

P1.189: A Pilot Study on the Feasibility and Safety of Super Mini-Invasive Resection of Pulmonary Nodules Through Percutaneous Approach

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INTRODUCTION

Background: Low-dose CT screening reveals a surge in Small Pulmonary Nodules (SPNs).

Current Dilemma: Standard management (Surgery vs. Follow-up) faces conflicting limitations:

- Surgical Trauma:** Invasive risks and lung parenchymal loss.

- Disease Progression:** Anxiety and risk during observation.

Unmet Need: Urgent demand for more precise & mini-invasive management strategies.

METHODS

Novel Technique: Percutaneous Pulmonary Spheroectomy (PPS)

A super mini-invasive resection for SPNs via percutaneous puncture.

Study Design: Prospective, single-arm, Phase 1 trial

Objective: feasibility and safety of PPS.

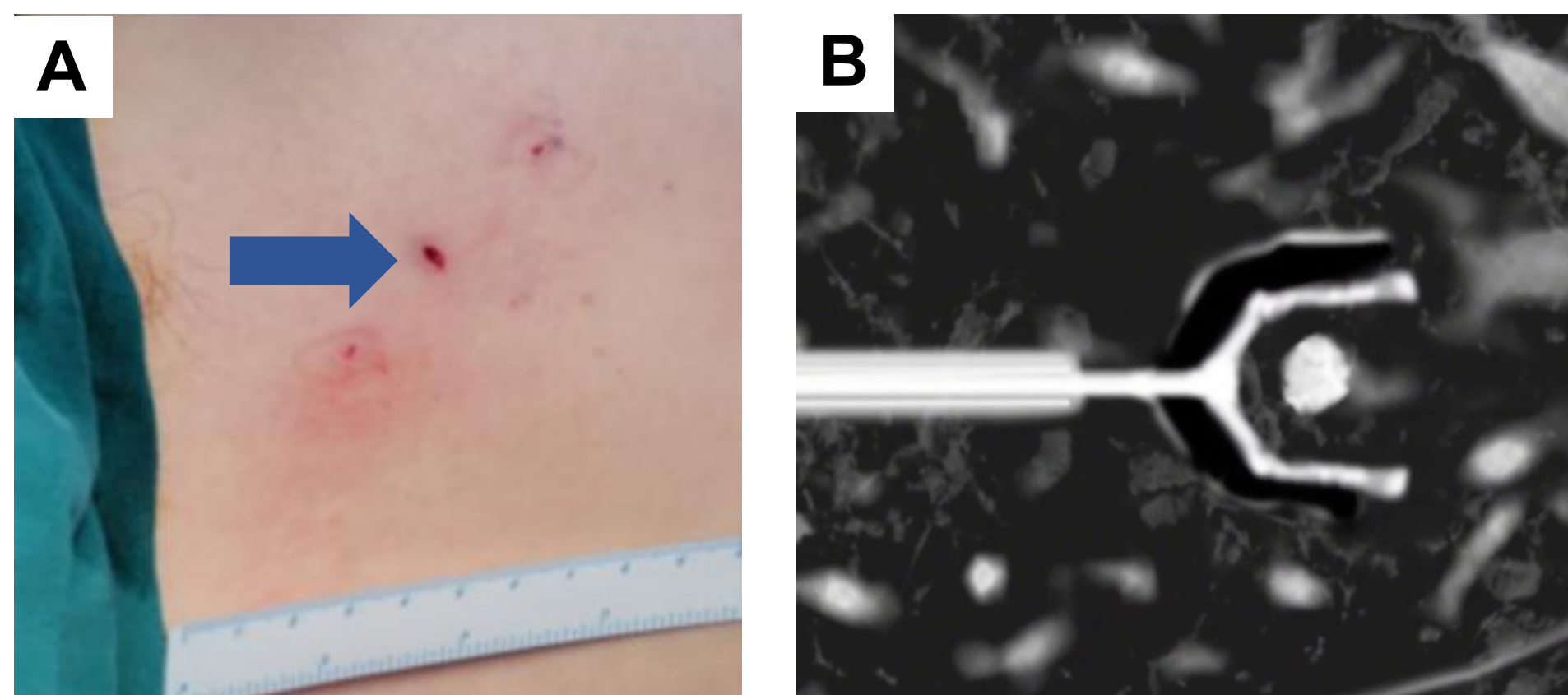


Fig. 1 (A) Percutaneous puncture and (B) Spheroectomy

RESULTS

Patient & Procedure (n=13)

Success Rate: **10/13 successfully resected via PPS**

Conversion: 3 cases VATS sub-lobectomy (2 target loss, 1 puncture failure)

Nodule Size: Median 6 mm (Range: 5-7 mm) Diagnosis: 7 AIS | 3 AAH

Perioperative & Recovery (Successful Cases)

Procedure Time: Median 236 min (95-305 min)

Blood Loss: Median 5 ml (0-8 ml)

