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| **REBUTT (RCT of Comprehensive Tissue Sampling by rEBUS via Ultrathin Bronchoscopy versus CT-guided TTNA): protocol and first 9 cases** |
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| **Introduction/Aim:** Pulmonary lesions requiring biopsy are increasingly identified. Established biopsy methods (e.g. CT guided transthoracic needle aspiration (TTNA) and bronchoscopy with radial endobronchial ultrasound (rEBUS)) have been compared in single-centre randomised head-to-head studies. Since then, technological advances in bronchoscopy such as ultrathin bronchoscope (Olympus MP190F) and flexible peripheral needle (Olympus PeriView Flex), have created new diagnostic opportunities that require rigorous evaluation.**Methods:** The REBUTT Australian multicentre RCT (Metro North HREC/2021/QPCH/69896) is recruiting patients with lung lesions 1-5cm diameter in the middle and outer 1/3 of lung. Once procedural feasibility and patient acceptance are established, patients are randomised to intervention (ultrathin bronchoscopy with rEBUS and multimodality sampling) or control (CT guided TTNA). Primary outcomes are non-inferiority of diagnostic yield (DY) and safety (pneumothorax). Pre-specified subgroup analyses will examine the effects of demographics, lung lesion characteristics, procedure and final diagnoses. **Results:**As of October 2023, 9 patients randomised. 5 TTNA (1 subsequently withdrew consent, DY 50%, sensitivity for malignancy 66%, 1x PTx) and 4 rEBUS procedures (DY 75%, sensitivity for malignancy 75%, 0 PTx). **Conclusion:** Outcomes will provide Australia-specific insight into diagnostic approaches for lung lesions. This is anticipated to help shape the procedural landscape into the future, with the anticipated increase in lung lesions requiring sampling.**Grant Support:** Loan equipment support via Olympus Australia. |