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## Introduction

- There has been a shift towards outpatient thyroidectomy for appropriately selected patients with benefits for both the patient and the healthcare system.<sup>1-3</sup>
- The American Thyroid Association (ATA) 2013 Consensus Statement outlined relative contraindications to outpatient thyroidectomies grouped into three categories (social, clinical and procedural) outlined in Figure 1.<sup>4</sup>
- Outcome data for outpatient total thyroidectomy in these groups is limited, but as a high-volume endocrine surgery center, we are able to routinely perform outpatient thyroidectomies for patients with relative contraindications.

**Study Objective:** Evaluate the safety of outpatient thyroidectomy in high-risk (OSA, AC/AP, substernal goiter, Graves') vs. low-risk patients at a high-volume center.

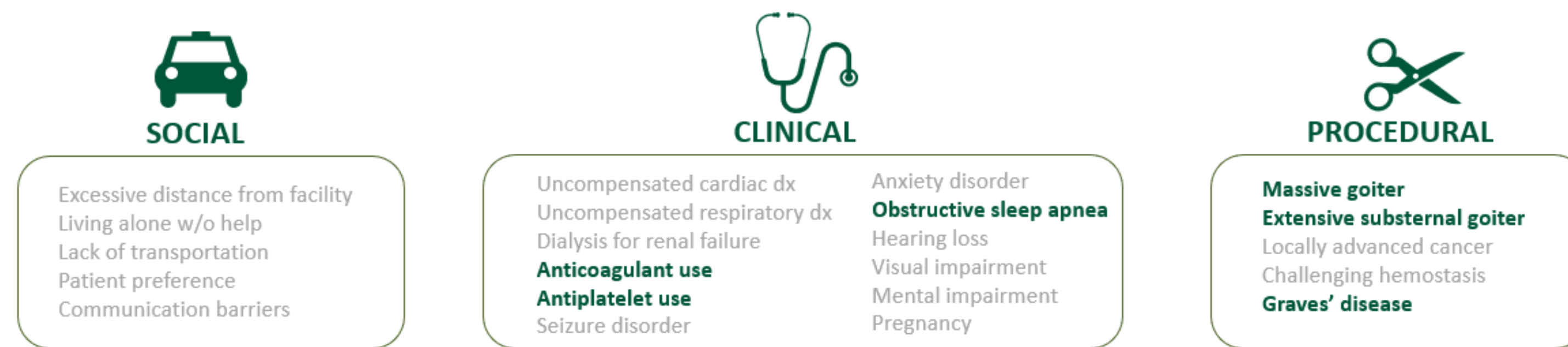


Figure 1. Selection of relative contraindications from ATA 2013 consensus for study.<sup>4</sup>

## Methods

- Retrospective cohort study; patient selection outlined in Figure 2.
- High risk defined as: obstructive sleep apnea (OSA), Anticoagulation (AC) or antiplatelet (AP) use, substernal goiter, Graves' disease, and ASA>3.
- Primary analysis outcomes: procedural (hematoma, RLN injury, hypocalcemia) and 30-day: readmissions, reoperations, ED visits, & patient inquiry (phone calls or portal messages).
- Secondary analysis of outcomes was conducted including planned and unplanned admissions and stratified by distance of patient residence from hospital.

