

Client
Gurugram
 Pathkind Diagnostics Pvt. Ltd.
 Plot No. 55-56, Udhog Vihar Ph-IV, Gurugram - 122015

Processed By
Pathkind Diagnostics Pvt. Ltd.
 Plot No. 55-56, Udhog Vihar Ph-IV, Gurugram - 122015

Name	: Mr. CL140	Billing Date	: 07/07/2023 12:18:21
Age	: 35 Yrs	Sample Collected on	: 10/07/2023 10:01:31
Sex	: Male	Sample Received on	: 10/07/2023 11:02:13
P. ID No.	: P1000100012623	Report Released on	: 14/07/2023 12:50:18
Accession No	: 10002304679	Barcode No.	: 10002304679-01
Referring Doctor	: Self		
Referred By	:	Ref no.	:

Report Status - Final

Test Name	Result	Biological Ref. Interval	Unit
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BIOCHEMISTRY

Troponin I, Quantitative <i>Sample: Serum</i>	0.04	<0.05	ng/mL
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Troponin I, Quantitative

Diagnosis

- The high tissue specificity of cardiac Troponin I measurements is beneficial for identifying cardiac injury in clinical conditions involving skeletal muscle injury resulting from surgery, trauma, extensive exercise, or muscular disease.
- Highly sensitive troponin (cTn) assay allows earlier detection of acute Myocardial Infarction (MI), with shortening of time window for serial measurement to 3 hours. Serial sampling to detect the temporal rise and fall of cTnI levels is recommended for the differentiation of acute cardiac events from chronic cardiac disease. The use of delta values (difference of cTnI levels between two test points) may have the potential to improve the clinical specificity for acute coronary syndrome (ACS).
- STAT High Sensitive Troponin-I results should be used in conjunction with other information such as ECG, clinical observations, and symptoms, etc.
- Elevated troponin levels may be indicative of myocardial injury associated with heart failure, myocarditis, arrhythmias & other causes like chronic renal disease, pulmonary embolism.
- 99TH Percentile (precision at 99th percentile): Overall: 26 ng/L Male :34.2 ng/L Female: 15.6 ng/L

Diagnostic Algorithm for Acute Coronary Syndrome(ACS)

- < 2 ng/ L – RULE OUT (100% NPV)**
 - Chest pain > 6 hours
 - TIMI < 1
 - GRACE < 140
- > 262 ng / L – RULE IN (96% PPV)**



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Test Name	Result	Biological Ref. Interval	Unit
a. Chest pain < 6 hours			
b. No H/O DM, CVD, CKD			
3. Between 2 and 262 ng / L – SERIAL SAMPLING 3 hrs			
a. > 50% delta change – RULE IN (94% PPV)			
b. < 50% delta change – RULE OUT			

Screening

- High Sensitive Troponin-I (3P25) assay can be incorporated into cardiovascular risk prediction models and risk scores to stratify the risk (low/moderate/elevated) of future cardiac events in asymptomatic individuals.
- The following cut-off points may be used to aid in stratifying the risk of cardiovascular disease in asymptomatic individuals.

Troponin Level

Risk	Male (ng/L)	Female (ng/L)
Low	< 6	< 4
Moderate	6-12	4-10
Elevated	>12	>10

Higher concentrations of hs Troponin I in apparently healthy subjects are strongly associated with increased risk of CVD, and hs-TnI may therefore be better suited for CVD screening in an asymptomatic general population than hs-CRP.

Addition of hsTnI and hsCRP to Framingham risk score showed an improvement in net reclassification.

Prognosis

- Troponin I concentration could predict coronary events, be modified by statins, and reflect response to therapy in a primary prevention population..
- High Sensitive Cardiac Troponin assays can be used to predict future risk of coronary heart disease and to assess response to Statin therapy.
- Troponin concentrations are reduced by statin therapy.
- Reductions in troponin concentrations are associated with better outcomes independent of LDL Cholesterol lowering.
- Troponin I has major potential to identify those at greatest risk and to assess their response (change at 1 year associated with future coronary risk) to interventions for the prevention of CAD.

Note:

- The current high-sensitivity troponin (hsTn) assay can detect low levels upto 0.003 µg/L (3 ng/L). (Following are the conversion factors- Concentration in pg/ml x 0.001 = µg/L, Concentration in pg/ml x 1.0 = ng/L)
- Reporting in many decimal point placements causes confusion and potentially can lead to misinterpretations; hence it has been recommended (IFCC2014) that the results are expressed in whole numbers by using ng/L as the unit of measurement.

Reference:

1. hs Troponin I IFCC November 2014.
2. Risk-Stratification of the apparently Healthy Population for Future Cardiac Events Publication Streamlines HUNT 2018, WOSCOPS 2016, BIONARCARE 2016-74, 738 PARTICIPANTS, JUPITER 2015, HUNT 2015)

NATIONAL REFERENCE LAB
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जांच सही तो इलाज सही



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** End of Report **



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Senior Consultant

