



# Research Week 2020

## Study Protocol for Using the International Prostate Symptom Score to Determine Patient Risk of Developing Post-Operative Urinary Complications After Elective Spine Surgery

Jason Brant, B.S., Jason Brant BS, Stephanie Radoslovich BA, Jorge Walker MS, Alden Wyland BS, Lynn M. Marshall ScD, Jung U. Yoo MD  
brantj@ohsu.edu  
OHSU

### Keywords

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### Abstract

#### Background

Little is known about how to predict a patient's risk of developing post-operative urinary complications (POUC) after elective spine surgery. The International Prostate Symptom Score (IPSS) is a validated survey that assesses lower urinary tract symptom (LUTS) severity, which could be used as a predictive tool for POUC.

#### Purpose

To determine whether the incidence of POUC in patients undergoing elective spine surgery increases with increasing severity of pre-operative LUTS as measured by the IPSS.

#### Study Design

Prospective cohort study.

#### Patient Sample

Adult patients who have a pre-operative visit for elective spine surgery at OHSU from July 2017 to June 2020 and a completed IPSS.

#### Methods

Electronic medical records will be reviewed to collect patient demographics, variables associated with POUC, and pre-operative IPSS. Patients will be divided into graded groups of LUTS severity according to IPSS using patients with no LUTS during the same time period as a control group. This data will be compared to the primary outcome measure of

POUC, which will be defined as any of the following events occurring during the time after surgery to discharge: the need for insertion of a Foley or straight catheter, an inability to void more than 8 hours after intra-operative Foley removal, an inability to void with a bladder scan of over 400 mL, presence of a urinary tract infection, and pharmacological treatment for urinary bother. Relative risk and chi-square calculations will be used to analyze group comparisons.

### Implications

If a predictive relationship between pre-operative moderate/severe LUTS and POUC occurrence is found, then this would suggest the utility of obtaining the IPSS before elective spine surgery. This would help identify patients who are at higher risk of developing such complications allowing pre-operative measures to be taken to determine if POUC occurrence can be reduced.

