Treatment Patterns, Overall Survival, and Disease-Free Survival in Early-Stage Non-Small Cell Lung Cancer Following Complete Resection

Background

- About 25% of the early-stage non-small cell lung cancer (NSCLC) patients receive surgical treatment. The overall disease-free survival (DFS) and overall survival (OS) of patients with stage IB-IIIA disease is 96.7% and 93.2% at 1 year and 94.0% and 92.8% at 3 years, respectively.

Descriptive statistics were used to summarize patient characteristics and treatment pattern in the study population. The study population was 2000.

Objectives

- To describe the treatment pattern of adjuvant therapy, OS, and real-world disease-free survival (rDFS) following complete resection in patients with early-stage (I-B-IIIA) NSCLC.

Methods

- Study design: Retrospective, non-interventional cohort study using electronic medical record (EMR) data.

Data source

- The ConcordiatiTM database consists of de-identified data including structured and unstructured text data and images, e.g., physician notes from selected patient cohorts according to specific disease specifications.

Eligibility

- Patients with a primary diagnosis of stage IB-IIIA NSCLC were eligible if they had undergone complete resection up to March 1, 2016 in an academic or community oncology practice setting. The earliest year of complete resection observed in this study population was 2005.

Study variables

- Patient demographic characteristics, including age, gender, race, and USA region.
- Patient clinical characteristics, including comorbidities, stage, histology, performance status, and type of surgery.
- Treatment patterns for systemic anticancer treatment in the adjacent setting, including the treatment duration and treatment status.
- OS was defined as the time from date of complete resection to date of death. Patients were censored at the date of last medical visit if the date of death was unknown. rDFS was defined as time from date of complete resection to date of first recurrence event (including recurrence, distant recurrence, or death). The biochemical recurrence is defined as elevated serum CEA or CA15-3. The study has received Institutional Review Board (IRB) approval.

Demographic and Clinical Characteristics (Table 1)

- Patients had a median age of 67 years at initial diagnosis, and 53.3% were male.
- Most patients were White (33.9%) and were located in the Midwest (31.4%) or South (27.4%) regions of the USA.

Eligibility

- Patients with a primary diagnosis of stage IB-IIIA NSCLC and those with stage II disease were eligible. Patients with prior neoadjuvant chemotherapy or radiotherapy were excluded from the study.

Treatment Pattern (Table 2 & Figure 2) and Patient Attrition (Figure 1)

- Of the 105 patients with stage IB-IIIA disease (n=441) was 55.2% at 3 years (95% CI: 50.3%, 60.2%). The overall median OS was 115.6 months (95% CI: 97.2, 137.1) for patients with stage IB-IIIA disease.

Results

- The most commonly used first adjuvant regimen was docetaxel (55.6%) and cisplatin-based chemotherapy was associated with improvement in disease-free survival (DFS) and overall survival (OS). Improvement in OS translates to a mere absolute survival benefit of 5 years.

Conclusions

- Although adjuvant chemotherapy is recommended by clinical guidelines, the rate of adjuvant chemotherapy delivery was low in this patient sample with early-stage NSCLC following complete resection in USA oncology practices.

Limitations

- Findings from this study should be generalized only to the underlying population who were included in the database.
- Patients in this study were mainly treated within community oncology practices. Treatment patterns in the adjacent setting may not be reflective of academic practices outside of the USA.

- With the advance of therapies in early-stage NSCLC, this study may not be valid for academic centers or in practice setting outside of the USA.

- Findings from the study should be interpreted in consideration of retrospective design and this known limitation of chart review.

- The study was limited to the extent of data availability as recorded in the database.

References


Disclosures

- The authors report no potential conflicts of interest regarding their content, use or application and disclaims any responsibility for their application or use in any way.

Data source: ALL patients with complete resection prior to March 1, 2016 in Patient360 database were included. The study has received Institutional Review Board (IRB) approval.

Statistical methods

- Descriptive statistics were used to summarize patient characteristics and treatment pattern in the adjacent setting.

At 1 year

- Stage I: 95.6% (95% CI: 93.8%, 97.3%) for patients with stage IB-IIIA disease.

Detection of the authors.

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