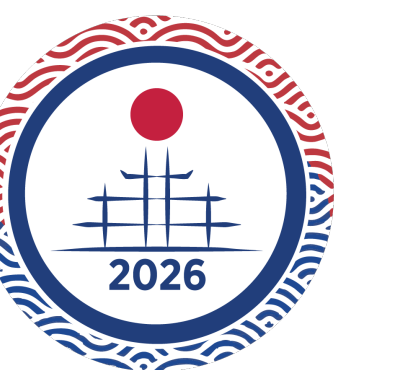




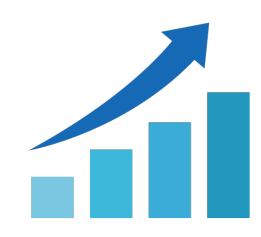
P1.171: Continuous Holographic Guidance: A Novel Extended-Reality (XR) Workflow for Lung Nodule Localization in Hybrid ORs



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INTRODUCTION



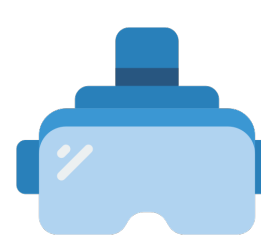
Clinical Rise: LDCT screening has increased the detection of small, non-palpable lung nodules.



Localization Need: Precise localization is critical to ensure adequate margins during sublobar resection.



Current Limits: Hybrid OR or CT room protocol lacks real-time spatial trajectory guidance.



Specific Aim: To evaluate the feasibility, safety, and accuracy of a novel XR-guided localization workflow.

METHODS

Patient Enrollment and Setting



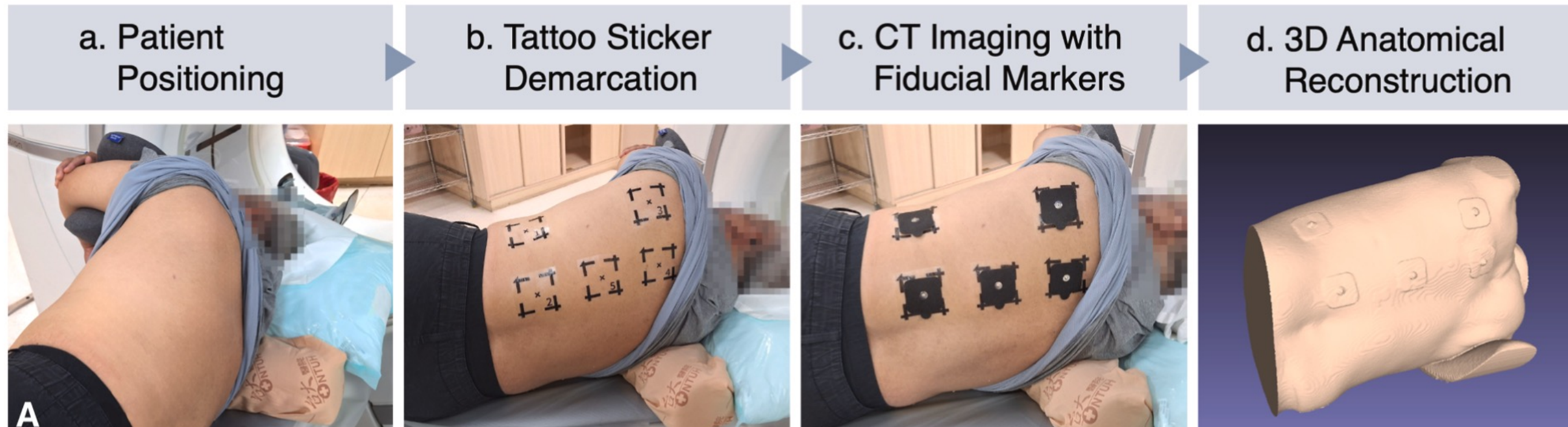
- Prospective Single-arm
- Participants (N=20)
- Small Peripheral Nodules (≤ 2 cm, outer 1/3)



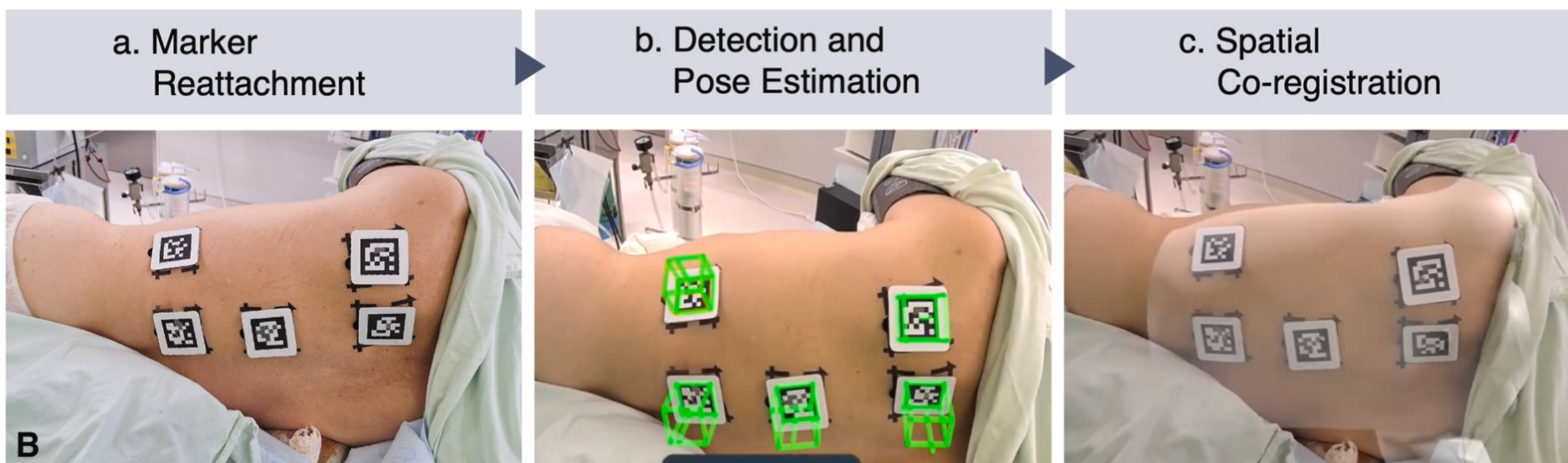
- Passthrough XR Headset (Meta Quest 3)
- Hybrid Operating Room

