

## **Dr. Ian Kronish**

The goal of this ancillary study is to identify a target for intervention after an acute coronary syndrome (ACS) that may decrease risk for recurrent cardiac events and mortality among patients who develop posttraumatic stress disorder (PTSD) due to the ACS. Approximately 12% of the nearly 2 million Americans who survive an ACS each year develop PTSD. Compared to ACS survivors who do not develop PTSD, those with PTSD have double the risk of recurrent cardiovascular events and mortality. The mechanisms underlying the association between ACS-induced PTSD and poor cardiovascular prognosis remain unknown. As a result, there is need for studies that assess mechanisms explaining the association between PTSD and prognosis.

A hallmark of PTSD is avoidance of exposure to reminders of the traumatic event. This has led to the hypothesis that ACS-survivors with PTSD will poorly adhere to medications that serve as reminders of the traumatic cardiac event. In support of this hypothesis, we have shown that stroke survivors with PTSD are three times as likely to report being non-adherent to their medications. Yet, thus far, no one has assessed whether ACS-induced PTSD is associated with poor medication adherence. If ACS-induced PTSD results in poor adherence to cardioprotective medications, then medication adherence may represent an important target for improving prognosis in ACS-survivors with PTSD.

The NHLBI-funded study “Impact of Social-Interpersonal Factors in the ER on PTSD/Cardiac Outcomes” provides a unique opportunity to test these hypotheses. This parent study will enroll a cohort of 1,741 ACS patients who initially present to the emergency room (ER) and are followed for 12 months to determine 1) which ER factors contribute to the development of PTSD after ACS and 2) the association between ACS-induced PTSD at 1 month and prognosis 1 year after the index ACS event. In this ancillary study, we propose to additionally measure adherence to aspirin in the six months after ACS using the gold-standard approach -electronic monitoring. We will also survey participants to understand why ACS-induced PTSD is associated with poor medication adherence. Finally, we will test whether the association between ACS-induced PTSD and ACS recurrence/mortality will be diminished after controlling for medication adherence. The results from this study will contribute to the understanding of the mechanisms by which ACS-induced PTSD leads to poor prognosis and will identify a specific target for interventions to improve prognosis in ACS survivors with PTSD.