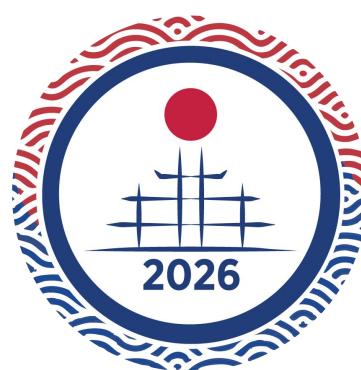


Clinical Characteristics and Survival Prognosis of 106 Female Patients with Small Cell Lung Cancer

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INTRODUCTION

In the past five years, the incidence of lung cancer in female non-smokers has increased significantly, making the female lung cancer patient population worthy of further attention. Small cell lung cancer (SCLC) accounts for approximately 15% of lung cancers and is strongly associated with smoking, with about 85% of cases occurring in males. However, the clinical characteristics and survival prognosis of SCLC in non-smoking females are rarely reported.

METHODS

A total of 1,577 patients diagnosed with SCLC at our hospital from January 2018 to December 2025 were collected, including 188 female patients (11.92%). A total of 106 female patients with complete follow-up data who received at least two cycles of anti-tumor therapy were selected for analysis. Data collected included smoking status, clinical stage, performance status (PS) score, and treatment regimen. Statistical analyses of baseline characteristics, progression-free survival (PFS), and overall survival (OS) were performed using R software.

CONCLUSION

Female patients with primary small cell lung cancer (P-SCLC) have slightly better mPFS and OS compared to previously reported data for the SCLC population. Transferred small cell lung cancer (T-SCLC) in female patients predominantly arises from transformation after targeted therapy for EGFR exon 19 deletion. The mPFS of T-SCLC is worse than that of P-SCLC, but the mOS is similar.

RESULTS

Patient Characteristics

Among 106 female patients with SCLC, 68 (64.2%) had de novo SCLC and 38 (35.8%) had transformed SCLC (T-SCLC). Women with de novo SCLC had a median age of 62 years (range, 22-80); 82.4% were never-smokers, and 75.0% had extensive-stage disease. Among them, 32 (47.1%) received chemotherapy and 28 (41.2%) received chemoimmunotherapy. Women with T-SCLC had a median age of 58 years (range, 24-76), and all were never-smokers.

RESULTS

- 64.2% of patients had P-SCLC and 35.8% had T-SCLC.
- T-SCLC occurred exclusively in never-smokers; 94.7% transformed from adenocarcinoma.
- 73.7% of T-SCLC cases harbored an EGFR exon 19 deletion before transformation.
- Median time to transformation was 22.7 months.
- T-SCLC was associated with significantly shorter PFS than P-SCLC: 4.5 vs 8.1 months; $P=0.0069$.
- OS was numerically shorter in T-SCLC but did not significantly differ: 12.6 vs 14.4 months; $P=0.065$.
- No significant OS difference was observed across treatment strategies within either cohort.

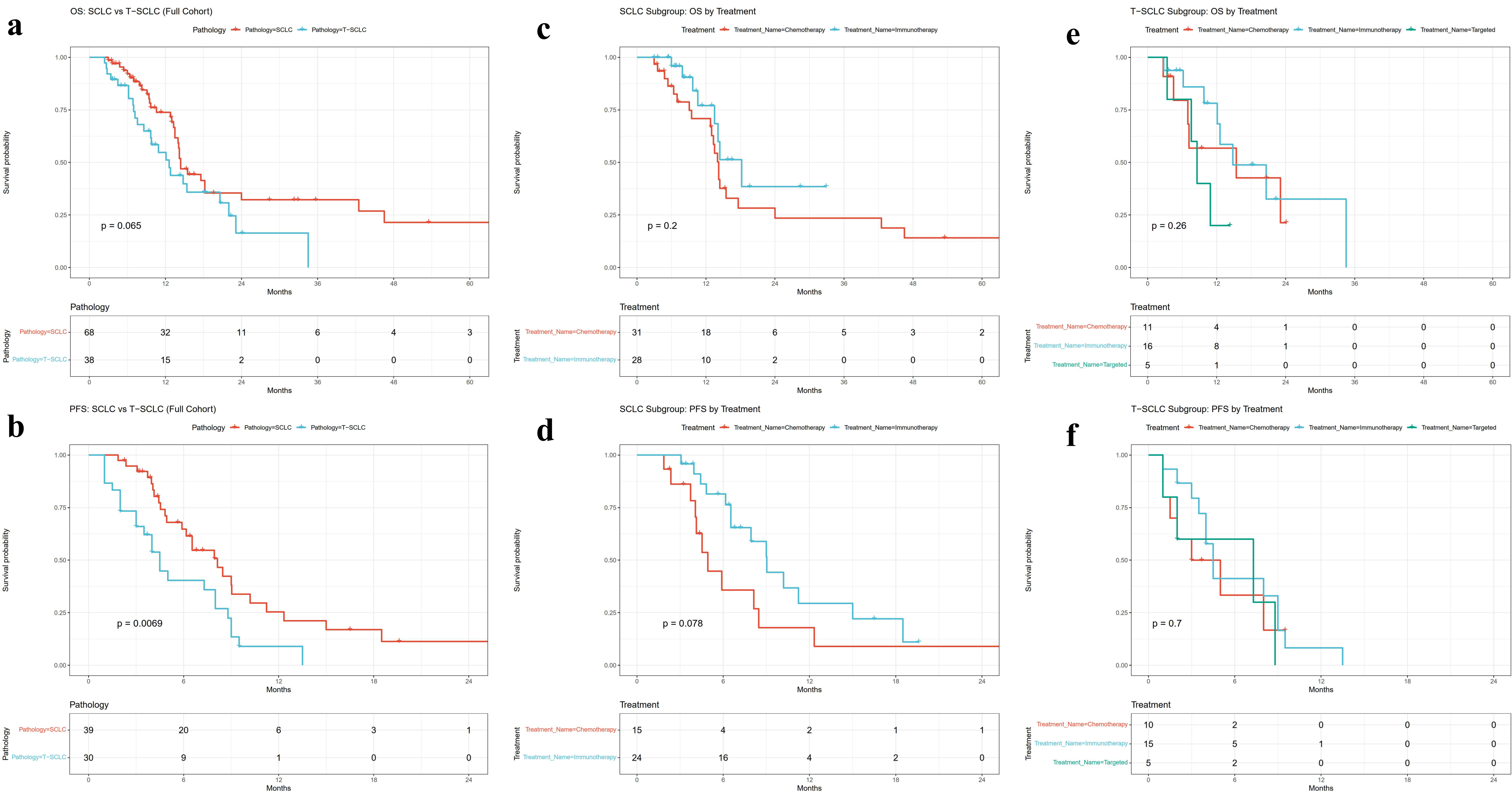


Figure 1. Survival outcomes according to disease origin and treatment in female patients with SCLC. (a, b) OS and PFS according to disease origin. (c, d) OS and PFS according to treatment among patients with P-SCLC. (e, f) OS and PFS according to post-transformation treatment among patients with T-SCLC.