

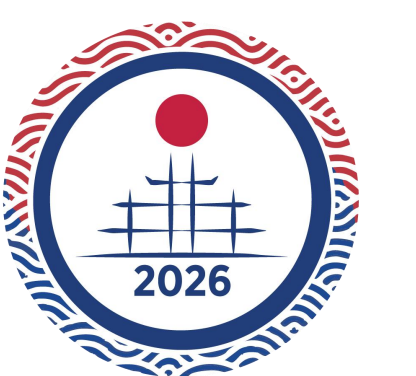


P2.337: Robotic-Assisted Bronchoscopy for Diagnosing Peripheral Pulmonary nodules: Protocol for A Multicentre Randomised Trial

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INTRODUCTION

Virtual bronchoscopic navigation (VBN) combined with ultrathin bronchoscopy (UTB) is widely used to diagnose peripheral pulmonary nodules (PPNs) and has shown favourable diagnostic performance. Meanwhile, robotic-assisted bronchoscopy (RAB) has recently demonstrated better diagnostic performance for PPNs due to its intraoperative real-time navigation and precise control. The novel RAB system is based on electromagnetic navigation technology, equipped with a catheter of 3.3 mm outer diameter and 1.6 mm working channel. A previous single-arm pilot study indicated that this system offered promising diagnostic performance. However, few randomised controlled trials have been reported to compare RAB to VBN combined with UTB without fluoroscopy. Therefore, we aim to determine whether the diagnostic performance of the RAB system is non-inferior to VBN combined with UTB for PPNs.

DISCUSSION AND CONCLUSION

Discussion: The outer/working channel diameters were 3.3/1.6 mm for RAB and 3.0/1.7 mm for VBN-UTB, respectively, which ensured comparable access to bronchial generations. The prespecified stratification factors will facilitate the identification of patient subgroups most likely to benefit from the RAB system. Different definitions of diagnostic yield will help better comparisons with other studies.

Conclusion: This study will offer direct evidence of the RAB system versus VBN combined with UTB for diagnosing PPNs without using fluoroscopy.

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AI Use Disclosure: AI was not used to create the content of this poster.

Methods

This study is a multicentre, randomised controlled, non-inferiority trial. A total of 186 patients will be enrolled across five hospitals in China.

Participants will be randomised 1:1 to either the RAB group or VBN-UTB group, stratified by lesion size, bronchus sign and intrapulmonary location. In both groups, sampling is confirmed by radial-endobronchial ultrasound (R-EBUS), and fluoroscopy will not be used.

The primary outcome is the diagnostic yield. Secondary outcomes include navigation success rate, navigation time, procedure duration, complications, etc.

