Docket #: S17-486

Breast Cancer Detection using an engineered B7-H3 affibody ligand

Mammography is the current first-line imaging technique for early breast cancer detection, however, its diagnostic accuracy is limited in women with dense breast tissue. Ultrasound is often performed as a second line test in women with dense breast tissue. However, due to its low specificity, it results in many false positive findings with unnecessary biopsies and increased associated health care costs. Researchers at Stanford and the University of Minnesota have recently identified and validated a novel, highly specific neoangiogenesis marker in patients with breast cancer with high diagnostic accuracy (AUC of up to 0.96).

Stage of Research
A preliminary study testing ultrasound contrast agent bearing antibodies in a transgenic mouse model showed that contrast-enhanced ultrasound could detect small foci of breast cancer.

Applications

- Diagnostic imaging of breast cancer.

Advantages

- Improvement of the diagnostic accuracy of ultrasound screening exams in detection and characterization of breast lesions in women with dense breast tissue.
- A theranostic approach to increase therapeutic efficacy.

Publications

- Provisional patent application is available to review under CDA.

Patents

- Published Application: WO2020041626
- Published Application: 20210340257
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