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11th International Meeting on General Thoracic Surgery
Clínic Barcelona | Universitat de Barcelona | Hospital Universitari Sagrat Cor

5th Meeting of the Thoracic Oncology, Thoracic Surgery, Techniques & Transplant, Respiratory Nursing and Respiratory Physiotherapy Areas of the Spanish Society of Pneumology and Thoracic Surgery (SEPAR)
Sociedad Española de Neumología y Cirugía Torácica (SEPAR)

10th International Workshop on Surgical Exploration of the Mediastinum and Systematic Nodal Dissection
Hospital Universitari Mútua Terrassa | Universitat de Barcelona

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3rd Joint Meeting of the Spanish Society of Thoracic Surgery (SECT)
SECT Sociedad Española de Cirugía Torácica

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COMPARISON OF MARGIN QUALITY FOR INTERSEGMENTAL PLAN IDENTIFICATION IN PULMONARY SEGMENTECTOMY

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Objectives
Insufficient margin in lung cancer is associated with an increased locoregional recurrence rate. In pulmonary segmentectomy, two commonly used methods for identifying the intersegmental plane are insufflation-deflation and indocyanine green dyeing. The aim of study was to compare these two methods in terms of quality margins and to evaluate their superiority.
Methods
A total of 63 patients who underwent VATS segmentectomy for pulmonary nodules and underwent preoperative planning with 3D modelling between April 2021 and February 2023 were included in the study. The location of the nodule and the distance to the intersegmental margins were virtually measured preoperatively using an open source 3D modelling system. Patients were grouped according to the method of identifying the intersegmental margins. Group1: insufflation-deflation method(n=42), Group2: systemic ICG injection(n=21). The area where the histopathological nodule was measured closest to the intersegmental margin was recorded. Values within (+/- 10 mm) compared to the value measured in the three-dimensional model were considered successful.
Results
There was no difference between the groups in terms of virtual and pathological margins. However, in terms of margin quality, the rate of deviation detected in the pathological margin compared to the measured virtual margin was significantly different between the groups.(p=0.001) Accordingly, the success rate was 64.3% in Group 1 and 90.5% in Group 2.(p=0.05)
Conclusion
Intersegmental plane identification with indocyanine green increases the margin quality by defining resection margins closer to the virtual margins. In the insufflation-deflation method, unnecessary parenchymal loss occurs due to disadvantages in identifying intersegmental margins.