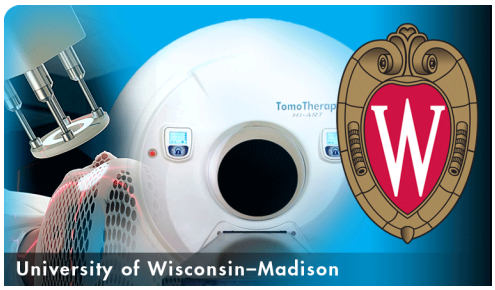

Monitoring Tumor Ablation in Real Time

INVENTORS • Christopher Brace, Peng Wang

WARF: P130294US01

View U.S. Patent No. 9,439,729 in PDF format.

The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a method for controlling and monitoring tumor ablation using signals emitted from the treatment antenna.

OVERVIEW

As an alternative to surgery, thermal ablation is a method of treating tumors of the liver, kidney, lung and other body parts. In the process, a slender antenna or probe is inserted through the skin to drive energy into the tumor, causing cells to heat and die.

Ultrasound or other medical imaging typically is used before the probe is turned on (for treatment planning) and after it is turned off (for treatment verification). A more dynamic method would empower clinicians to monitor progress in real time.

THE INVENTION

UW–Madison researchers have developed a method that uses radiofrequency signals transmitted from a microwave ablation probe to monitor the boundaries between a tumor, ablation zone and background healthy tissue.

The probe emits and then detects the signals as they echo off the different tissue boundaries. Since the boundary between a tumor and background tissue becomes less distinct as the ablation progresses, clinicians can determine when treatment is complete based on these echoes.

APPLICATIONS

- Microwave ablation
- Treating cancer of the liver and lung, as well as renal, adrenal and bone malignancies

KEY BENEFITS

- Provides real-time ablation monitoring and control

THE WARF ADVANTAGE

Since its founding in 1925 as the patenting and licensing organization for the University of Wisconsin-Madison, WARF has been working with business and industry to transform university research into products that benefit society. WARF intellectual property managers and licensing staff members are leaders in the field of university-based technology transfer. They are familiar with the intricacies of patenting, have worked with researchers in relevant disciplines, understand industries and markets, and have negotiated innovative licensing strategies to meet the individual needs of business clients.

- Easily integrated with existing probes
- Useful in a variety of ablation treatments
- Simple and intuitive
- Any confounding echoes from the ablation region are removed.

ADDITIONAL INFORMATION

Related Technologies

WARF reference number P120091US01 describes a method to degrade tumors using new microwave-emitting slot antennas.

Tech Fields

Radiation Therapy - Ablation
Medical Devices - Surgical devices

CONTACT INFORMATION

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846.