

Hong Kong performs novel robotic-assisted bronchoscopy for lung metastases

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World's first robotic-assisted bronchoscopic microwave ablation of lung metastases

Malignant cancers from different organs often metastasise to the lung. Conventional surgical resection of lung metastases can be associated with significant surgical access trauma and undesirable removal of adjacent healthy lung tissue. The Chinese University of Hong Kong (CUHK)'s Faculty of Medicine (CU Medicine) performed the world's first robotic-assisted bronchoscopic microwave ablation of lung metastases.

Since October 2022, three patients with a total of six lung metastases have been successfully treated with ablation. This novel procedure allows physicians to accurately access peripheral areas of the lung and perform non-invasive lung sparing microwave ablation of lung metastases. It is now in clinical trial, with a target of enrolling up to 145 patients worldwide.

Dr Rainbow Lau Wing-hung, Clinical Assistant Professor (honorary) from the Division of Cardiothoracic Surgery, Department of Surgery at CU Medicine, explained, "Bronchoscopy is a form of endoscopic procedure, usually performed by doctors specialising in lung disorders. The novel robotic-assisted bronchoscopy uses real-time optical imaging and electromagnetic positioning to enable the operator to navigate the complex human airways. The procedure is performed using a remote console that is linked with the robotic arms and bronchoscope to accurately drive the device to the desired location within the lung. The advanced robotic mechanism within the bronchoscope also maintains stability while the microwave ablation catheter is deployed, improving the accuracy and efficiency of the ablation procedure."