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Implementation of Minimally Invasive Thyroidectomy for Cancer Care: Conversion Rates Are Associated with Facility Learning Curve but Not Total Volume of Thyroidectomies

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Background

- Minimally invasive thyroidectomy (MIT), both laparoscopically and robotically, is increasingly being implemented for cancer care in the United States
- Conversion to an open procedure is an undesirable outcome inherent to new technology implementation
- **Aim:** Evaluate conversion rates and its risk factors during MIT implementation nationwide

Methods

Inclusion Criteria:

- National Cancer Database(NCDB): 2010- 2019
- MIT and conversion rates

Independent variables:

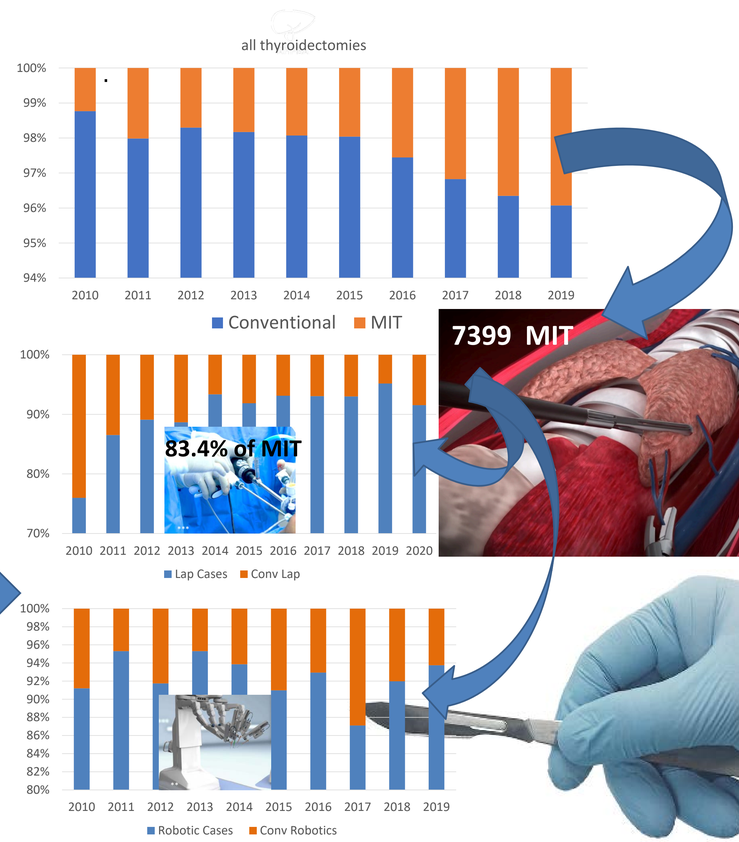
- patient, tumor, procedure, and facility level factors

Statistical Evaluation:

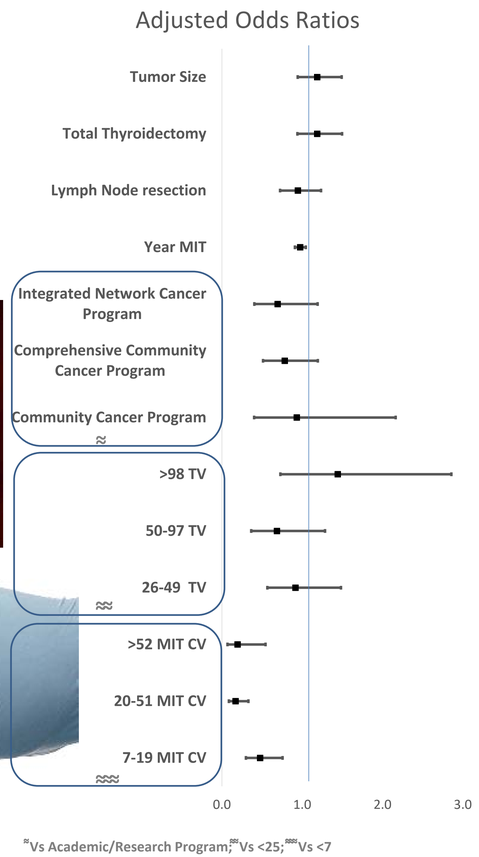
- Average annual facility volume of all thyroidectomies (TV) and Cumulative annual facility volume of MIT (MIT-CV)
- Facility-clustered logistic regression model

Results

Demographics/Characteristics



Multivariate Analysis



Facility **MIT-CV** was associated with decreasing **MIT conversion,** but not total volume nor year of MIT implementation.

Conclusions

- Conversion rates are decreasing nationwide
- They decreased as the facility experience with MIT increased, denoting a facility learning curve
- TV was not associated with conversion
- **Next steps: evaluate other adverse events to determine the impact of MIT learning curve**

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