

 MYOCARDIAL ISCHEMIA AND INFARCTION

**USEFULNESS OF RED CELL DISTRIBUTION WIDTH IN PREDICTING SHORT AND LONG-TERM MORTALITY AFTER NON ST-ELEVATION MYOCARDIAL INFARCTION**

ACC Poster Contributions

Ernest N. Morial Convention Center, Hall F  
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Session Title: Predictors of Long Term Outcome after ACS  
Abstract Category: 4. Unstable Ischemic Syndrome/Long-Term Outcome  
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**Background:** Red blood cell distribution width (RDW) is a strong predictor of adverse outcomes in patient with heart failure, stable coronary artery disease, stroke and acute myocardial infarction. The aim of our study was to explore the predictive value of RDW on all-cause mortality in patients with non ST-segment elevation myocardial infarction (NSTEMI).

**Method:** This observational study includes 619 NSTEMI patients, discharged from Staten Island University Hospital between September 2004 and December 2006. Patients were divided into equal tertiles and survival was evaluated in each RDW tertile.

**Result:** Patients in the highest RDW tertile (RDW > 14) had higher in-patient (7% vs. 1%) and 4-year (30% vs. 7%) mortality rates compared to those in the lowest tertile (RDW < 13) (Wilcoxon  $-2=34.64$ ,  $P<0.0001$ ). After controlling for Global Registry of Acute Coronary Events risk profile scores and other confounding variables, RDW remained a significant predictor of in-patient and 4-year mortality. Patients with RDW>14 had 1.15 adjusted hazard ratio for all-cause mortality (confidence interval 1.01-1.26,  $p=0.036$ ).

**Conclusion:** RDW is an independent predictor of short-term and long-term mortalities in NSTEMI patients with a RDW>14. We strongly suggest use of RDW in risk stratification of NSTEMI population.

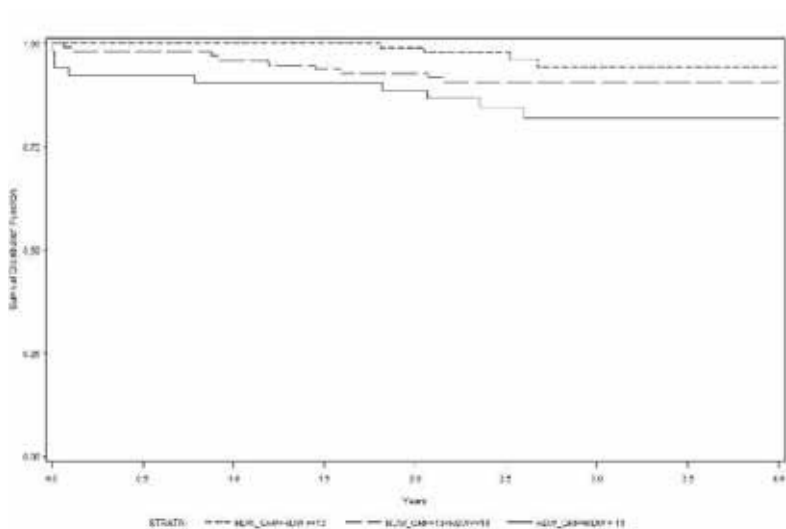


Figure 4. Four-year mortality Kaplan Meier curve among NSTEMI patients with normal hemoglobin on admission and discharge according to RDW tertiles. Overall Log-rank chi-square = 12.5653,  $P=0.0015$ . NSTEMI= Non ST Segment Elevation Myocardial Infarction, RDW= Red cell Distribution Width.