



My Patient Has Stable Angina: When to Intervene

Presenter: Dr. Abul Fazal Mohammad Helal Uddin,

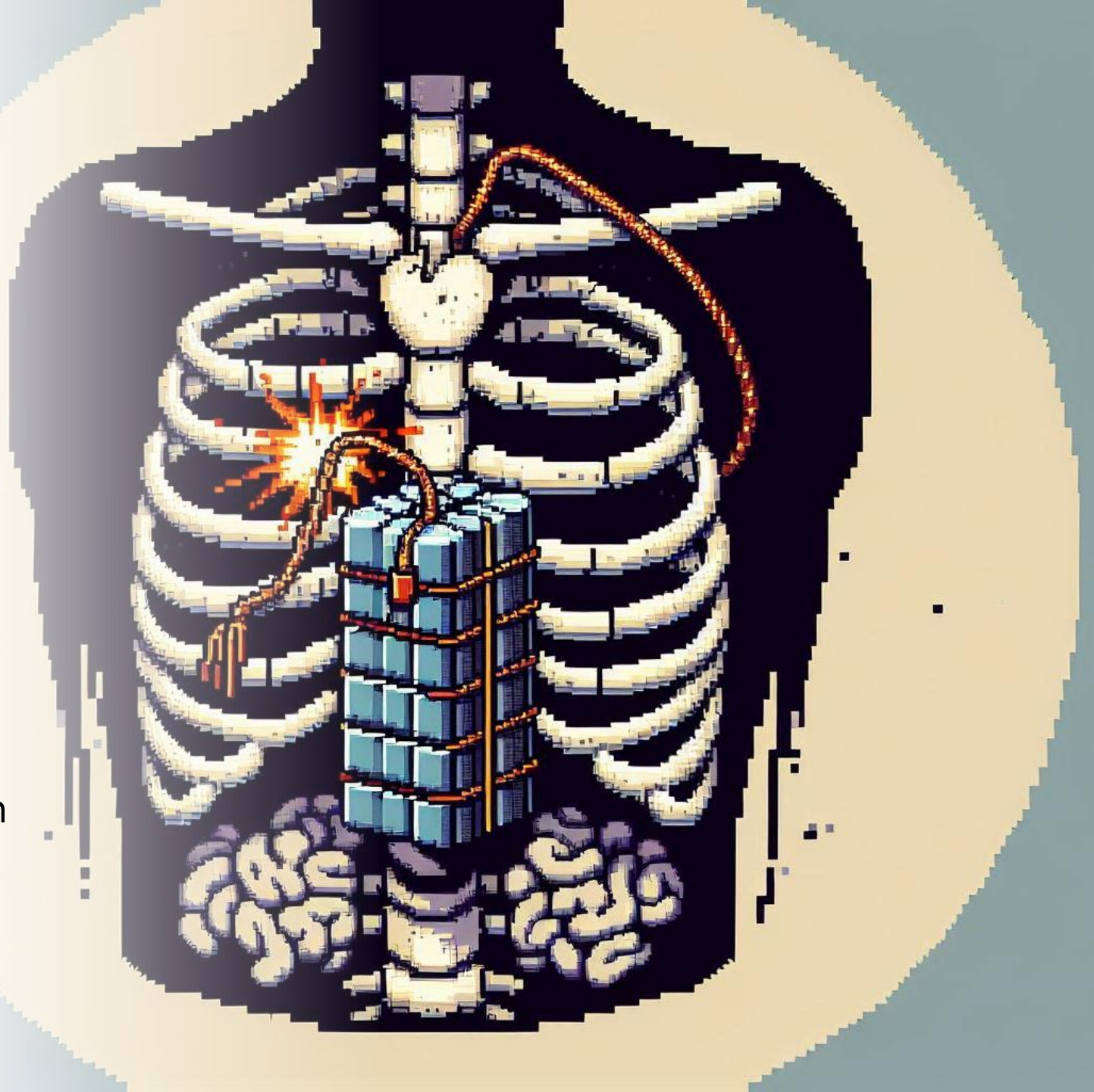
Associate Professor of Medicine, Sir Salimullah Medical College

Event: **Bangladesh Society of Medicine Annual Conference**

An evidence-based approach to timely treatment

Introduction

"Imagine a time bomb ticking inside your chest, silent until the fuse burns down. This is the reality for patients with stable angina, where every moment of delay can lead to irreversible damage. Today, we explore when to cut the wire and intervene."



My Patient Has Stable Angina: When to Intervene



Stable Angina is a common manifestation of Coronary Artery Disease.



Early identification of the patients with high-risk features and timely intervention is the key to prevent adverse outcomes.

