

# **The Role of HIV in Post-Injury Coagulation**

## *WTA Multicenter Trials Committee*

**Principal Investigator**

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**Study Idea:** A retrospective review of functional coagulation measures and outcomes in trauma patients with HIV.

**Background:**

- HIV infection is known to produce a chronic pro-inflammatory milieu; prior studies show HIV replication leads to decreases in several anti-coagulant factors and increases in many procoagulant factors.
- HIV-infected patients are also known to be at greater risk for both venous and arterial thrombosis; this chronic immune activation and inflammation in these patients may contribute to increased risk.
- Antiretroviral therapy (ART) decreases viral replication preserving CD4+ T-cell numbers, however low-level immune activation and inflammation persist in virally suppressed HIV-infected patients.
- The impact of chronic immune activation on post-injury coagulation is unknown.

**Study Aim:**

- To investigate the relationship between functional coagulation measures (TEG or ROTEM) and outcomes in HIV patients after trauma

**Data Collection Logistics**

- A case report form to be completed by research team including injury characteristics, initial clinical labs, ART status, CD4+ T-cell numbers, and outcomes.
- Retrospective data collection of initial functional coagulation measures collected on HIV patients including TEG or ROTEM.
- All data collection through Redcap.

**Next steps:**

- San Francisco has collected injury characteristics, laboratory, functional coagulation measures, and outcome data on 39 HIV patients from 2005-2018
  - Given small sample size, we are underpowered to detect differences in outcomes such as thromboembolic complications and organ failure but on multivariate analysis have identified that HIV-positivity was independently associated with a hypercoagulable state including increased CRT-alpha angle, a trend towards shorter CRT-K time and lower antithrombin activity.
- Seek feedback from the WTA Multicenter Trials Committee,
- We are looking for participating sites who currently perform TEG or ROTEM clinically or for research purposes– please contact study coordinators if interested

**Timeline**

- Aim to submit for WTA 2019 (abstract submission October 2018) ?

**Participating Sites**

- UCSF – San Francisco General Hospital – PI Rachael Callcut
- We are seeking participating sites!