

# 2019 NEHS Annual Meeting Abstract Submission

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ABSTRACT TITLE *	Prolonged Opioid Use Following Neuroma Surgery: PROMIS Pain Interference as a Tool to Identify Patients At Risk
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Name of who will present abstract at NEHS meeting on December 6, 2019 Please note that the same person cannot present more than one abstract at the meeting. *	Jonathan Lans
Please indicate if the presenter is: *	<ul style="list-style-type: none"><li>• Not currently a resident or fellow</li></ul>
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**ABSTRACT – should include background information and a description of methods, programs, or practices. \***

**Introduction:** In the current opioid crisis, awareness of the patients at highest risk of post-operative opioid misuse is important for clinicians. Identifying the patients with a symptomatic neuroma that are at risk for prolonged opioid use could be beneficial for early intervention. Therefore, the aim of this study is to identify the factors associated with self-reported post-operative opioid use of >4 weeks in patients that have undergone neuroma surgery.

**Methods:** A total of 78 patients that underwent surgical treatment for a symptomatic neuroma of the upper (n=46, 59%) or lower extremity (n=32, 41%) were included. Patients completed the following questionnaires: PROMIS pain interference, PROMIS depression, NRS pain score and a custom medication questionnaire at a median of 9.6 years (IQR:5.3–13.3) following neuroma surgery. Surgical treatments included neuroma excision followed by nerve end implantation (n=40, 51%), nerve reconstruction/repair (n=18, 23%) or excision alone (n=16, 21%), other techniques included AlloDerm wrapping of the nerve end (n=2), neuroma neurolysis (n=1) and neuroma neurolysis along with wrapping of the nerve with a collagen conduit (n=1). We evaluated “prolonged opioid use”, defined as patient reported opioid use of >4 weeks post-operatively and performed bivariate and multivariable analysis to assess the factors associated with this outcome.

**Results:** Twenty-seven percent (n=21) of patients reported opioid use of >4 weeks following neuroma surgery. Additionally, of these patients five (24%) reported use of non-opioid medication, five (24%) reported use of both nerve pain medication and non-opioid pain medication and four (19%) reported use nerve pain medication alone. In multivariable logistic regression we found that an increased PROMIS PI score was independently associated with self-reported opioid use of >4 week post-operatively (OR: 1.1, 95% CI: 1.0–1.1, p=0.038), adjusted for smoking and pre-operative opioid use. The median PROMIS PI score amongst patients with prolonged opioid use was 64.2 (IQR: 57.9–71.0) compared to 54.3 (IQR: 38.7–61.5) in those that did not report prolonged opioid use. Additionally, smoking (OR: 2.9, p=0.080) and pre-operative opioid use (OR: 2.9, p=0.078) appeared to be associated with prolonged opioid use without reaching statistical significance.

**Conclusion:** In conclusion, almost one third of patients treated surgically for a symptomatic neuroma reported opioid use of more than four weeks post-operatively. Inferior coping skills were related to prolonged opioid use, and smokers and those using pre-operative opioids also had the tendency of prolonged post-operative opioid use. We recommend that patients with symptomatic neuromas should complete a brief psychosocial questionnaire and to consider the results in a multidisciplinary treatment approach.