The oncological value of video-assisted thoracoscopic lobectomy for early-stage non-small-cell lung cancer

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We have read with interest the paper by Hanna et al. [1], who compared video-assisted thoracoscopic surgery (VATS) with open lobectomy for Stage I and II non-small cell lung cancer (NSCLC) with the aim of determining whether these techniques are oncologically equivalent.

First of all, we congratulate the authors for the innovative statistical approach adopted. In fact, in order to investigate their goal, they were successful in creating two cohorts of 190 patients, matched in terms of gender, age, cancer histology, pathological staging and co-morbidities. The authors excluded every other prognostic factor, with the exception of open or thoracoscopic surgical technique. We think that this method is particularly appropriate. Moreover, it is remarkable that their data were prospectively collected.

As regards the results, they found that postoperative outcomes were statistically similar in both cohorts (P > 0.05). However a lower complication rate and a shorter hospital stay were recorded in favour of VATS lobectomy. Disease-free survival and cancer-specific survival were also equivalent (P = 0.938 and P = 0.139) but a slight divergence in cancer-specific survival was found, in favour of open lobectomy. Overall survival, excluding the effect of the learning curve, was also equivalent in both cohorts [2].

Based on these results, some considerations need to be weighed. Despite VATS and open lobectomy results being statistically equivalent, postoperative outcomes were more favourable under VATS than for the ‘open’ cohort. This is consistent, since the distinctive feature of thoracoscopy is to avoid complications related to thoracotomy. On the other hand, it is noteworthy that overall survivals were equivalent but cancer-specific survivals showed a slight divergence in favour of open lobectomy. This seems to suggest that open lobectomy guarantees better results in terms of oncological efficacy.

These results could have resulted from the small population investigated, therefore we agree with the authors that a study involving a larger number of patients is needed to improve the sensitivity of statistical analysis and to better define the advantages of VATS lobectomy. In fact, the point of adopting VATS to perform a pulmonary lobectomy is the possibility of improving outcomes, reducing complications and obtaining an overall and cancer-specific survival rate that is equivalent to—or even better than—that resulting from open thoracotomy [3].

Lastly, as the authors reported, the decision to perform either VATS or open lobectomy was not randomized but at the discretion of surgeons. In our experience this decision is based on tumour location, since VATS lobectomy could be challenging in case of hilar tumours and therefore related to worse outcomes. This supports our opinion that VATS should not be considered as an alternative to open lobectomy but suitable for every I and II staged cases. Patient selection, based on tumour size and location, is the key point for obtaining favourable outcomes when adopting thoracoscopy.

We conclude by congratulating the authors on their data in favour of VATS lobectomy. Their results, consistent with the literature [4, 5], are particularly interesting, since they are based on direct comparison between VATS and open technique after optimum 1:1 propensity matching.

REFERENCES