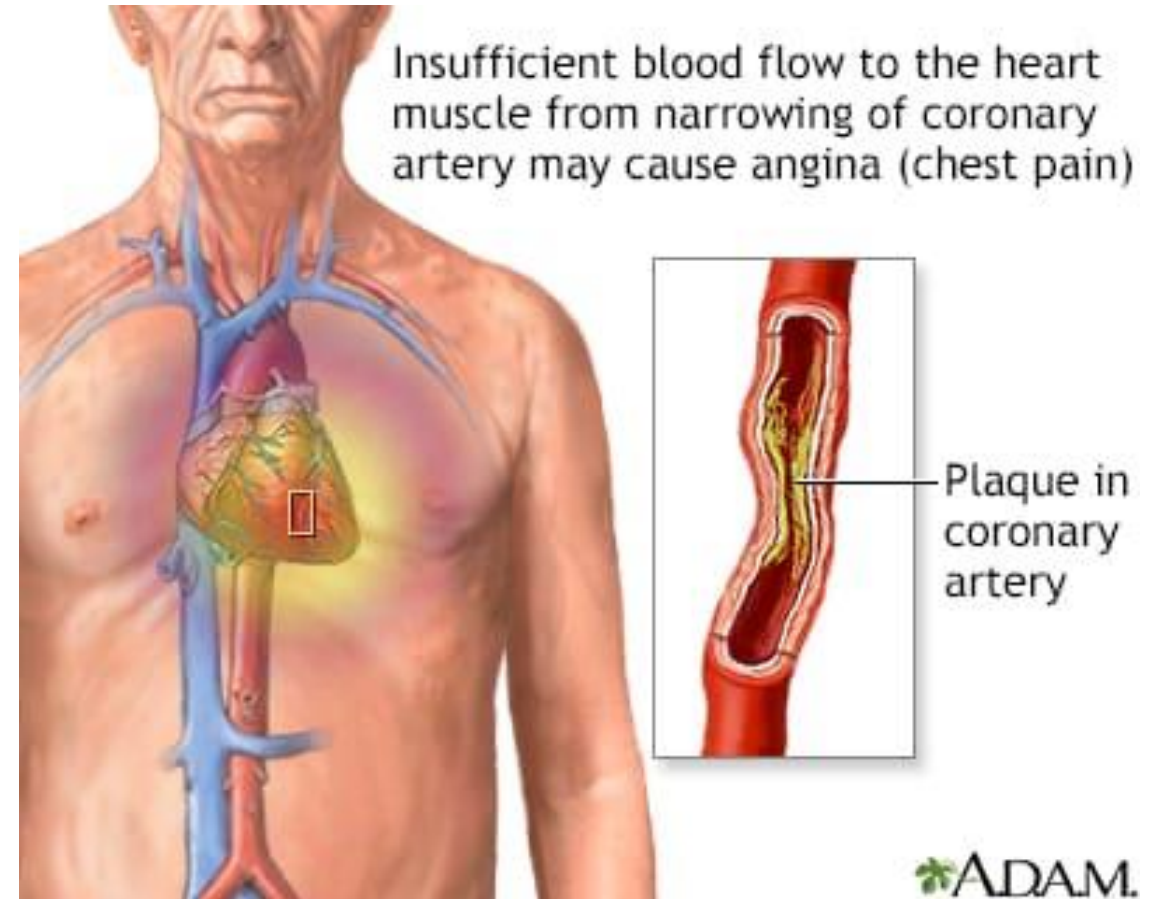


The strategy of intervention should be tailored to the individual patient, based on the level of risk, comorbidities, and patient preference.



Understanding Stable Angina

- Stable angina is caused by a reduced blood supply to the heart muscle
- It is characterized by chest pain or discomfort
- Episodes of pain tend to last 5 minutes or less
- Rest or medication can alleviate the discomfort



CLASS (STRENGTH) OF RECOMMENDATION	
CLASS 1 (STRONG)	Benefit >>> Risk
Suggested phrases for writing recommendations: - Is recommended - Is indicated/useful/effective/beneficial - Should be performed/administered/other - Comparative-Effectiveness Phrases†: - Treatment/strategy A is recommended/indicated in preference to treatment B - Treatment A should be chosen over treatment B	
CLASS 2a (MODERATE)	Benefit >> Risk
Suggested phrases for writing recommendations: - Is reasonable - Can be useful/effective/beneficial - Comparative-Effectiveness Phrases†: - Treatment/strategy A is probably recommended/indicated in preference to treatment B - It is reasonable to choose treatment A over treatment B	
CLASS 2b (WEAK)	Benefit ≥ Risk
Suggested phrases for writing recommendations: - May/might be reasonable - May/might be considered - Usefulness/effectiveness is unknown/unclear/uncertain or not well-established	
CLASS 3: No Benefit (MODERATE) (Generally, LOE A or B use only)	Benefit = Risk
Suggested phrases for writing recommendations: - Is not recommended - Is not indicated/useful/effective/beneficial - Should not be performed/administered/other	
Class 3: Harm (STRONG)	Risk > Benefit
Suggested phrases for writing recommendations: - Potentially harmful - Causes harm - Associated with excess morbidity/mortality - Should not be performed/administered/other	

LEVEL (QUALITY) OF EVIDENCE‡	
LEVEL A	
- High-quality evidence‡ from more than 1 RCT - Meta-analyses of high-quality RCTs - One or more RCTs corroborated by high-quality registry studies	
LEVEL B-R	(Randomized)
- Moderate-quality evidence‡ from 1 or more RCTs - Meta-analyses of moderate-quality RCTs	
LEVEL B-NR	(Nonrandomized)
- Moderate-quality evidence‡ from 1 or more well-designed, well-executed nonrandomized studies, observational studies, or registry studies - Meta-analyses of such studies	
LEVEL C-LD	(Limited Data)
- Randomized or nonrandomized observational or registry studies with limitations of design or execution - Meta-analyses of such studies - Physiological or mechanistic studies in human subjects	
LEVEL C-EO	(Expert Opinion)
Consensus of expert opinion based on clinical experience	

COR and LOE are determined independently (any COR may be paired with any LOE).

A recommendation with LOE C does not imply that the recommendation is weak. Many important clinical questions addressed in guidelines do not lend themselves to clinical trials. Although RCTs are unavailable, there may be a very clear clinical consensus that a particular test or therapy is useful or effective.

* The outcome or result of the intervention should be specified (an improved clinical outcome or increased diagnostic accuracy or incremental prognostic information).

† For comparative-effectiveness recommendations (COR 1 and 2a; LOE A and B only), studies that support the use of comparator verbs should involve direct comparisons of the treatments or strategies being evaluated.

‡ The method of assessing quality is evolving, including the application of standardized, widely-used, and preferably validated evidence grading tools; and for systematic reviews, the incorporation of an Evidence Review Committee.

COR indicates Class of Recommendation; EO, expert opinion; LD, limited data; LOE, Level of Evidence; NR, nonrandomized; R, randomized; and RCT, randomized controlled trial.