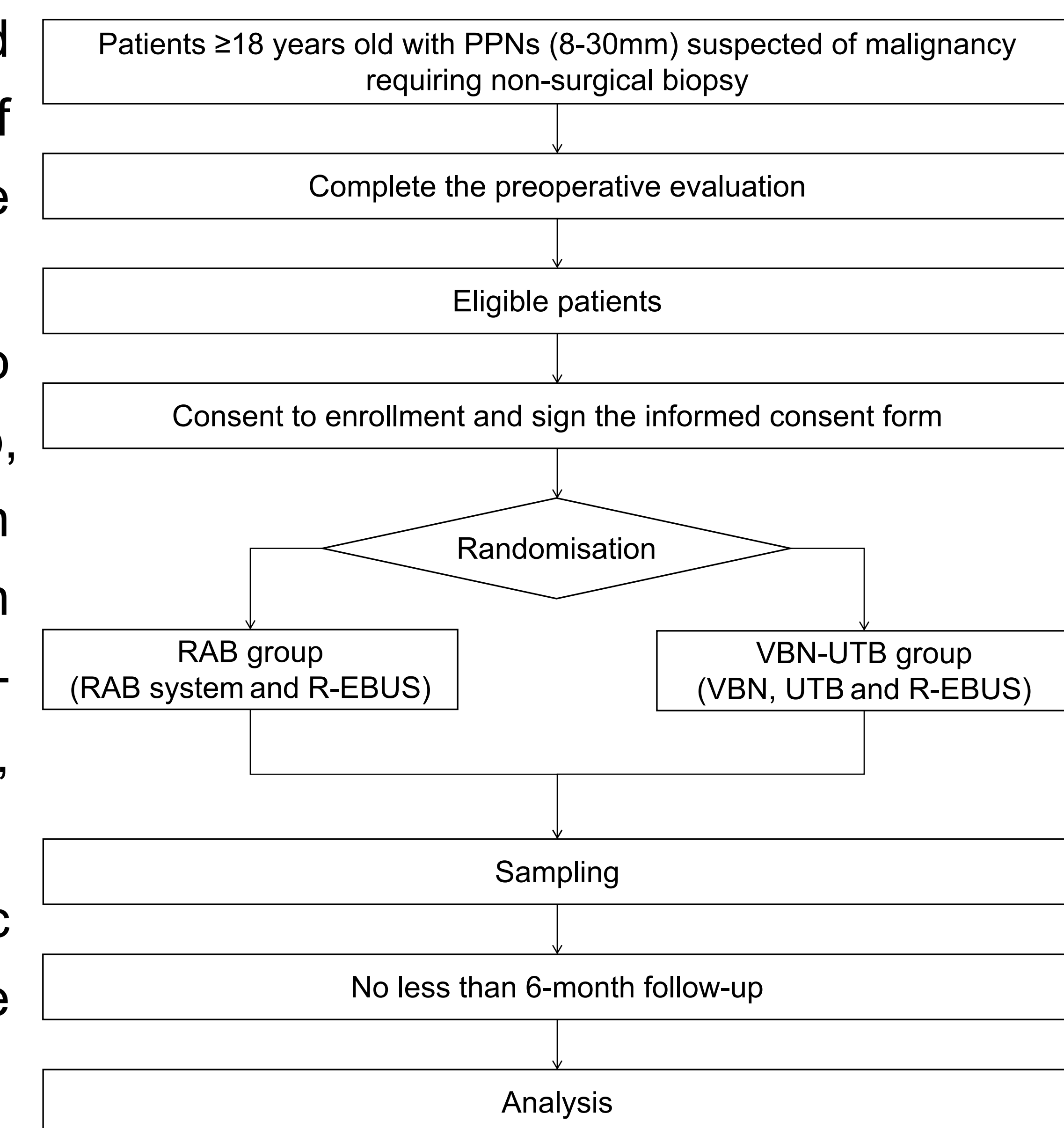


Fig 1. Study flow diagram



Fig 2. Appearance of the RAB system

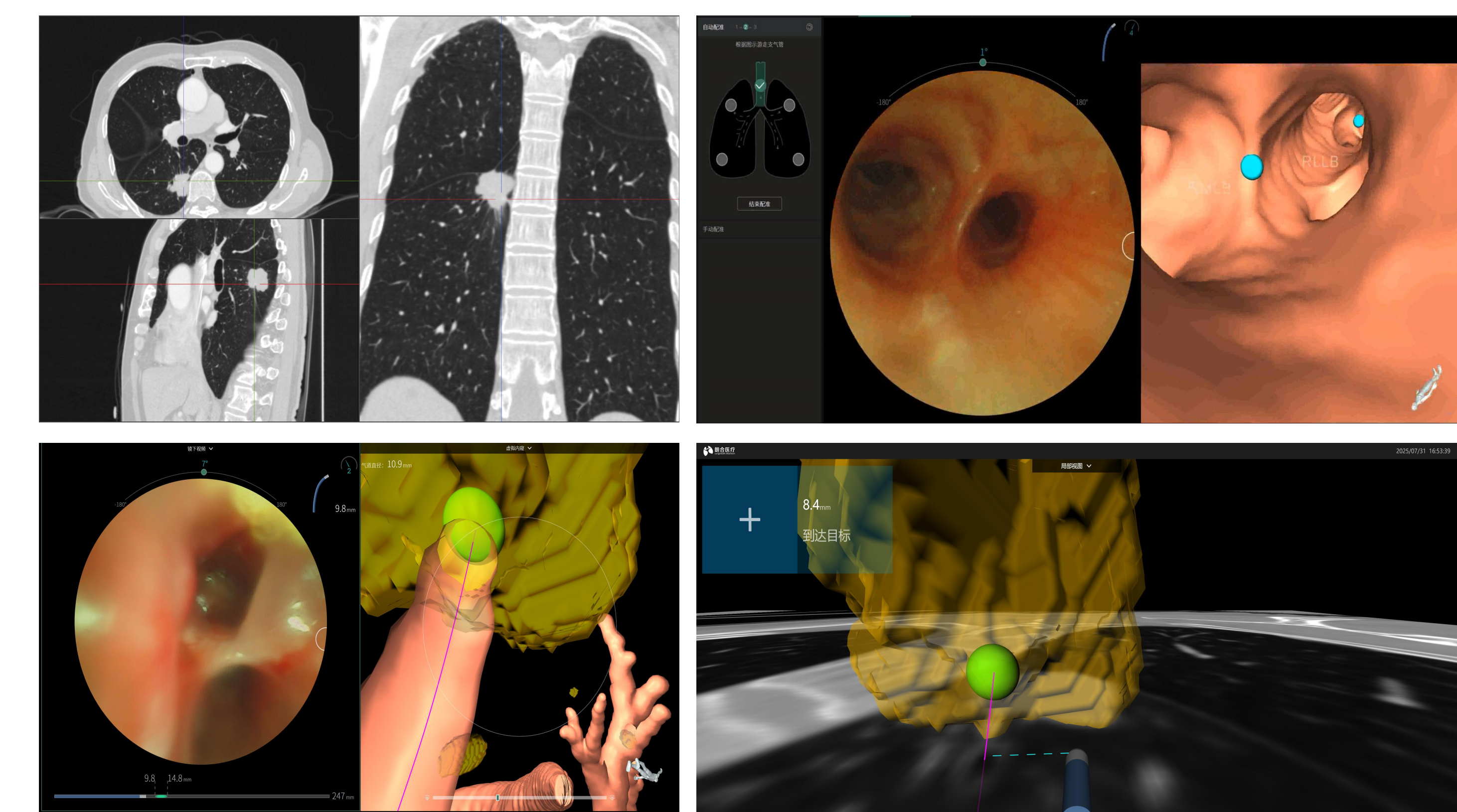


Fig 3. Representative case of the RAB system