

Medtronic

# A decade of dedication



Emprint™ ablation system with  
Thermosphere™ technology

10

years with  
Emprint™  
Thermosphere™

2024 marks

# 10 years of Emprint™ Thermosphere™ technology

Since its launch in 2014, the Emprint™ ablation system with Thermosphere™ technology has harnessed the evolution of microwave ablation technology to control the active heating zone.

Thanks to a decade of dedication, it is now the first and only technology with three types of control (thermal, field, and wavelength) – a significant development in overcoming the problem of predictability in thermal tumor ablation.

It's time to celebrate how far we've come before we continue our pathway to the future with renewed focus.



**Predictability**<sup>5</sup>



**Sphericity**<sup>5</sup>



**Large  
ablation  
zones**<sup>5</sup>

## A closer look

Successful management of non-resectable liver tumors is about more than what you remove - it's about what you leave behind, too. The Emprint™ ablation system enables a minimally invasive procedure that **provides immediate, repeatable results<sup>1</sup> and can help lower the chance of recurrence.<sup>2</sup>**

It also allows you to ablate less healthy liver tissue, which increases your patients' chances for the future.<sup>3,4</sup>

## A lifeline of innovation

Emprint™ continues to lead proudly from the front.

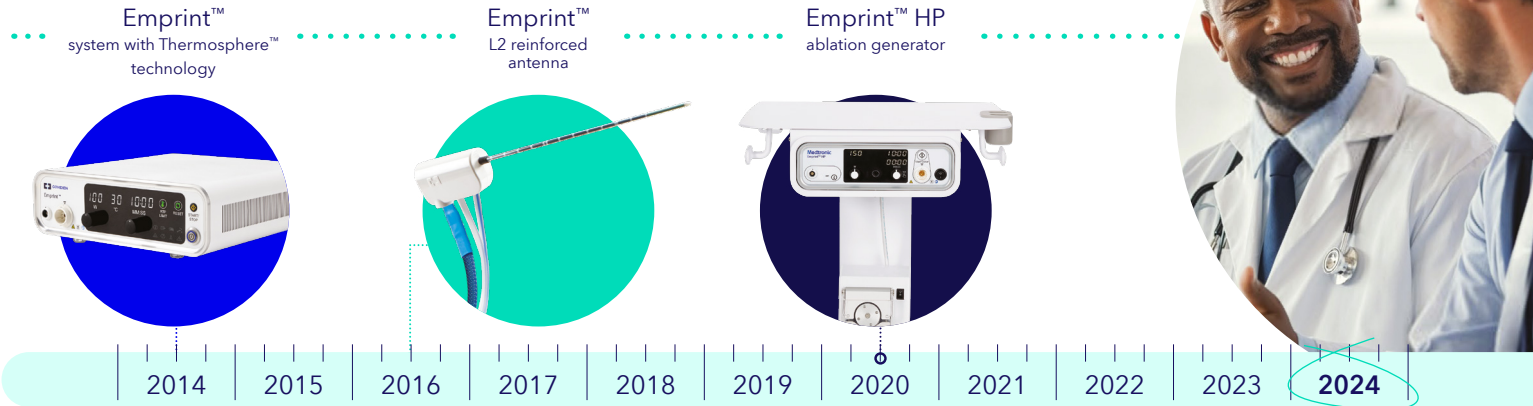
Emprint™ is a first-to-market product that has stood the test of time. But being the first of its generation doesn't mean standing back to make way for other technologies.

# The data speaks for itself

In a recent comparative study<sup>5</sup> comparing the ablation zones of four commercially available MWA devices, the new-generation Emprint™ HP system:

- Created the desired large ablation zones\*
- Produced the most spherical ablation zones\*
- Potentially reduced the risk of complexities by using a single antenna

\*At maximum system settings



## Supportive data or publications

**2015** - Lerardi et al.  
A new system of microwave ablation at 2450 MHz: preliminary experience.

**2017** - Cobelli et al.  
Microwave ablation of liver malignancies: comparison of effects and early outcomes of percutaneous and intraoperative approaches with different liver conditions: New advances in interventional oncology: state of the art

**2018** - Vogl et al.  
Evaluation of microwave ablation of liver malignancy with enabled constant spatial energy control to achieve a predictable spherical ablation zone

**2023** - Pua et al.  
Comparative Study of Ablation Zone of EMPRINT HP Microwave Device with Contemporary 2.4 GHz Microwave Devices in an Ex Vivo Porcine Liver Model

# Where next?

It's been an extraordinary 10 years, but the journey to an even better tomorrow starts here. Thank you for being part of the Medtronic ablation and Emprint™ HP story.

Together, we've helped deliver life-enhancing treatment to a generation of patients.

**Let's not stop now.**



## References

1. De Cobelli F, Marra P, Ratti F, et al. Microwave ablation of liver malignancies: comparison of effects and early outcomes of percutaneous and intraoperative approaches with different liver conditions. *Med Oncol.* 2017;34(4):49.
2. Takahashi H et al. Local Recurrence After Microwave Thermosphere Ablation of Malignant Liver Tumors: Results of a Surgical Series. *Surgery* 2018 Apr;163(4):709-713.
3. Ruers T, Van Coevorden F, Punt CJA, et al. Local treatment of unresectable colorectal liver metastases: Results of a randomized phase II trial. *J Natl Cancer Inst.* 2017;109(9):dix015.
4. Drake TM, Harrison EM. Malignant liver tumours. *Surgery.* 2017;35(12):707-714.
5. Hui TCH, How GY, Chim MSM, Pua U. Comparative Study of Ablation Zone of EMPRINT HP Microwave Device with Contemporary 2.4 GHz Microwave Devices in an Ex Vivo Porcine Liver Model. *Diagnostics.* 2023; 13(16):2702. <https://doi.org/10.3390/diagnostics13162702>

Emprint™ ablation system

### Indications for Use

The Emprint™ ablation system is intended for use in percutaneous, laparoscopic, and intraoperative coagulation (ablation) of soft tissue, such as lung, kidney, and liver, including partial or complete ablation of non-resectable liver tumors.

### Contraindications

Microwave ablation procedures are not recommended for pregnant patients or patients with cardiac pacemakers or implanted electronic devices. The Emprint™ ablation system is not intended for use in cardiac procedures.

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Important: Always refer to the Instructions For Use (IFU) packaged with the product for complete instructions, indications, contraindications, warnings and precautions.

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