

## Introduction

- Majority of hand surgeries are performed on an outpatient basis
  - Lower cost
  - Quicker turn-over time
- Stand-alone surgery centers/anesthesiologists often use patient factors in deciding who should have surgery there
  - Concern of higher risk of perioperative and postoperative complications often cited
- No association between patient comorbidities and post-operative complications established



## Objectives

- Primary outcome:** Risk factors for post-operative complications after undergoing elective hand surgery

## Methods

- Database:** American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP)
- Patients:** those undergoing elective, hand surgery in an outpatient setting (2004 – 2015)
- Potential risk factors:** patient demographics, surgical data, medical comorbidities
- Outcome:** Wound related, medical (cardiopulmonary, neurological, renal complications) and Return to the OR and readmission related to primary procedure
- Hypothesis tests and multiple logistic regression**
  - Compare risk factors of those with complication to those without

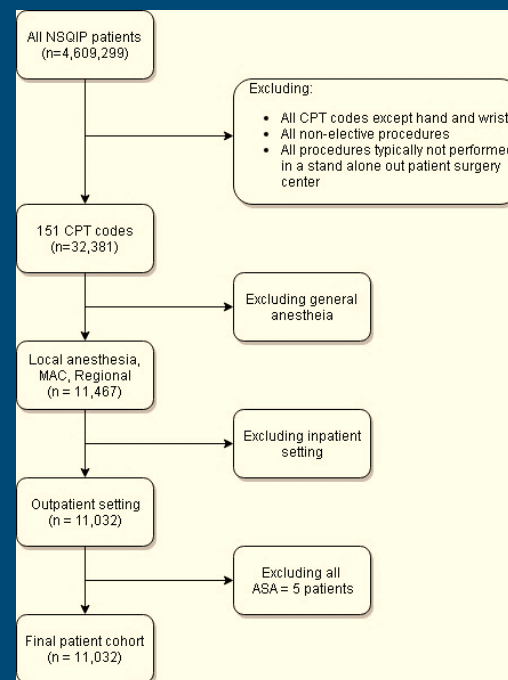
## Results (Cont...)

### Distribution of Complications (N=10623)

Complications	Count	%
<b>Wound complications</b>		
Superficial Infection	63	0.59
Deep infection	10	0.09
Dehiscence	21	0.2
Organ Space SSI	7	0.07
<b>Cardiac complications</b>		
Cardiac arrest	0	0
Myocardial infarction	1	0.01
<b>Renal complications</b>		
Acute renal failure	1	0.01
<b>Neurologic complications</b>		
CVA	3	0.03
Peripheral nerve injuries	1	0.01
<b>Hematologic complications</b>		
DVT	1	0.01
<b>Systemic complications</b>		
Sepsis	2	0.02
Septic Shock	1	0.01
Clostridium difficile colitis	2	0.02
Graft/Prosthesis/Flap failure	1	0.01
Return to operation room	38	0.36
Readmission	27	0.25
Blood transfusion	0	0
Death	6	0.06
Total number of complications	193	-
Total number of patients with complications	144	1.36

- Multiple Logistic Regression for Risk factors for complications**
  - ASA Class 4 (OR 1.78, p = 0.016)
  - Renal dialysis (OR 8.22, p < 0.001)
  - Bleeding disorder (OR 1.89, p = 0.049)
  - Smoking (OR 1.68, p = 0.02)

## Results



## Conclusion

- Elective hand surgery has a low overall complication rate of 1.35%
- Renal dialysis, ASA 4, smoking and bleeding disorders are risk factors
- Useful for pre-operative counseling of patients with the above risk factors