



University of Colorado  
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# The Impact of Practice Patterns on Outcomes and Costs in Acute Limb Ischemia

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# Disclosures

**None**



# Introduction

- There is a lack of consensus around ALI care in comparison to other vascular pathologies
- Significant practice pattern variations exist regarding ALI patient transfer, intervention modality, and antithrombotic therapy (AT) following revascularization
- The aim of this study is to use a statewide registry to determine:
  - **Regional ALI practice patterns**
  - **Impact of patient factors, perioperative factors, and AT therapy on ALI outcomes**
  - **Costs associated with management of ALI**



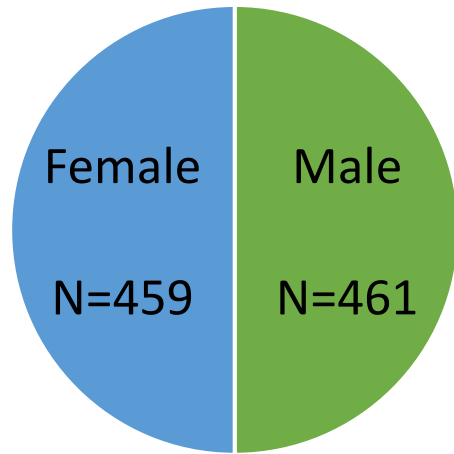
# Methodology

- Validated coding tool used to identify ALI patients in the statewide All-Payer Claims Database (APCD) from 2012-2019
- Demographic, procedural, and antithrombotic (AT) prescribing information was recorded from the registry
  - A patient on “**full AT**” therapy was prescribed an **anticoagulant regimen (AC)** and/or **antiplatelet regimen including Plavix (AP)**
- Bivariate analysis and MLR completed for primary outcomes of one-year unplanned readmission and reoperation

