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## Comparison of Patient Survival after Resection for Pulmonary Carcinoid Tumors Compared to Other Neuroendocrine Tumors: A United States Population Study

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### ABSTRACT

**Background:** We hypothesized: 1) resected pulmonary typical carcinoid (TC) will show a favorable clinical pattern compared to other bronchopulmonary neuroendocrine tumors (BPNETs); and 2) Atypical carcinoid (AC) and large-cell neuroendocrine carcinoma (LCNEC) patients will have similar outcomes. **Methods:** The Surveillance Epidemiology and End Result database was queried to compare demographics and tumor specific variables in patients undergoing resection for TC, AC, LCNEC and small cell lung cancer (SCLC) from 2001 to 2006. **Results:** Similar to LCNEC, AC patients had greater incidence of histologic positive lymph nodes compared to TC ( $P < 0.001$ ). Survival analysis showed a mean survival of  $40.0 \pm 1.9$  months for SCLC,  $46.2 \pm 2.2$  months for LCNEC,  $58.3 \pm 2.3$  months for AC, and  $70.2 \pm 0.2$  months for TC tumors. TC patients demonstrated favorable survival, and SCLC patients poorer survival, compared to AC and LNEC patients ( $P < 0.01$ ). **Conclusion:** AC tumors are a BPNET histology that exhibits clinical behavior distinct from TC. AC tumors should be staged, and treated with stage appropriate therapeutic strategies similar to other non-small cell lung cancers.

### KEYWORDS

Lung Cancer; Carcinoid; Neuroendocrine Tumor; Thoracic Surgery

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