Diagnostic Tools for Stable Angina

Diagnostic Tools	Description
1. History & Physical	- Assess symptoms (e.g., chest pain characteristics, duration).
	- Evaluate cardiovascular risk factors and medical history.
	- Perform physical examination to assess vital signs and signs of heart failure.
2. Laboratory Tests	- Troponin I: Assess myocardial injury or infarction in suspected ACS.
	- Lipid Profile: Evaluate cardiovascular risk and guide lipid-lowering therapy.
3. Non-Invasive Testing	- Exercise ECG: Detect exercise-induced ischemic changes.
	- Stress Echocardiography: Assess myocardial perfusion and wall motion abnormalities.
	- Nuclear Perfusion Imaging: Evaluate myocardial perfusion at rest and during stress.
	- Cardiac MRI: Assess myocardial function, perfusion, and viability.
4. Invasive Angiography	- Reserved for high-risk patients with equivocal or abnormal non-invasive tests.
	- Direct visualization of coronary anatomy.
	- Consider FFR or iFR for lesion-specific ischemia assessment.

Seattle Angina Questionnaire - Scoring:

Domain	Score Range	Interpretation
Physical Limitation	0-100	Higher scores indicate greater limitation in physical activities due to angina.
Angina Stability	0-100	Higher scores indicate more stable angina symptoms.
Angina Frequency	0-100	Higher scores indicate more frequent angina episodes.
Treatment Satisfaction	0-100	Higher scores indicate greater satisfaction with angina treatment.
Quality of Life	0-100	Higher scores indicate better quality of life related to angina.

Stratification in Stable Angina: HEART Score & Beyond

Objective of Risk Stratification:

- Identify high-risk patients for major adverse cardiac events (MACE).
- Guide decisions for optimal timing of interventions.

Risk Stratification Tools:

- Employ the HEART Score to evaluate risk based on History, ECG, Age, Risk factors, and Troponin levels.
- Use the Coronary Artery Disease Consortium calculator for assessing pre-test probability of ischemic heart disease.

Determining Risk Levels:

- Consider comorbidities like hypertension, diabetes, and smoking history which can elevate risk.
- Non-invasive stress testing and coronary angiography for traditional risk assessment.

Advanced Imaging Techniques:

- Implement cardiac MRI and CCTA for comprehensive risk stratification.

Personalized Risk Assessment:

- Selection of stratification method should align with individual patient risk profiles.

Incorporating Other Scores:

- Consider other risk models such as the GRACE and TIMI scores, particularly in post-acute coronary syndrome (ACS) settings.



CAD Consortium Pre-Test Probability Calculator Factors

Factor	Categories/Values
Age	- Younger than 40 <> - 40 to 49 <> - 50 to 59 <> - 60 to 69 <> - Older than 70
Gender	- Male <> - Female
Chest Pain Type	- Typical angina <> - Atypical angina <> - Non-anginal pain <> - Asymptomatic
Smoking	- Smoker <> - Non-smoker
Diabetes	- Diabetic <> - Non-diabetic
Hypertension	- Hypertensive <> - Normotensive
Hypercholesterolemia	- Hypercholesterolemic <> - Normal cholesterol levels
Family History	- Present <> - Absent

Pretest Probabilities of Obstructive CAD in Symptomatic Patients

(A) according to age, sex, and symptoms;

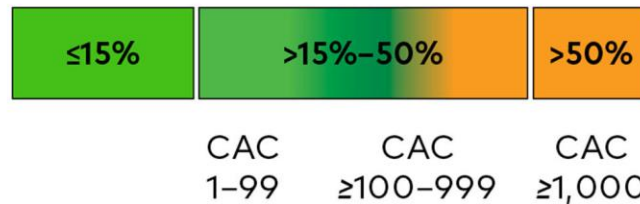
(B) according to age, sex, symptoms, and CAC

Age, y	Chest Pain		Dyspnea	
	Men	Women	Men	Women
30–39	≤4	≤5	0	3
40–49	≤22	≤10	12	3
50–59	≤32	≤13	20	9
60–69	≤44	≤16	27	14
70+	≤52	≤27	32	12

A Pretest probability based on age, sex, and symptoms



B Pretest probability based on age, sex, symptoms, and CAC score⁺

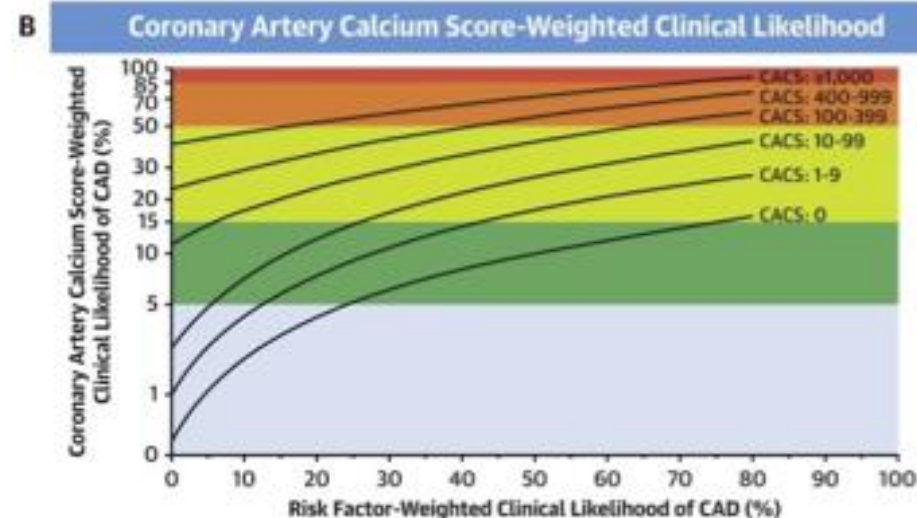


CENTRAL ILLUSTRATION: Estimation of the Clinical Likelihood of Obstructive Coronary Artery Disease

