



Edward 'Ed' Jay, Owner/STI Creator

If the avenue to improved breast cancer mortality is earlier detection, improved and cost-effective imaging technology is essential. ThermEval answers with Spatial Thermal Imaging (STI), a low-cost, safe, non-invasive, high-resolution imaging technique to visualize anatomical features inside the breast. STI resolution is comparable to MRI, revealing breast tumors as small as 1mm – 2mm, with a 95 percent Positive Predictive Value. Thousands of examinations have substantiated STI efficacy for detecting and identifying early-stage malignancies.

STI combines the sensitivity of heat-sensitive (infrared) cameras with a proprietary software technique to provide anatomical visualization of blood vessels, cysts, and tumors, both benign and malignant. Unlike breast thermography which interprets the macroscopic thermal patterns of the breast, STI processes the thousands of individual image pixels to recreate a visualization of the source of heat reaching the breast surface, including sources of heat where the amount of heat transferred to the breast surface is not humanly visible in the thermal image. These STI visualizations unambiguously identify young, malignant tumors that would likely remain hidden for years.

Breast thermography and ambiguity: An abnormal thermal image is associated with a high probability of malignancy; however, mildly abnormal thermal images document only a small number of thermal signs related to breast cancer.

SPATIAL THERMAL IMAGING from ThermEval: Non-Invasively Visualizing Anatomical Features Inside the Breast

These signs are ambiguous as they are also associated with myriad benign causes, e.g., cysts. Without knowing the underlying cause of a few surface signs, an unambiguous prognostication is impossible. Specious claims of efficacy based on the inherently ambiguous nature of mildly abnormal images have impeded the acceptance of thermography. STI successfully eliminates ambiguities by revealing the underlying cause of signs observed in borderline normal images.

“STI dramatically enhances the intrinsic value and credibility of the breast thermography examination. This technological advance has brought immeasurable benefits to practitioners and their patients and is an essential tool when the goal is to provide the best service to patients,” says STI creator Edward 'Ed' Jay.

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ThermEval created STI for use by its thermal image interpretation service subsidiary, Thermogram Assessment Services (TAS). With STI, TAS practitioners and their patients enjoy a more meaningful view of breast health than they would otherwise receive from a reading service lacking STI. In addition to explaining the underlying causes of errant thermal signs, STI demonstrated the ability to visualize small, minimal heat-producing tissue that escapes human visibility on a thermal image.

STI is a low-cost, safe, non-invasive, high-resolution, imaging technique to visualize anatomical features inside the breast with a resolution comparable to MRI. STI evidences functional capability for detecting early malignancies in the preneoplastic stages of tumor development by the third year of tumor life. Thousands of examinations have substantiated STI suitability as a first-line tool in the primary breast cancer screening domain and as an essential adjunct to the breast thermography practice. By way of significantly earlier detection, Spatial Thermal Imaging conceivably offers an economical path to improved breast cancer survival, reduced metastasis, and improved mortality.