

MEDLEY

Medical AI Ensemble Clinical Decision Report

Case ID: test_free_orch

Title: test_free_orch

Generated: 2025-09-06
00:27

Primary Diagnostic Consensus

Diagnosis	ICD-10	Agreement	Confidence	Status
Aortic Dissection	I21.9	18.0%	Very Low	PRIMARY

Alternative & Minority Diagnoses

Diagnosis	ICD-10	Support	Type
Pericarditis	Unknown	16.2%	Alternative (10-29%)
Pulmonary Embolism	Unknown	15.3%	Alternative (10-29%)
Gastroesophageal Reflux Disease	Unknown	9.0%	Minority (<10%)
Acute Coronary Syndrome	Unknown	8.1%	Minority (<10%)
Acute Myocardial Infarction	Unknown	7.2%	Minority (<10%)
Angina Pectoris	Unknown	4.5%	Minority (<10%)
Unstable Angina	Unknown	3.6%	Minority (<10%)
Gastroesophageal Reflux Disease (gerd)	Unknown	2.7%	Minority (<10%)
Acute Coronary Syndrome (acs)	Unknown	2.7%	Minority (<10%)
Pneumothorax	Unknown	1.8%	Minority (<10%)
Esophageal Spasm	Unknown	1.8%	Minority (<10%)
Myocardial Infarction	Unknown	1.8%	Minority (<10%)
Costochondritis	Unknown	1.8%	Minority (<10%)
Myocardial Infarction (stemi)	Unknown	0.9%	Minority (<10%)
Musculoskeletal Chest Pain	Unknown	0.9%	Minority (<10%)
Acute Myocardial Infarction (ami)	Unknown	0.9%	Minority (<10%)
Pulmonary Embolism (pe)	Unknown	0.9%	Minority (<10%)
St-elevation Myocardial Infarction	Unknown	0.9%	Minority (<10%)
Chest Pain, Unspecified	Unknown	0.9%	Minority (<10%)

Analysis Overview

Models Queried: 23

Successful Responses: 23

Consensus Level: Low

Total Cost: \$0.553

■ ■ Free Model Disclaimer: This analysis was generated using free AI models

Free models may provide suboptimal results. For improved accuracy and reliability, consider using premium models with an API key.

■ ■ Note: Analysis using fallback extraction (orchestrator unavailable)

Some advanced analysis features may be limited. ICD codes have been inferred where possible.

Critical Decision Points & Evidence Synthesis

Critical Decision Points

Key areas where models showed significant divergence in diagnostic or management approach:

Evidence Synthesis & Clinical Correlation

Symptom-Diagnosis Correlation Matrix

Symptom

Legend: +++ Strong association, ++ Moderate, + Weak, - Not typical

Diagnostic Decision Tree

Step	Action	If Positive	If Negative
1	Initial Laboratory Tests	→ Confirm suspicion	→ Broaden differential
2	Imaging Studies	→ Identify pathology	→ Consider specialized tests
3	Specialized Testing	→ Definitive diagnosis	→ Empiric treatment
4	Treatment Trial	→ Continue if effective	→ Reconsider diagnosis

Executive Summary

Case Description

TEST1: A 50-year-old patient presents with severe chest pain.

Key Clinical Findings

- Positive family history of similar episodes

Primary Recommendations

- Consider Aortic Dissection among differential diagnoses

Primary Diagnosis Clinical Summaries

Diagnostic Landscape Analysis

Detailed Diagnostic Analysis

The ensemble analysis identified **Aortic Dissection** as the primary diagnosis with 18.0% consensus among 0 models.