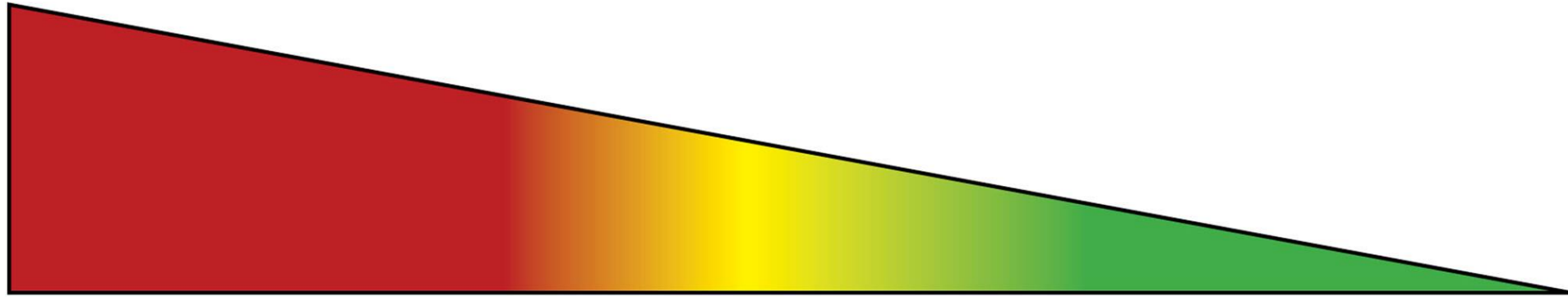
A Risk Factor-Weighted Clinical Likelihood

Number of Risk Factors	Nonanginal Pain						Atypical Angina or Dyspnea						Typical Angina					
	Women			Men			Women			Men			Women			Men		
	0-1	2-3	4-5	0-1	2-3	4-5	0-1	2-3	4-5	0-1	2-3	4-5	0-1	2-3	4-5	0-1	2-3	4-5
Age: 30-39	0	1	2	1	2	5	0	1	3	2	4	8	2	5	10	9	14	22
Age: 40-49	1	1	3	2	4	8	1	2	5	3	6	12	4	7	12	14	20	27
Age: 50-59	1	2	5	4	7	12	2	3	7	6	11	17	6	10	15	21	27	33
Age: 60-69	2	4	7	8	12	17	3	6	11	12	17	25	10	14	19	32	35	39
Age: 70-80	4	7	11	15	19	24	6	10	16	22	27	34	16	19	23	44	44	45

Risk factors: Family history, smoking, dyslipidemia, hypertension, diabetes



Winther, S. et al. J Am Coll Cardiol. 2020;76(21):2421-32.



- Central
- Pressure
- Squeezing
- Gripping
- Heaviness
- Tightness
- Exertional/stress-related
- Retrosternal

- Left-sided
- Dull
- Aching

- Stabbing

- Right-sided
- Tearing
- Ripping
- Burning

- Sharp
- Fleeting
- Shifting
- Pleuritic
- Positional



HEART Score Table for Chest Pain Patients in the ED

HEART Score Component	Description	Points	MACE Outcome (Over Next 6 Weeks)
History	Highly Suspicious	2	Score 0–3: 2.5% - Discharge Home
	Moderately Suspicious	1	Score 4–6: 20.3% - Admit for Clinical Observation
	Slightly or Non-Suspicious	0	Score 7–10: 72.7% - Early Invasive Strategies
ECG	Significant ST-Depression	2	
	Nonspecific Repolarization	1	
	Normal	0	
Age	≥ 65 years	2	
	> 45 - < 65 years	1	
	≤ 45 years	0	
Risk Factors	≥ 3 Risk Factors or History of CAD	2	
	1 or 2 Risk Factors	1	
	No Risk Factors	0	
Troponin	> 3× Normal Limit	2	
	> 1 - < 3 × Normal Limit	1	
	≤ Normal Limit	0	
Risk Factors Detail	DM, current or recent smoker, HTN, HLP, family history of CAD, obesity		

Probability of obstructive coronary artery disease (CAD) based on various factors:

Risk Factor	Low Probability	Intermediate Probability	High Probability
Age	Younger individuals	Middle-aged individuals(Men > 65 years, Women > 75 years)	Older individuals
Sex	Female		Male
Symptoms	- Symptoms possibly related to angina, but not typical	Typical angina at low-level activity or moderate exertion	Typical angina
Medical History	No history of CAD	Family history of CAD	- Personal history of CAD - Heart failure - Significant arrhythmias - Left ventricular dysfunction
Risk Factors	Few or no traditional risk factors	Some risk factors present Peripheral artery disease Diabetes mellitus	Multiple risk factors or severe single risk factor Known obstructive CAD (prior MI, revascularization) causing significant stenosis
Test Results	Normal ECG and no ischemic changes during stress testing	Abnormal ECG or equivocal changes during stress testing	Abnormal ECG and definitive ischemic changes during stress testing

Choosing the Right Diagnostic Test

Pretest likelihood of CAD	Low	→	No testing necessary	→	Option for CAC for ASCVD risk stratification
	Intermediate-high	→	Younger patient (<65 y of age)	OR	Less obstructive CAD suspected → CCTA favored
	Intermediate-high	→	Older patient (≥65 y of age)	OR	More obstructive CAD suspected → Stress testing favored

	Favors use of CCTA	Favors use of stress imaging
Goal	- Rule out obstructive CAD - Detect nonobstructive CAD	Ischemia-guided management
Availability and expertise	High-quality imaging and expert interpretation routinely available	High-quality imaging and expert interpretation routinely available
Likelihood of obstructive CAD	Age <65 y	Age ≥65 y
Prior test results	Prior functional study inconclusive	Prior CCTA inconclusive
Other compelling indications	- Anomalous coronary arteries - Require evaluation of aorta or pulmonary arteries	- Suspect scar (especially if PET or stress CMR available) - Suspect coronary microvascular dysfunction (when PET or CMR available)

Stress testing information					
	ETT	Stress echocardiography	SPECT MPI	PET MPI	Stress CMR MPI
Patient capable of exercise	✓	✓	✓		
Pharmacologic stress indicated		✓	✓	✓	✓
Quantitative flow				✓	✓
LV dysfunction/scar		✓	✓	✓	✓

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graph TD
    Start[Stable Chest Pain + No Known CAD] --> ClinicalRisk[Clinical risk assessment (1)]
    ClinicalRisk --> LowRisk[Low risk]
    ClinicalRisk --> IntermediateHighRisk[Intermediate/high risk]
    
    LowRisk --> NoTesting[No testing recommended (1)]
    LowRisk --> CACorECG[CAC or exercise ECG testing in selected cases (2a)]
    
