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## APPENDIX. CONFERENCE DISCUSSION

**Dr E. Bishay** (Birmingham, UK): Can you just explain to me (my understanding about a segmentectomy is based on the airway) why does it matter that I identify these veins? Am I doing something wrong in my practice?

**Dr Tane:** The inflation and deflation line is also important, but if the airway has emphysematous changes, we use both intersegmental veins and inflation and deflation line.

**Dr T. Marjanski** (Gdansk, Poland): Your study was smartly presented; the conclusions are indisputable. I have got a question, because I don't understand. You performed CT twice, once a 64 row and second time a 320 row, yes?

**Dr Tane:** No. Before surgery I performed two CT's.

**Dr Marjanski:** Two angiographies?

**Dr Tane:** Yes.

**Dr Marjanski:** So you placed the contrast through the patient twice, yes?

**Dr Tane:** No. MDCT is usually performed for preoperative staging and at the time of admission ADCT is performed, because the duration between admission and staging is long.

**Dr Marjanski:** I'm very sorry but I think that this study raises some ethical concerns. I think it is not justified to perform two angiographies instead of routine chest CT, just for research purposes. I think that in the light of the risk of postoperative renal failure, or postoperative hyperthyrosis, it raises some concerns. We are running a similar study but basing it on routinely performed simple CT with IV contrast, not angiography, and definitely not angiography performed twice. Nevertheless, I think the topic is important, as the software provides us with excellent visualization of vasculature.

**eComment. Pulmonary segmentectomies: should we follow segmental veins or deflation/inflation lines?**

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We read with interest the well-written study of Tane *et al.* about the usefulness of 320-multidetector row for preoperative three-dimensional (3D) pulmonary vasculature assessment for candidates for pulmonary segmentectomies [1]. Puzzlingly, quite similar studies have been simultaneously published by other Japanese groups [2, 3].

We would like to add some considerations.

Importantly, this paper highlights the preoperative utility of identifying the intersegmental vein to decide whether the segmentectomy is feasible or not. However, it would be interesting to understand if the 3D software is now able to clearly depict and differentiate pulmonary veins from arteries (e.g. by colour-coding these vessels differently), thus facilitating the assessment of tumoural vein invasion. Furthermore, it is unclear if the software can truly facilitate the identification of the intersegmental pulmonary vein as compared to axial computed tomography images.

A second comment concerns the surgical technique: if a primary tumour is less than 2 cm in diameter, is it really important to assess pulmonary vasculature precisely? In fact, we think that it could be safe and sufficient (and probably easier) to identify the lines of inflation and deflation to divide lung parenchyma while performing a pulmonary segmentectomy. According to Schuchert and colleagues this approach could decrease the risk of bleeding and prolonged postoperative air leaks [4]. Maybe a well designed randomized controlled trial would be able to clarify these open issues.

**Conflict of interest:** none declared.

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