dimer release from very small clots may be diluted by the circulation and may not give a detectable increase.
3. Fibrinolysis is a highly regulated process and in delicate dynamic balance. In case of hereditary, acquired deficiency and dysfunction of Fibrinogen, the rate of fibrinolysis will be altered there by not givin detectable D-dimer level.
4. False positive may be seen with high levels of rheumatoid factor,bilirubin, lipemic sera and hemolysed blood. The test should be read in conjunction with other clinical parameters.

*** End of Report ***

Tests Marked with * are not in the scope of NABL

Dr.S.R.SRINIVASA KANNAN,M.D.Path
DIRECTOR & PATHOLOGIST

Mr. KARTHICK.S , B.Sc MLT
LAB TECHNICIAN

SIVA HOSPITALS KOTTAR

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Branch	: NAGERCOIL	SID No.	: 88708
Name	: Master. THIRUNEEL KANDAN	IP / OP No.	: N/A
Age/Gender	: 15 Y / Male	Registered on	: 30/05/2021 15:36
Patient UID	: 89752	Collected on	: 30/05/2021 15:54
Referred Client	: SIVA HOSPITALS, KOTTAR	Reported on	: 30/05/2021 19:52
Referred By	: N/A	Sample Type	: SERUM
Aadhar No	:		
Passport No	:		

Test Report

Test Name	Results	Flag	Units	Bio. Ref. Interval
LIVER FUNCTION TEST WITH PT				
BILIRUBIN - TOTAL SERUM Diazo Method Cobas c311	0.25		mg/dL	0 - 1.2
BILIRUBIN - DIRECT SERUM Diazo Method Cobas c311	0.19		mg/dL	0 - 0.3
BILIRUBIN INDIRECT SERUM Calculated Cobas c311	0.06		mg/dL	0 - 0.9
SGOT (AST) SERUM IFCC Reference Method Cobas c311	21		U/L	0 - 40
SGPT (ALT) SERUM IFCC Reference Method Cobas c311	11		U/L	0 - 41
ALKALINE PHOSPHATASE SERUM IFCC Reference Method Cobas c311	104		U/L	82 - 331
GGT SERUM IFCC Reference Method Cobas c311	17		U/L	12-35
TOTAL PROTEIN SERUM Biuret Cobas c311	8.17		g/dL	6.6 - 8.7
ALBUMIN SERUM Bromocresol Green Cobas c311	4.71	H	g/dL	3.2 - 4.5
GLOBULIN SERUM Calculated	3.46		g/dL	2.5 - 3.5
A/G RATIO SERUM Calculated	1.36		Ratio	1.2 - 2.1
PROTHROMBIN TIME SODIUM CITRATE MECHANICAL or OPTICAL TURBIDOMETRY CT 100				

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Branch	: NAGERCOIL	SID No.	: 93708
Name	: Master. THIRUNEEL KANDAN	IP / OP No	N/A
Age/Gender	15 Y / Male	Registered on	30/05/2021 15:36
Patient UID	88752	Collected on	30/05/2021 15:51
Referred Client	SIVA HOSPITALS, KOTTAR.	Reported on	30/05/2021 20:21
Referred By	N/A	Sample Type	SODIUM CITRATE
Aadhar No			
Passport No			

Test Report

Test Name	Results	Flag	Units	Bio. Ref. Interval
LIVER FUNCTION TEST WITH PT				
TEST	7.90		Sec	7.7 - 10.3
CONTROL	9.00		Sec	
INR	0.88			

NOTES
The prothrombin time (PT) is used, often along with a partial thromboplastin time (PTT), to help diagnose the cause of unexplained bleeding or inappropriate blood clots. The international normalized ratio (INR) is a calculation based on results of a PT and is used to monitor individuals who are being treated with the blood-thinning medication (anticoagulant) warfarin.

