STEP A - Assess for Myocardial Infarction and 30-day risk of cardiac event For all patients being discharged, complete both STEP A and STEP B (pg2)

USE ONLY IF CARDIAC ISCHEMIA IS THE PRIMARY CONCERN (requiring Tnl testing - not for myopericarditis, heart failure, arrythmias) Do not use if inpatient admission or investigation for another potential diagnosis is required.

Include: Is suspected ischemic cardiac chest pain the MAIN presenting problem requiring investigation today and

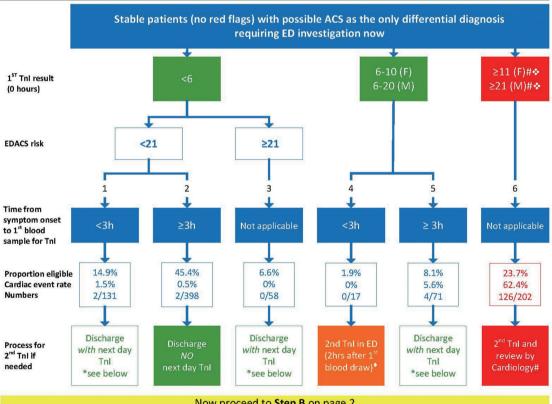
if it was excluded could the patient be discharged to outpatient follow-up? δ use this pathway

Exclude: Can myocardial infarction be excluded based on history and examination only, without measuring TnI (e.g. clearly musculoskeletal)? ðexit this pathway

Patients referred by GP to Cardiology ⇒ seen by Cardiology. ED team can initiate blood tests and resuscitate as required. Patients self-presenting

⇒ seen by ED.

SCREEN FOR STEMI and consider alternative Screen for high-risk features of aortic dissection Red flag(s) present causes, e.g. (see HealthPathways) and ACS Red Flags: = Not for low-risk pathway Pulmonary embolism Ongoing chest pain thought likely to be ischaemic Manage as clinically Pneumothorax Haemodynamic instability indicated Abdominal cause e.g., Pancreatitis History suggestive of crescendo angina (increasing Oesophageal rupture severity or frequency) Ischaemic changes on ECG, not known to be old



Now proceed to Step B on page 2 ETT: Exercise Treadmill Test

- *Next day TnI via Acute Demand Nursing. It is *essential* to make e-referral <u>and</u> make telephone call to 0800 111 900.
- *Give patient blood test form and information sheet. (See Hospital HealthPathway ACS for further guidance and printable forms)

Tnl: High-sensitivity cardiac troponin I

- *Consider patient convenience and ability to attend when planning next day troponin (a repeat test in ED is a potential alternative).
- ♦ If 2nd Tnl positive, ≥11 (F), ≥ 21 (M) or change between 1st and 2nd Tnl samples ≥4 patient should be discussed with Cardiology.
- # Consider Gen Med referral for patients with frailty, comorbidity, or known CAD not suitable for invasive strategy.
- See guidance for chronic troponin elevation on following page

Canterbury DHB 20220421

CTCA: CT coronary Angiogram

	MI does not ex	secondary investiga clude underlying CA		D (after AMI ruled o	out in Step A)	
Chest pain is considered	d to be very lo	w suspicion of CAD		ACTION		
or non-cardiac (e.g. sing			-YES-		d politely reques	t Cardiac risk profiling
TnI<6 (unless risk factor	rs – see box Ca	and D below)	A	if not done within	preceding 5 years	17. 17.
	NO (theref	ore consider CAD)				
Marked frailty or como	orbidity			ACTION	estado de contrato de contrato en	NO. 100 CM
OR			-YES-	Consider Cardiolog		view to optimise
Known CAD not suitable	le for invasive s			medical manageme	CANADA SERVICE STREET,	
	-		В	Otherwise follow-u	ip by GP	
	NO					
Risk factors requiring E		onsult:		ACTION	of the fire of carety	
• Tnl ≥11 (F) or ≥21 (VEC. N	Refer to Cardiology	reg in ED .	
 new ischaemia on E ongoing pain (if ED 		lakt ka isakasusia)	-YES-	Occasionally it may expedi	ite and/or help decision	-making for there to be a dire
ongoing pain (if ED concerns with follo		The state of the s	С	discussion between Cardio	ology SMO and senior El	doctor.
and the second second	NO					
	T.			a CTIONIC side on of	-	
Risk factors needing ou	utpatient tests	and Cardiology		ACTION: either of	r FTT (see helow)	unless patient had
review:				recently 'normal' in	The state of the s	
High normal TnI 6-1	10 (F) or 6-20 (M)		OR		
Recurrent symptoms not recently investigated			-YES	B) Refer to Cardiology SMO Virtual Review $^{\Psi}$ if:		
High risk patients s	such as known l	nistory of CAD, or	- 1993		not suitable for ETT (eg physically unable, abnormal	
people with high ex	xposure to mul	tiple risk factors		resting ECG su	ch as LBBB or AF)	
(e.g. Mãori)		_		 there is clinical 	concern that mo	ore specific tests are
			D	required, eg C	TCA, invasive ang	iogram or echo
(i) Patients with chronic chronic elevation and no s	c TnI elevation ar significant \triangle (or	nd +ve \triangle require Card previously not investi	liology Reg re gated for this	elevation) should have	4hrs); (ii) now asyr ve Cardiology SMO	nptomatic patients wit review if symptoms we
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Canterbury DHB 20220421

Figure S1 Application of Pathway utilising EDACS score (reproduced with permission of Dr. Martin Than, Christchurch Hospital).

