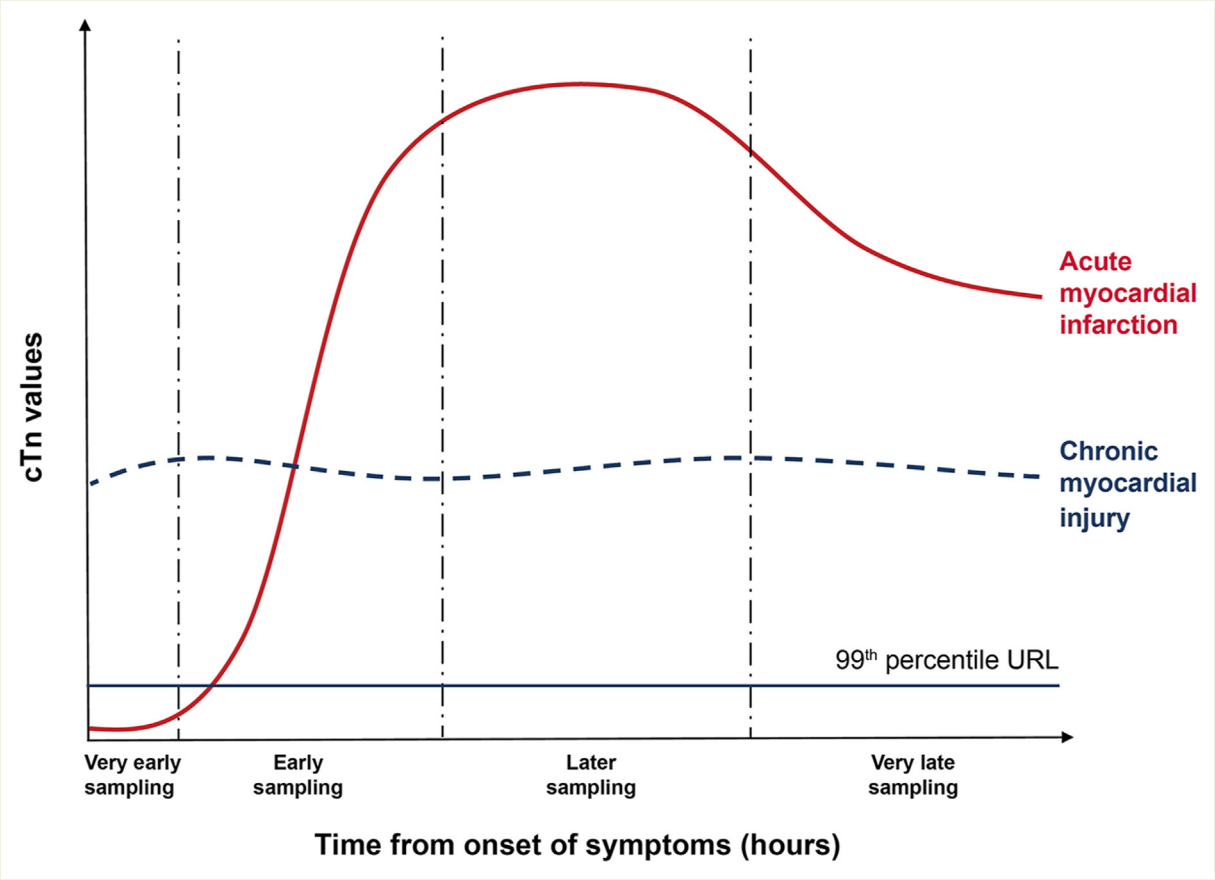

Figure 8 Early troponin kinetics in people with acute myocardial infarction.
Abbreviations: cTn, cardiac troponin; URL, upper reference limit.

use contemporary cTn assays. When defined as low-risk using a hs-cTn strategy, further testing to exclude AMI is not required [16,146,147].

Risk stratification for people with suspected ACS: identifying myocardial infarction and unstable angina

For people without findings consistent with ACOMI on the initial ECG, further assessment aims to identify NSTEMI and UA through evaluation of clinical features with additional ECG and troponin testing. NSTEMI is associated with elevated cTn values.

People with ongoing or recurrent ischaemic symptoms, or new ECG findings suggestive of ischaemia during initial or repeat testing, should be considered high risk for ACS. Serial cTn testing should be pursued if clinical suspicion of ACS remains high, as late increases in cTn have been described in <1% of people with NSTEMI [148].

2.4.1.1. High-sensitivity troponin-based clinical decision pathways

Strategies incorporating hs-cTn assay results rather than contemporary troponin assays are recommended for safe, rapid decision making. Overall, hs-cTn-based risk stratification identifies ~50–65% of people presenting with suspected ACS as low risk, ~20–30% as intermediate risk and ~15–25% as high risk for MACE [149,150]. When used in a validated algorithm combined with non-ischaemic ECG changes, safety and efficacy are achieved without using clinical risk scores [16,142].

0-, 0/1-, and 0/2-hour strategies have been developed for most hs-cTn assays and the values are assay-specific (Figure 11, Table 7 and Supplementary Material B1) [42,106,142,143,148,151–158].

Single high-sensitivity cardiac troponin measurements

A single hs-cTn measurement is not suitable for people with symptom onset <2 hours. These people require serial testing [23,106,143,153,155,159–161]. In people with symptom onset ≥2 hours, combining a single hs-cTn result with non-ischaemic ECG findings can very safely identify 20–50% of people as low risk [42,46,105,106,143,147,149–152,155,161–168].

A single measurement approach has been extensively validated using both hs-cTnT and hs-cTnI assays, with high negative predictive value and sensitivity for excluding index MI and a <1% risk of MACE during short- and longer-term follow-up [40,104,105,147,149,161,168–171]. Unlike hs-cTn assays, using a single contemporary troponin measurement to assess risk has not been validated [172].