Detailed Alternative Analysis

Diagnosis	Support	Key Evidence	Clinical Significance
Pericarditis	16.2%	0 models	Less likely
Pulmonary Embolism	15.3%	0 models	Less likely
Gastroesophageal Reflux Disease	9.0%	0 models	Unlikely
Acute Coronary Syndrome	8.1%	0 models	Unlikely
Acute Myocardial Infarction	7.2%	0 models	Unlikely
Angina Pectoris	4.5%	0 models	Unlikely
Unstable Angina	3.6%	0 models	Unlikely
Gastroesophageal Reflux Disease (gerd)	2.7%	0 models	Unlikely

Minority Opinions

All alternative diagnoses suggested by any models with their clinical rationale:

- **Gastroesophageal Reflux Disease** (ICD-10: Unknown) - 9.0% agreement (0 models)
Supporting Models:
- **Acute Coronary Syndrome** (ICD-10: Unknown) - 8.1% agreement (0 models)
Supporting Models:
- **Acute Myocardial Infarction** (ICD-10: Unknown) - 7.2% agreement (0 models)
Supporting Models:
- **Angina Pectoris** (ICD-10: Unknown) - 4.5% agreement (0 models)
Supporting Models:
- **Unstable Angina** (ICD-10: Unknown) - 3.6% agreement (0 models)
Supporting Models:
- **Gastroesophageal Reflux Disease (gerd)** (ICD-10: Unknown) - 2.7% agreement (0 models)
Supporting Models:
- **Acute Coronary Syndrome (acs)** (ICD-10: Unknown) - 2.7% agreement (0 models)
Supporting Models:
- **Pneumothorax** (ICD-10: Unknown) - 1.8% agreement (0 models)
Supporting Models:

- **Esophageal Spasm** (ICD-10: Unknown) - 1.8% agreement (0 models)

Supporting Models:

- **Myocardial Infarction** (ICD-10: Unknown) - 1.8% agreement (0 models)

Supporting Models:

- **Costochondritis** (ICD-10: Unknown) - 1.8% agreement (0 models)

Supporting Models:

- **Myocardial Infarction (STEMI)** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

- **Musculoskeletal Chest Pain** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

- **Acute Myocardial Infarction (AMI)** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

- **Pulmonary Embolism (PE)** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

- **ST-elevation Myocardial Infarction** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

- **Chest Pain, Unspecified** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

Additional Diagnoses Considered:

- **Pericarditis** (ICD-10: Unknown) - 16.2% (0 models)

- **Pulmonary Embolism** (ICD-10: Unknown) - 15.3% (0 models)

Management Strategies & Clinical Pathways

Immediate Actions Required

No immediate actions identified with high consensus.

Recommended Diagnostic Tests

Treatment Recommendations

Treatment recommendations pending diagnostic confirmation.

Model Diversity & Bias Analysis

Model Response Overview & Cost Analysis

Model	Origin	Tier	Cost	Diagnosis	Training Profile
gpt-4o	USA	Premium	\$0.011	Acute Myocardial Infarction	Comprehensive
gpt-4o-mini	USA	Budget	<\$0.01	Acute Myocardial Infarction	General
gpt-oss-120b	USA	Mid-Range	<\$0.01	Acute myocardial infarction	Standard
claude-3-opus-2	USA	Premium	\$0.068	Acute coronary syndrome	Comprehensive
gemini-2.5-pro	USA	Premium	\$0.025	Acute Myocardial Infarction	General
gemini-2.5-flas	USA	Budget	<\$0.01	Unstable Angina	General
gemini-2.5-flas	USA	Budget	<\$0.01	Acute Myocardial Infarction	General
gemma-2-9b-it	USA	Budget	<\$0.01	Acute Coronary Syndrome	Standard
gemma-3-12b-it	USA	Unknown	<\$0.01	Acute Coronary Syndrome (ACS)	Standard
llama-3.2-3b-in	USA	Budget	<\$0.01	Acute Coronary Syndrome	General
mistral-large-2	France	Premium	<\$0.01	Acute Coronary Syndrome	Standard
mistral-7b-inst	France	Budget	<\$0.01	Acute Coronary Syndrome (ACS)	General
deepseek-chat	China	Budget	<\$0.01	Acute Myocardial Infarction	Regional
deepseek-r1	China	Budget	<\$0.01	Acute Myocardial Infarction	Regional
deepseek-chat-v	China	Unknown	<\$0.01	Acute Coronary Syndrome	Regional
qwen-2.5-coder-	China	Mid-Range	<\$0.01	Acute Myocardial Infarction (AMI)	Regional
command-r-plus	Canada	Premium	\$0.012	Acute coronary syndrome	Standard
command-r	Canada	Mid-Range	<\$0.01	Acute Myocardial Infarction	Standard
jamba-large-1.7	Israel	Premium	<\$0.01	Acute Coronary Syndrome (ACS)	Standard
sonar-deep-rese	USA	Premium	\$0.365	Acute Coronary Syndrome	Standard
wizardlm-2-8x22	USA	Mid-Range	<\$0.01	Acute Myocardial Infarction	Standard
grok-2-1212	USA	Premium	<\$0.01	Acute Myocardial Infarction	Standard
grok-4	USA	Premium	\$0.033	Acute Coronary Syndrome	Alternative

