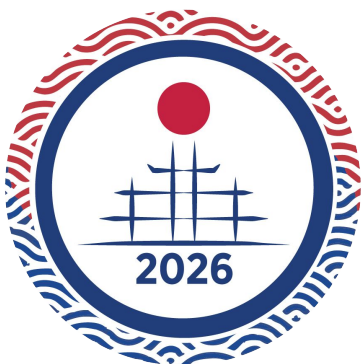


# E-P3264: Segmentectomy versus Lobectomy for T1c Non-Small Cell Lung Cancer: A Multicenter Analysis

Gizem Özçibık Işık <sup>1</sup>, Akif Turna <sup>2</sup>, Serhan Tanju <sup>3</sup>, **Celal Buğra Sezen** <sup>1</sup>, Hasan Volkan Kara<sup>2</sup>, Hüseyin Melek <sup>4</sup>, Ali Çelik <sup>5</sup>, Muhammet Sayan <sup>5</sup>, Suat Erus <sup>3</sup>, Cengiz Gebitekin <sup>4</sup>, Yekta Altemur Karamustafaoğlu <sup>6</sup>, Kadir Burak Özer <sup>3</sup>, Şükrü Dilege <sup>3</sup>

1-Yedikule Chest Diseases and Thoracic Surgery Training and Research Hospital, Department of Thoracic Surgery, Türkiye, 2-Istanbul University-Cerrahpasa Cerrahpasa Medical Faculty, Department of Thoracic Surgery, Türkiye, 3-Koc University Faculty of Medicine, Department of Thoracic Surgery, Türkiye, 4-Bursa Uludag University Faculty of Medicine, Department of Thoracic Surgery, Türkiye, 5-Gazi University Faculty of Medicine, Department of Thoracic Surgery, Türkiye, 6-Trakya University Faculty of Medicine, Department of Thoracic Surgery, Türkiye

**Correspondence:** [bugrasezen@hotmail.com](mailto:bugrasezen@hotmail.com), [ozcibikgizem@gmail.com](mailto:ozcibikgizem@gmail.com)



IASLC 2026 World  
Conference on Lung Cancer

SEPTEMBER 12 – 15, 2026  
SEOUL, REPUBLIC OF KOREA

## INTRODUCTION

It has been demonstrated that segmentectomy and lobectomy provide comparable survival outcomes in non-small cell lung cancer (NSCLC) measuring 2 cm or less. However, no clear superiority of either surgical approach has been established for tumors measuring 2–3 cm. In cases with lymph node positivity or adverse prognostic factors within the 2–3 cm range, the appropriateness of segmentectomy remains controversial. In this study, we aimed to evaluate the outcomes of segmentectomy and lobectomy in patients with NSCLC measuring 2–3 cm.

## METHODS

Patients with NSCLC measuring 2–3 cm who underwent either segmentectomy or lobectomy across six institutions were included in the study. The groups were compared in terms of demographic, clinical, pathological, and survival outcomes.

## REFERENCES

1.Saji H, Okada M, Tsuboi M, et al. Segmentectomy versus lobectomy in small-sized peripheral non-small-cell lung cancer (JCOG0802/WJOG4607L): a multicentre, open-label, phase 3, randomised, controlled, non-inferiority trial. Lancet 23(10335):1607–1617

2.Altorki N, Wang X, Damman B, et al. Lobectomy, segmentectomy, or wedge resection for peripheral clinical T1aN0 non-small cell lung cancer: A post hoc analysis of CALGB 140503 (Alliance). J Thorac Cardiovasc Surg 167(1):338–347e1

3.Xu W, Li Z, Cao X, et al. Oncologic outcomes of three-dimensional navigation-guided segmentectomy for early-stage non-small cell lung cancer >2-3 cm. Asian J Surg. 2024 Nov 28:S1015-9584(24)02643-5.

4.Hattori A, Matsunaga T, Fukui M, et al. Oncologic outcomes of segmentectomy for stage IA radiological solid-predominant lung cancer >2 cm in maximum tumour size. Interact Cardiovasc Thorac Surg. 2022 Nov 8;35(6):ivac246.

