**ONLINE DATA SUPPLEMENT**

# Ischemia on Myocardial Perfusion Imaging with Positron Emission Tomography Identifies Patients Receiving a Survival Benefit from Early Revascularization

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**Online Table 1: Propensity-adjusted standardized differences between early revascularization and medical therapy groups**

| Variable | Propensity-adjusted Standardized Differences (%) |
|---|---|
| Age, in years | 9.5 |
| Sex | **28.6** |
| Body mass index, in $kg/m^2$ | 3.7 |
| Hypertension | 6.7 |
| Diabetes | **16.6** |
| Hyperlipidemia | 7.4 |
| Smoker | 0.5 |
| Family history of CVD | 1.8 |
| Peripheral Vascular Disease | 7.1 |
| Cerebrovascular Accident | 1.6 |
| Atrial Fibrillation | 2.4 |
| Chest pain (angina, non anginal, none) | 1.4 |
| Dyspnea | 2.1 |
| Syncope | 2.7 |
| Aspirin | 7.7 |
| Beta blocker | 6.0 |
| Other antiplatelet agent | 6.0 |
| Statin | 5.3 |
| Calcium channel blocker | 3.6 |
| Inpatient vs. Outpatient | 0.5 |
| Known Coronary Artery Disease | **14.3** |
| Prior abnormal calcium score | 2.7 |
| Baseline abnormal EKG | 0.1 |
| Resting rate pressure product | 3.1 |
| EKG ischemic response | 3.5 |

| Variable | Propensity-adjusted Standardized Differences (%) |
|---|---|
| Rest LVEF, % | **22.4** |
| % Infarcted Myocardium | **17.3** |
| Stress LVEF, % | 8.4 |
| Standardized differences > 10% denote significant differences. | |

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**Online Table 2: Sensitivity Analysis: Cox Proportional Hazards analysis for all-cause and cardiac mortality. Sensitivity analysis with adjustment of factors affecting decision to revascularize and other potential confounders as covariates.**

Given the expected physician referral bias for revascularization, we sought to adjust for all potential factors that could affect decision to revascularize, and could also confound the relationship between ischemia and death using Cox proportional hazards models adjusted for numerous covariates.

A total of 28 covariates (risk factors, demographics, medications, symptoms, stress MPI findings) were included for and adjusted in the Cox model with %ischemia, 90-day revascularization and %ischemia*90 day revascularization interaction in the model.

In the adjusted model, there was a significant interaction between %ischemia* 90 day revascularization. The hazard ratios cross unity at ~ 6% ischemia with 95% upper confidence interval crossing unity at ~13%. We used several strategies to examine this interaction, including a linear relationship with %ischemia, a non-linear relationship with spline terms and as a categorical variable. The results suggested a HR crossing of unity at 6% with an upper 95% confidence interval crossing at 13%.

