

*Survival and Chemotherapy Response in Metastatic Lung Carcinoids: Insights from the National Cancer Database*

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**Abstract :**

**Introduction**

Metastatic lung carcinoids (MLC) represent a rare subset of lung cancers with distinct histologic subtypes. Survival outcomes and prognostic factors have not been well-studied in the real-world setting.

**Methods**

Patients with MLC between 2010 and 2020 were included from the National Cancer Database based on histologic codes ICD-O-3 8240/3 and 8249/3. Kaplan-Meier curves and multivariate Cox proportional hazard regression were used to compare overall survival (OS) and evaluate prognostic factors.

**Results**

The median age at diagnosis was 68 and 69 years for atypical and typical MLC, respectively. The 3-year OS of the atypical MLC was 22.11%, and the typical MLC was 41.94% ( $p < 0.001$ ). In the typical MLC cohort, chemotherapy was associated with worse OS (HR, 2.148; 95% CI, 1.853 - 2.489;  $P < 0.0001$ ), and hormonal treatment showed better, albeit non-significant, OS (HR, 0.841; 95% CI, 0.672 - 1.053;  $P = 0.1307$ ). In the atypical MLC cohort, chemotherapy showed a non-

significant benefit in OS (HR, 0.887; 95% CI, 0.734-1.053; P=0.2126), whereas hormonal therapy significantly improved OS (HR, 0.715; 95% CI, 0.523-0.978; P=0.0355).

## **Conclusion**

Administration of chemotherapy was associated with worse OS in typical MLC, but patients with atypical MLC showed a non-significant trend toward survival benefit. These findings suggest against chemotherapy in metastatic typical MLC, but larger studies are needed further to evaluate the role of chemotherapy in metastatic atypical MLC.