





COMPARISON OF LOBECTOMY PERFORMED THROUGH VERSIUS ROBOTIC SURGICAL SYSTEM AND DA VINCI ROBOTIC SURGICAL SYSTEM: THE FIRST PROSPECTIVE STUDY OF EARLY PERIOPERATIVE RESULTS

Pablo Paglialunga; Usue Caballero; Leandro Grando; Nestor Quiroga; Xavi Michavila; Deymar Lozano; Luis Lomanto; Cristina García; Angela Guirao; Irene Bello; Anna Ureña; Gemma Muñoz; Alberto Cabañero; Sara Fra Fernández; David Sanchez; Nicolas Moreno Mata; Ricard Ramos; Laureano Molins; Marc Boada

Department of Thoracic Surgery. Clinical Respiratory Institute. Clinic Hospital of Barcelona.

OBJECTIVE: Robotic-assisted thoracic surgery (RATS) has been proven as a safe and efficient minimally invasive thoracic approach compared to thoracotomy. Recently, many new platforms arised as an alternative to DaVinci surgical system. This study aimed to explore the application of the Versius surgical robot in performing pulmonary lobectomy and to compare its safety, surgical effect, and advantages or disadvantages compared with the mature da Vinci robotic surgical system.

METHODS: Prospective, multicenter, and analytical design, was carried out. Anatomical lobectomy and systematic lymph no de dissection were conducted in all patients. Demographic and clinical data were collected and variables of interest, including surgical time, days of pleural drainage, days of hospital stay, and the incidence of complications were compared.

RESULTS: The combined 39 patients from the Versius group (n = 9) and the da Vinci group (n = 30) showed no significant differences. No conversion to thoracotomy was observed, and perioperative outcomes were comparable in the 2 groups. We found statistically significant differences in surgical time, being significantly lower in the Versius group (204 ([165-230] vs 127 [120-135], p < 0.001).

CONCLUSION: The application of Versius surgical robot in lobectomy was preliminarily shown to be safe and effective. Compared with the mature da Vinci robotic surgery system, Versius surgical robot had similar technical and surgical advantages, highlighting its suitability as an optional method for the new generation of robotic-assisted thoracoscopic surgery.