Uses of PT
1. *To monitor patients who are on oral anticoagulant therapy*: PT is the standard test for monitoring treatment with oral anticoagulants. Oral anticoagulants inhibit carboxylation of vitamin K-dependent factors (Factors II, VII, IX, and X) and make these factors inactive. INR should be maintained in the therapeutic range for the particular indication (INR of 2.0-3.0 for prophylaxis and treatment of deep venous thrombosis, INR of 2.5-3.5 for mechanical heart valves). Therapeutic range provides adequate anticoagulation for prevention of thrombosis and also checks excess dosage, which will cause bleeding.
2. *To assess liver function*: Liver is the site of synthesis of various coagulation factors, including vitamin K-dependent proteins. Therefore PT is a sensitive test for assessment of liver function.
3. *Detection of vitamin K deficiency*: PT measures three of the four vitamin K-dependent factors (i.e. II, VII, and X).
4. *To screen for hereditary deficiency of coagulation factors* VII, X, V, prothrombin, and Fibrinogen.

Causes of prolongation of PT
1. Treatment with oral anticoagulants
2. Liver disease
3. Vitamin K deficiency
4. Disseminated intravascular coagulation
5. Inherited deficiency of factors in extrinsic and common pathways

COMPLETE BLOOD COUNT(CBC)				
TOTAL WBC COUNT	4370		Cells/cu.mm	4000 - 10000
EDTA BLOOD				
DC detection method				
Fully Automated Analyzer Sysmex XN 550				
DIFFERENTIAL COUNT				
EDTA BLOOD				
Flow Cytometry				
Fully Automated Analyzer Sysmex XN 550				
NEUTROPHILS	40.2		%	40 - 80
LYMPHOCYTES	51.3	H	%	25 - 35
MONOCYTES	5.3		%	2 - 10
EOSINOPHILS	3.0		%	1 - 6
BASOPHILS	0.2		%	0 - 2

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Branch	: NAGERCOIL	SID No.	: 93708
Name	: Master. THIRUNEEL KANDAN	IP / OP No	N/A
Age/Gender	: 15 Y / Male	Registered on	30/05/2021 15:36
Patient UID	: 88752	Collected on	30/05/2021 15:51
Referred Client	: SIVA HOSPITALS, KOTTAR	Reported on	30/05/2021 20:21
Referred By	: N/A	Sample Type	EDTA BLOOD
Aadhar No			
Passport No			

Test Report

Test Name	Results	Flag	Units	Bio. Ref. Interval
COMPLETE BLOOD COUNT(CBC)				
HAEMOGLOBIN EDTA BLOOD SLS-Haemoglobin method Fully Automated Analyzer Sysmex XN 550	14.4		g/dl	13 - 17
RBC COUNT EDTA BLOOD DC detection method Fully Automated Analyzer Sysmex XN 550	4.90		Million/cu.mm	4.5 - 5.5
PCV EDTA BLOOD Pulse Height detection method Fully Automated Analyzer Sysmex XN 550	40.3		%	40 - 55
MCV EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	82.2	L	fl	83 - 101
MCH EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	29.4		pg	27 - 32
MCHC EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	35.7	H	g/dl	31.5 - 34.5
RDW - CV EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	13.3		%	11.6 - 14
RDW - SD EDTA BLOOD Calculated	38.9	L	fl	39 - 46
PLATELET COUNT EDTA BLOOD DC detection method Fully Automated Analyzer Sysmex XN 550	2.21		Lakh/Cumm	1.5 - 4
MPV EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	10.0	H	fl	8 - 9.5
***PLATELET DISTRIBUTION WIDTH (PDW)** EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	11.6		fl	

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Branch	: **NAGERCOIL**	**SID No.**	: **93708**
Name	: **Master. THIRUNEEL KANDAN**	IP / OP No	N/A
Age/Gender	15 Y / Male	Registered on	30/05/2021 15:36
Patient UID	88752	Collected on	30/05/2021 15:51
Referred Client	SIVA HOSPITALS, KOTTAR	Reported on	30/05/2021 20:21
Referred By	N/A	Sample Type	EDTA BLOOD
Aadhar No			
Passport No			

