

Uniportal VATS: Comment on the consensus report from the uniportal VATS interest group (UVIG) of the European Society of Thoracic Surgeons

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We read with interest the European Society of Thoracic Surgeons Consensus Report on behalf of UVIG on 'uniportal' video-assisted thoracic surgery lobectomy [1].

In 2000, a clarification about the various types of video-assisted thoracic surgery (VATS) techniques was published [2]. This was further supplemented in 2016 by statements from a number of past presidents of the European Society of Thoracic Surgeons attempting to define 'uniportal' VATS [3]. The statement suggested that the term 'uniportal-single port-single trocar' VATS should be used when a 2-cm port (trocar) is employed whereas when a larger incision is made, the operation should be called single-incision video-assisted minithoracotomy. This appears to contradict the consensus statement that 'uniportal' could mean an operation performed through a ≤ 4 -cm incision.

We note that the first two-lines of the paper by Bertolaccini *et al.* [1] provide inaccurate historical information. Clearly, the background should have referred to papers by Migliore *et al.* [4–6].

Moreover, it concerns us that the authors base their definition of 'uniportal' VATS only on the length of the skin incision. Thus, the pragmatic question arises: should a 4-cm skin incision be considered the same in a 158-cm thin patient versus a 185-cm obese patient with a large chest and thick adipose tissue? A 4-cm incision represents 13.3% of 30-cm skin-measured-hemi-chest-circumference in a thin patient while it represents only 5.7% in a tall obese patient with a 70-cm skin-measured-hemi-chest circumference. A 4-cm incision in a thin patient looks like a mini-thoracotomy while it is negligible in a well-built/obese individual. Furthermore, is this really the skin incision or is this the actual 'thoracotomy' length because even with a 4-cm-skin-incision, this can easily be extended to ≥ 8 cm on the ribs. If the skin incision is limited to a maximum of 4 cm, is it always possible to extract a lobe? We know that for this reason, the skin incision often needs to be enlarged at the end of the operation. Is the term 'uniportal' still considered appropriate?

It is therefore reasonable to suggest that the length of incision should be selected according to the patient chest size, the lobe of the lung, the diameter of the tumour and body mass index of the subject, and not by default.

Whilst it could be interesting to debate on the issues related to the ability to perform a lobectomy through a ≤ 4 cm incision, the view of inclusion of 'uniportal' VATS within the training of thoracic surgeons is weak. In the absence of robust evidence base studies which demonstrate a clear advantage of the 'uniportal' VATS, it sounds premature to incorporate this routine in clinical-education practice. Moreover, despite some claimed advantages in perioperative outcome and length of stay, the clinical impact is still of little relevance, and needs to be balanced against the oncological aspects.

It is disappointing that this consensus report is not inclusive enough and does not take into account the views of many experienced surgeons. In this respect, we should emphasize the desirability of discussion with the involvement of other relevant societies and associations in Europe and beyond in such an important topic before the recommendation is made to adopt a policy based on consensus of a relatively small group within the worldwide population of thoracic surgeons.

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Reply to Migliore and Hirai

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We were expecting a comment from Professors Migliore and Hirai [1, 2] on our recently published paper, and we thank them for their input.

Some of the issues they raised have been addressed in the past [3]. However, their relevant concerns are about the scope of this first document by the European Society of Thoracic Surgeons (ESTS) Uniportal VATS Interest Group (UVIG) [2].

UVIG is a working group within the ESTS and is not an independent Society. We are aware that similar initiatives on focused uniportal groups are being developed in individual countries (i.e. Japan). However, it is envisaged that ESTS (the largest scientific Society purely dedicated to General Thoracic Surgery worldwide) may provide the best scientific environment to codify the steps necessary to learn, practice and teach uniportal VATS (UniVATS). In fact, at the first UVIG meeting during the ESTS Congress in Innsbruck, the decision