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Review Article

FMTVDM–Breast Cancers Diagnostic Doorway from Qualitative to Quantitative Measurement, Care and Treatment

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Clinical efforts to diagnostically evaluate women-and men-with breast cancer have resulted in various degrees of success. The use of external radiographic sources to look for tissue abnormalities-mammography - has according to the *Cochrane Collaboration* not been able to demonstrate a reduction in mortality [1]; a position also held by the *National Cancer Institute* and *The Canadian Trial* [2].

Given the failure of mammograms to reliably find and exclude breast cancer, a variety of investigations looking at ultrasound, Magnetic Resonance Imaging (MRI) and Computer Tomography (CT), have failed to yield significantly better results.

In 2019, following efforts by DenseBreasts.org [3] and others, U.S. Federal Legislation was passed requiring all mammograms to include a statement specifying that women with *dense breasts*-which represents 50% of all women-need to be aware that mammograms may miss breast cancers in women whose breast tissue is considered dense.

During the last two-decades investigations into the ability to *quantitatively* measure changes in regional blood flow and metabolism-thus allowing differentiation of tissue-have demonstrated that FMTVDM* [4] can measure these tissue differences making it possible to distinguish between (A) inert material-calcium, breast implants, etc. – (b) normal breast tissue-including the fibroglandular tissue referred to as *dense breast tissue*, (C) inflammatory changes-including infections, (D) precancerous and ductal carcinoma in-situ, and (E) cancers [5-40].

As a result of these investigations, FMTVDM was patented [4] in 2017 and has been undergoing additional investigation in Nevada [41,42]. It is currently scheduled to be implemented in the curriculum of U.S. training programs [43] - thus opening the doorway between the worlds of qualitative and quantitative breast cancer diagnosis and treatment of patients.

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*FMTVDM is issued to first author. No other COIs to report.

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