Test Report

Test Name	Results	Flag	Units	Bio. Ref. Interval
COMPLETE BLOOD COUNT (CBC)				
*PCT EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	0.22		%	
ABSOLUTE NEUTROPHIL COUNT (ANC) EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	1760	L	Cells/cu.mm	2000 - 7000
ABSOLUTE LYMPHOCYTE COUNT (ALC) EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	2240	L	Cells/cu.mm	6000 - 9000
ABSOLUTE EOSINOPHIL COUNT EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	130		Cells/cu.mm	20 - 500
ABSOLUTE MONOCYTE COUNT (AMC) EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	230		Cells/cu.mm	200 - 1000
ABSOLUTE BASOPHIL COUNT (ABC) EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	10		Cells/cu.mm	20 - 100
RETICULOCYTE COUNT EDTA BLOOD Flow Cytometry Fully Automated Analyzer Sysmex XN 550	0.99		%	0.5 - 2.5
*CORRECTED RETICULOCYTE COUNT EDTA BLOOD Calculated Fully Automated Analyzer Sysmex XN 550	0.81		%	0.5 - 2.5

COMMENT:

A complete blood count (CBC) is used to evaluate overall health and detect wide range of disorders, including anemia, infection and leukemia.
There have been some reports of WBC and platelet counts being lower in venous blood than in capillary blood samples ,although still within these reference ranges.

POSSIBLE CAUSES OF ABNORMAL PARAMETERS: -
High RBC, Hb, or HCT - dehydration, polycythemia, shock, chronic hypoxia
Low RBC, Hb, or HCT - anemia, thalassemia, and other hemoglobinopathies
Low MCV - microcytic anemia
High MCV - macrocytic anemia, liver disease
Low WBC - sepsis, marrow hypoplasia
High WBC - acute stress, infection, malignancies
Low platelets - risk of bleeding

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Branch	: NAGERCOIL	SID No	: 93706
Name	: Master. THIRUNEEL KANDAN	IP / OP No	: N/A
Age/Gender	: 15 Y / Male	Registered on	: 30/05/2021 15:36
Patient UID	: 88712	Collected on	: 30/05/2021 15:51
Referred Client	: SIVA HOSPITALS, KOTTAR	Reported on	: 30/05/2021 20:21
Referred By	: N/A	Sample Type	: EDTA BLOOD
Aadhar No	:		
Passport No	:		

Test Report

Test Name	Results	Flag	Units	Bio. Ref. Interval
COMPLETE BLOOD COUNT(CBC)				
High platelets : risk of thrombosis				
Notes				
1.Microcytic Anemia/Schizocytic Anemia can have low platelet count				
2.Microcytic Anemia/Leukocytosis can have Reactive thrombocytosis				
For microcytic indices a Mentzer index of less than 13 suggests that the patient may have thalassemia trait and an index of more than 13 suggests that the patient may have iron deficiency				
Reference ranges are from Dacie and Lewis Practical Hematology 12th edition(2016)				
Reference ranges may vary between laboratories				
CBC Test processed on fully automated analyser(6 Part Differential SYSMEX XN-550)				
This device performs hematology analysis according to the hydrodynamic focusing(DC detection) and flow cytometry Method(using a semiconductor laser) and SLS-Hb method				
UREA	18.1		mg/dl	10.5 - 49.5
CLINICAL				
Urease GLDH				
Cobas c311				
CREATININE	0.81		mg/dl	0.7 - 1.2
CLINICAL				
Jaffe Kinetic				
Cobas c311				
***INTERLEUKIN 6 (IL-6)**	34.69	H	pg/ml	0.00 - 7.0
CLINICAL				
ECLIA				
Cobas e411				

INTENDED USE

Interleukin 6 (IL-6) acts as both a pro-inflammatory cytokine and an anti-inflammatory myokine and can be measured in a person who has a condition associated with inflammation, such as lupus or rheumatoid arthritis, or with infection. Interleukin 6 may also be used in the evaluation of diabetes or cardiovascular disease. It also stimulates the production of acute phase reactants, proteins that increase in the blood with conditions that cause inflammation or tissue injury. There is some ***early evidence that IL-6 can be used as an inflammatory marker for severe COVID-19 infection with poor prognosis, in the context of the wider coronavirus pandemic.***

