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Physical Exercise for Patients with Lung Cancer: A Danish Clinical Guideline

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Background
Patients with lung cancer frequently experience reduced physical capacity, symptom burden, and treatment-related functional decline across the disease trajectory. Although physical activity is recommended in national cancer care pathways, disease-specific guidance on structured exercise interventions for patients with lung cancer has been limited. This clinical guideline was developed by this author group for the Danish Lung Cancer Group (DLCG) to provide evidence-based recommendations for physical exercise in patients with lung cancer undergoing preoperative treatment, curative-intent therapy, or oncological treatment in advanced disease stages.

Methods
The guideline is based on a systematic appraisal of the literature, including randomised controlled trials (RCTs) and systematic reviews and meta-analyses evaluating exercise effects and safety in patients with lung cancer. In total, 92 RCTs and 31 systematic reviews and meta-analyses were included, encompassing more than 30,000 patients. Exercise modalities comprised aerobic training, resistance training, respiratory exercises, and multimodal programmes delivered in supervised, home-based, or combined settings. Outcomes included physical fitness, functional capacity, dyspnoea, quality of life, postoperative outcomes, and exercise-related adverse events.

Results
Across disease stages, structured exercise interventions were associated with improvements in cardiorespiratory fitness, functional capacity, dyspnoea, and health-related quality of life. Preoperative exercise was associated with reduced postoperative complications and shorter hospital length of stay, while exercise during and after oncological treatment improved physical functioning. Serious exercise-related adverse events were rare and predominantly mild and transient.

Conclusion
The available evidence supports that physical exercise is safe and clinically beneficial for patients with lung cancer across treatment settings and disease stages. The guideline recommends that individualised exercise interventions should be offered as an integrated component of lung cancer care, with exercise type and intensity tailored to patient characteristics and clinical status. Implementation of these recommendations aims to promote consistent, high-quality, and equitable exercise-based care within the Danish healthcare system.

Keywords

Lung cancer
Guideline

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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