

Socio-demographic inequalities in stage at diagnosis of lung cancer: A French population-based study

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Introduction. Diagnosing patients at non-advanced stage become a mainstay of lung cancer prevention and control strategies. Understanding socio-demographic inequalities in stage at diagnosis may support targeting interventions on patients at higher risk. This study aimed to identify these socio-demographic determinants from a large French population-based cancer registry.

Methods. Incident lung cancers diagnosed between 2008 and 2019 identified from the Poitou-Charentes Cancer Registry (south-west France) were included. Stage at diagnosis was categorised as advanced/non-advanced stage (TNM III/IV vs. I/II) according to the 8th TNM edition to ensure consistent level of prognosis over time. Socio-demographic variables included age, sex, the French European Deprivation Index (EDI) and patient's place of residence. Their impact on stage at diagnosis was quantified by multivariate logistic regression models with subgroup analyses by histological subtype. Sensitivity analyses were conducted using multiple imputation on missing stage data.

Results. Of the 15,487 included patients, 75% were diagnosed at advanced stage (66% to 95% depending on the histological subtype), 17% at non-advanced stage and 10% had a missing stage. Multivariate analysis showed a higher risk of advanced stage for men, older and younger patients, most deprived patients and those living in non-urban areas. Small cell lung cancer was strongly associated with risk of advanced stage, overriding the risks linked to socio-demographic factors in this subgroup. Sensitivity analyses showed consistent results with very similar findings.

Conclusion. This study highlighted the main socio-demographic determinants associated with delayed diagnosis in lung cancer. Research on targeted interventions to address disparities in advanced lung cancer is needed.

Keywords: Lung cancer, Socio-demographic factors, Stage at diagnosis, Population based-study.