Total Estimated Cost: \$0.553

Understanding Training Profiles

Training profiles indicate the type and depth of medical knowledge in each model:

Comprehensive: Extensive medical literature training with broad clinical knowledge

Standard: Standard medical knowledge base with general clinical training

Regional: Region-specific medical training reflecting local practices and conditions

General: Broad general knowledge, not specifically trained on medical literature

Alternative: Alternative medical perspectives and non-conventional approaches

AI Model Bias Analysis

AI model bias analysis is generated during orchestration (Step 2). This comprehensive analysis examines cultural, geographic, and training data biases across the AI models used.

Primary Diagnosis Bias Factors:

- Cultural: Fallback analysis - limited bias assessment available
- Geographic: Cannot assess without orchestrator
- Training Data: Training data bias analysis requires orchestrator

Alternative Diagnoses Bias:

Detailed Model Responses

Complete diagnostic assessments from each model:

1. gpt-4o (USA, Released: 2024-05-13)

Primary Diagnosis: Acute Myocardial Infarction (ICD-10: I21.9) - Confidence: 0.9

Differential Diagnoses:

- Pulmonary Embolism (ICD: I26.99) - 0.6
- Aortic Dissection (ICD: I71.00) - 0.5
- Pericarditis (ICD: I30.9) - 0.4

Key Clinical Findings:

- severe chest pain
- age 50

2. gpt-4o-mini (USA, Released: 2024-07-18)

Primary Diagnosis: Acute Myocardial Infarction (ICD-10: I21.9) - Confidence: 0.85

Differential Diagnoses:

- Angina Pectoris (ICD: I20.9) - 0.7
- Pulmonary Embolism (ICD: I26.9) - 0.6
- Aortic Dissection (ICD: I71.0) - 0.5

Key Clinical Findings:

- Severe chest pain
- Radiation of pain to left arm
- Diaphoresis
- Nausea

3. gpt-oss-120b (USA, Released: 2025-08-05)

4. claude-3-opus-2 (USA, Released: 2024-02-29)

Primary Diagnosis: Acute coronary syndrome (ICD-10: I20.0) - Confidence: 0.8

Differential Diagnoses:

- Pulmonary embolism (ICD: I26.99) - 0.6
- Aortic dissection (ICD: I71.00) - 0.5
- Pericarditis (ICD: I30.9) - 0.4

Key Clinical Findings:

- Severe chest pain in a 50-year-old patient

5. gemini-2.5-pro (USA, Released: 2024-12-19)**6. gemini-2.5-flas (USA, Released: 2024-12-19)**

Primary Diagnosis: Unstable Angina (ICD-10: I20.0) - Confidence: 0.5

Differential Diagnoses:

- Myocardial Infarction (STEMI) (ICD: I21.0) - 0.4
- Aortic Dissection (ICD: I71.0) - 0.3
- Pericarditis (ICD: I30.9) - 0.2

Key Clinical Findings:

- 50-year-old patient
- severe chest pain

7. gemini-2.5-flas (USA, Released: 2024-12-19)

Primary Diagnosis: Acute Myocardial Infarction (ICD-10: I21.9) - Confidence: 0.85

Differential Diagnoses:

- Unstable Angina (ICD: I20.0) - 0.7
- Pulmonary Embolism (ICD: I26.99) - 0.6
- Aortic Dissection (ICD: I71.00) - 0.55

Key Clinical Findings:

- 50-year-old patient
- Severe chest pain

8. gemma-2-9b-it (USA, Released: 2024-06-27)

Primary Diagnosis: Acute Coronary Syndrome (ICD-10: I20-I25) - Confidence: 0.7

Differential Diagnoses:

- Pulmonary Embolism (ICD: I26) - 0.2
- Pericarditis (ICD: I30) - 0.15
- Aortic Dissection (ICD: I71.0) - 0.1

Key Clinical Findings:

- Severe chest pain
- Possible radiation of pain

9. gemma-3-12b-it (USA, Released: 2024-12-11)

Primary Diagnosis: Acute Coronary Syndrome (ACS) (ICD-10: I21.9) - Confidence: 0.8

Differential Diagnoses:

- Pericarditis (ICD: I30.0) - 0.3
- Esophageal Spasm (ICD: K22.8) - 0.2
- Aortic Dissection (ICD: I68.2) - 0.15

Key Clinical Findings:

- Severe chest pain
- Possible associated symptoms (e.g., shortness of breath, diaphoresis, nausea)

10. llama-3.2-3b-in (USA, Released: 2024-09-25)

Primary Diagnosis: Acute Coronary Syndrome (ICD-10: I21.0) - Confidence: 0.8

Differential Diagnoses:

- Myocardial Infarction (ICD: I21.0) - 0.7
- Angina Pectoris (ICD: I20.0) - 0.6
- Acute Coronary Syndrome (ICD: I21.0) - 0.5

Key Clinical Findings:

- Severe chest pain
- ECG changes
- Elevated troponin levels

11. mistral-large-2 (France, Released: 2024-11-01)

Primary Diagnosis: Acute Coronary Syndrome (ICD-10: I20.0) - Confidence: 0.85

Differential Diagnoses:

- Pulmonary Embolism (ICD: I26.9) - 0.75
- Aortic Dissection (ICD: I71.0) - 0.65
- Pericarditis (ICD: I30.9) - 0.6

Key Clinical Findings:

- Severe chest pain

12. mistral-7b-inst (France, Released: 2023-09-27)

Primary Diagnosis: Acute Coronary Syndrome (ACS) (ICD-10: I21.9) - Confidence: 0.8

Differential Diagnoses:

- Aortic Dissection (ICD: I70.0) - 0.2
- Pulmonary Embolism (ICD: I26.0) - 0.15
- Esophageal Spasm (ICD: K21.3) - 0.05

Key Clinical Findings:

- Chest pain
- Severe
- Radiating to the left arm

13. deepseek-chat (China, Released: 2024-12-20)

Primary Diagnosis: Acute Myocardial Infarction (ICD-10: I21.9) - Confidence: 0.85

Differential Diagnoses:

- Aortic Dissection (ICD: I71.00) - 0.7
- Pulmonary Embolism (ICD: I26.99) - 0.65
- Pericarditis (ICD: I30.9) - 0.6

Key Clinical Findings:

- Severe chest pain
- Age 50 years

14. deepseek-r1 (China, Released: 2025-01-20)

15. deepseek-chat-v (China, Released: 2024-12-26)

Primary Diagnosis: Acute Coronary Syndrome (ICD-10: I24.9) - Confidence: 0.85

Differential Diagnoses:

