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# Cost Savings Achieved through Introduction of Holmium Laser Enucleation of the Prostate (HOLEP)

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## Background

### Benign Prostatic Hyperplasia (BPH)

- ↑incidence and prevalence worldwide
- 80% of men will experience BPH by their 8th decade of life
- ↑risk of mortality, depression, falls
- ↓health-related quality-of-life
- billions of \$\$\$ in annual health expenditures
- When medical management fails, surgical treatment is warranted

## Problem Statement

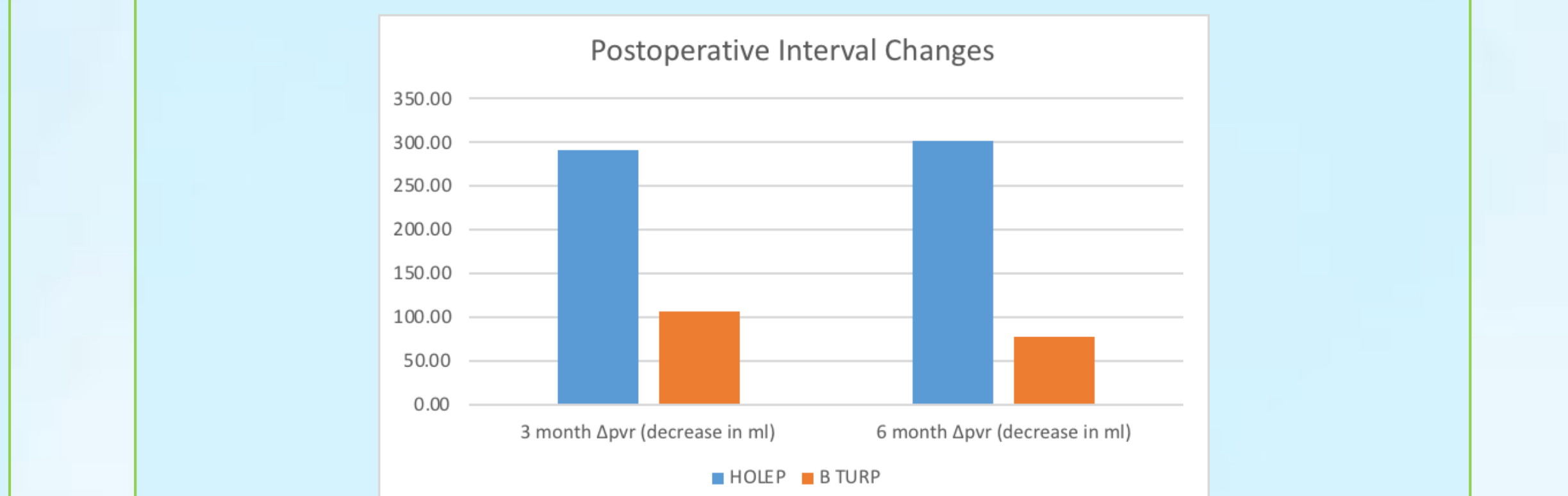
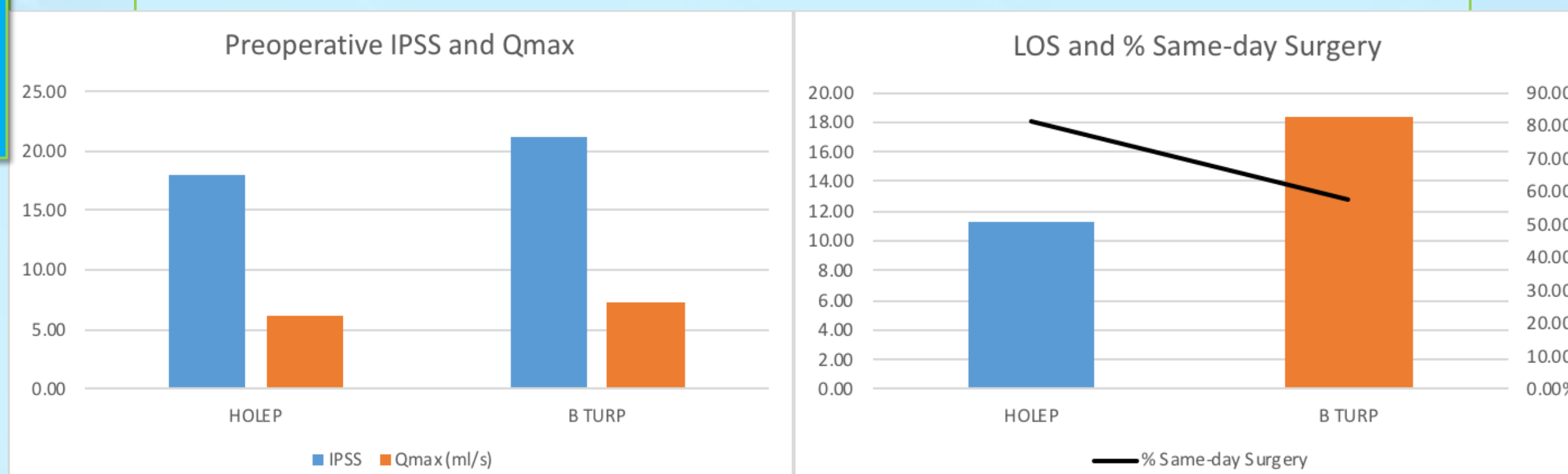
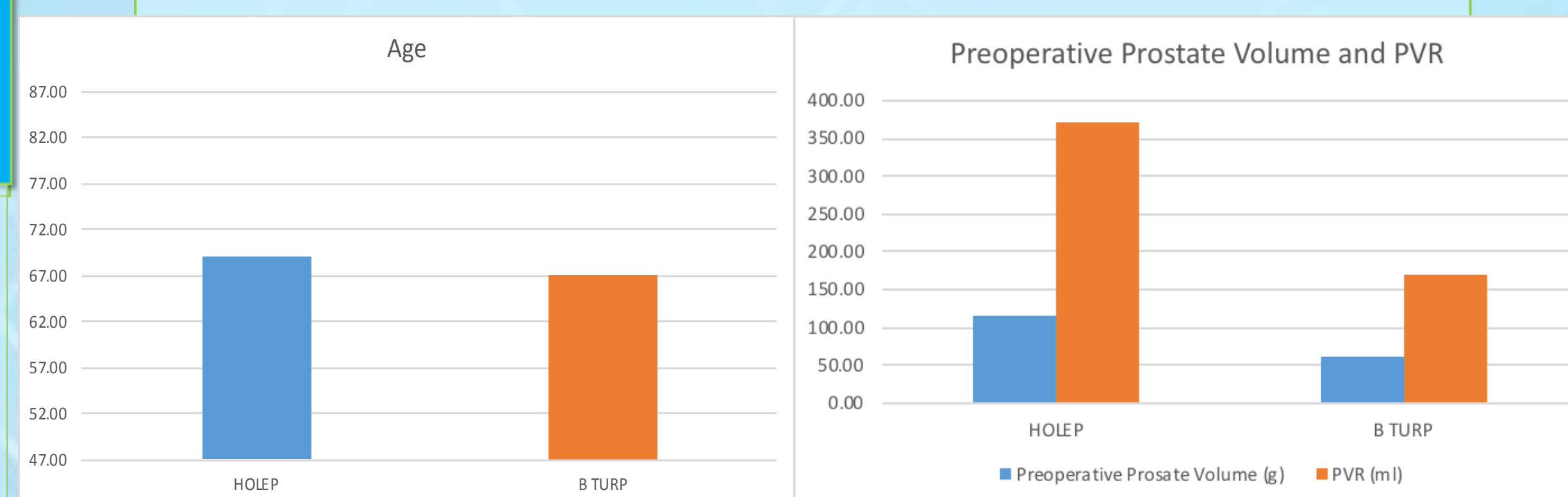
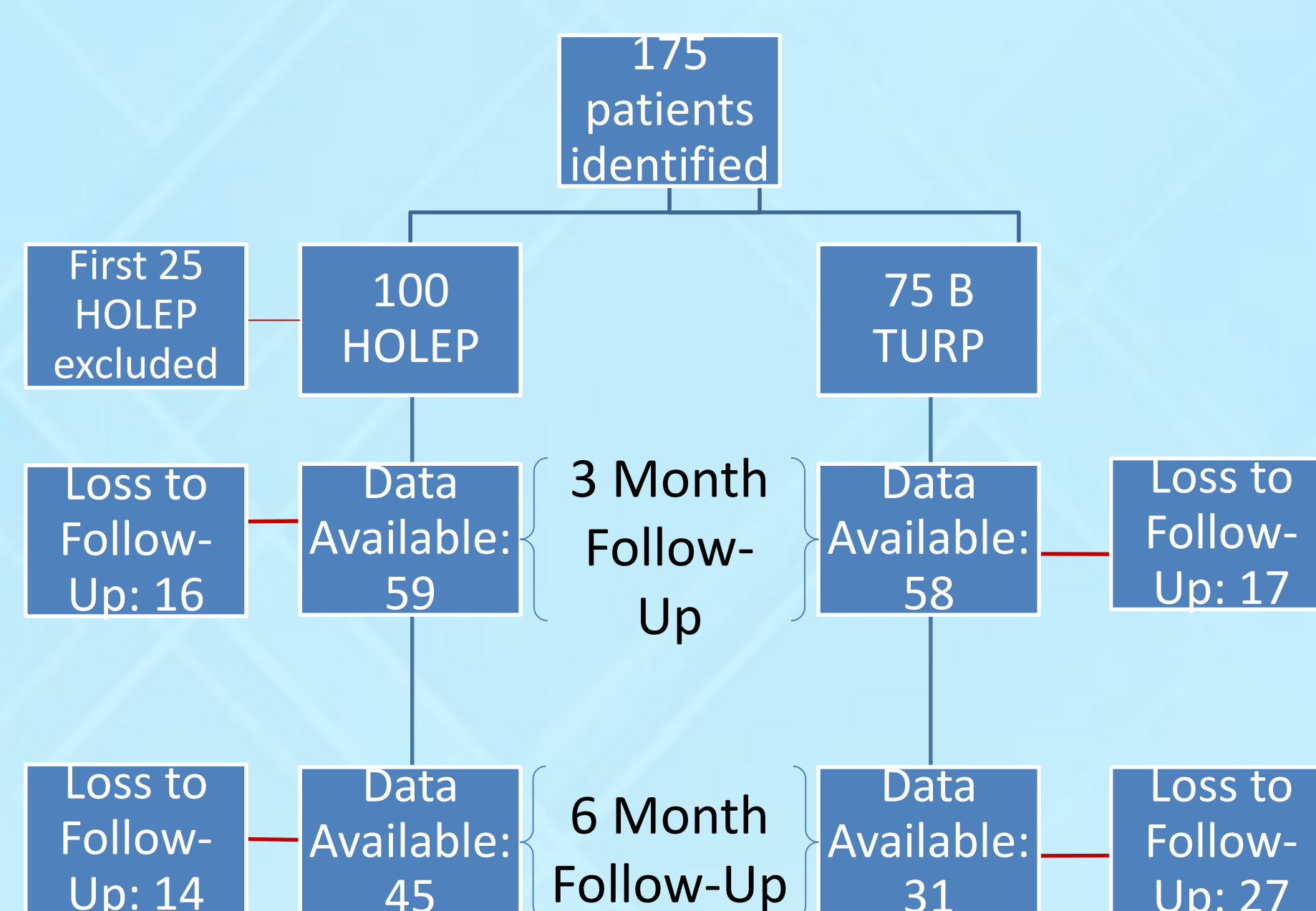
The objective of this study is to compare B TURP and same-day HOLEP with respect to LOS as a source of cost savings in a community hospital setting

