

APPENDIX 2. ASSESSING the RISK of ACUTE CORONARY SYNDROME

Signs and Symptoms that *likely* represent ACS, secondary to Coronary Artery Disease

Assessment	High Likelihood Any of the following:	Intermediate Likelihood Absence of high-likelihood features and presence of any of the following:	Low Likelihood Absence of high- or intermediate likelihood features but may have:
History	<ul style="list-style-type: none"> Chest or left arm pain OR discomfort as chief symptom reproducing prior documented angina Known history of CAD, including MI 	<ul style="list-style-type: none"> Chest or left arm pain or discomfort as chief symptom Age > 70 years Male sex Diabetes mellitus 	<ul style="list-style-type: none"> Probable ischemic symptoms in absence of any of the intermediate likelihood characteristics Recent cocaine use
Physical Exam	Transient MR murmur, hypotension, diaphoresis, pulmonary edema, or rales	Extracardiac vascular disease	Chest discomfort reproduced by palpation
ECG	New, or presumably new, transient ST-segment deviation (1mm or greater) or T-wave inversion in multiple precordial leads	<ul style="list-style-type: none"> Fixed Q waves ST depression 0.5 to 1mm or T-wave inversion greater than 1mm 	<ul style="list-style-type: none"> T-wave flattening or inversion less than 1 mm in leads with dominant R waves Normal ECG
Cardiac Markers	Elevated cardiac Troponin I, Troponin T, or MB fraction of creatine kinase	Normal	Normal

Short-term risk of death or nonfatal MI in patients with UA/NSTEMI*

Feature	HIGH RISK At least 1 of the following must be present:	INTERMEDIATE RISK No high-risk features, BUT must have 1 of the following:	LOW RISK No high- or intermediate-risk feature BUT may have any of the following:
History	Accelerating tempo of ischemic symptoms in preceding 48h	Prior MI, peripheral or cerebrovascular disease, or CABG; prior aspirin use	
Character of Pain	Prolonged ongoing pain at rest (>than 20 mins)	<ul style="list-style-type: none"> Prolonged rest angina (>than 20 mins), now resolved, with moderate or high likelihood of CAD Rest angina (>than 20 mins) or relieved with rest or sublingual NTG Nocturnal angina New-onset or progressive CCS* class III or IV angina in the past 2 weeks without prolonged rest pain (>than 20 mins) but with intermediate or high likelihood of CAD (see table above) 	<ul style="list-style-type: none"> Increased angina frequency, severity, or duration Angina provoked at a lower threshold New onset angina with onset 2 weeks to 2 months prior to presentation
Clinical findings	<ul style="list-style-type: none"> Pulmonary edema, likely due to ischemia New or worsening MR murmur S₃ or new/worsening rales Hypotension, bradycardia, tachycardia Age > than 75 years 	Age > 70 years	
ECG	<ul style="list-style-type: none"> Angina at rest with transient ST-segment changes >0.5mm Bundle-branch block, new/presumed new Sustained ventricular tachycardia 	<ul style="list-style-type: none"> T-wave changes Pathological Q waves or resting ST-depression less than 1 mm in multiple lead groups (anterior, inferior, lateral) 	Normal or unchanged ECG
Cardiac Markers	Elevated cardiac Troponin T, Troponin I or MB fraction of creatine kinase	Slightly elevated cardiac Troponin T, Troponin I OR MB fraction of creatine kinase	Normal

* NOTE: Estimation of the short-term risks of death and nonfatal cardiac ischemic events in UA (or NSTEMI) is a complex multivariable problem that cannot be fully specified in a table such as this; therefore, this table is meant to offer general guidance and illustration rather than rigid algorithms.

CABG = coronary artery bypass graft surgery; CAD = coronary artery disease; CCS = Canadian Cardiovascular Society; ECG = electrocardiogram; MI = myocardial infarction; MR = Mitral Regurgitation; NTG = nitroglycerin; UA/NSTEMI = unstable angina/non-ST elevation myocardial infarction.

*Canadian Cardiovascular Society Grading of Angina Pectoris

Class	Description of Stage
I	"Ordinary physical activity does not cause angina," (e.g. walking or climbing stairs). <ul style="list-style-type: none"> angina due to strenuous, rapid or prolonged exertion at work or recreation.
II	"Slight limitation of ordinary activity." Angina occurs: <ul style="list-style-type: none"> on walking or climbing stairs rapidly; walking uphill; stair climbing after meals; cold/wind; or under emotional stress; or only during the few hours after awakening. Walking more than 2 blocks on the level, and climbing more than 1 flight of ordinary stairs at a normal pace and under normal conditions
III	"Marked limitations of ordinary physical activity." <ul style="list-style-type: none"> angina occurs on walking 1 to 2 blocks on the level and climbing 1 flight of stairs under normal conditions and at a normal pace.
IV	"Inability to carry on any physical activity without discomfort – anginal symptoms may be present at rest."

Above Tables reprinted with permission from: (1) ACC/AHA 2007 Guidelines for the Management of Patients With Unstable Angina/Non-ST Elevation Myocardial Infarction. Circulation 2007;116:803-877 ©2007, American Heart Association, Inc. (2) Campeau L. Grading of angina pectoris (letter). Circulation 1976;54:522-3(15).

