Antenna For Targeted Cancer Treatment

Thin, flexible, balun-free antenna for minimally invasive radiofrequency ablation and tumor removal

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Market:

The global microwave ablation devices market is projected to reach $377 million by 2021 with a CAGR of 14% driven by demand for less invasive surgical procedures. Microwave ablation probes and antennas are ~33% of the devices market.

Technology:

This novel microwave ablation antenna design uses a thinner, more flexible, balun-free, helical shape that can be used for both low- and high-frequency microwave ablations. This design eliminates the need for bulky baluns by using shielded balanced transmission line feeds that have integrated conductors of equal impedances along their length. While traditional, bulky antennas can only be used with low-frequency microwaves, this antenna has been used with both low- and high-frequency microwaves.

IP and Stage:

1 issued patent. Tested in animals for low- and high-frequency microwave ablation.

Impact:

This antenna enables faster, less invasive, more targeted cancer treatment with less unwanted damage to surrounding healthy tissue, lowered procedure risks, reduced recovery time, and improved patient outcomes. The thinner, more flexible antenna geometry allows for higher spatial positioning and is more amenable to being maneuvered through blood vessels, offering the potential for less invasive, intravascular procedures that are not possible with current commercially available antennas.

Ask:

Introductions to microwave ablation and surgical oncology device companies

More information:

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