



Access to Robotic Assisted Thoracoscopic Surgery in Historically Marginalized Groups at a Rural Tertiary Medical Center

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BACKGROUND

Historically marginalized populations, including older, nonwhite, and underinsured patients with lung cancer have been shown to experience diagnostic, therapeutic, and outcome disparities in care. While newer techniques in lung cancer surgery including robotic-assisted thoracoscopy are becoming more widely available, it is unclear if these modalities are being equitably utilized. The purpose of this study was to examine if robotic surgery is equitably utilized in lung cancer care.

METHODS

A retrospective review of patients who underwent lung resection surgery at a rural academic tertiary care center between August 2017 and December 2022 was performed. Modalities included robotic-assisted thoracoscopic surgery, video-assisted thoracoscopic surgery (VATS), and open thoracotomy and operations included were pneumonectomy, lobectomy, and wedge resection.

Patients were separated into groups based on race (White and Nonwhite), Insurance Status (Underinsured/uninsured vs Insured), Sex, and Age (≥ 65 and Younger). Patients with Medicaid or without insurance were categorized as underinsured.

The proportion of patients in each group undergoing robotic surgery was compared with those undergoing VATS/open surgery using Chi Squared and Fisher's Exact Test. Statistical significance was set at a p-value of 0.05.

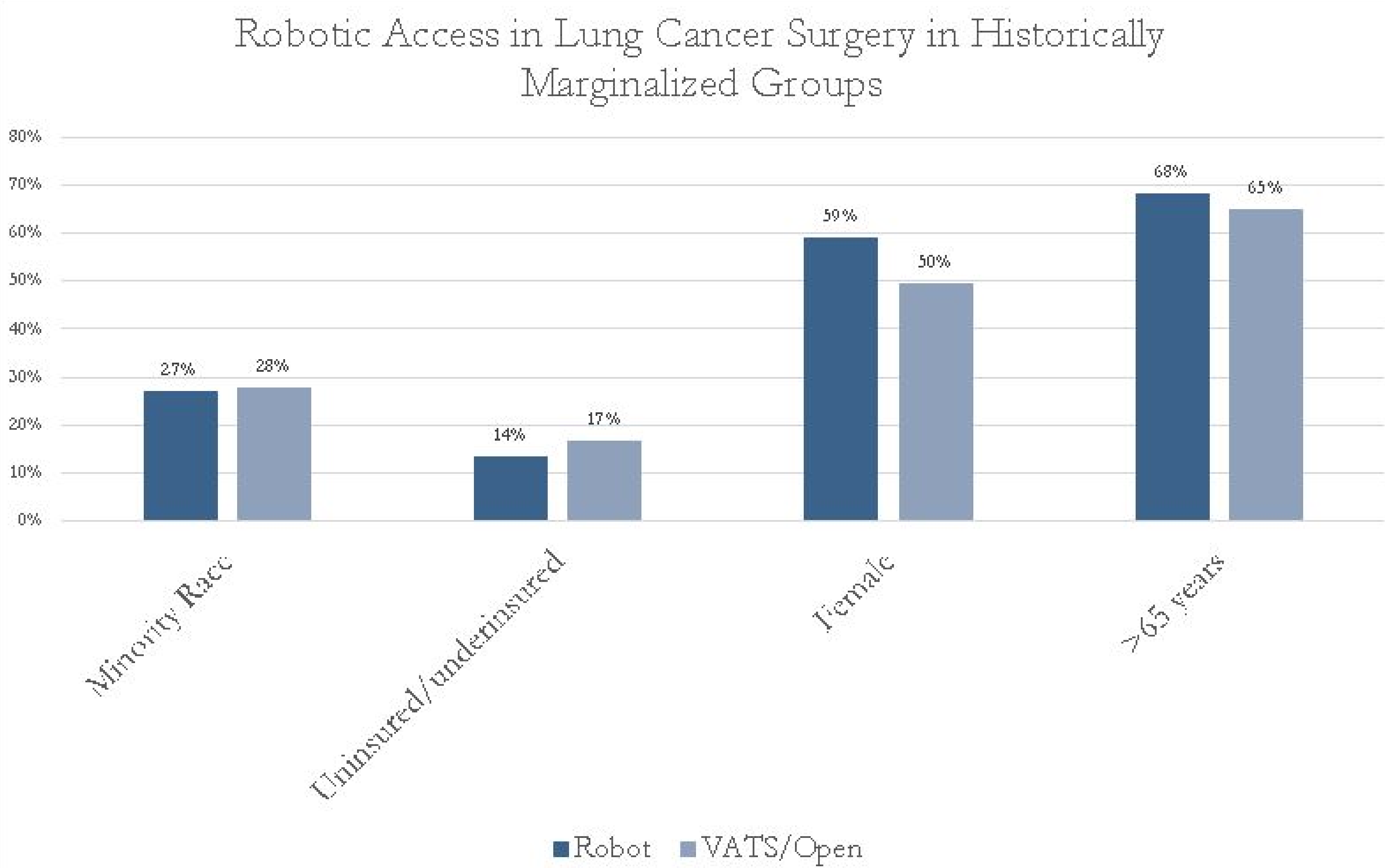


Table 1. Robotic Access in Lung Cancer Surgery in Historically Marginalized Groups

Group	Robotic (N = 22)	VATS/Open (N = 165)	P-value ^a
Minority Race	6 (27%)	46 (28%)	0.59
Female	13 (59%)	82 (50%)	0.28
Underinsured/uninsured	3 (14%)	28 (17%)	0.49
>65 years old	15 (68%)	107 (65%)	0.48

^aChi-Square or Fisher's Exact Test where applicable
VATS - Video-assisted thoracoscopic surgery

RESULTS

A total of 187 patients were included in this study. There were 22 robotic surgeries, 163 VATS, and 2 open procedures with 11 pneumonectomies, 106 lobectomies, and 70 wedge resections performed. There were 52 (27.8%) non-white patients, and 135 (72.1%) white patients. There were 95 (50.8%) female patients, and 92 (49.1%) male patients. 31 (16.5%) patients were categorized as underinsured or uninsured, and 156 (83.4%) had adequate insurance. 123 (65.7%) patients were over the age of 65 and 64 (34%) patients were under the age of 65. There were no significant differences in the proportion of any of these groups receiving robotic surgery as compared to VATS/Open surgeries.

CONCLUSIONS

While disparities in lung cancer care for historically marginalized populations still exist nationally, access to robotic surgery in our population does not seem to follow these trends. Further multicenter analysis will be necessary to determine if robotic surgery is being equitably utilized in these more vulnerable populations nationwide.

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