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Medtronic announces first-in-world lung ablation procedure with ILLUMISITE™ fluoroscopic navigation platform

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Medtronic announced today the first-in-world endoluminal lung ablation using the ILLUMISITE™ platform. The minimally invasive procedure was completed by Professor Calvin Ng and Dr. Rainbow Lau from Hong Kong for a patient with a lung lesion.

Using a patient's CT scan, the ILLUMISITE™ platform allowed the physicians to create a customized virtual pathway through the patient's lungs, much like a GPS map commonly used to drive to a destination.

Then, in the procedure, the physicians inserted a bronchoscope along with a navigation catheter into the patient's mouth. The virtual pathway and navigation catheter enabled physicians to navigate through the patient's airways. Once there, the physician used the specialized Emprint™ ablation catheter kit[†] to deliver a minimally invasive, localized treatment to the lesion in the lung.

"This is a significant milestone in our commitment to unlock comprehensive solutions that enable clinicians to identify, diagnose, and treat lung masses sooner. By combining the power of our ILLUMISITE™ platform and endoluminal ablation technology, we've introduced innovation that can aid in the diagnosis and treatment of lung masses not someday, but this day," said Emily Elswick, Vice President and General Manager, Lung Health and Visualization, Medtronic.

As stated in published evidence:

- Each year, more people die of lung cancer than from colon, breast, and prostate cancers combined[1]
- 74% of lung cancer patients are diagnosed at late stages[2], offering a survival rate of just 19%[1, ‡]
- When caught early and treated, lung cancer survival soars to 92%[3, §]

- Minimally invasive approaches – compared to open procedures – are proven to result in shorter hospital stays, less pain, and faster return to normal activities[4]

The ILLUMISITE™ platform is available in the United States, Europe, Hong Kong, Canada, and Taiwan and offers four distinct benefits:

- Provides a minimally invasive option for biopsy and treatment where the technology is legally marketed.
- Enhances visibility of suspicious tissue in the lungs.[5]
- Enables doctors to sample tissue in multiple areas of nodules – helping to obtain adequate tissue collection from all over the nodule to aid in optimal tissue specimens .
- Allows expanded access for physicians to reach lesions that do not have airway entry points through utilizing state of the art innovative tools such as the Medtronic CrossCountry™ transbronchial access tool – helping doctors to reach the ~50% of nodules that are outside the airway.[6]

About Emprint™ Ablation Catheter Kit †

- Medtronic received Breakthrough Device Designation status from the U.S. Food and Drug Administration (FDA) for the Emprint™ ablation catheter kit in April 2021. The FDA Breakthrough Device Program is intended to help patients receive more timely access to breakthrough technologies that have the potential to provide more effective treatment or diagnosis for life-threatening or irreversibly debilitating diseases or conditions.
- The Emprint™ ablation catheter kit is an unapproved device in the United States and is intended to be used in conjunction with the Emprint™ microwave generator and Medtronic navigation platform to provide a minimally invasive, localized treatment of malignant lesions in the lung. It can be used together with standard of care therapy when indicated.
- Enrollment of 30 subjects in the NAVABLATE ablation safety study in Europe and Hong Kong was completed in September 2020.
- Related study completed: Chan JWY, Lau RWH, Ngai JCL, et al. Transbronchial microwave ablation of lung nodules with electromagnetic navigation bronchoscopy guidance-a novel technique and initial experience with 30 cases. *Transl Lung Cancer Res.* 2021;10(4):1608-1622. doi:10.21037/tlcr-20-1231

† The Emprint™ ablation catheter kit is CE Marked and is currently available in the E.U. and Hong Kong.
‡ Based on 5-year survival.
§ Based on 10-year survival.

References

1. Siegel RL, Miller KD, Jemal A. Cancer Statistics, 2020. *CA Cancer J Clin*. 2020; 2020;0:1-24.
2. Gildea TR, DaCosta Byfield S, Hogarth DK, Wilson DS, Quinn CC. A retrospective analysis of delays in the diagnosis of lung cancer and associated costs. *Clinicoecon Outcomes Res*. 2017;9:261–269.
3. Henschke CI, Yankelevitz DF, Libby DM, Pasmantier MW, Smith JP, Miettinen OS. Survival of patients with stage I lung cancer detected on CT screening. *N Engl J Med*. 2006;355(17):1763-1771.
4. Bendixen M, Jørgensen OD, Kronborg C, Andersen C, Licht PB. Postoperative pain and quality of life after lobectomy via video-assisted thoracoscopic surgery or anterolateral thoracotomy for early stage lung cancer: a

randomised controlled trial. *Lancet Oncol*. 2016 Jun;17(6):836-44.
5. Pritchett MA, Bhadra K, Mattingley JS. Electromagnetic Navigation Bronchoscopy With Tomosynthesis-based Visualization and Positional Correction: Three-dimensional Accuracy as Confirmed by Cone-Beam Computed Tomography. *J Bronchology Interv Pulmonol*. 2020;DOI 10.1097/LBR.0000000000000687.
6. Folch E, Khandhar S, et al. Electromagnetic navigation bronchoscopy for peripheral pulmonary lesions: one-year results of the prospective, multicenter NAVIGATE study. *J Thorac Oncol*. 2019; 14(3): 445-458.

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