|  |
| --- |
| **REBUTT (RCT of Comprehensive Tissue Sampling by rEBUS via Ultrathin Bronchoscopy versus CT-guided TTNA): protocol and first 9 cases** |
| Gerard Olive1,2, Steven Leong1,2, Henry Marshall1,2, Ian Yang1,2, Rayleen Bowman1,2, Rachael O’Rourke3,4, Tracy Leong5, Andrew Pattison6, Phan Nguyen7, Rajesh Thomas8, Daniel Steinfort9, Kwun Fong1,2 |
| *1Department of Thoracic Medicine, The Prince Charles Hospital, Brisbane, QLD*  *2The University of Queensland Thoracic Research Centre, Brisbane, QLD*  *3Department of Medical Imaging, The Prince Charles Hospital, Brisbane, QLD*  *4The University of Queensland, Brisbane, QLD*  *5Austin Health, Heidelberg, VIC*  *6Department of Respiratory Medicine Sunshine Coast University Hospital, Birtinya, QLD*  *7Royal Adelaide Hospital, Adelaide, SA*  *8Department of Respiratory Medicine Sir Charles Gairdner Hospital, Nedlands, WA*  *9Department of Respiratory Medicine Royal Melbourne Hospital, Parkville, VIC* |
| **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. |