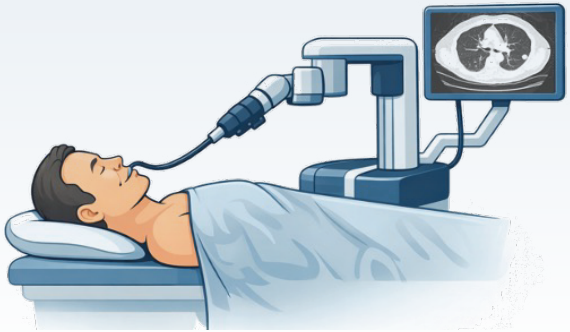
Partial Registration vs Full Registration for Robotic-Assisted Bronchoscopy: Is Less More?

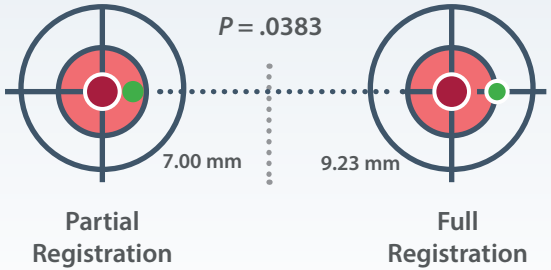
STUDY DESIGN

- 22 patients undergoing shape-sensing **robotic-assisted bronchoscopy for tissue diagnosis** of peripheral pulmonary lesions (PPLs) < 2 cm in size
- Compared mean target center distance **(TCD)** for partial registration vs full registration
- **"Partial registration"** includes surveying only the lobe containing the biopsy target vs "full registration," which includes surveying all 4 quadrants.

RESULTS

- Partial registration demonstrated **significantly improved** accuracy in localizing PPLs compared to full registration, 7.00 mm vs 9.23 mm ($P = .0383$)
  - Mean improvement of **2.23 mm**
- Most accurate in **posterior** lung fields (4.41 mm mean improvement; $P = .0415$)





These findings suggest that partial registration leads to improved accuracy in targeting PPLs compared to full registration particularly in regions more prone to CT-to-body divergence, such as the lower lobes and posterior lung regions.

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