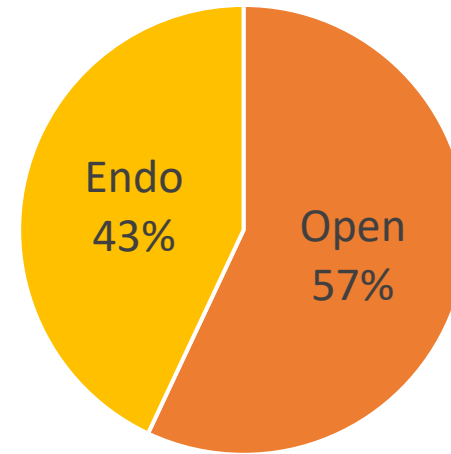


# 920 ALI Patients Identified

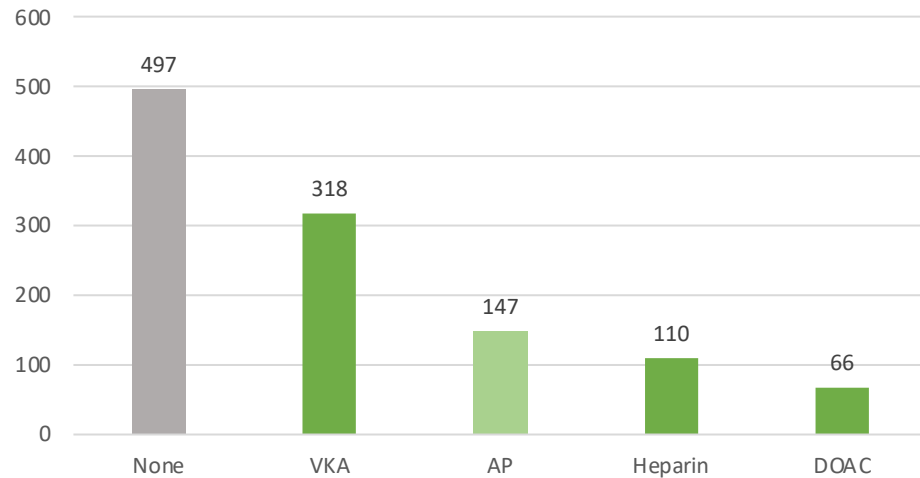
Gender



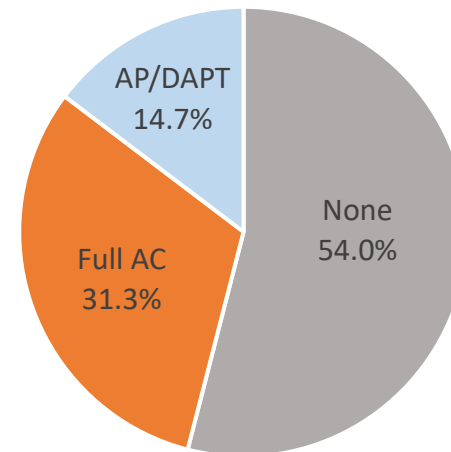
Surgery Type



# Patients Receiving AT Prescription by Drug Type



Antithrombotic Therapy Regimen



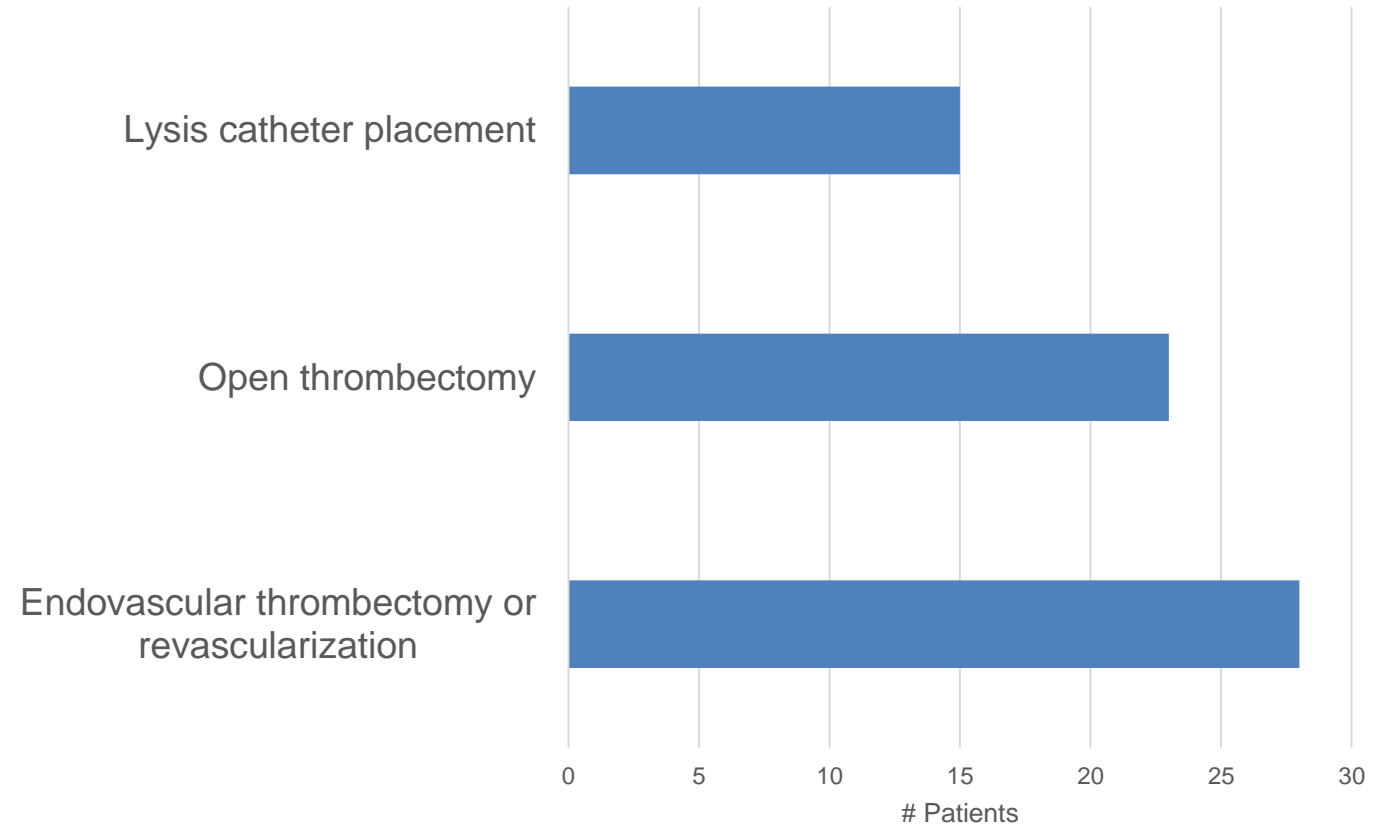
# Results: Readmission and Reoperation Rates

**One-year Readmission rate: 53.0% (n=487)**

**One-year Reoperation rate: 7.7% (n=71)**

**Median Time to Reoperation: 6.8 months (208 days)**

Most Common Causes of Reoperation



# Results: Outcomes by AT regimen

- **Patients with full AT vs. no AT regimen**

- Readmission: 58.6% vs. 48.1% ( $p < 0.01$ )
- Reoperation: 9.4% vs 6.2% ( $p = .07$ )

- **Patients with AP vs. no AP regimen**

- Readmission 58.8% vs. 51.9% ( $p = .14$ )
- Reoperation 11.7% vs. 7.0% ( $p = .07$ )