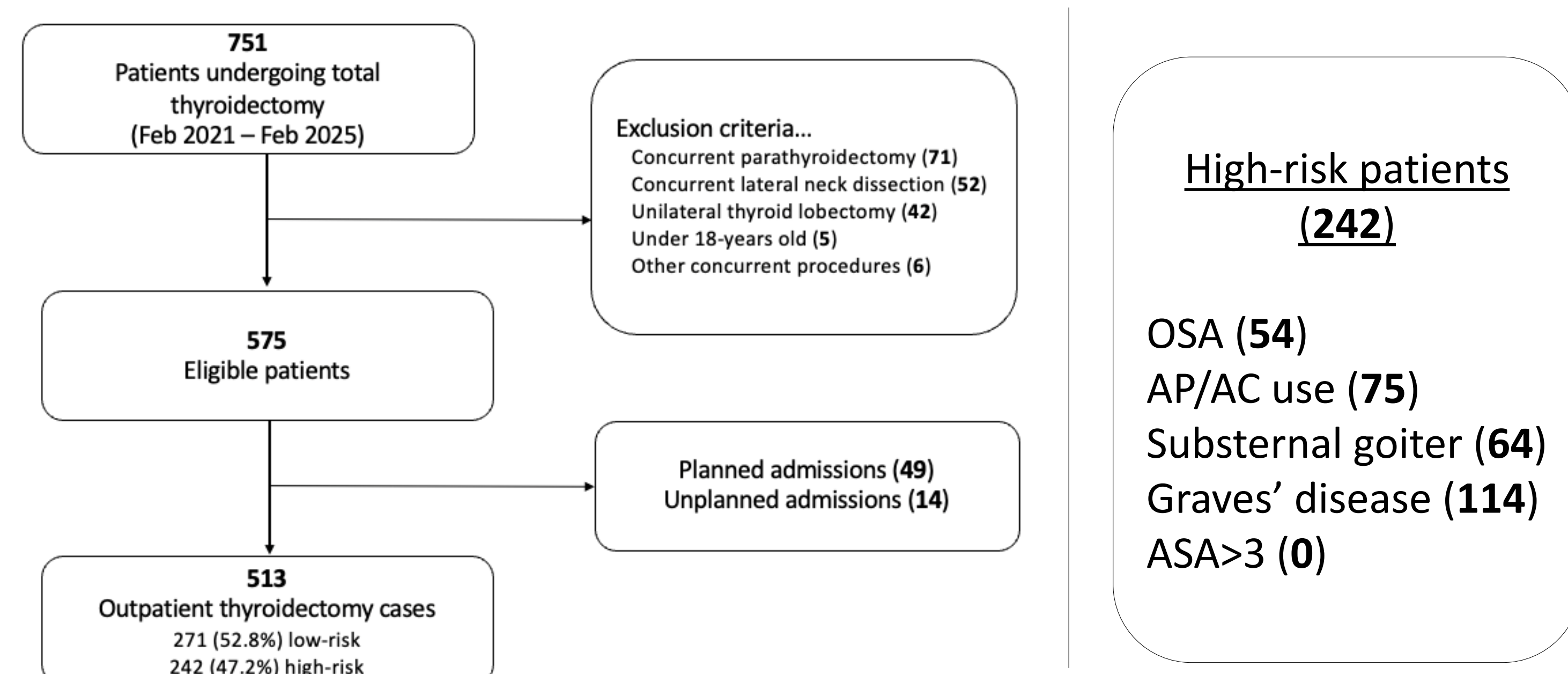


Figure 2. Patient selection breakdown with total of 513 outpatient thyroidectomy cases.

## Results

PATIENT DEMOGRAPHICS			
	Low-Risk (n=271)	High-Risk (n=242)	p-Value
Age (yrs), mean (SD)	48.47 (14.58)	52.48 (16.50)	0.0038
Sex (male), n (%)	29 (10.70)	49 (20.25)	0.0039
White race, n (%)	256 (94.46)	215 (88.84)	0.0310
Distance to hospital, min, median [Q1-Q3]	73 (57-89)	73 (58-90)	0.8937
PATIENT CLINICAL CHARACTERISTICS			
	Low-Risk (n=271)	High-Risk (n=242)	p-Value
CCI, mean (SD)	1.29 (1.31)	1.78 (1.89)	0.0008
ASA class III, n (%)	69 (25.46)	110 (45.45)	<0.0001
BMI, mean (SD)	31.39 (7.67)	30.49 (7.31)	0.1887
Smoking (past 5 yrs), n (%)	32 (11.81)	58 (23.97)	0.0005

Table 1: Comparison of patient demographics and clinical characteristics for outpatient total thyroidectomy cases.

