



AB002. Perioperative outcomes of radical lobectomies using Robotic-assisted thoracoscopic techniques vs. traditional video-assisted thoracoscopic techniques: retrospective study of 1,075 consecutive p-Stage I NSCLC cases

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Background: Robotic thoracoscopic surgery was introduced to mainland China in 2009 and gained popularity in past few years. Here we present the largest Chinese series of robotic lobectomy for early-stage non-small cell lung cancer (NSCLC) to date. We aim to compare the perioperative outcomes of robotic assisted thoracoscopic lobectomy (RATL) and traditional Video assisted thoracoscopic lobectomy (VATL) for p-Stage I NSCLC, and standardize

the anatomic lobar resections of our center.

Methods: We retrospectively collected and analyzed the data of 1,075 Stage I NSCLC patients who underwent minimally invasive lobectomies (RATL and VATL) by the same surgical team from May 2013 to April 2016. Propensity score match was used to minimize the bias between two groups. Perioperative outcomes were analyzed. **Results:** Compared to the VATL, RATL had more retrieved lymph nodes (9.70 vs. 8.45, $P=0.000$), less POD1 drain (230.91 vs. 279.79 mL, $P=0.001$), shorter chest tube duration (3.84 vs. 4.33 d, $P=0.003$) and postoperative length of stay (4.97 vs. 5.45 d, $P=0.004$), but a higher cost (¥93,244.84 vs. ¥67,055.82, $P=0.000$). No significant difference was observed between the group of RATL and VATL considering the average skin-to-skin time (90.84 vs. 92.25 min, $P=0.624$), conversion rate (1.3% vs. 0.87%, $P=1.000$) and Prolonged Postoperative Hospital Stay rate (3.0% vs. 4.3%, $P=0.694$).

Conclusions: This study confirms that RATL is a safe and feasible alternative to VATL for early stage NSCLC. RATL shows better perioperative outcomes than VATL in some aspects. Future studies should focus on the long-term benefits of RATL compared with VATL.

Keywords: Lobectomy; non-small cell lung cancer (NSCLC); robotic; video

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