    IntermediateHighRisk --> CCTA[CCTA* (1)]
    IntermediateHighRisk --> StressTesting[Stress testing:*  
Stress CMR  
Stress PET  
Stress SPECT  
Stress echocardiography (1)  
Exercise ECG (2a)]
    
    StressTesting --> MildIschemia[Mild ischemia]
    StressTesting --> ModerateSevereIschemia[Moderate-severe ischemia]
    
    MildIschemia --> OptimizeTherapies1[Optimize preventive therapies (1)]
    MildIschemia --> CAC2a[CAC (2a)]
    
    ModerateSevereIschemia --> OptimizeTherapies2[Optimize preventive therapies (1)]
    
    OptimizeTherapies2 --> PersistentSymptoms{Persistent symptoms?}
    PersistentSymptoms -- NO --> ContinueTherapies[Continue preventive therapies (1)]
    PersistentSymptoms -- YES --> InvasiveAngiography2[Invasive coronary angiography (1)]
    InvasiveAngiography2 --> CCTA2a[CCTA (2a)]
    
    CCTA --> Inconclusive[Inconclusive]
    CCTA --> NoCAD[No CAD (no stenosis or plaque)]
    CCTA --> NonobstructiveCAD[Nonobstructive CAD (<50% stenosis)]
    CCTA --> ObstructiveCAD[Obstructive CAD (≥50% stenosis)]
    
    Inconclusive --> StressTesting2a[Stress testing (2a)]
    
    NoCAD --> INOCA[Consider INOCA pathway as an outpatient for frequent or persistent symptoms]
    
    NonobstructiveCAD --> FFRCT[FFR-CT for 40%-90% stenosis OR stress testing (2a)]
    
    ObstructiveCAD --> FFRCT2[FFR-CT ≤0.8 or moderate-severe ischemia]
    ObstructiveCAD --> HighRiskCAD[High-risk CAD† or frequent angina]
    
    FFRCT2 -- NO --> InvasiveAngiography1[Invasive coronary angiography (1)]
    FFRCT2 -- YES --> InvasiveAngiography1
    
    HighRiskCAD --> InvasiveAngiography1
    
    InvasiveAngiography1 --> Inconclusive2[Inconclusive]
    InvasiveAngiography1 --> MildIschemia2[Mild ischemia]
    InvasiveAngiography1 --> ModerateSevereIschemia2[Moderate-severe ischemia]
    
    Inconclusive2 --> OptimizeTherapies3[Optimize preventive therapies (1)]
    Inconclusive2 --> CAC3a[CAC (2a)]
    
    MildIschemia2 --> OptimizeTherapies4[Optimize preventive therapies (1)]
    MildIschemia2 --> CAC4a[CAC (2a)]
    
    ModerateSevereIschemia2 --> OptimizeTherapies5[Optimize preventive therapies (1)]
    
    OptimizeTherapies5 --> PersistentSymptoms2{Persistent symptoms?}
    PersistentSymptoms2 -- NO --> ContinueTherapies2[Continue preventive therapies (1)]
    PersistentSymptoms2 -- YES --> InvasiveAngiography3[Invasive coronary angiography (1)]
    InvasiveAngiography3 --> CCTA3a[CCTA (2a)]
    
    FollowUp[Follow-up testing and intensification of GDMT by initial test results and persistence/worsening/frequency of symptoms]
  
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Recommendations for Low-Risk Patients With Stable Chest Pain and No Known CAD:

COR	LOE	Primary Recommendation	Additional Details
1	B-NR	Assess pretest probability of obstructive CAD.	For low-risk patients, additional tests may be unnecessary.
2a	B-R	Use CAC as first-line test to exclude plaque.	First-line test for low-risk patients to identify plaque.
2a	B-NR	Exercise testing without imaging for low-risk patients.	Assesses risk and functional capacity in low-risk patients.

Recommendations for Intermediate-High Risk Patients With Stable Chest Pain and No Known CAD

Anatomic Testing Recommendations

COR	LOE	RECOMMENDATIONS
1	A	CCTA is effective for diagnosis of CAD, for risk stratification, and for guiding treatment decisions.

Recommendations for Intermediate-High Risk Patients With Stable Chest Pain and No Known CAD

Stress Testing Recommendations

COR		Recommendations
1	B-R	Stress imaging is effective for diagnosis of myocardial ischemia and for estimating risk of MACE.
2a	B-R	PET is reasonable in preference to SPECT for rest/stress nuclear MPI to improve diagnostic accuracy.
2a	B-R	Exercise electrocardiography is reasonable for those who can achieve maximal levels of exercise.
2b	B-NR	The use of attenuation correction or prone imaging may be reasonable to decrease the rate of false-positive findings in SPECT.