Workflow of the extended reality (XR)-assisted lung nodule localization procedure.

Generation of Patient-Specific 3D Anatomical Models

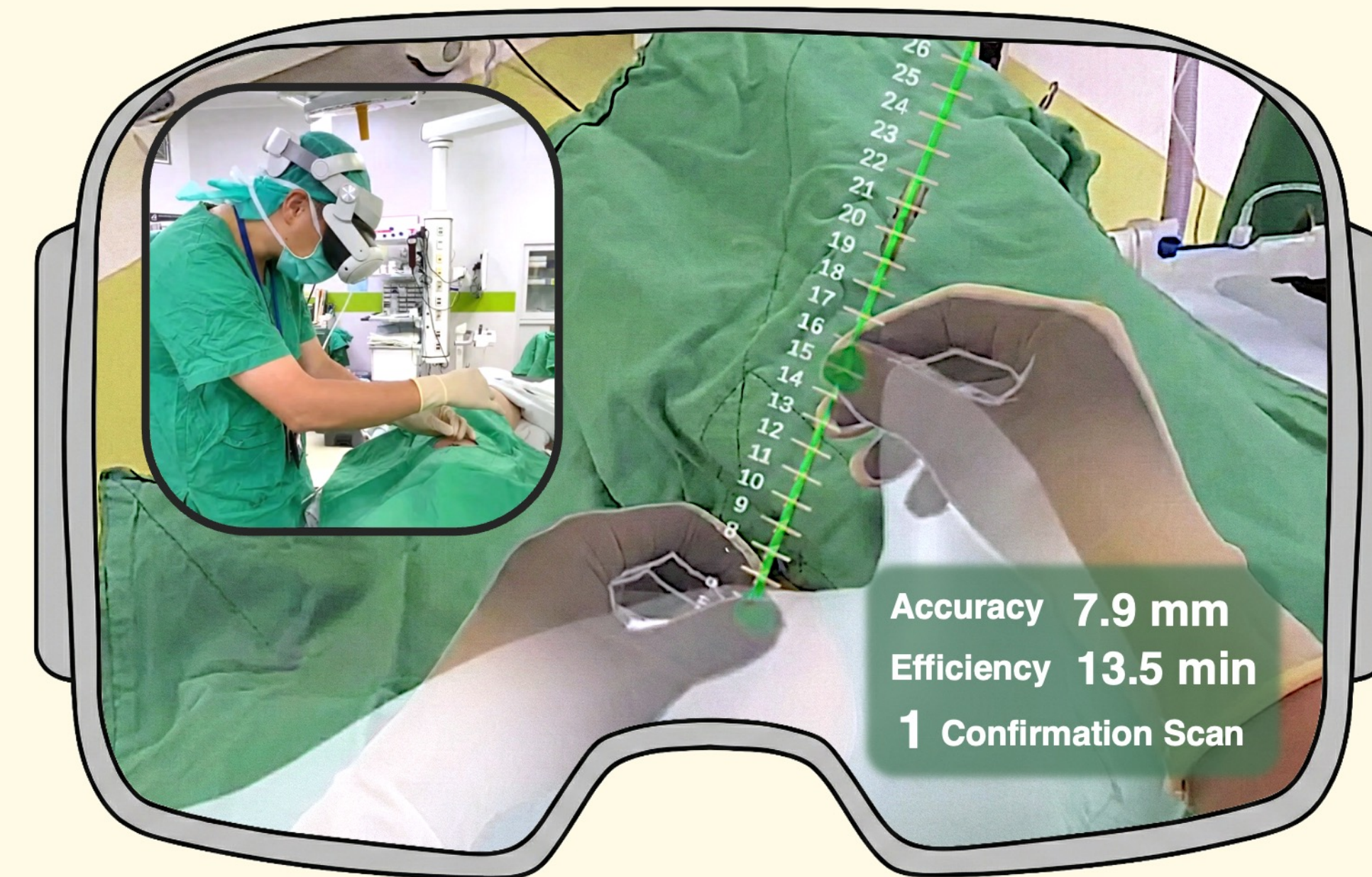


Intraoperative Image-to-Patient Registration



DISCUSSION AND CONCLUSION

XR-assisted Lung Nodule Localization



Extended reality-assisted localization in a hybrid operating room is **a safe and feasible technique that streamlines the surgical workflow** for small pulmonary nodules by enabling continuous needle advancement.

REFERENCES & ACKNOWLEDGEMENTS

• References



- **Trial & Ethics:** NCT06976684 | NTUH IRB Protocol: 202502149RINB.
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RESULTS

Step-by-step XR-assisted localization of a left upper lobe nodule.

