Introduction
- Primary repair of peripheral of nerves is a common technique used in reconstructive surgery
- Few studies have investigated 30-day adverse outcomes of these procedures in the upper extremities
- Using the NSQIP Database, our study sought to identify 30-day complication rates and help determine which patients may be at risk of developing them

Methods
- Retrospective analysis of NSQIP data from 2010-2016
- Cases selected if ICD9/ICD10 codes consistent with primary nerve repair of upper extremity
- Patients were grouped based on presence or absence of 30-day adverse outcomes for analysis
- Further analysis was done on patients with Isolated Peripheral nerve Injury versus those with multiple injuries

Results
- 487,300 cases were reviewed
- 785 cases of upper extremity nerve repair
- 64% were male, mean age of 40 years
- Most common indication for surgery was injury to digits (54%)
- 30-day adverse events occurred in 23 cases (3%)
- Operation time was significantly longer in multiple injury group compared to Isolated injury group (z=10.57, p<0.0001 by Wilcoxon Rank Sum Test)
- Multiple Injury Patients were Significantly more likely to have 30-day adverse events (p=0.0043 by Fisher’s Exact Test)

Conclusion
- Rate of 30-day complications after primary repair of upper extremity peripheral nerves appears to be low with an average annual incidence of <1% in the U.S.
- Return to operating room was necessary in 1.4% of observed cases and accounted for greater than one third of all 30-day complications
- 30-day adverse events were exceedingly rare in cases of isolated peripheral nerve injury
- Isolated peripheral nerve injury occurred in less than half of all cases
- Patients with multiple injuries and longer operation times were at greater risk of developing 30-day complications