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UNIVERSITY OF WISCONSIN–MADISON

Using Stromal Collagen to Help Diagnose and Characterize Breast Cancer

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WARF: P06061US

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing an imaging method that may assist in diagnosing cancerous and precancerous conditions in breast tissue.

Overview

Biomedical imaging allows physicians to detect the onset of disease, injury and other disorders at an early stage, and to monitor their progression.

The Invention

UW-Madison researchers have developed an imaging method that may assist in diagnosing cancerous and precancerous conditions in breast tissue. Because breast cancer is frequently associated with the increased deposition of proteins, particularly collagen, in the extracellular matrix, the inventors developed three tumor-associated collagen signatures, or TACS, which provide novel markers for localizing and characterizing breast tumors.

To identify breast carcinomas, nonlinear optical microscopy is used to generate high resolution, 3-D images of a test tissue. The images are then analyzed to detect and characterize any TACS that may exist in the tissue. The degree to which the TACS are present correlates with the onset and progression of cancer, thus providing diagnostic information complementary to conventional diagnostic methods.

Applications

- Breast cancer diagnosis

Key Benefits

- Provides reliable indicators to help identify and characterize breast tumors in animal models and human tissues
- Enables clinicians to more effectively diagnose abnormal tissue
- Facilitates therapy at an earlier stage
- Test tissue may be a fresh, unfixed, unstained biopsy sample; an intact tissue in an organism; or a paraffin-embedded, sectioned biopsy or tissue sample.
- Method is non-invasive and non-destructive

Additional Information

For More Information About the Inventors

Tech Fields
- Medical Imaging : Other diagnostic imaging

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

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