

Clinical Significance of Smoking Cessation in Patients With Cancer: A 30-Year Review

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Introduction

Methods

Results

Effect of Continued Smoking on Survival, Mortality, and Disease
Progression in Patients With Cancer

Impact of Smoking and Smoking Cessation on Cancer Treatment
Effectiveness

Clinical Importance of Smoking Cessation on Quality of Life, Pain, and
Performance Status

Discussion

BACKGROUND: Despite the established causal relationship between tobacco smoking and cancer, many cancer patients continue to smoke after diagnosis. This partly reflects ignorance of the beneficial effects of smoking cessation, even after diagnosis. The aim of this study was to demonstrate the effects of continuing or quitting smoking in patients with diagnosed cancer. **METHODS:** The study was based on a review of medical databases (PubMed Central, MEDLINE, Cochrane Library) in the last 30 y. All articles included in the present analysis were in English. **RESULTS:** In subjects with early-stage lung cancer, continued smoking after diagnosis is associated with an increased risk of all-cause mortality and decreased survival. Research has demonstrated significant differences in actuarial overall survival favoring the non-smoking group among subjects with lung cancer. In subjects with oral cancer, smoking cessation or reduction leads to a significant reduction in mortality. There is also evidence that tobacco smoking aggravates and prolongs radiotherapy-induced complications. Of particular importance is evidence that continued smoking is associated with adverse effects during anti-cancer treatment. Smoking promotes tumor progression and increases resistance to chemotherapy due to nicotine-induced resistance to apoptosis by modulating mitochondrial signaling. Continued smoking is also related to inferior outcomes of treatment with novel targeted therapies such as erlotinib. Smoking in subjects with gastric and lung cancer is also associated with an increased risk of developing second primary tumors. Quitting smoking after lung cancer diagnosis is associated with a better performance status, whereas persistent smokers have worse overall quality of life. Subjects who continue to smoke despite being diagnosed with cancer report more severe pain than subjects who have never smoked and greater pain-related functional impairment. **CONCLUSIONS:** Continued smoking after cancer diagnosis is related to reduced treatment efficacy and reduced survival, increased risk for second primary malignancies, and deterioration of quality of life. *Key words: lung cancer; smoking; smoking cessation; quality of life* [Respir Care 2014;59(12):1–•. © 2014 Daedalus Enterprises]