CLINICAL NOTES

Normally, IL-6 is not detected in the blood or is present in low quantities. An elevated IL-6 may mean that the person tested has an inflammatory condition. An increase in IL-6 may be seen in conditions such as -

Obstetric infections: IL-6 has emerged as a reporter cytokine for intra-amniotic infection. Diseases associated with an altered immune system (polyclonal B-cell abnormalities or autoimmune diseases)
Other conditions: Elevated levels of circulating IL-6 have been detected in patients with cardiac myxoma , Castleman's disease , rheumatoid arthritis , IgM gammopathy and in those with acquired immunodeficiency syndrome as well as alcoholic liver cirrhosis
Proliferative Diseases: Elevated plasma levels of IL-6 are observed in patients with psoriasis and mesangial proliferative glomerulonephritis
Neoplastic Diseases: Increased systemic levels of IL-6 have been detected in patients with multiple myeloma, other B- cell dyscrasias , Lennert's T

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Branch	: NAGERCOIL	SID No.	: 93708
Name	: Master. THIRUNEEL KANDAN	IP / OP No	N/A
Age/Gender	15 Y / Male	Registered on	30/05/2021 15:36
Patient UID	88752	Collected on	30/05/2021 15:51
Referred Client	SIVA HOSPITALS, KOTTAR	Reported on	30/05/2021 19:52
Referred By	N/A	Sample Type	SERUM
Aadhar No			
Passport No			

Test Report

Test Name	Results	Flag	Units	Bio. Ref. Interval
lymphoma, renal cell carcinoma and various other solid tumors **Inflammatory Responses:** IL-6 is involved in the induction of acute phase proteins and induction of fever. Elevated serum levels of IL-6 are also found in patients with severe burns , in serum and plasma as a marker for predicting postoperative complications , in serum and urine of recipients of kidney transplants before rejection in the serum				
Ferritin SERUM Nephelometry NSPA iQ	62.48		ng/mL	30 - 220
D-DIMER TRISODIUM CITRATE Immunoturbidimetry NSPA iQ	0.15		ug/ml	0 - 0.5

COMMENT
During coagulation sequence of reactions occur in the body in response to variety of external and/or internal stimuli. The enzymatic cascade reaction terminates in the conversion of fibrinogen to fibrin by the enzyme thrombin. The fibrin gel is then converted to a stable fibrin clot. The fibrin network is dissolved by the enzyme plasmin to generate cross -linked fibrin degradation products (FDP). D dimer is the smallest plasmin resistant molecular unit present within FDP. An elevated D dimer may be due VTE, DIC, recent surgery, trauma, infection, liver disease, pregnancy, eclampsia, heart disease, in some cancers and in elderly people. A normal or low D dimer helps to rule out clotting as the cause of symptoms

Note:
D dimer half-life is approximately 6 hours in circulation of individuals with normal renal function. Patients with stabilized clots and not undergoing active fibrin deposition and plasmin activation may not give detectable D dimer elevations, anti-coagulant therapy
In PE, the larger the clot size, higher the expected level of circulating D dimer. Conversely, the amount of D-dimer release from very small clots may be diluted by the circulation and may not give a detectable increase
Fibrinolysis is a highly regulated process and in delicate dynamic balance. In case of hereditary, acquired deficiency and dysfunction of Fibrinogen, the rate of fibrinolysis will be altered there by not givin detectable D dimer level
False positive may be seen with high levels of rheumatoid factor,bilirubin, lipemic sera and hemolysed blood. The test should be read in conjuction with other clinical parameters.

C REACTIVE PROTEIN (CRP) SERUM Nephelometry NSPA iQ	0.89		mg/L	0 - 6

COMMENT: C-reactive protein (CRP) is a non-specific indicator of inflammation and one of the most sensitive acute phase protein made by the liver. CRP test measures the amount of CRP in the blood to detect inflammation due to acute conditions or to monitor the severity of disease in chronic conditions.

