

ASSESSING FUTURE CARDIAC RISK IN AN ASYMPTOMATIC POPULATION

A step-by-step physician guide to help more accurately identify patients who may be at risk of a future cardiac event.

ABBOTT'S hsTnl: AN AID TO STRATIFYING RISK OF FUTURE CARDIAC DISEASE IN APPARENTLY HEALTHY PEOPLE

Abbott's High Sensitive Troponin-I (hsTnI) is a cardiac-specific blood test for risk stratification of the apparently healthy population. Used in conjunction with other clinical and diagnostic findings, Abbott's hsTnI is an aid to stratifying the risk of a future cardiac event, including cardiovascular (CV) death, myocardial infarction (MI), coronary revascularization, heart failure, or ischemic stroke in asymptomatic individuals.^{1,2}

As a physician, Abbott's hsTnI blood test can help you to more accurately stratify an asymptomatic individual's risk of a future cardiac event in to three categories: **low, moderate** or **elevated**. In conjunction with clinical and diagnostic findings, it enables you to better prioritize appropriate care for those at higher risk, and potentially avoid unnecessary investigations, treatments and side effects in those at lower risk, helping to reduce the burden of CVD on healthcare systems.

Abbott's hsTnI can be integrated into daily practice and added to existing patient wellness checks, helping to inform inform clinical decision-making.

Identifying risk of a future CV event is paramount to help ensure patients receive the appropriate care in a timely manner.

CV RISK STRATIFICATION OF ASYMPTOMATIC INDIVIDUALS

There are a variety of CV risk prediction models currently available, many of which estimate CV risk by taking into account the presence of CV risk factors. This method of stratifying CV risk poses challenges, in particular in the local setting and between patients of different ethnicities.^{3,4} Existing models also have specific limitations, such as applicability only in certain populations and the ability to measure only a limited number of CV outcomes.

HOW DOES ABBOTT'S hsTnI CV RISK STRATIFICATION COMPARE WITH OTHER CURRENT TOOLS?

Current tools, such as Framingham 2008 and SCORE (ESC), involve measurements that are not specific to the heart and are overly dependent on age, which may not necessarily provide the true cardiac risk status of a patient. Data show that as hsTnI has been developed to more accurately measure lower troponin-I levels which could not be reliably reported using contemporary assays, it can more accurately categorize patients' cardiac risk, compared to other currently available CV risk assessment tools, when used in conjunction with clinical and diagnostic findings, in turn helping to inform clinical decision-making.^{5–9}

RISK SCORING SYSTEM	LIMITATIONS
European SCORE risk chart ³	 Estimates only fatal CV risk May not be applicable in non-European populations Limited to the major determinants of risk Limited age range (40-65 years)
ASCVD risk score calculator (AHA/ACC)	 May overestimate CV risk in both men and women⁴ Inferior to the Framingham Risk Score in identifying high CV risk individuals when evaluated in an Asian population¹⁰
Framingham Risk Score ¹¹	 May overestimate CV risk in both men and women¹⁰ May not be accurate in those with markedly elevated risk factors (e.g. those with markedly elevated LDL levels)⁸

Compared to the above mentioned tools, Abbott's hsTnI more accurately categorizes a patient into low, moderate or elevated risk categories when used in conjunction with clinical and diagnostic findings, allowing those with a greater risk to be directed to where their condition will be best managed, in turn helping to prevent adverse cardiac outcomes.^{5–9}

HOW TO USE THE CV RISK STRATIFICATION RESULTS

Abbott's hsTnI results are to be reported in the same way as current hsTnI results and applied to the risk stratification table shown below (CV Risk Stratification of Asymptomatic Individuals).

It's more than a test, it's:

1. DATA-GUIDED RISK ASSESSMENT:

Assess which risk category an individual falls into based on the corresponding troponin-I level. A statement interpreting these results, may be provided:

- *a.* It is critical to evaluate troponin-I concentrations within the clinical context of all supporting parameters, including all classic CV risk factors (family history, blood pressure, lipids, smoking, diabetes), and all other clinical and diagnostic findings.
- **b.** Although myocardial injury, characterized by elevated troponin levels, is necessary to diagnose an MI, it can also be attributable to multiple other acute and non-acute clinical conditions.^{1,2,12}

2. INSIGHT TO ENHANCE CLINICAL DECISION MAKING:

Use your clinical judgement and adhere to recommended CV prevention guidelines to determine appropriate care for your patient based upon their level of risk.

3. THE POTENTIAL TO IMPROVE PATIENT OUTCOMES:

Motivate your patients to take action to make healthier living choices to help improve their heart health.

For example, if a patient falls into a low–moderate risk category, and you are following 2016 European Guidelines on Cardiovascular Disease Prevention in clinical practice, section 2.3.5 offers guidance on apparently healthy people, and recommends 'offering lifestyle advice to maintain their low–moderate risk status' using SCORE tables.⁴

TROPONIN LEVEL		
MALE (pg/mL)	FEMALE (pg/mL)	INTERFRETATION
<6	<4	Low risk of a future cardiac event
≥6 to ≤12	≥4 to ≤10	Moderate risk of a future cardiac event
>12	>10	Elevated risk of a future cardiac event

CV RISK STRATIFICATION OF ASYMPTOMATIC INDIVIDUALS

In conjunction with clinical and diagnostic findings, sex-specific thresholds help enable clinicians to appropriately stratify an individual's risk of a future cardiac event and prioritize preventative measures for each person to help improve their cardiac health. The cut-off points above may be used to aid in stratifying the risk of a future cardiac event in asymptomatic individuals.^{1,2}



UNDERSTANDING CARDIAC INJURY CATEGORIZATION



By providing you with a diagnostic test that can help you to more accurately identify a patient's risk of a future cardiac event, Abbott's hsTnI enables you to:

- Motivate and empower patients to take control and make long-term changes to their lifestyle to help improve their heart health
- Recommend targeted treatments before a cardiac event takes place

UNDERSTAND RISK OF CV INJURY USING ABBOTT'S hsTnl CARDIAC-SPECIFIC BLOOD TEST IN CONJUNCTION WITH OTHER CLINICAL AND DIAGNOSTIC FINDINGS^{1,2,13}

An example framework below has been developed using Framingham Risk Score as the risk calculator:



* Local guidelines such as the European Society of Cardiology (ESC), American College of Cardiology / American Heart Association (AHA / ACC), World Health Organization (WHO), or the US Preventive Services Task Force (USPSTF).^{3,14–16}

IT'S MORE THAN A TEST. IT'S INFORMED TREATMENT PLANNING.

To implement cardiac risk stratification of the apparently healthy population using Abbott's hsTnl test in your practice, please contact your local Diagnostics representative at Abbott.

For more information go to www.corelaboratory.abbott

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AHA = American Heart Association; ACC = American College of Cardiology; CV = Cardiovascular; CVD = Cardiovascular disease; ESC = European Society of Cardiology; hsTnl = High Sensitive Troponin-I; MI = Myocardial infarction.

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