ACS Rule-in Rule-out Pathway (0-1h) Southland ED

For risk stratification of patients with undifferentiated non-traumatic chest pain that may represent ACS, whereby patients who are low risk (<1% 30 day MACE rate) may be safe for discharge.

NB: The term "chest pain" can include other potentially ischaemic symptoms (eg chest heaviness, arm/jaw pain, SOB, etc), at the discretion of the clinician

Inclusion

- Episode of continuous symptoms >5 mins
- Age >20 years

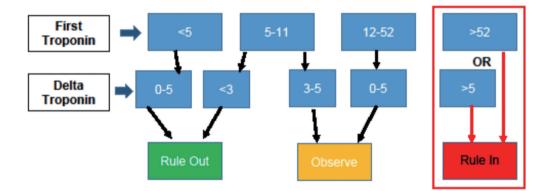
Exclusion

- STEMI
- Haemodynamic instability (arrhythmia, hypotension, APO)
- · Suspected alternative diagnosis such as PE or dissection
- Acute ischaemic changes on ECG
- Crescendo angina, persistent or recurrent pain in ED
- Known cause of symptoms (eg pneumonia)

First TnT = blood draw on arrival is $\underline{\text{time zero}}$. Second TnT is taken at $\underline{\text{1 hour}}$ after first blood draw Δ (delta) TnT = $\underline{\text{absolute difference}}$ between 0-1 hour results

Disposition is decided by a combination of the first Troponin and the Delta

NB: if first Tn is >52 OR the Δ is >5, patient is Rule IN



- Rule Out (0h <5 or 0h <12 + ∆<3)
 - o (<1% prevalence of AMI, <1% 30 day MACE rate)
 - Confirm differential diagnoses considered
 - o Chest Pain handout
 - Discharge home
 - o GP review in 1-2 weeks to review CAD risk factors
- Rule In (0h >52 or ∆>5)
 - o (60-70% prevalence of AMI)
 - Admit
 - Consider early ACS treatment
- "Observe" (Any other result)
 - o (10-20% prevalence of AMI)
 - o 3h troponin: if all three <15 = Rule Out. Otherwise discuss with ED Consultant

Figure S2 Application of ESC-based pathway (reproduced with permission of Dr. Chris Johnstone, Invercargill Hospital).

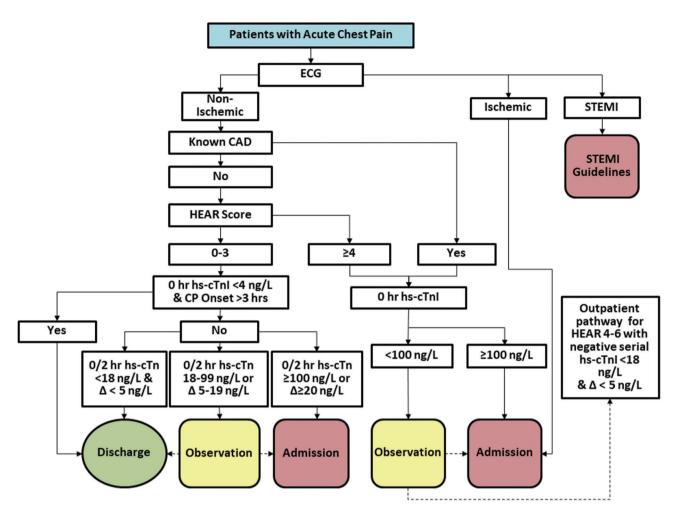
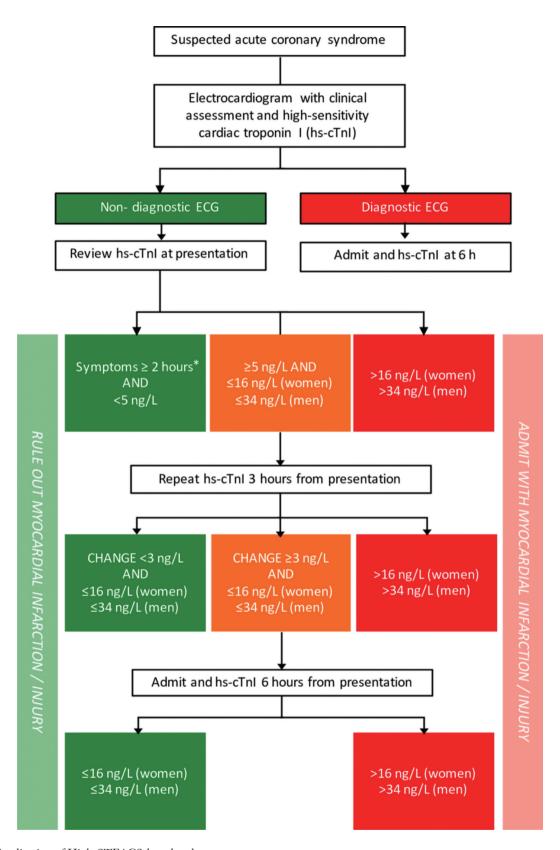


Figure S3 Application of HEART-based pathway (reproduced with permission of Dr. Simon Mahler, Wake Forest Baptist Health, Winston-Salem, USA).



 $\textbf{Figure S4} \ \textbf{Application of High-STEACS-based pathway.}$