

CardioAssist — Myocardial Infarction Risk Screening

An agentic AI system that interprets patient MI risk, explains the drivers behind each score, and surfaces a recommended next step for clinician review — extending the underlying prediction model into actionable decision support.

CLINICIANS

CARE COORDINATORS

CARDIOLOGY REFERRAL TEAMS

HEALTH SYSTEMS

START REFERRAL

PATIENTS SCREENED TODAY

214

HIGH-RISK FLAGS PENDING

12

MODEL AUC

0.83

RECALL (HIGH-RISK CLASS)

0.80

PATIENT RISK SNAPSHOT

RC

Robert Chen

68 / M · MRN 384021 · Screened Jul 9, 2026

71% MI risk

HIGH RISK

vs. population base rate of 9.4%

RECOMMENDED ACTION

Refer to cardiology within 2 weeks. Order lipid panel + ECG; discuss statin therapy and smoking cessation.

SHAP-based explanation

CONTRIBUTING FACTORS

feature	patient value	impact
Age group	65-69	+0.18
General health	Fair	+0.14
Diabetes	Type 2	+0.11
Stroke history	None reported	-0.09

SCREENING QUEUE

PATIENT	AGE / SEX	MI RISK	TIER
Robert Chen	68 / M	71%	HIGH
Maria Perez	54 / F	38%	MODERATE
Dennis Okafor	71 / M	64%	HIGH
Linda Wu	59 / F	29%	MODERATE
James Tran	41 / M	9%	LOW

12 pending review

MODEL PERFORMANCE

Random Forest classifier

Age group

0.18

General health status

0.14

Diabetes status

0.11

BMI

0.09

Smoking status

0.08

Random Forest model · test AUC 0.83 · recall 0.80

FILTERS

RISK THRESHOLD

≥ 50% (High Risk)

CARE TEAM

Cardiology Referral

SORT QUEUE BY

MI Risk (High → Low)

SO WHAT

CardioAssist surfaces risk drivers and a recommended next step — it informs clinical judgment, not replaces it. Real-world deployment would require clinical validation and FDA review (e.g., as Software as a Medical Device).

01 — Earlier Intervention

Flag risk before the event, not after

Surfaces high-risk patients for cardiology referral and preventive care while there's still time to act.

02 — Explainable by Design

Shows the why, not just a score

SHAP-based contributing factors let clinicians see exactly what's driving each patient's risk estimate.

03 — Physician-in-the-Loop

Recommends, never diagnoses

Every referral and treatment decision stays with the clinician; the model surfaces evidence, not verdicts.