

Noncancer-specific mortality in patients with stage IA1 NSCLC after surgical resection: the role of comorbidities in prognosis

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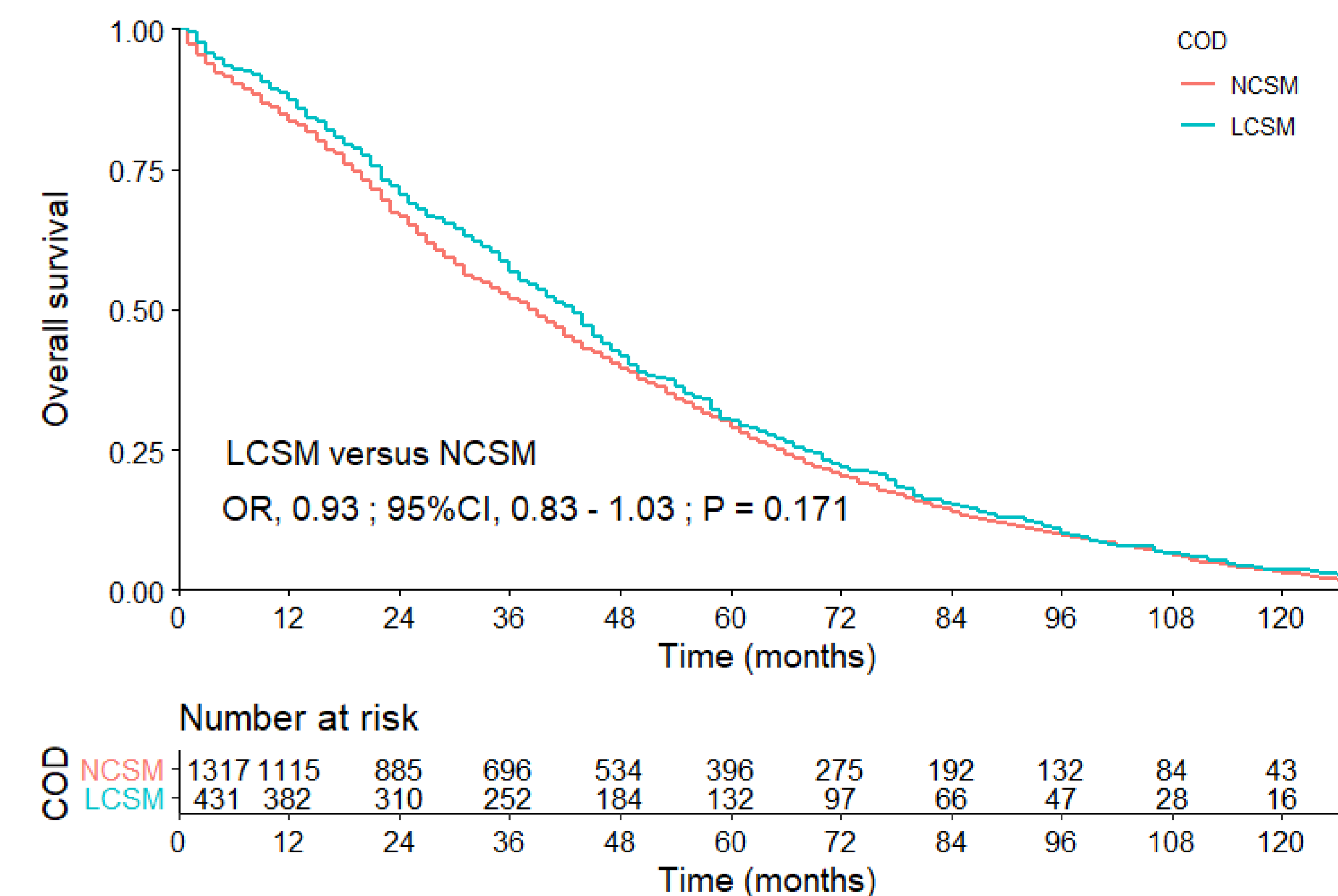
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Background: Relapse and metastasis were commonly responsible for the poor prognosis for early-stage non-small cell lung cancer(NSCLC). With the increasing cases of elderly patients, the prevalence and clinical implications of noncancer-specific mortality have not been seen revealed previously due to the comorbidities.

Methods: We identified the patients with stage IA1 NSCLC between 2004 and 2015 in the Surveillance, Epidemiology, and End Results(SEER) database and reviewed patients between 2014 and 2018 from West China Hospital, Sichuan University. We compared the incidence and survival between lung cancer-specific mortality(LCSM) and noncancer-specific mortality(NCSM), and intended to reveal the impact of age and various causes of death on prognosis. Kaplan-Meier analysis and propensity score matching analysis were employed to determine the survival difference between LCSM and NCSM.

Results: A total of 4955 patients were included with a median follow-up of 50 months(interquartile range, 26-85 months) from the SEER database, in which 431(8.7%) died of lung cancer and 1317(26.6%) of other causes. Those who died of other causes were older than those who died of cancer(70.01 years versus 67.69 years, $P<0.001$), while no significant difference was observed between LCSM and NCSM in overall survival(LCSM versus NCSM, OR=0.93; 95%CI, 0.83-1.03; $P=0.171$). Among the causes of NCSM, the survival time was significantly impaired in the deaths of hepatobiliary and pancreatic diseases, diseases of the oral cavity, tonsil and pharynx, and other carcinomas compared to the diseases of other systems($P<0.001$).



Conclusions: NCSM was crucial to the prognosis of early-stage NSCLC after surgical resection, and thus, better management of the comorbidities was supposed to be considered in routine follow-up among these patients. The clinical implications and practice of these comorbidities remain to be studied in further prospective studies.

Disclosures: The authors declare no conflict of interest.