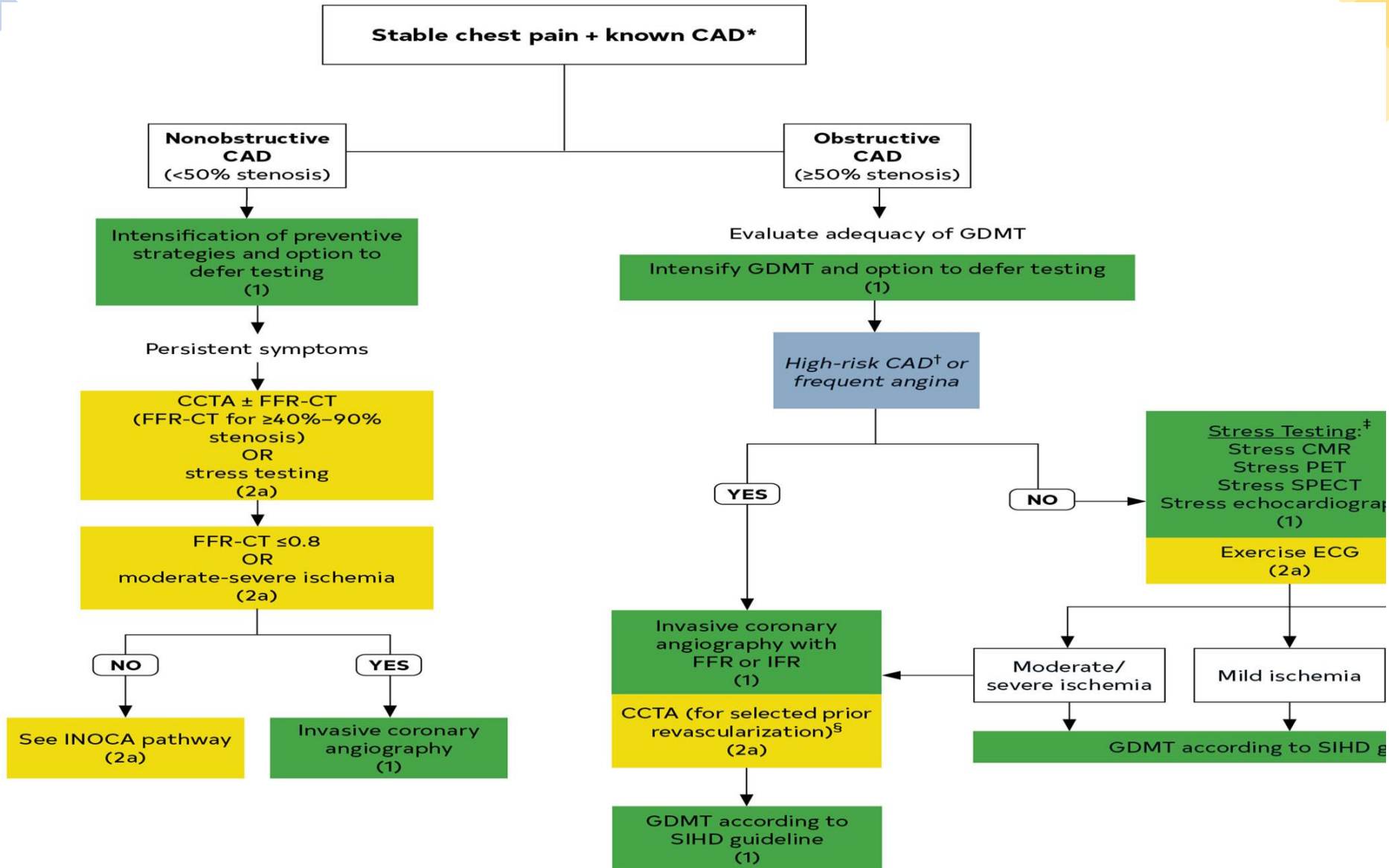
Recommendations for Intermediate-High Risk Patients With Stable Chest Pain and No Known CAD

Assessment of Left Ventricular Function Recommendations

COR	LOE	Recommendations
1	B-NR	TTE is effective for diagnosis of resting left ventricular systolic and diastolic function and detection of abnormalities.

Sequential or Add-on Testing: What to Do If Index Test Results Are Positive or Inconclusive

COR	LOE	Recommendations
2a	B-NR	FFR-CT can be useful for diagnosis of vessel-specific ischemia and to guide decision-making regarding the use of coronary revascularization.
2a	B-NR	CCTA is reasonable after an inconclusive or abnormal exercise ECG or stress imaging study.
2a	B-NR	The addition of CAC testing can be useful in stress testing.
2a	B-NR	Stress imaging is reasonable after inconclusive CCTA.
2b	C-EO	CCTA or ICA may be reasonable after a negative stress test but with high clinical suspicion of CAD.



Recommendations for Patients With Known CAD Presenting With Stable Chest Pain

COR	LOE	Recommendations
1	A	Optimize GDMT for patients with obstructive CAD and stable chest pain.
1	C-EO	Optimize preventive therapies for patients with known nonobstructive CAD and stable chest pain.

Recommendations for Patients With Obstructive CAD Who Present With Stable Chest Pain

