



TECHNOLOGY

Portable Multi-Parameter Cancer Diagnostic Device

OVERVIEW

Background:

Each year in USA alone, more than 200,000 breast cancer cases are diagnosed. The transformation from benign to cancerous state changes the morphological signatures in the tumor environment. Mechanical and electrical phenotyping has been demonstrated as a promising technique to study the progression of the breast cancer. Thus, a device capable of performing mechanical and electrical characterization of breast tissue quickly, accurately and simultaneously at the micro-scale will potentially open new avenues for breast cancer diagnosis.

Innovation:

Researchers at the University of Maryland have designed a Portable Multi-Parameter Cancer Diagnostic Device. This device is a tissue micro characterization technology platform that provides a unique opportunity to determine the malignancy in tissues as well as the stage of disease progression from the onset of the disease. This device comprises of disposable single-use components as well as a base platform, which can be used in several studies. The novelty of this invention is the simultaneous measurement of multiple tissue parameters, which can provide a deterministic and quantitative information of the tissue characteristics, including but not limited to, the mechanical, electrical, and thermal characteristic of the normal tissue from the onset through disease progression of the tissue.

APPLICATIONS

- Cancer Diagnosis

ADVANTAGES

- Multiple tissue parameter measurement
- Portable
- Low-cost

CONTACT INFO

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Additional Information

INSTITUTION

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PATENT STATUS

Pending

CATEGORIES

- Diagnostics

- Platforms
- Devices

EXTERNAL RESOURCES

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