

Lobar vs Sublobar Resection for Non-Small Cell Lung Cancer

Siam T. Muquit, BS; Dr. Jessica Ruck, MD; Dr. Stephen Broderick, MD
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Johns Hopkins University School of Medicine, Baltimore, Maryland, USA

BACKGROUND

- In recent years, sublobar resections have replaced lobar resections to become the preferred treatment for stage I Non-Small Cell Lung Cancer (NSCLC) in order to spare the lung parenchyma.
- Some studies have validated this shift in approach, but more data is needed to confirm the shift to sub-lobectomies.

STUDY OBJECTIVE

- We aimed to compare cancer recurrence at 3 years between patients undergoing sub-lobar vs. lobar resections for Stage I NSCLC.

METHODS

- Retrospective cohort study
- All patients who underwent a surgical resection for NSCLC at JHH from Jan. 2015 to June 2022
- Patient data was collected from EPIC charts
- Patients were stratified by surgery type (lobar vs. sublobar resection)
- Descriptive statistics performed using Fisher's exact and Chi-squared testing
- Time to local or distant recurrence, censored for death evaluated using Kaplan-Meier curves and multivariable Cox regression. Regression models were adjusted for gender and clinical stage.

RESULTS

Factor	Level	Lobectomy	Sublobar Resection	P-value
N		114	64	
Gender	Male	46 (40.4%)	23 (35.9%)	0.56
	Female	68 (59.6%)	41 (64.1%)	
Clinical Stage	0	1 (1%)	2 (4%)	0.011
	IA	41 (44%)	39 (74%)	
	IB	19 (20%)	3 (6%)	
	IIA	1 (1%)	0 (0%)	
	IIB	15 (16%)	5 (9%)	
	III	13 (14%)	2 (4%)	
	IV	4 (4%)	2 (4%)	
Histology	Squamous	19 (16.7%)	8 (12.5%)	0.21
	Adenocarcinoma	73 (64.0%)	49 (76.6%)	
	Other	22 (19.3%)	7 (10.9%)	
Lymphovascular Invasion (LVI)	No	75 (68.8%)	49 (81.7%)	0.070
	Yes	34 (31.2%)	11 (18.3%)	

Figure 1. Patients were stratified by surgery type. Descriptive statistics for categorical variables were performed using Fisher's exact and Chi-squared testing. No statistically significant differences were found between variables collected.

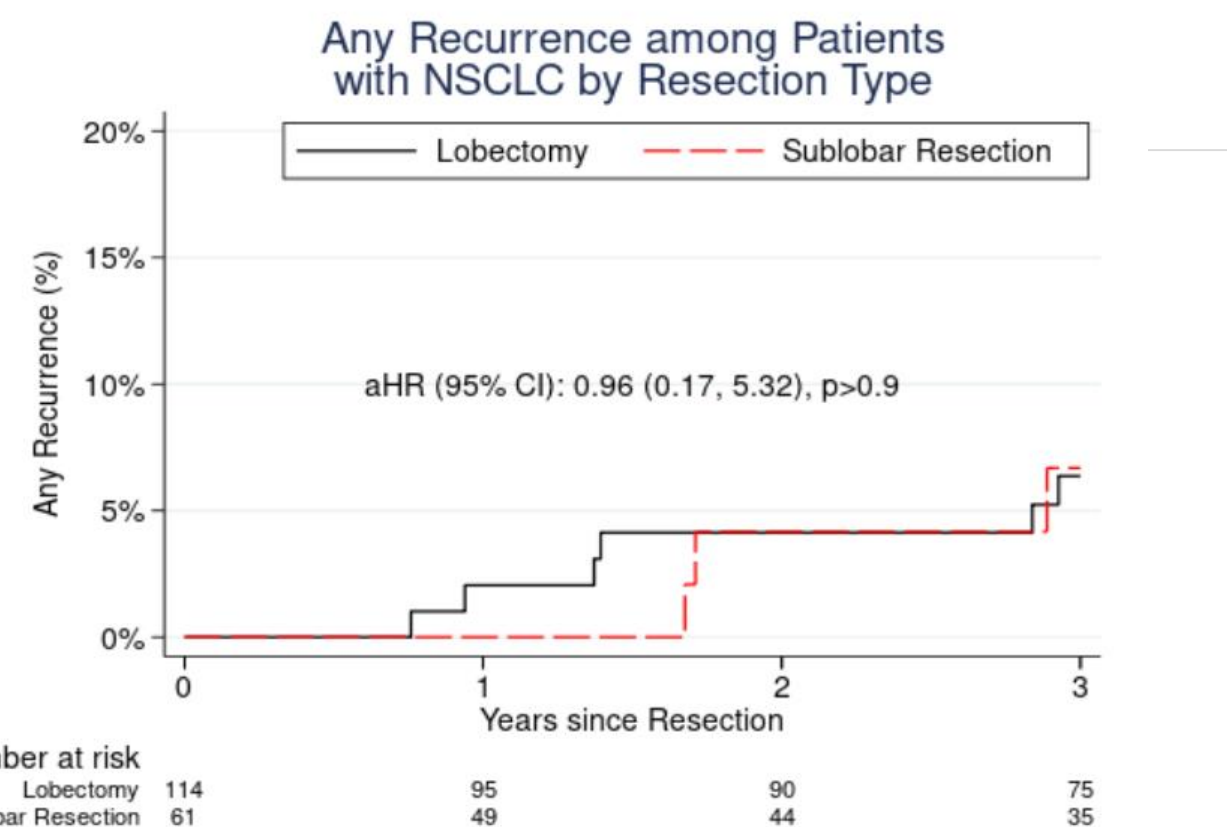


Figure 2. Time to any recurrence, censored for death, was evaluated by surgery type using Kaplan-Meier curves and multivariable Cox regression. Regression models were adjusted for gender and clinical stage. There was no statistically significant difference found between the 3-year recurrence outcomes of lobectomy vs. sublobectomy.

CONCLUSIONS

- Our findings suggest no statistically significant difference between cancer recurrence after lobectomy vs. sublobectomy.
- This validates the shift towards the use of sublobar resection as a surgical treatment option for NSCLC.

LIMITATIONS

- Our study is limited as a single-center retrospective cohort study. Future studies would benefit from larger, multi-center sample sizes and prospective cohorts.

IMPLICATIONS

- Our study validates the shift towards sublobectomy for patients with NSCLC, thereby sparing lung parenchyma and function, and increasing quality of life for patients.