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Planning and marking for thoracoscopic anatomical segmentectomies

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Abstract

Although sublobar resection (SLR) for treating non-small cell lung carcinoma (NSCLC) is still controversial, thoracoscopic segmentectomy is rising. Performing it by closed chest surgery is complex as it means confirming the location of the lesion, identifying vascular and bronchial structures, preserving venous drainage of adjacent segments, severing the intersegmental plane and ensuring an oncological safety margin with no manual palpation and different landmarks. Accurate planning is mandatory. We discuss in this article the interest of 3D reconstruction and mapping technics to enhance safety and reliability of these procedures.

Keywords: Thoracoscopic surgery, lung cancer, segmentectomy, lung reconstruction