OBJECTIVES
The aims of this study were to use real world evidence to:
1. Replicate the parameters of the ISCHEMIA clinical trial evaluating outcomes among patients with ischemic heart disease (IHD) treated with routine invasive therapy (INV) and optimal medical therapy (OMT) in comparison with OMT on its own.1
2. Characterize outcomes of INV for patients experiencing certain ischemic events.

METHODS
Data from an EMR research network representing over 58M patient-lives was used to examine outcomes after treatment for four initial ischemic indications, angina pectoris and non-ST elevation myocardial infarction (NSTEMI), newly in the past five years. INV was defined as cardiac catheterization, coronary artery bypass grafting, or percutaneous coronary intervention, and OMT constituted several cardiovascular medications. INV-OMT cohorts were treated with at least one INV and one OMT within the month after the incident ischemic event. OMT cohorts were treated with OMT alone in the first month. We matched on demographic factors, comorbid ischemic events, and other risk factors, and we compared outcomes (cardiac arrest, all-cause mortality, STEMI, NSTEMI, unstable angina, heart failure, and all-cause hospitalization) occurring any time after treatment between cohorts using risk ratios and 95% confidence intervals.

EXCLUDE PATIENTS:
• Age >21 at time of event
• Ischemic heart disease before the last 5 years
• OMT alone

RESULTS
The risk of STEMI and a second NSTEMI, unstable angina, heart failure, and all-cause hospitalization was significantly greater among primary NSTEMI patients treated with INV+OMT vs. those treated with OMT alone. There was no difference in risk of cardiac arrest between the two patient groups, and those treated with INV-OMT had significantly less risk of all-cause mortality than those treated with OMT alone (Figure 2). The risk of cardiac arrest, STEMI, NSTEMI, a second occurrence of unstable angina, heart failure, and all-cause hospitalization was significantly greater among primary unstable angina patients treated with INV-OMT vs. those treated with OMT alone. There was no difference in risk of all-cause mortality between the two patient groups (Figure 3).

CONCLUSIONS
Routine INV may be beneficial in reducing all-cause mortality among patients with an NSTEMI event. Otherwise, this study suggests INV-OMT treatment has the same or greater risk for other relevant outcomes than OMT alone, matching some preliminary conclusions seen from the ISCHEMIA trial.2

REFERENCES