Atrial Fibrillation (AFib) is the most common cardiac arrhythmia and causes serious tissue damage to the heart. AFib also increases the risk of stroke and heart failure. Existing ablation techniques only have about a 50 percent chance of success in treating AFib because clinicians do not have enough information about the extent and location of tissue damage. The proposed invention improves ablation treatment by providing real-time visualization of damaged tissues. A disposable probe characterizes tissue damage before, during, and after the ablation procedure. Computational imaging processing and electrical measurements are then used to transform sequences of two-dimensional images into complete, real-time images of the tissue. A steerable catheter can then position the ablation system using the images provided to ensure all damaged tissue is covered.

**Features and Benefits**
- Provides real-time information regarding extent and location of tissue damage in AFib patients.
- Enables imaging of live tissues and therapeutic effects in the body at microscopic resolution.
- Improves patient outcomes.
- Reduces repeat procedures.

**Recent Publications**

**Inventor Profile**
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