## Methods

- Retrospective cohort study
- First 25 HOLEP patients excluded to account for steep learning curve<sup>9</sup>
- 75 consecutive patients from both HOLEP and B TURP providers
- HOLEP performed by a single surgeon vs B TURP performed by a separate single surgeon 11/2015-5/2018
- Both cohorts followed the same postoperative critical care pathway
- Mean LOS, operative time, preoperative prostate volume, postoperative change in IPSS,  $Q_{max}$ , PVR at 3 and 6 month intervals
  - $Q_{max}$  values when PVR was <125ml were excluded

## Results

- Demographics:
- 150 participants
  - 100% male



## Discussion

- Both 3 and 6 month postoperative data support outcomes in current literature that HOLEP is at worst non inferior to B TURP
  - Despite significantly larger preoperative prostate size
- Significantly shorter length of stay for HOLEP patients provides means to achieve lower cost of hospitalization for BPH surgical candidates
- HOLEP remains an initially expensive addition to Urology program
  - High startup costs, learning curve
- Equates the cost of open simple prostatectomy within 2 years of implementation, conservative management within 2.5 years
  - Significant cost reduction should be anticipated beyond these equivalence points
  - Laser can be used in additional cases (lithotripsy)
- BPH will continue to frequently require urologic care
- According to AUA and EUA guidelines, HOLEP is now established as a treatment for BPH, rather than an emerging technology
- HOLEP has proved to be effective in treating small and large prostates with minimal morbidity, better hemostasis, less blood loss, and better voiding pattern than B TURP
- The upcoming challenge is to optimize patient stratification, assessing which technique should be preferred based on patient characteristics

## Conclusions

- HOLEP has the potential for cost savings by reducing the cost of hospitalization for patients undergoing surgical management of BPH
- Same day HOLEP does not sacrifice postoperative outcomes
- Future studies should include
  - Larger sample size
  - Extended follow up of patients beyond 3-6 months
  - More detailed cost analysis between modalities

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