

# **Epidemiology of Neuroendocrine Tumors (NET) of the Lung in the US: Analysis of 2 Large Insurance Claims Databases**

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**Background:** U.S. incidence of all NET increased from 10.9 cases per million person-years (PMPY) in 1973 to 52.5 PMPY in 2004 as reported in SEER (Yao 2008). Prevalence was reported as 350 per million/year for all NET. Bronchopulmonary or lung NETs represent approximately 20%–25% of primary NETs (Wolin 2015). It is anticipated that incidence and prevalence may be increasing, but trends beyond 2004 are unknown.

**Methods:** Retrospective, cross-sectional study using 2010-2014 data from 2 US claims databases: MarketScan and PharMetrics. Patients were 18-64, and had  $\geq 1$  inpatient or  $\geq 2$  outpatient claims with NET of bronchus or lung, identified by ICD-9 codes. Prevalence was number of lung NET patients divided by number of enrollees/year. Incidence was number of patients with a first observed NET diagnosis who were disease-free for 2 years prior, divided by number of enrollees.

**Results:** For years 2010-2014, there were 397-617 and 393-507 lung NET cases/year in MarketScan and PharMetrics, respectively. Prevalence increased 19.0-30.4 per million/year between 2010 and 2014 in MarketScan and 18.9-26.2 in PharMetrics; increased with age and was highest in 55-64 year olds (45.0-79.0); and was greater in females (22.6-39.3) than in males (13.8-20.6). Incidence increased in both datasets from 2011 to 2014: 15.9-19.2 PMPY in MarketScan and 13.1-16.0 PMPY in PharMetrics.

**Conclusion:** In both databases, the incidence and prevalence of lung NET have increased considerably from 2010 to 2014. This increase may be due to better diagnostic methods, increased awareness of NET among clinicians and pathologists, and/or an actual increase in disease occurrence in the US population. These results suggest the need for awareness of the clinically effective and safe treatment options available for lung NET patients among healthcare providers.

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