## Full AT Therapy

- (1) Anticoagulation  
*and/or*
- (2) Antiplatelet regimen  
including Plavix



# Analysis of Patients Requiring Reintervention

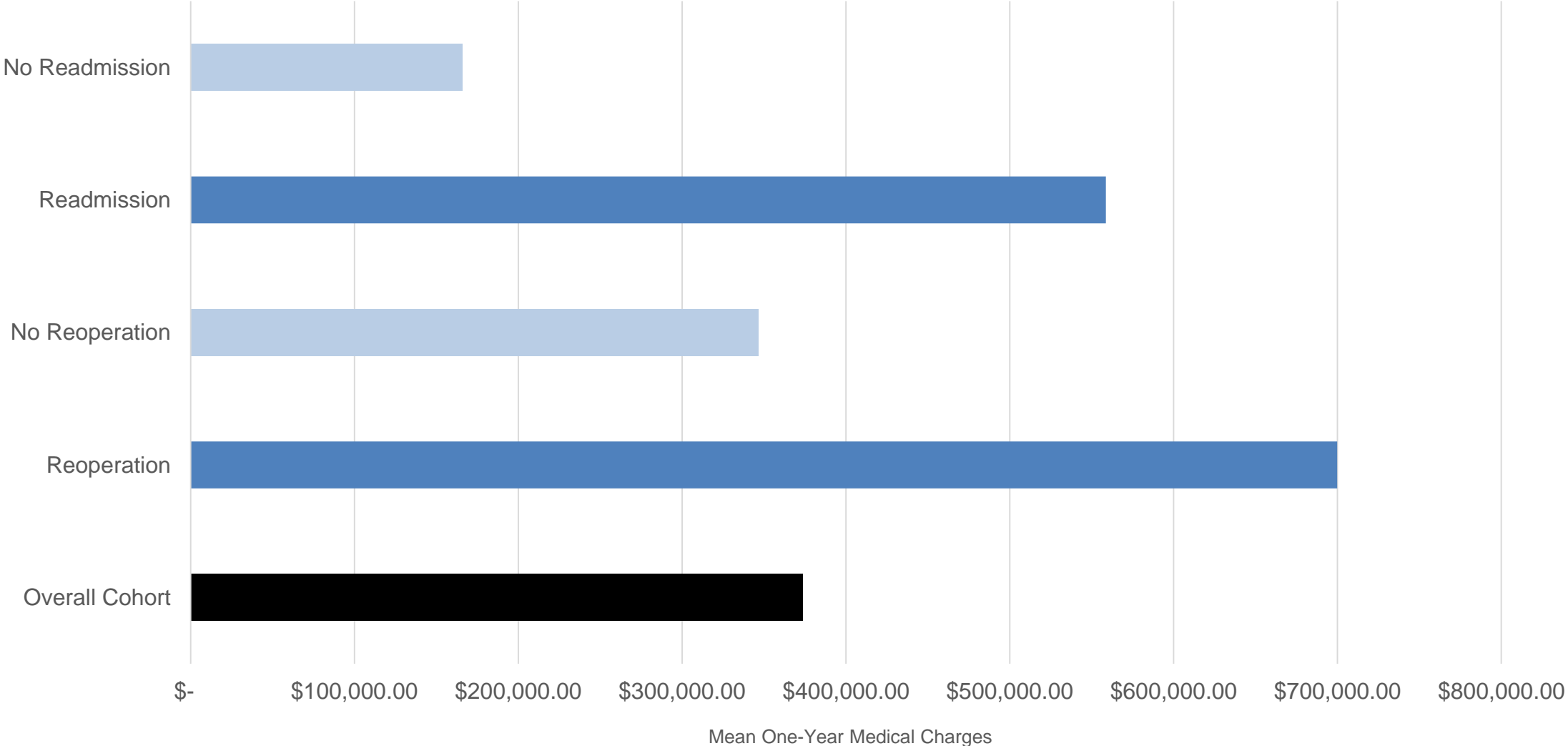
Characteristics	No Reintervention (n=849)	Reintervention (n=71)	P-value
Female (%)	50.1	46.5	.54
Age (Years)	69.6	66.4	.28
Hispanic (%)	3.3	1.4	.32
Open Operation (%)	58.4	39.4	<b>&lt;.01</b>
Endovascular Operation (%)	41.6	60.6	<b>&lt;.01</b>
No Antithrombotic Therapy (%)	54.9	43.7	.07
Full Antithrombotic Therapy (%) <sup>a</sup>	45.1	56.3	.07
Dual Antiplatelet Therapy (%)	14.1	22.5	.06
Mean 1-year Medical Charges (\$)	346,766	699,848	<b>&lt;.01</b>

<sup>a</sup> Full Antithrombotic Therapy constitutes a regimen which includes any anticoagulants and/or dual antiplatelet therapy





# Cost of Morbidity in ALI Patients



# Conclusions

- **ALI is a morbid and costly disease with high rates of readmission and reoperation**
- **Antithrombotic ordering patterns varied widely with half of patients receiving no AT, and others receiving one of numerous regimens**
- **Full AT regimen was associated with higher rates of reoperation and readmission, suggesting a more conservative regimen could prevent morbidity following ALI intervention**
- **This study underscores the need for further standardization of postoperative AT therapy in ALI patients**



Questions?

