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Trends in mediastinal nodal staging and its impact on unforeseen N2 and survival in lung cancer

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Invasive mediastinal nodal staging of patients with resectable NSCLC significantly increased over the years in the Netherlands. Performance of invasive staging led to a possible overall survival benefit in patients with clinical N1–3 disease. https://bit.ly/2S9Adaa

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ABSTRACT

Introduction: Guidelines for invasive mediastinal nodal staging in resectable nonsmall cell lung cancer (NSCLC) have changed over the years. The aims of this study were to describe trends in invasive staging and unforeseen N2 (uN2) and to assess a potential effect on overall survival.

Methods: A nationwide Dutch cohort study included all clinical stage IA–IIIB NSCLC patients primarily treated by surgical resection between 2005 and 2017 (n=22 555). We assessed trends in invasive nodal staging (mediastinoscopy 2005–2017; endosonography 2011–2017), uN2 and overall survival and compared outcomes in the entire group and in clinical nodal stage (cN)1–3 patients with or without invasive staging.

Results: An overall increase in invasive nodal staging from 26% in 2005 to 40% in 2017 was found (p<0.01). Endosonography increased from 19% in 2011 to 32% in 2017 (p<0.01), while mediastinoscopy decreased from 24% in 2011 to 21% in 2017 (p=0.08). Despite these changes, uN2 was stable over the years at 8.7%. 5-year overall survival rate was 41% for pN1 compared to 37% in single node uN2 (p=0.18) and 26% with more than one node uN2 (p<0.01). 5-year overall survival rate of patients with cN1–3 with invasive staging was 44% *versus* 39% in patients without invasive staging (p=0.12).

Conclusion: A significant increase in invasive mediastinal nodal staging in patients with resectable NSCLC was found between 2011 and 2017 in the Netherlands. Increasing use of less invasive endosonography prior to (or as a substitute for) surgical staging did not lead to more cases of uN2. Performance of invasive staging indicated a possible overall survival benefit in patients with cN1–3 disease.