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## **ROBOTIC PORTAL LEFT MAIN STEM BRONCHUS SLEEVE RESECTION BY LEFT TRANSTHORACIC APPROACH**

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Introduction Because of its location adjacent to the aortic arch and main pulmonary artery, exposing and anastomosis for the proximal left main stem bronchus is challenging. This is the first case of robotic portal left main stem bronchus sleeve resection by left transthoracic approach. Indication of the technique A 70-year-old female patient who had medical history of right upper lobectomy for lung adenocarcinoma (pT1aN0M0 stage IA1) was referred to our hospital to further investigation for bronchial tumor. Chest computed tomography and bronchoscopy showed a protruding lesion on a proximal left main stem bronchus. Description of the technique The procedure was completed by the da Vinci Xi robot. Robotic instruments included spatula (right arm), cadiel forceps (left arm), and double fenestrated grasper (retracting arm). To expose the left main stem bronchus, lymph node dissection for number 4L, 7, and 10 were performed. To define the line of dissection, a 25G needle was punctured from the thoracic cavity into the left main bronchus, and we confirmed tumor location and puncture site by bronchoscopy. Both 1-ring and 3-ring from the carina of the left main bronchus were circumferentially dissected. After confirming negative margins, bronchial end-to-end anastomosis was performed with running sutures using ligated one-ended RB-1 Prolene adjusted to 14 cm as a double-ended needle. The anastomosis was performed from anterior side to posterior side using robotic needle driver. Conclusion We found that robotic approach allows good exposure of left main stem bronchus.