Complications: **0 (No postoperative complications)**

Follow-up: **All patients recovered well with subtle FEV1 changes.**

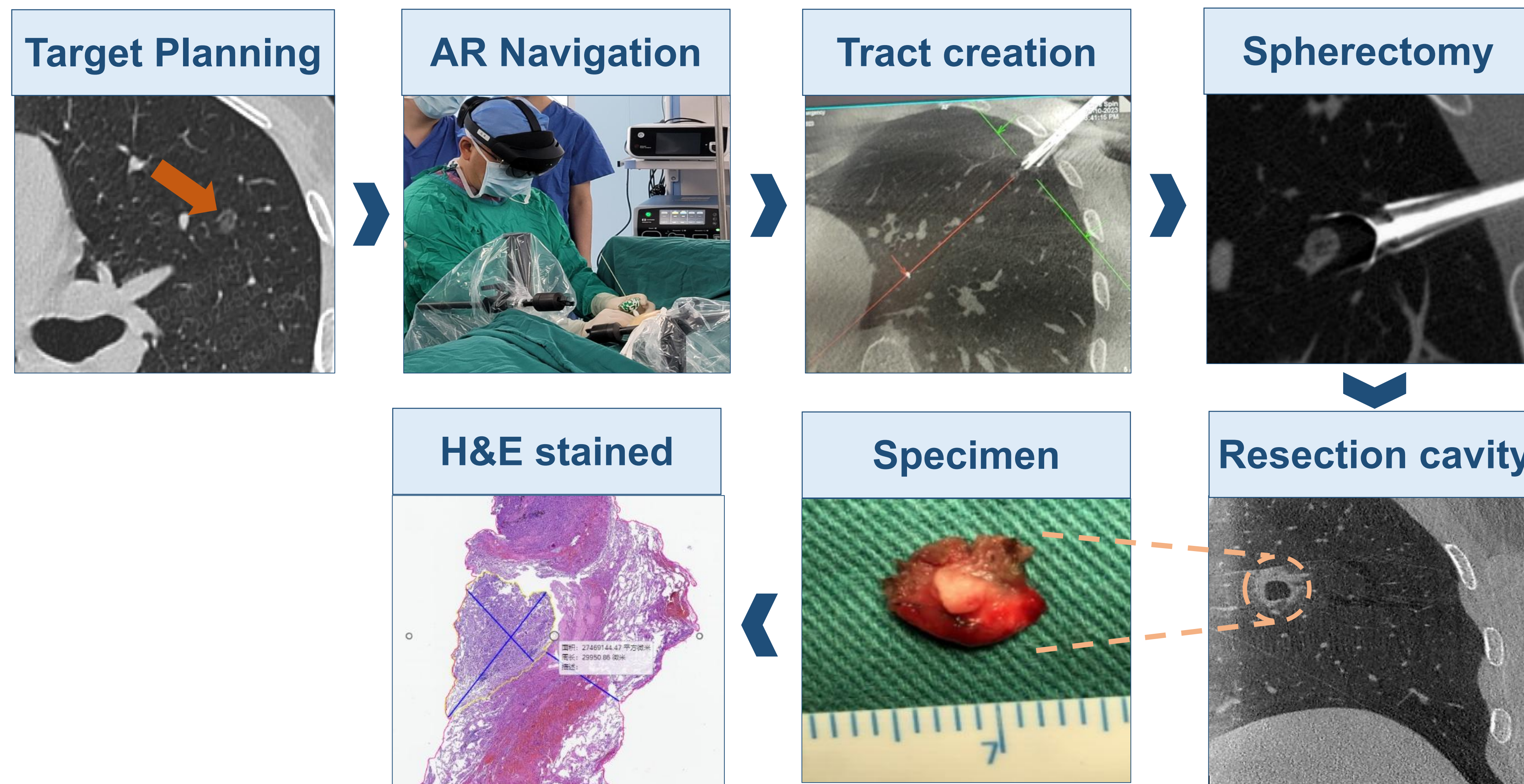


Fig. 2 Percutaneous Pulmonary Spheroectomy workflow

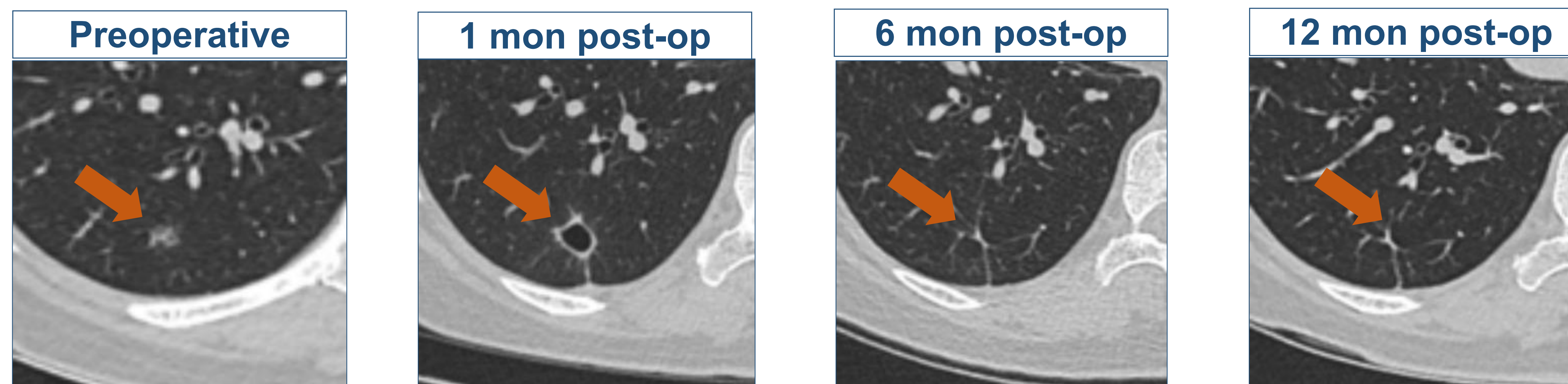


Fig. 3 Preoperative and postoperative recovery

DISCUSSION AND CONCLUSION

PPS is Safe & Feasible: complete resection of SPNs via percutaneous puncture is a viable super mini-invasive approach.

Validation Needed: Further large-scale studies are required to confirm these preliminary findings and optimize the technique.

REFERENCES & ACKNOWLEDGEMENTS

List the most critical references and recognize any support or contributions from others.

- Use QR code to save space and to link to more extensive lists or related works.



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