**AI Disclosure:** No AI tools were used in the development of this material.

## RESULTS

A total of 249 patients were included, with 70 in the segmentectomy group and 179 in the lobectomy group. The mean age were 65.8 ± 8.9 and 62.6 ± 9.9 years in the segmentectomy and the lobectomy group respectively(p=0.295).

The segmentectomy group consisted of 51 females and 19 males, while the lobectomy group included 43 females and 136 males; the groups were demographically similar(Table 1). Overall survivals were comparable between the groups (p=0.715; Table 2, Figure 1).

In multivariable analysis, regression analysis revealed that pleural invasion and the presence of STAS emerged as independent adverse prognostic factors (p<0.001, p<0.001, p<0.001 respectively; Table 3).

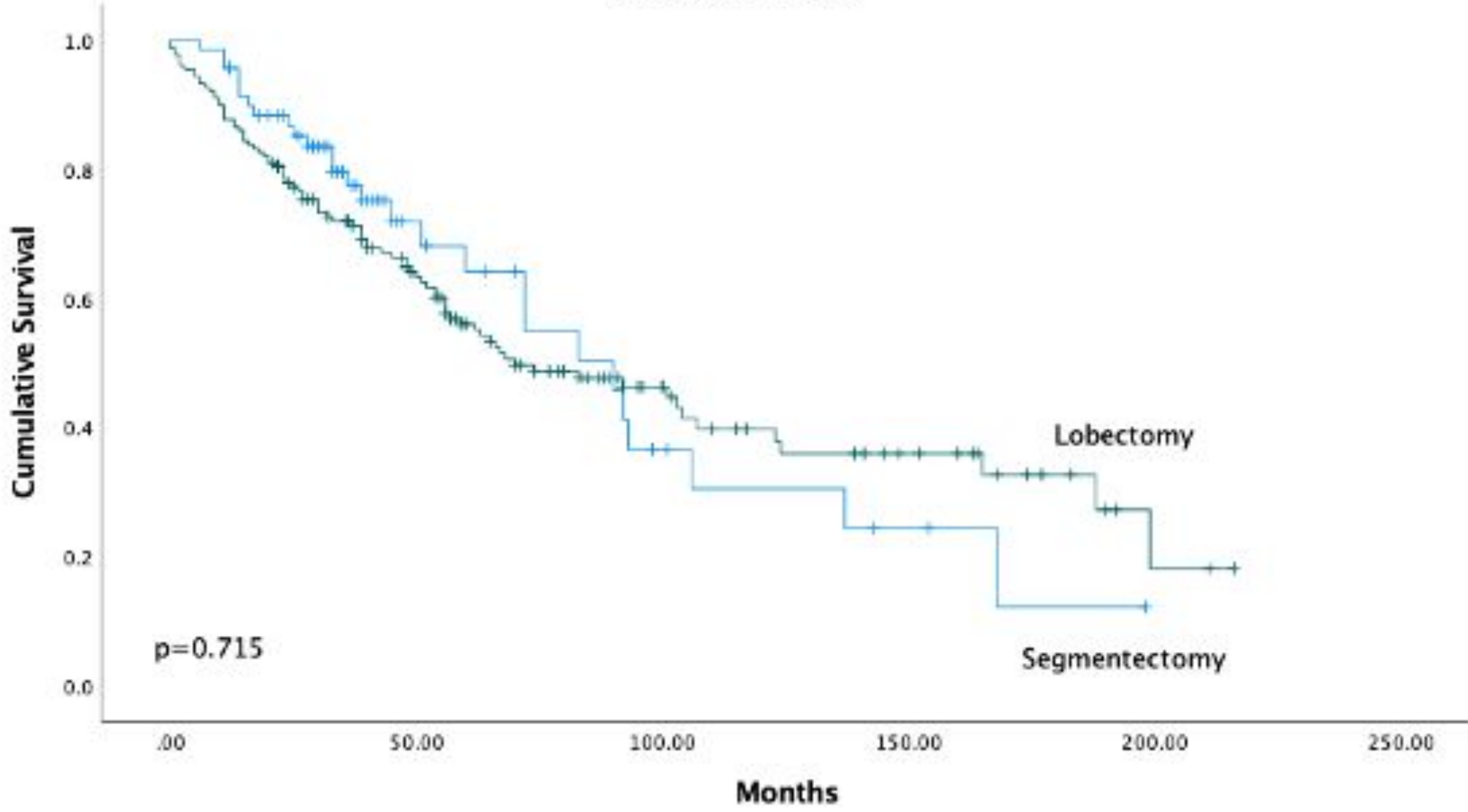
Table 1: Demographic and Pathologic Data