*** End of Report ***

Tests Marked with * are not in the scope of NABL

Dr. S.R.SRINIVASA KANNAN.M.D.Path
DIRECTOR & PATHOLOGIST

SIVA HOSPITAL KOTTAR

Dr. LALITHA SRINIVASAN. S, PhD
MICROBIOLOGIST

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Branch	: NAGERCOIL	SID No.	: 91609
Name	: Mr. THIRUMEELAKANDAN	IP / OP No	: N/A
Age/Gender	: 15 Y / Male	Registered on	: 24/05/2021 12:57
Patient UID	: 66778	Collected on	: 01/01/2014 01:18
Referred Client	:	Reported on	: 24/05/2021 16:45
Referred By	: Dr SRINIVASA KANNAN SR	Sample Type	: NASOPHARYNGEAL & THROAT SWAB
Aadhar No	:		
Passport No	:		8764291

MOLECULAR BIOLOGY

SARS-CoV-2 QUALITATIVE ASSAY REPORT REAL - TIME PCR

INTERPRETATION:

Positive and Negative controls are run along with the specimen. The specimen is determined as Positive when its amplification reaches exponential phase and the curve rises above the threshold value(CT).

REPORT:

SPECIMEN TYPE	RESULT	
	SARS-CoV-2 (N-Gene)	SARS-CoV-2 (ORF1ab-Gene)
NASOPHARYNGEAL & THROAT SWAB	Ct Value-22.63 POSITIVE	NEGATIVE

IMPRESSION:

SARS-CoV-2 (COVID-19) RNA DETECTED.

ICMR Approved testing center for RT-PCR.
ICMR Reg. No. -VLNKTN
No. 1159, (Old No. 253), K/1, K.P Road, Nagercoil - 629 003, Tamilnadu, India

PRADEEPHA., MSc., Mphil.,
Biotechnologist

Dr.S.R.SRINIVASA KANNAN,M.D.Path
DIRECTOR & PATHOLOGIST

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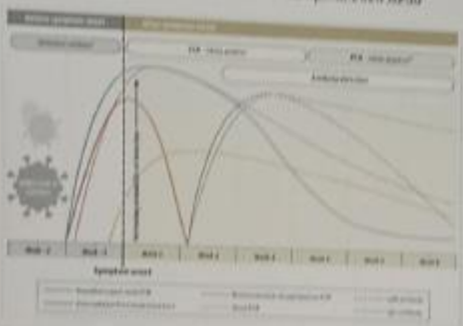
Branch	: NAGERCOIL		
Name	: Mr. THIRUNEELAKANDAN	SID No.	: 91600
Age/Gender	: 15 Y / Male	IP / OP No	: N/A
Patient UID	: 86778	Registered on	: 24/05/2021 12:57
Referral Client	:	Collected on	: 01/01/2014 01:18
Referred By	: Dr SRINIVASA KANNAN SR	Reported on	: 24/05/2021 16:45
Aadhar No	:	Sample Type	: NASOPHARYNGEAL & THROAT SWAB
Passport No	:		

R764291

MOLECULAR BIOLOGY

Interpreting Diagnostic Tests for SARS-CoV-2

JAMA. 2020;323(22):2249-2251. doi:10.1001/jama.2020.8259



Estimated Variation Over Time in Diagnostic Tests for Detection of SARS-CoV-2 Infection Relative to Symptom Onset

Estimated time intervals and rates of viral detection are based on data from several published reports. Because of variability in values among studies, estimated time intervals should be considered approximations and the probability of detection of SARS-CoV-2 infection is presented qualitatively.
a)Detection only occurs if patients are followed up proactively from the time of exposure.
b)More likely to register a negative than a positive result by PCR of a nasopharyngeal swab

*** End of Report ***

PRADEEPHA., MSc., MPhil.,
Biotechnologist

Dr S.R.SRINIVASA RAGHAN M.D.Path
DIRECTOR & PATHOLOGIST

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