# Title: Specialist palliative care reduces the need for acute health care services in patients with nonmalignant pulmonary diseases and lung cancer: a nationwide study

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## Abstract
**Background:** The high suffering and symptom burden related to both lung cancer and nonmalignant pulmonary diseases calls for equal receipt of specialist palliative care (SPC) services.
**Objectives:** To study the receipt of SPC in lung cancer and nonmalignant pulmonary diseases, and the impact of SPC on the use of acute healthcare resources during the end-of-life.
**Design:** A retrospective nationwide cohort study.
**Setting/subjects:** All Finnish decedents who died of lung cancer (n=2342) or nonmalignant pulmonary disease (n=1571) in 2019 were searched from the registries of the Finnish Institute of Health and Welfare. Demographics, the use of SPC, the use of emergency department (ED), and hospitalizations were evaluated.
**Results:** Contact with SPC services occurred in 27.8% and 9.1% of the patients with lung cancer and nonmalignant pulmonary disease, respectively ($p<0.001$). During the last month of life, early SPC contact (> 30 days before death) decreased the use of ED in lung cancer (46% vs. 63%, $p<0.001$) and nonmalignant pulmonary disease (53% vs. 69%, $p<0.001$) and reduced the number of hospitalizations in secondary care in lung cancer (31% vs. 59%, $p<0.001$) and nonmalignant pulmonary disease (34% vs. 52%, $p<0.001$). In both patient groups, early SPC contact was associated with lower need for ED and secondary care hospitalization during the last month of life, also in multivariate analyses.
**Conclusions:** Contact with SPC services is more common in lung cancer than in nonmalignant pulmonary disease, although both groups have rather limited receipt of SPC. Early integration of SPC is recommended as it has the potential to reduce burdensome acute healthcare use during the end-of-life in both patient groups.