Index Diagnostic Testing

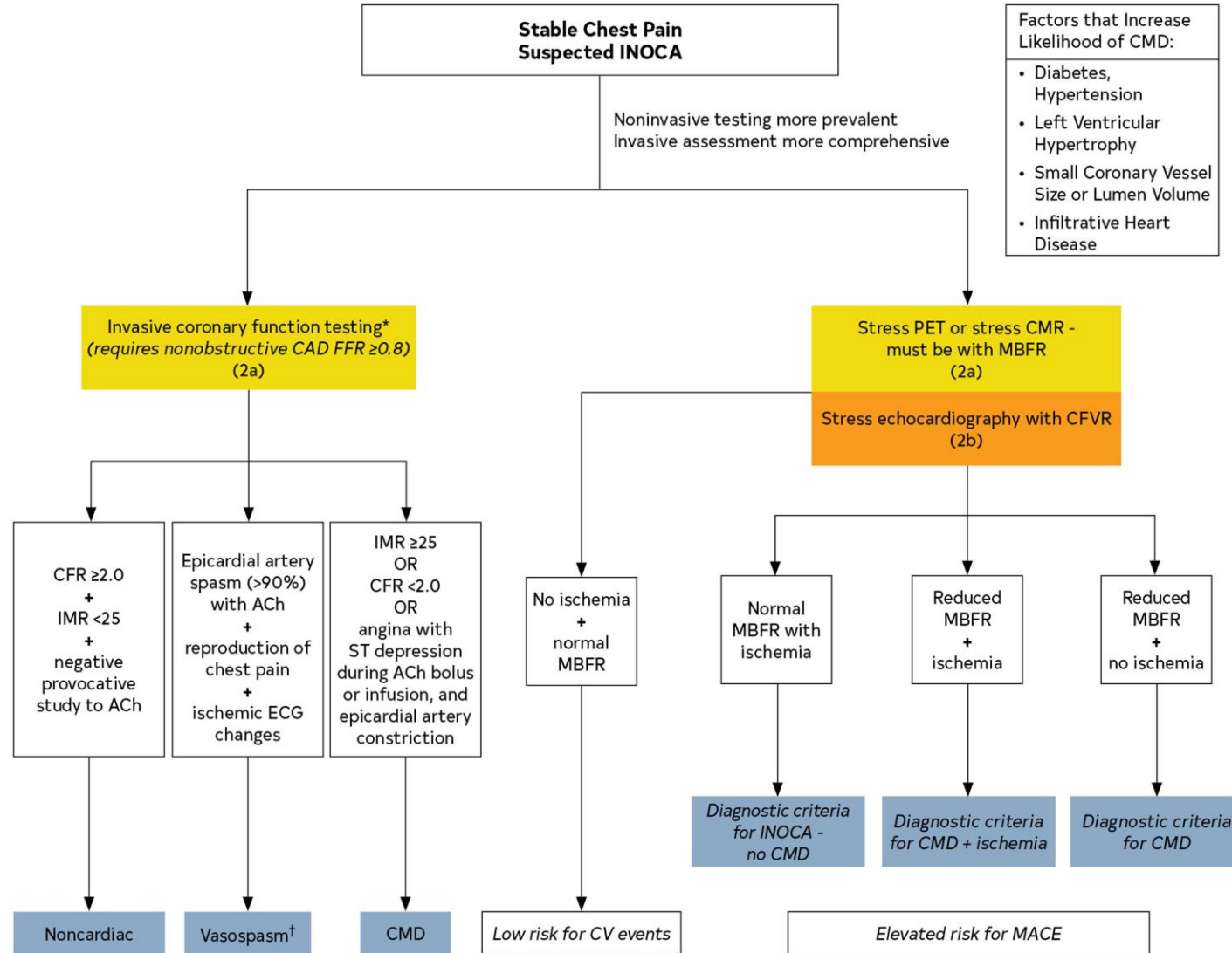
COR	LOE	Recommendations
1	A	ICA recommended for guiding therapeutic decision-making in patients with moderate-severe ischemia despite GDMT.
1	A	FFR or instantaneous wave free ratio recommended for patients referred for ICA without prior stress testing.
1	B-R	ICA is effective for guiding therapeutic decision-making in symptomatic patients with CCTA-defined $\geq 50\%$ stenosis.
2a	B-NR	CCTA is reasonable to evaluate bypass graft or stent patency.
1	B-NR	Stress PET/SPECT MPI, CMR, or echocardiography recommended for diagnosis of myocardial ischemia.
2a	B-R	PET is reasonable over SPECT for rest/stress nuclear MPI to improve diagnostic accuracy.
2a	B-NR	Exercise treadmill testing can be useful to assess symptoms and select management.
2a	B-NR	The addition of myocardial blood flow reserve in stress PET MPI or CMR improves diagnosis accuracy.

Recommendations for Patients With Prior CABG Surgery With Stable Chest Pain

COR	LOE	Recommendations
1	C-LD	ICA is recommended for patients with prior CABG surgery and stable chest pain with moderate-to-severe ischemia or indeterminate/nondiagnostic stress test for guiding therapeutic decision-making.
2a	C-LD	Performing stress imaging or CCTA is reasonable for patients with prior CABG surgery and stable chest pain who are suspected to have myocardial ischemia, to evaluate for ischemia or graft stenosis or occlusion.

Recommendations for Patients With Known Nonobstructive CAD Presenting With Stable Chest Pain

COR	LOE	Recommendations
2a	B-NR	CCTA is reasonable for symptomatic patients with nonobstructive CAD to determine plaque burden and progression.
2a	B-NR	FFR can be useful for patients with 40% to 90% stenosis on CCTA to diagnose ischemia and guide use of ICA.
2a	C-LD	Stress imaging is reasonable for patients with extensive nonobstructive CAD to diagnose myocardial ischemia.



- Factors that Increase Likelihood of CMD:
- Diabetes, Hypertension
 - Left Ventricular Hypertrophy
 - Small Coronary Vessel Size or Lumen Volume
 - Infiltrative Heart Disease

Intensification of preventive strategies + symptom guided GDMT (1)

Recommendations for Patients With Suspected Ischemia and No Obstructive CAD (INOCA)

COR	LOE	Recommendations
2a	B-NR	Invasive coronary function testing is reasonable for patients with stable chest pain, nonobstructive CAD, and mild ischemia.
2a	B-NR	Stress PET MPI with myocardial blood flow reserve is reasonable for diagnosing microvascular dysfunction.
2a	B-NR	Stress CMR with myocardial blood flow reserve measurement is reasonable to improve diagnosis and risk estimation.
2b	C-EO	Stress echocardiography with coronary flow velocity reserve measurement may be reasonable for diagnosis and risk estimation.

Case Study 1: Low-Risk Patient

- Mr. Smith A 55-year-old teacher with occasional chest pain controlled by medication.
- Next step for the patient.





Assessment and Evaluation:



Conduct a comprehensive assessment of Mr. Smith's cardiovascular risk factors, including blood pressure, lipid profile, smoking status, DM and family history.



Review his current medication regimen and assess adherence and efficacy in controlling symptoms.



Management of Low-Risk Patients

Lifestyle Modifications and Medical Therapy:

- Encourage heart-healthy lifestyle changes such as diet, exercise, and smoking cessation.
- Continue current medical therapy and consider adjusting medications for optimal control of symptoms.

Monitoring and Follow-up Strategy:

- Regular follow-up appointments to monitor symptoms and medication effectiveness.
- Use of risk assessment tools to re-evaluate the risk status periodically.

Indications for Escalation of Care:

- worsening symptoms despite optimal medical therapy,
- development of high-risk features on diagnostic testing,
- or emergence of new cardiovascular events.



Intermediate-Risk Patient Case Study

“Mr. Thompson, a 60-year-old businessman, experiences frequent angina despite medication. What are our next steps?”

Symptoms: Persistent angina episodes.

Current Therapy: Beta-blockers, statins,

Angiogram Findings: 70% stenosis in LAD, 50% in RCA.