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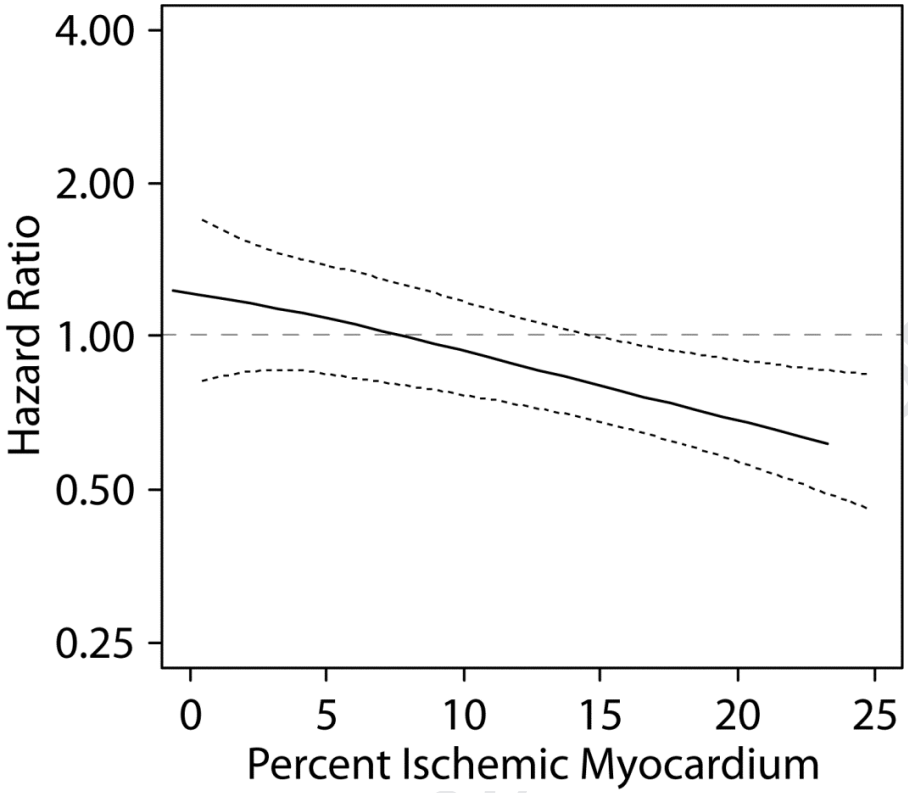
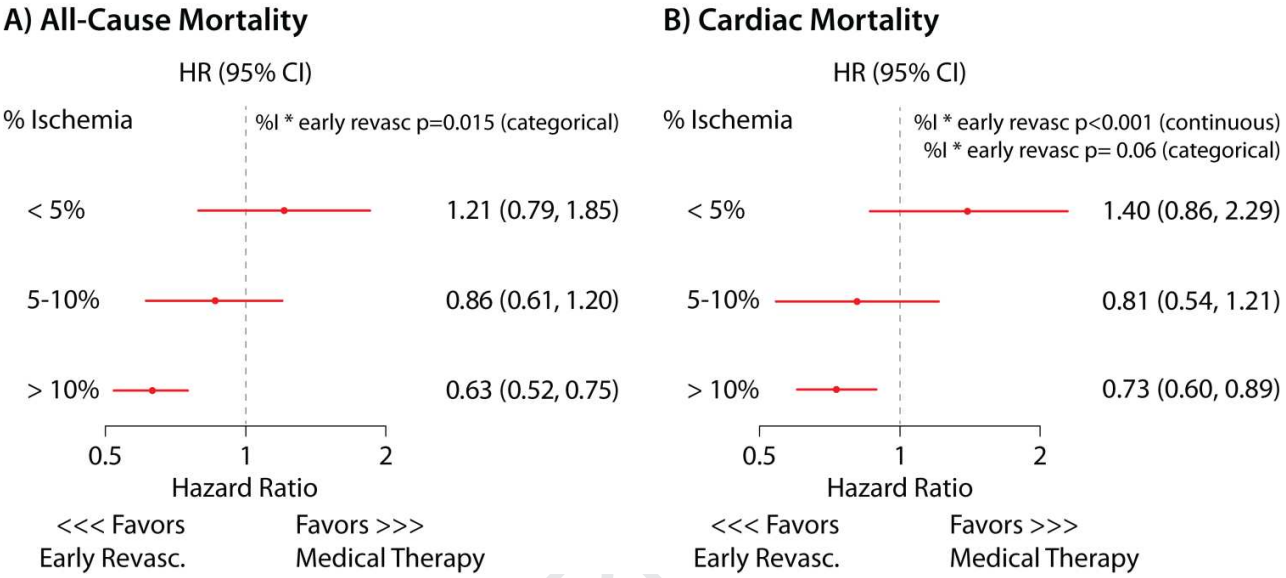
**Hazard Ratio for death with early revascularization compared to medical therapy based on percent ischemic myocardium on PET Myocardial Perfusion Imaging**




**Analysis of interaction of %ischemic myocardium with early revascularization vs. medical therapy on all-cause and cardiac death**

| Adjusted Cox Model | Strata | Hazard Ratio (95%CI) Early Revascularization vs. Medical Therapy | Interaction P-value |
|---|---|---|---|
| All-cause Death | % Ischemia <6% | 1.27 (.78, 2.06) | <0.001 |
| | % Ischemia ≥6% | 0.83 (0.65, 1.08) | |
| Cardiac Death | % Ischemia <6% | 0.84 (0.41, 1.70) | 0.003 |
| | % Ischemia ≥6% | 0.75 (0.56, 0.99) | |

**Online Figure 1: Forest plots depicting hazard ratios with early revascularization vs. medical therapy across levels of percent ischemia (when analyzed in categories of 0-<5%, 5-10% and >10% ischemia) for (A) all-cause mortality and (B) cardiac mortality.**

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