The article by Reeve et al. [1] published in this issue of the *European Journal of Cardio-thoracic Surgery* has the merit of being the first published randomised clinical trial on the effectiveness of physiotherapy manoeuvres to prevent pulmonary complications after lung resection. The authors have carefully designed and conducted an intention-to-treat study to evaluate the effectiveness of a physiotherapy policy in their settings, rather than the actual effectiveness of physiotherapy in the cases that eventually received the treatment.

For years, perioperative physiotherapy has been considered as one of the most effective measures to improve quality of care and provide optimal results to patients with thoracic surgical diseases [2]. However, in a recently published clinical practice guideline [3] on fitness for radical therapy in lung cancer patients developed by the European Respiratory Society (ERS) and the European Society of Thoracic Surgeons (ESTS), no recommendations on perioperative physiotherapy were stated owing to the lack of sound evidences in the literature.

The article by Reeve et al. [1] reports the preliminary results of a randomised clinical trial designed 2 years earlier [4] and concludes that postoperative pulmonary complications did not decrease in the experimental arm (patients treated with physiotherapy). This conclusion would be in accordance with systematic reviews of the literature related to abdominal and cardiac surgery where the effectiveness of routine perioperative physiotherapy has not been demonstrated [5,6]. Thus, according to current best evidences (one randomised control trial and two systematic reviews of the literature), it could be concluded that implementing perioperative physiotherapy programmes for patients undergoing major thoracic and abdominal procedures is not cost-effective, except for a small subset of cases with specific high-risk criteria of developing pulmonary complications [7,8].

In the study design previously published by the same team [4], the rate of pulmonary complications after major thoracic surgery was checked in the literature and, according to an estimated rate of 20%, a sample size of 184 cases was calculated. Unfortunately for the investigation, but fortunately for the patients, the actual prevalence of complications at the interim analysis was as low as 2.9% in the control arm. Thus, the investigators decided to stop patient’s accrual due to the impossibility of demonstrating any advantages of the treatment and attributed the low rate of pulmonary complications to the effectiveness of the standardised clinical care pathway designed in the centre where the cases were treated, rendering additional physiotherapy ineffective. This finding — although not demonstrated by the data presented in the study by Reeve et al. [1] — is not new, and some years ago, the first evidence on the effectiveness of standardised patient care to decrease the prevalence of adverse outcomes and hospital costs in general thoracic surgery was published [9]. We also know that a greater number of hours of care by registered nurses per day are associated with better outcomes, including low rate of nosocomial pneumonia, for hospitalised patients [10].

To my understanding, the conclusions in the article published in this issue of the *EACTS* do not contradict the widespread belief among thoracic surgeons that perioperative physiotherapy improves the outcomes after lung resection. Perhaps we should better define what kind of interventions are the exclusive responsibilities of the physiotherapy team and what kind of physical postoperative care should be performed by the nursing staff because of comparable results and lower costs. While in some countries or centres with abundant professionals, patients are better helped to early ambulation, deep breath and cough manoeuvres by registered nurses, in others, these interventions can better fit under the responsibility of physiotherapists.

The article by Reeve et al. [1] has to be well understood and would never be used by hospital administrators as an ‘evidence-based’ justification to save the money spent in routine perioperative respiratory care which is absolutely necessary for thoracic patients.

**References**


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