Recommendations for Patients With Known CAD Presenting With Stable Chest Pain:

COR	LOE	Recommendations	Additional ACC/AHA Details
1	A	For patients with obstructive CAD and stable chest pain, it is recommended to optimize GDMT.	Guideline-Directed Medical Therapy (GDMT) includes antianginal therapies, statins, ACE inhibitors, or ARBs, and beta-blockers.
1	C-EO	For patients with known nonobstructive CAD and stable chest pain, it is recommended to optimize preventive therapies.	Preventive therapies include lifestyle modifications, statin therapy, and aspirin as appropriate, based on risk assessment.

Case Study 3: High-Risk Patient

Attribute	Details
Name	Mr. Robert Johnson
Age	70
Occupation	Retired Army Officer
Medical History	Severe angina during rest or minimal exertion
Stress Test Result	Positive

Intervention Strategy & Follow-up Plan

Category	Details
Intervention Strategy	Consider percutaneous coronary intervention (PCI) or coronary artery bypass grafting (CABG) based on disease complexity; balance urgency of intervention with peri-procedural risks.
Follow-up Plan	Monitor in cardiac care unit post-procedure; optimize medical therapy to prevent recurrent ischemic events. Regular follow-up for symptom evaluation, medication adjustment, and risk factor modification; implement cardiac rehabilitation program.

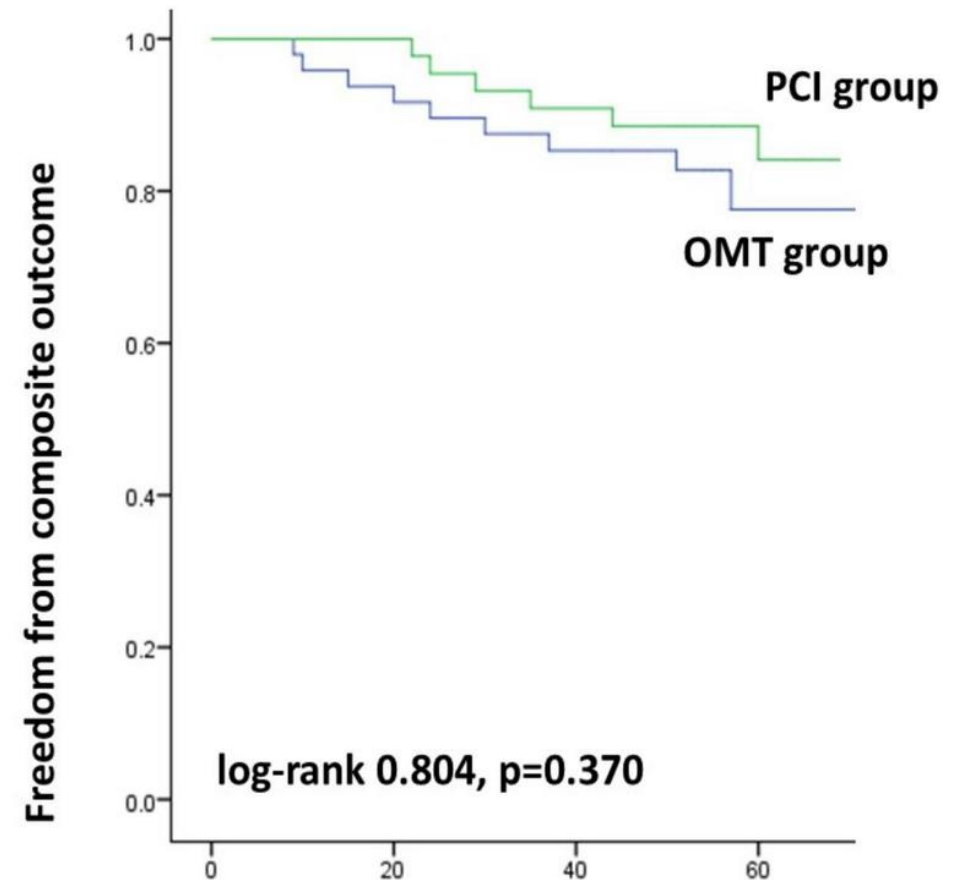
Key Trials and Guidelines in Stable Angina Management

COURAGE Trial: Showed no significant difference in death and myocardial infarction rates between OMT alone and OMT plus PCI.

ISCHEMIA Trial: Found no significant difference in major cardiovascular events between initial invasive strategy and conservative strategy.

ACC/AHA Guidelines: Offer comprehensive recommendations for risk stratification, diagnostic testing, medical therapy, and revascularization

ISCHEMIA trial, showing the Kaplan-Meier curves of event-free survival and cumulative incidence of the primary outcome for OMT alone versus OMT plus invasive strategy (PCI or CABG)



Number at risk		Months			
OMT group	48	44	38	8	
PCI group	44	44	39	19	

Long-term follow-up of patients with chronic total coronary artery occlusion previously randomized to treatment with optimal drug therapy or percutaneous revascularization of chronic total occlusion (COMET-CTO)

Long-term follow-up (mean 56 ± 12 months)			
	OMT	PCI	<i>p</i>
Cardiac death	6	3	0.489
MI	1	0	1
PCI-TV	2	2	1
CABG	1	1	1
All-cause mortality	11	4	0.093

The data is numerical. PCI, percutaneous coronary intervention; OMT, optimal medical therapy; MI, myocardial infarction; CABG, coronary artery bypass graft; TVR, target vessel revascularization.



C

Chest pain



Chest Pain Means More Than Pain in the Chest

H

High-Sensitivity



High-Sensitivity Troponins Preferred

E

Early Care



Seek Early Care for Acute Symptoms

S

Share



Share the Decision-Making

T

Testing

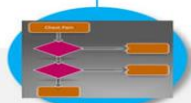


Testing Not Routinely Needed in Low-Risk Patients



P

Pathways



Use Clinical Decision Pathways

A

Accompanying



Women May Be More Likely to Present With Accompanying Symptoms

I

Identify



Identify Patients Most Likely to Benefit From Further Testing

N

Noncardiac



Noncardiac Is In. Atypical Is Out.

S

Structured



Structured Risk Assessment Should Be Used

Conclusion

- Stable angina requires a delicate balance between watchful waiting and decisive action.
- Our goal is to provide timely intervention that transforms lives and averts disaster.

