



## Radio Frequency Ablation System Using Multiple Electrodes

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**WARF: P01339US**

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**The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing an efficient method of RF ablation using multiple electrodes.**

### Overview

Radio frequency (RF) ablation is an important method of treating non-resectable primary and metastatic liver tumors. The technique uses an electric current to destroy tumor cells with heat, resulting in lesions in the tumor. RF ablation is currently performed by inserting and removing a single probe at a series of locations along a tumor; however, this process is long and time-consuming for all but the smallest of tumors because it requires multiple overlapping treatment zones.

### The Invention

UW-Madison researchers have developed an efficient method of RF ablation using multiple electrodes. The technique involves simultaneous operation of multiple mono-polar probes. An electric circuit switches power rapidly between individual probes so that on an instantaneous basis, each probe is operating in isolation. At the same time, each probe can be considered to be operating simultaneously for the purpose of heating.

### Applications

- RF ablation for the treatment of liver tumors

### Key Benefits

- Uses multiple probes simultaneously, which increases the size of lesions created
- Promotes large and uniform lesions
- Allows individual temperature, impedance, and timing control of each probe
- Reduced electrical shielding between probes avoids cool spots
- Speeds treatment process
- Avoids complex inter-electrode current flows

### Additional Information

#### For More Information About the Inventors

- [Fred Lee](#)

#### Tech Fields

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- [Radiation Therapy - Ablation](#)

For current licensing status, please contact Jeanine Burmania at [jeanine@warf.org](mailto:jeanine@warf.org) or 608-960-9846



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