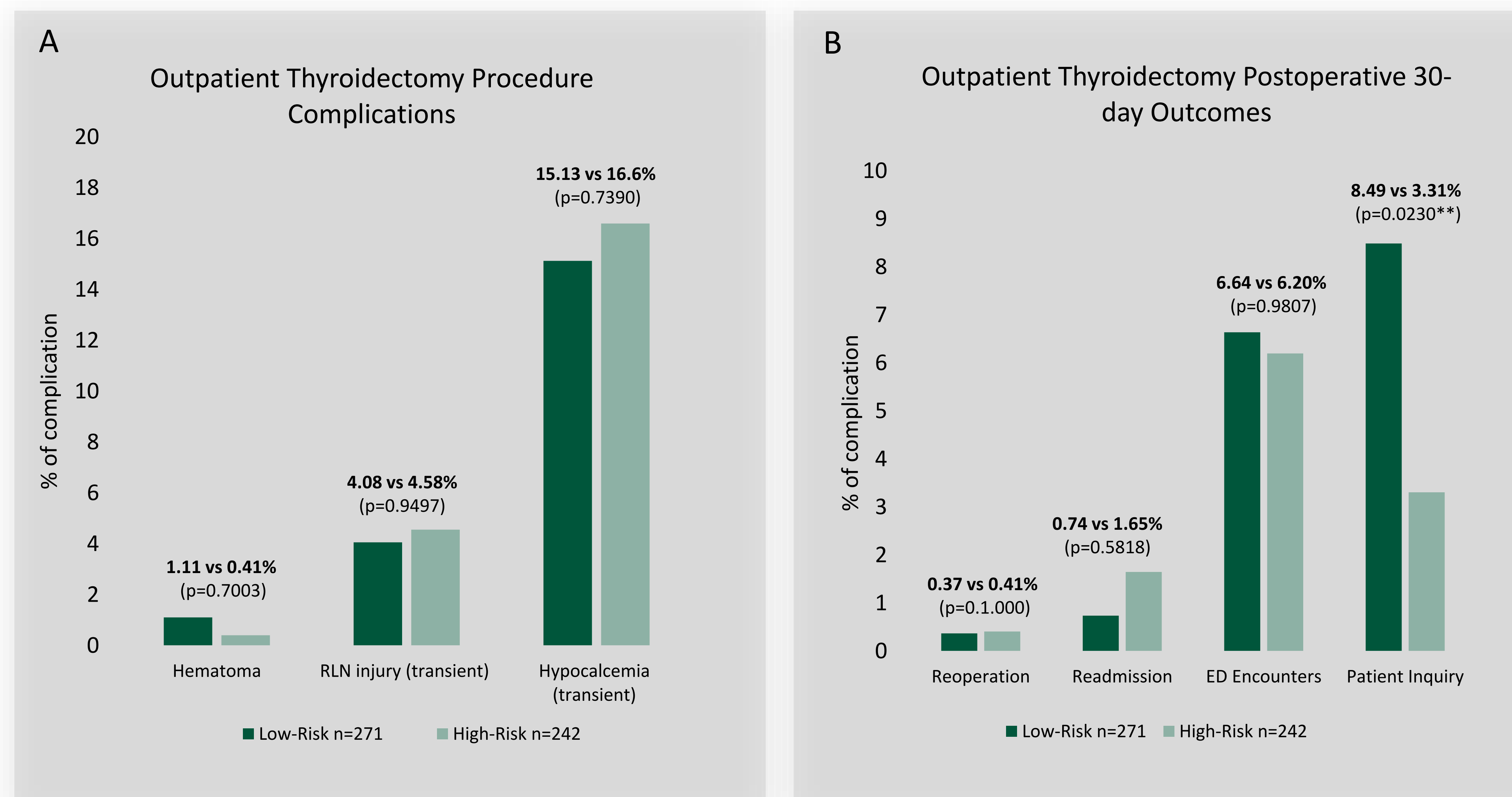


Figure 3. High risk vs low risk outpatient thyroidectomy (A) procedure complications and (B) postoperative 30-day outcomes.

## References:

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3. Lee DJ, Chin CJ, Hong CJ, Perera S, Witterick IJ. Outpatient versus inpatient thyroidectomy: A systematic review and meta-analysis. Head Neck. 2018;40(11):192-202. doi:10.1002/hed.24934
4. Terris DJ, Snyder S, Carneiro-Pla D, Inabnet WB, et al. American Thyroid Association Statement on Outpatient Thyroidectomy. Thyroid. 2013;23(10):1193-202. doi: 10.1089/thy.2013.0049.

## Discussion

- Compared to low-risk patients, high-risk patients were significantly older, more likely to be male, more likely to be non-White, have a higher mean CCI score, to be classified as ASA III, and to have reported smoking within the last 5 years.
- Low-risk and high-risk patients were found to have similar BMI (30-31), and distance from the hospital (73 minutes).
- Procedure complications (postoperative hematoma, RLN injury, hypocalcemia) were overall low in both groups.
- There was NO DIFFERENCE in rate of procedural complication between risk groups.
- For 30-day outcomes, the only statistical difference was a higher rate of postop patient inquiry in the low-risk group.
- Secondary analysis:

– Potential for selection bias with omission of unplanned or planned admissions, therefore secondary analysis including broader cohort was done and still NO significant difference in postoperative complication rate or adverse 30-day outcomes.

– Potential for differences in outcomes due to distance traveled to hospital, but on secondary analysis there was no increase in composite procedure complication rates or adverse postoperative 30-day outcomes with increasing distance.

- Study Limitations:

– Retrospective single-center design may limit generalizability.

– Patient population (largely white, female, specific regional sample).

– Selection bias w/o unplanned or planned admissions – addressed with secondary analysis.

## Conclusion

- High-risk patients (OSA, AC/AP use, substernal goiter, Graves') experienced no increase in postoperative complications, readmissions, or ED visits when compared to their lower-risk counterparts.
- Supports expanding outpatient eligibility for outpatient total thyroidectomy.
- Surgeon experience & volume critical in considering outpatient thyroid surgery.