|                                                     | Segmentectomy<br>(n=70)                  | Lobectomy<br>(n=179)                                | p Value                       |
|-----------------------------------------------------|------------------------------------------|-----------------------------------------------------|-------------------------------|
| Age                                                 | 65.8 ± 8.9                               | 62.6 ± 9.9                                          | 0.295                         |
| Gender<br>-Female<br>-Male                          | 19 (27.1%)<br>51 (72.9%)                 | 43 (24.0%)<br>136 (76.0%)                           | 0.609,<br>OR:1.2<br>(0.6-2.2) |
| Tumor Diameter                                      | 2.6 ± 0.3                                | 2.7 ± 0.3                                           | 0.267                         |
| Pathology<br>-Adenocarcinoma<br>-Non-adenocarcinoma | 44 (62.9%)<br>26 (37.1%)                 | 75 (41.9%)<br>104 (58.1%)                           | 0.507                         |
| N0<br>N1                                            | 61 (87.1%)<br>9 (12.9%)                  | 145 (75.4%)<br>34 (24.6%)                           | 0.249                         |
| PL0<br>PL1<br>PL2<br>PL3                            | 56 (80.0%)<br>9 (12.9%)<br>5 (7.1%)<br>0 | 104 (58.1%)<br>53 (29.6%)<br>10 (5.6%)<br>12 (6.7%) | <0.001                        |
| Perineural Invasion                                 | 2 (2.9%)                                 | 66 (36.9%)                                          | <0.001                        |
| Lymphatic Invasion                                  | 19 (27.1%)                               | 139 (77.7%)                                         | <0.001                        |
| Vascular Invasion                                   | 9 (12.9%)                                | 104 (58.1%)                                         | <0.001                        |
| STAS                                                | 22 (31.4%)                               | 61 (34.1%)                                          | <0.001                        |

## DISCUSSION

In this study, no significant difference in survival was observed between segmentectomy and lobectomy in patients with T1c NSCLC. However, the higher frequency of adverse pathological features such as pleural, lymphatic, vascular invasion, and STAS in the lobectomy group suggests that this group may have included tumors with more aggressive biological behavior. These findings suggest that segmentectomy may be a non-inferior oncologically option for patients with tumors measuring 2–3 cm in diameter. Furthermore, identifying pleural invasion and STAS as independent prognostic factors underscores the significance of tumor biology in surgical decision-making, beyond just tumor size.

Figure 1: Survival Functions



|               | 10- Years<br>Survival<br>Rate (%) | Median<br>Survival<br>(Months) | 95% CI     | p<br>Value |
|---------------|-----------------------------------|--------------------------------|------------|------------|
| Segmentectomy | 61.4%                             | 94.1 ± 11.0                    | 72.4-115.7 | 0.715      |
| Lobectomy     | 50.8%                             | 103.5 ± 7.5                    | 88.8-70.0  |            |

Table 2: Survival Data

|                  | p Value | HR; 95% CI    |
|------------------|---------|---------------|
| Pleural Invasion | 0.007   | 0.3 (0.1-0.7) |
| STAS             | 0.006   | 2.2 (1.2-3.7) |

Table 3:Cox regression analysis of factors affecting survival