- Aortic Dissection (ICD: I71.01) - 0.7
- Pulmonary Embolism (ICD: I26.99) - 0.6
- Pericarditis (ICD: I30.9) - 0.4

Key Clinical Findings:

- 50-year-old patient
- severe chest pain

16. qwen-2.5-coder- (China, Released: 2024-11-12)

Primary Diagnosis: Acute Myocardial Infarction (AMI) (ICD-10: I21) - Confidence: 0.85

Differential Diagnoses:

- Angina Pectoris (ICD: I20) - 0.55

- Pulmonary Embolism (ICD: I26) - 0.45
- Aortic Dissection (ICD: I31) - 0.35

Key Clinical Findings:

- Severe chest pain

17. command-r-plus (Canada, Released: 2024-04-04)

Primary Diagnosis: Acute coronary syndrome (ICD-10: I20) - Confidence: 0.8

Differential Diagnoses:

- Myocardial infarction (ICD: I21) - 0.7
- Angina pectoris (ICD: I20.9) - 0.6
- Aortic dissection (ICD: I71.0) - 0.45

Key Clinical Findings:

- Severe chest pain in a 50-year-old patient suggests a potential cardiac event.

18. command-r (Canada, Released: 2024-03-11)

Primary Diagnosis: Acute Myocardial Infarction (ICD-10: I21) - Confidence: 0.9

Differential Diagnoses:

- Angina Pectoris (ICD: I20) - 0.75
- Pericarditis (ICD: I30) - 0.6
- Aortic Dissection (ICD: I71) - 0.4

Key Clinical Findings:

- Severe chest pain, radiating to left arm
- Elevated Troponin and CK-MB levels
- ST segment elevation on ECG

19. jamba-large-1.7 (Israel, Released: 2025-07-01)

Primary Diagnosis: Acute Coronary Syndrome (ACS) (ICD-10: I21.9) - Confidence: 0.9

Differential Diagnoses:

- Gastroesophageal Reflux Disease (GERD) (ICD: K21.9) - 0.6
- Pulmonary Embolism (PE) (ICD: I26.90) - 0.7
- Pericarditis (ICD: I31.9) - 0.5

Key Clinical Findings:

- Severe chest pain
- Possible radiation to arm or jaw
- Shortness of breath

20. sonar-deep-rese (USA, Released: 2025-03-07)

21. wizardlm-2-8x22 (USA, Released: 2024-04-15)

Primary Diagnosis: Acute Myocardial Infarction (ICD-10: I21.9) - Confidence: 0.7

Differential Diagnoses:

- Unstable Angina (ICD: I20.0) - 0.6
- Aortic Dissection (ICD: I71.0) - 0.5
- Pulmonary Embolism (ICD: I26.9) - 0.4

Key Clinical Findings:

- Severe chest pain
- Age 50 years old
- Potential risk factors for cardiovascular disease (e.g., hypertension, hyperlipidemia, smoking, diabetes)

22. grok-2-1212 (USA, Released: 2024-12-12)

Primary Diagnosis: Acute Myocardial Infarction (ICD-10: I21.9) - Confidence: 0.8

Differential Diagnoses:

- Pulmonary Embolism (ICD: I26.99) - 0.6
- Aortic Dissection (ICD: I71.0) - 0.5
- Pericarditis (ICD: I30.9) - 0.4

Key Clinical Findings:

- Severe chest pain

23. grok-4 (USA, Released: 2024-12-26)

Primary Diagnosis: Acute Coronary Syndrome (ICD-10: I24.9) - Confidence: 0.7

Differential Diagnoses:

- Aortic Dissection (ICD: I71.00) - 0.4
- Pulmonary Embolism (ICD: I26.99) - 0.3
- Pericarditis (ICD: I30.9) - 0.2

Key Clinical Findings:

- Severe chest pain
- Age 50 years