

# 2022 NEHS Annual Meeting Abstract Submission

COMPLETE

NEHS Vice President, Daniel Mastella, M.D., is currently accepting abstract submissions for presentation at our Annual Meeting on December 2, 2022.

This meeting will be held at the Sturbridge Host Hotel in Sturbridge, MA.

Therapists, NPs, and PAs are also encouraged to submit.

THE DEADLINE FOR SUBMISSION IS OCTOBER 15, 2022

RESIDENTS AND FELLOWS ONLY. Please indicate if you want your paper to be considered for the prestigious H.Kirk Watson, M.D. Founder's Award. The abstracts for award consideration will be presented in the morning and the award will be presented in the afternoon.

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PUBLIC

Oct 14th 2022, 8:36:24 pm

## IP ADDRESS



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## \* ABSTRACT TITLE

Institutional and national review of postoperative infection rates following surgical fasciectomy for Dupuytren's disease, Carpal tunnel surgery and Trigger finger surgery

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Allan Weidman

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## \* Name of who will present abstract at NEHS meeting on December 2, 2022 Please note that the same person cannot present more than one abstract at the meeting.

Allan Weidman

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## \* Please indicate if the presenter is:

Not currently a resident or fellow

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## \* List full names of abstract authors

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**\* ABSTRACT - should include background information and a description of methods, programs, or practices.**

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**INTRODUCTION:** Dupuytren's disease (DD) is a common hand condition that affects the palmar fascia and can lead to flexion contractures. Treatment of DD can be variable, ranging from minimally-invasive to more aggressive surgical options. Surgical fasciectomy is effective in the treatment of DD, but associated with a risk of recurrence, neurovascular injury, wound complications, and infection. Despite the prevalence of this procedure, few studies have investigated the incidence of postoperative infection and the role of prophylactic oral antibiotics. The purpose of this study is to determine the infection rate following surgical fasciectomy in comparison to other common hand procedures using institutional and national data.

**METHODS:** This retrospective study gathered demographic, preoperative, and postoperative data from patients that underwent surgery for DD at Beth Israel Deaconess Medical Center (BIDMC) between 2012 and 2019. Patients were identified using CPT and ICD-9/10 codes. Additional data was gathered using the ACS-NSQIP database (2015-2019), which was queried using CPT codes for surgical fasciectomy for DD, carpal tunnel surgery (CTS) and trigger finger surgery (TFS). Summary statistics were calculated with Chi-squared and T-tests. Regression models were used for subgroup analysis.

**RESULTS:** A total of 359 patients underwent surgical fasciectomy at BIDMC. The mean age of these patients was 63.2 (GMD 11.9), 17.9% had diabetes and 79.8% had at least one comorbidity. The overall postoperative complication rate for surgical fasciectomy at BIDMC was 8.7%. Within the NSQIP dataset, 105 surgical fasciectomy, 3,272 CTS and 683 TFS patients were identified. The combined institutional and NSQIP cohort had a racial distribution of 13% non-white and 87% white patients. Post-operative Infection rates were not significantly higher following surgical fasciectomy (3.90% BIDMC, 4.76% NSQIP,  $p = 0.46$ ) compared to TFS (2.49%) and CTS (3.36%). The overall infection rate for all surgeries identified was 3.3% (GMD 0.063). There was no correlation between Diabetes and infection. Patients who smoke were more likely to experience infection after any hand surgery than non smokers ( $P=0.002$ ).

**CONCLUSION:** Rates of postoperative infection following surgical treatment of DD were similar to CTS and TFS. Smoking is associated with higher infection following hand surgery and patients should be counseled to quit before undergoing these procedures. Overall, despite descriptions of high complication rates following surgical fasciectomy, proper surgical technique and judicious postoperative care can limit infectious complications. Further analysis will reveal risk factors for infection following hand surgery.

**Please attach files with diagrams and/or photos to support your abstract (10 MB limit)**

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**\* Please attach the abstract presenter's CV**

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# Post-Operative Infection by Treatment and Cohort

