

## AB033. Digital drainage system prevents pneumothorax after tubeless single port thoroscopic lung resection

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**Abstract:** Tubeless technique is a new concept to further enhance patient recovery after thoroscopic surgery. Here we report our method to prevent pneumothorax after tubeless single port thoroscopic lung resection by digital drainage system. At the end of the procedure, a single 16-Fr pigtail catheter was placed into the pleural cavity and connected to an electronic digital chest drainage system. The lung was re-expanded fully under thoroscopic vision

and the pigtail catheter was removed after confirming zero air flow. Our method utilizes electronic digital drainage system to select patients for tubeless thoroscopic procedures. Full expansion of lung and zero air leakage were ensured at the end of procedure. The advantages include: (I) digitalized evaluation for air leaks in deciding whether to remove the catheter; (II) constant negative pressure during lung re-expansion; and (III) controllable inflation of lung without recruitment maneuvers by anesthesiologist. We believe it's safer and more scientific to avoid chest tube after tubeless single port thoroscopic lung surgery.

**Keywords:** Tubeless video-assisted thoroscopic surgery (tubeless VATS); single port thoroscopic surgery; digital drainage system

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