Objective:
The main objectives for nerve repair is to optimize nerve restitution and to minimize neuroma formation. Persistent postsurgical pain (PPSP) is common after surgery and the predisposing factors for developing pain are mainly unknown. The aim of this retrospective study was to determine the prevalence of persistent neuropathic pain after standard epineurial repair of traumatic peripheral nerve injury in the upper extremity.

Methods:
The Leeds Assessment of Neuropathic Symptoms and Signs (LANSS) Pain Scale part A questionnaire was sent to 755 patients who underwent nerve repair surgery in the upper extremity between 2006 and 2016 at the Department of Orthopedic and Hand Surgery in Uppsala, Sweden. All nerve repairs were performed with epineurial suture technique. Additional questions regarding cold intolerance, decreased sensitivity, pain using visual analogue scale (VAS) and present medication were included in the survey.

Results:
536 out of 755 patients answered the questionnaires (response rate 71%). Postsurgical pain persisted in 311 patients (58%). Pain intensity was on average rated to VAS 5. Most of the patients with VAS >5 had no pain medication. Cold intolerance was present in 497 patients (93%). A number of 520 patients stated that they had decreased sensibility to stimulation distal to the nerve injury (97%) (Fig. 1). According to LANSS Pain Scale part A 23% of the patients had a score ≥12 which is associated with neuropathic pain (Fig. 2).

Conclusions:
The prevalence of persistent postsurgical pain and the extent which involves neuropathic pain according to LANSS are increased after surgical nerve repair in the upper extremity. Cold intolerance and decreased sensibility are even more common and were present in almost all patients.