INTRODUCTION

• Injury to major peripheral nerves can occur as a result of direct penetrating trauma or crush injuries and subsequently require surgical intervention.
• Previous studies have mainly reported on digital nerve injuries.
• Purpose: To characterize patients who have undergone surgical repair of major peripheral nerves at a Level-1 trauma center over a 15-year period.

RESULTS

• Sample Summary: 164 Patients; 74.1% male; 55.1% African American; Mean age: 31.0 years (SD: 12.0)
• Mechanism of Injury: Laceration (36%), Gunshot wound (17.7%), Motor vehicle accident (16.5%)
• Most Commonly Injured Nerve: Ulnar nerve (23.5%), Median nerve (22.9%), Radial nerve (17.5%) (Table 1)
• Nerves are most commonly injured in the forearm

METHODS

• Retrospective Study: Patients who underwent major peripheral nerve repair at a Level-1 trauma center from 2000–2015.
• Exclusion Criteria: Isolated digital nerve repairs
• Variables of Interest: Demographic data, nerve injured, mechanism of injury, associated polytrauma (Y/N), type of repair (autograft, allograft, nerve conduit, direct repair)
• Qualities of the nerve repair were assessed including the type of repair and nerve gap distance.

CONCLUSIONS

• Ulnar and median nerves are the most commonly injured major peripheral nerves.
• Nerve gap distance was the most significant predictive factor in deciding which repair technique was utilized.
• Patients who underwent autograft or allograft procedures were more likely to require a reoperation versus direct or nerve conduit repairs.
• Outcome data on nerve repairs is necessary to truly assess success of repair/reconstruction techniques.