

Financial Stress - a Sensor for Emotional and Physical Burden in Lung Cancer Patients?

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Introduction:

It has been acknowledged that pre-treatment health-related quality of life (HRQL) is highly relevant for the survival of lung cancer patients. A lack of systematic research on pre-treatment HRQL of lung cancer patients applying integrative oncology (IO) treatment has been detected. To close this gap we evaluated patient reported outcomes (PRO) of patients with lung cancer at the time of diagnosis being treated within an Anthroposophic-integrative concept at a certified oncological and lung cancer center.

Methods:

The present study is a real-world observational health services research study. Clinical and demographic data were retrieved from the Network Oncology cancer registry (1). Pre-treatment patient-reported outcomes were evaluated by analysing European Organization Research and Treatment of Cancer (EORTC QLQ-C30) and Hospital Anxiety and Depression Scale (HADS) questionnaires in people with all-stage lung cancer. Statistical analyses were performed with R (Rstudio version 3.3.0).

Results:

87 patients were eligible for the questionnaire analysis (median age 68.0 years, IQR 59.0-74.4). Financial burden at first diagnosis was observed as the only statistically significant discriminating PRO variable between patients that would later apply add-on IO treatment. 29.9% of the total cohort reported financial difficulties. Self-reported pre-treatment financial difficulty was associated with younger age ($p=0.007$), pre-treatment pain ($p=0.006$), anxiety ($p=0.04$) and feeling of discouragement ($p=0.03$) as well as with the decision for add-on VA therapy ($p=0.007$) while tumor stage was not an association factor. Add-on VA therapy was significantly associated with younger age ($p=0.006$).

Discussion & Conclusion:

Pre-treatment financial problem is a known issue in oncology but has until now not recognized for lung cancer patients who are treated within IO concepts. The present study reveals that around one third of our lung cancer patients have financial difficulties at first diagnosis, a finding that is in line with a recent non-IO report (2). Interestingly, a significant higher pre-treatment financial burden was observed in patients that later would decide for add-on VA therapy which may be explainable by the significantly younger (working) age of these patients. Financial burden which is significantly more often reported in younger lung cancer patients may be a sensor for increased pain and poor emotional outcomes. A recent work evaluated financial burden as the strongest independent predictor for poor quality of life among cancer survivors (3). We suggest physicians to screen for lung cancer patients who are of working age (broadly aged < 65 years) and/or who report increased pain at the time of diagnosis as they might be at particular risk for financial as well as emotional problems. Physicians should timely react to prevent emotional and physical burden of these patients. As

utilization of IO concepts is continuously growing in the lung cancer community (4) patient's pre-treatment financial difficulties should become an issue in this field.

References: 1) Schad F et al. Forsch Kompl 2013, 2) Kent EE et al. Cancer. 2013, 3) Fenn M et al. J Onc Pract 2018, 4) Thronicke A, Schad F et al. Complement Ther Med 2018