Socio-economic status influences chance of undergoing surgical treatment for pancreatic cancer in the Netherlands

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Introduction: In the USA, a high socio-economic status (SES) has been shown to be associated with a higher chance for surgical treatment and improved survival. In The Netherlands the health care system is not comparable to that in the USA and the effects of SES might be different. The aim of this study is to analyze the influence of socioeconomic status on surgical treatment and survival in non-metastasized (M0) pancreatic cancer patients in The Netherlands.

Methods: All patients diagnosed with M0-pancreatic cancer between 2005 and 2012 in the Eindhoven Cancer Registry (ECR), The Netherlands were included. Data on patient characteristics, tumor characteristics and treatment were extracted. Patients were grouped as surgical treated or not surgical treated. Groups were compared using chi-square tests. SES was categorized as Low-socio-economic status (LSES), Mid-socio-economic status (MSES), High-socio-economic status (HSES), or institutionalized. The influence of SES on the chance for surgical treatment was assessed by multivariable logistic regression. Influence of SES on overall survival was analyzed by multivariable Cox regression analysis.

Results: In total, 748 M0-patients were included. Of these patients 67% underwent surgical treatment. Patients with LSES less often underwent surgical treatment (27%) than patients with HSES (42%, p < 0.001; odds ratio 0.60, 95%CI 0.38–0.94). Survival was not different between these SES groups (hazard ratio 0.98 95%CI 0.79-1.22).

Conclusion: Socio-economic status in pancreatic cancer patients determined the chance for surgical treatment. However, SES had no influence on survival. As surgical treatment is the only option for long-term survival in pancreatic cancer patients, it is important to provide more insights in the causes of these inequalities to ultimately minimize the effects of SES in pancreatic cancer care.