Background: According to our acute coronary syndrome (ACS) pathway patients are classified to (P) Priority Risk-traditionally equivalent to ST-elevation MI, (A) Advanced Risk, (I) Intermediate Risk, and (N) Negative/Low Risk, that reflects patients most immediate risk stratification upon admission.

Methods: 6911 ACS patients were admitted to a NYC hospital from Sept., 2004, to Dec., 2010, were enrolled in our prospective ACAP-ACS registry. Patients were stratified and treated according to the PAIN pathway. Long term outcome including a composite of myocardial infarction, cardiac mortality and readmission for ACS were assessed at 5-year follow-up.

Results: Study population consisted of 3761 men (54%) with a mean age 60 ± 14 years and 3150 women (46%) with mean age 66 ± 15 years. Using the Framingham risk score, group P patients had a score of 10.6 while group I patients had a score of 10.9, P<0.001. Using the Cox regression Model, Patients in groups A and I had worse outcomes at 5-year follow-up period. Interestingly, after the index admission there was a Plateauing in outcomes for about 1000 days followed by a steep increase in cardiovascular events (Graph).

Conclusion: Intermediate risk patients according to our PAIN pathway had more risk factors which correlate with a higher risk for future cardiac events as calculated from the Framingham Risk Score. The plateau observed after the index event can be explained by the initial aggressive intervention and risk factor modification which may have decreased overtime.