

THERMAL BREAST EXAMINATION FINDINGS

Patient: Jane Doe

DOB:
06/25/1969Exam Date: **05/02/21**

Practitioner: Edward Jay

Analysis performed: 06/15/22

PRESENTATION: Patient Ms. Jane Doe reports pain in the right breast at the lower-outer quadrant. Patient reports a palpable mass in the left breast at the areola/periareolar region at 6 O'clock.

EXAMINATION PARAMETERS: The images for this examination were acquired using an infrared sensitive camera. Views of the breasts consisted of a frontal image, oblique images, and as necessary, lateral images including the axillary regions. The images were assessed for the risk of developed breast cancer using the Gold-standard statistical assessment methodology. Spatial Thermal Imaging (STI) was employed to visualize the anatomical features of the breast. This examination complied with the recommended protocol for thermal breast examinations.

SUMMARY: [Borderline Normal Images] Two thermal signs (of twenty possible) associated with breast disease are observed on the right breast. One instance of probably significant pathology consistent with the location of patient's complaint is visualized in the right breast. One benign cyst, fibroadenoma, etc., is seen in the upper-inner quadrant of the right breast. One thermal sign (of twenty possible) associated with breast disease is observed on the left breast. One instance of an equivocal atypical issue consistent with the location of patient's complaint is visualized in the left breast. One seemingly benign vascular issue is seen in the upper-inner quadrant of the left breast.

OBSERVATIONS: There is an observable difference between the vascular patterns on the right breast and the left breast. Neither dominates visible vascularity.

Right Breast Thermal Signs: Two of twenty possible thermal signs statistically associated with breast cancer are observed on the right breast. An irregular thermovascular pattern is seen at the upper half. Its maximum temperature is mildly higher (1.3°C) than the temperature of the same area on the opposite left breast, and significantly higher (2.7°C) than the mean temperature of the same right breast.

Right Breast STI: Visualization of the internal right breast reveals one instance of highly suspicious tissue in the lower-outer quadrant. It is an irregularly shaped mass, 0.50°C above the temperature of adjacent tissue, associated with a vessel, and with jagged and randomly-shaped edges, typically characteristic of probably significant pathology (M4). One benign cyst, fibroadenoma, etc., is seen in the upper-inner quadrant.

Left Breast Thermal Signs: Only one of twenty possible thermal signs statistically associated with breast cancer is observed on the left breast. An irregular thermovascular pattern is seen at the upper half and the areola/periareolar region at 7 O'clock. It is moderately higher (2.0°C) than the mean temperature of the same left breast. The temperature of the nipple/areola region of the left breast is mildly higher (0.7°C) than the temperature of the nipple/areola region of the right breast.

Left Breast STI: Visualization of the internal left breast reveals one instance of tissue equivocal for pathological implications in the areola/periareolar region at 6 O'clock. It is an irregularly shaped mass, associated with a vessel, and with smooth and uniformly shaped edges, typically characteristic of unlikely significant pathology (M2). One seemingly benign vascular issue is seen in the upper-inner quadrant.

IMPRESSIONS: [Borderline Normal Images] There is little thermal evidence suggesting elevated risk of developed malignancy in each breast. This assessment is generally characteristic of multiple small- to medium size cysts, slow- to fast-growing fibroadenomas, fibrocystic dysplasia, micro-invasive carcinomas, T1 carcinomas (< 2mm), and a healthy breast. * Patients assessed borderline normal have approximately 10% - 12% probability of a developing tumor. In this regard, visualization of the subcutaneous breasts reveals probably significant pathology in the right breast, and equivocal atypical tissue in the left breast. Further investigation is warranted. Visualization of the subcutaneous breasts reveals one benign cyst, fibroadenoma, etc., in the upper-inner quadrant of the right breast, and one seemingly benign vascular issue in the upper-inner quadrant of the left breast.

Right Breast: Borderline Normal (TH2). 1) Patient reports pain in the right breast at the lower-outer quadrant. 2) The right breast image is assessed borderline normal. 3) Only two signs statistically associated with breast cancer are observed. 4) Probably significant pathology (M4) is visualized in the lower-outer quadrant 5) The location of the visualized tissue corresponds with patient's reported symptoms. 6) One benign cyst, fibroadenoma, etc., is seen in the upper-inner quadrant of the right breast.

Left Breast: Borderline Normal (TH2). 1) Patient reports a palpable mass in the left breast at the areola/periareolar region at 6 O'clock. 2) The left breast image is assessed borderline normal. 3) Only one sign statistically associated with breast cancer is observed. 4) There is consistency between one observed thermal sign associated with breast cancer and patient's reported symptoms. 5) An equivocal atypical lesion is visualized in the nipple/areola 6) The location of the visualized tissue

corresponds with patient's reported symptoms. 7) One seemingly benign vascular issue is seen in the upper-inner quadrant of the left breast.

CONCLUSIONS & FOLLOW-UP: Comprehensive follow-up is indicated, as probably significant pathology is seen in the right breast, and unlikely significant pathology seen in the left breast, and approximately 10% of patients with this TH2 risk assessment host developed breast cancer. Ultrasound, or MRI if needed*, should be performed to confirm the probably significant pathology seen in the right breast, and unlikely significant pathology seen in the left breast. Attempt to resolve equivocal issues by employing ultrasound, or MRI if needed*. Ultrasound should be performed to verify noted benign issues. Noted physical characteristics and/or atypical thermal patterns amplify the potential for pathology. A repeat thermal and physical examination should be performed in 3- to 6-months. .

***Notes:** 1) Assessed risk is related to the number of observed thermal signs statistically associated with developed significant disease. 2) A negative thermal finding does not preclude the possible presence of significant pathology. (Patients assessed TH2 Bordeline Normal have 10% - 12% probability of a developing malignancy.) 3) Masses smaller than 5mm are not adequately visualized with ultrasound, and require MRI. 4) Thermal imaging is not a standalone tool, and must be used with adjunctive methods (physical examination/ultrasound/elastography/MRI).

This Report is not a diagnosis of illness or disease. It is intended for use only by licensed health care professionals to evaluate patient health, ascertain medical conditions, and provide treatment. It is not to be used by individuals for self-diagnosis or self-evaluation or the diagnosis or evaluation of others. **Analyst:** E. B. Jay, Certified Thermologist/Thermogram Assessment Services