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FACTORS INFLUENCING MANAGEMENT AND OUTCOME IN NON-SMALL CELL LUNG CANCER

The role of socioeconomic status, age, geographic region of origin and aspects of quality of life

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Akademisk avhandling

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Title
Factors influencing management and outcome in non-small cell lung cancer: the role of socioeconomic status, age, geographic region of origin and aspects of quality of life.

Abstract
Yearly, 4,200 individuals in Sweden are diagnosed with lung cancer, of which 85 % are non-small cell lung cancer (NSCLC). The aims of this thesis were to investigate aspects of equality of care and outcomes in patients with NSCLC and to examine indicators of quality of life.

All studies used data in Lung Cancer Database Sweden (LCBaSe), a research database generated by record linkages between the National Lung Cancer Register and other population-based registers. We identified 40,000 patients with NSCLC diagnosed between 2002 and 2016.
Paper I examined influence of socioeconomic status. Patients with a high educational level were more often offered PET-CT, assessed in a multidisciplinary team setting, treated with stereotactic body radiotherapy and had better survival in early-, but not in late-stage disease.
Paper II investigated elderly NSCLC patients. No difference in stage was seen in patients ≤ 84 years, nor in diagnostic intensity <80 years. Treatment intensity was adapted according to age. Survival differed across age groups in early-, but not late-stage disease.
Paper III examined immigrants. We found evidence of a "healthy migrant effect". There were only small differences in management and outcome. If anything, non-Nordic immigrants had better survival in early-stage disease.
Paper IV assessed psychological impact following a NSCLC diagnosis. Higher rates of depression, anxiety, intoxication and suicide were seen in NSCLC patients compared to lung cancer free individuals. The risk of depression, anxiety and suicide decreased over time but the increased risk of intoxication remained throughout the follow-up period.
In summary, we found equal access of care and only minor differences in patterns of management and outcomes according to socioeconomic status, age and geographic region of origin. New diagnostics and treatment modalities need to be quickly introduced to enable equal access across socioeconomic groups. A careful assessment of older patients is important to avoid age-biased clinical decision-making. A diagnosis of NSCLC impacts psychological aspects of quality of life and active measures to identify and treat depression and anxiety as well as to identify patients at risk of intoxication and suicide is necessary.

Keywords
Lung neoplasms, NSCLC, socioeconomic factors, educational level, aged, elderly, immigration, depressive disorder, dysthymic disorder, suicide, survival, population-based, registries, Sweden

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