



A.O.G.S. and NIRAMAI

Present

Exclusively for the AOGS members or their spouse

BREAST SCREENING PROGRAMME

Please Register [CLICK HERE](#)



Dr. Kamini Patel
President



Dr. Nita Thakre
Hon. Secretary



Niramai's Features



No Touch



No Pain



No See



No Radiation



15-20mins



Works for all ages

Screening will be done by female technicians only

Get a **quick screening done** for a healthy YOU!

DATE: 10th August 2022 TIME: 9:00am to 6:00pm

VENUE: Jagmohan Parikh Hall, AMA Building, Ashram Road, Ahmedabad

Programme Co-Ordinators



Dr. Beena Patel



Dr. Darshini Shah



Dr. Hetal Patoliya



Dr. Praful Panagar

For queries call: **079-26586426 / +917861011818**

ISO Certified and CE Mark approved in addition to 25+ Indian & International patents

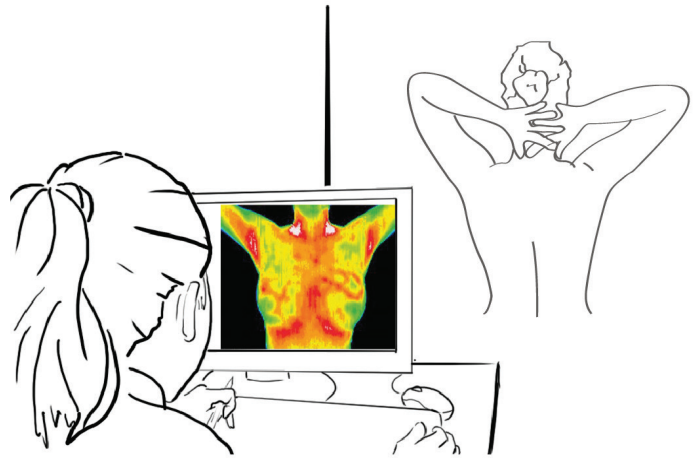


A NOVEL BREAST CANCER SCREENING SOLUTION



Niramai

NIRAMAI is a health tech company with a mission to save lives by enabling early detection of breast cancer in a privacy aware manner, through an AI-based technique called Thermalytix™



No Touch



No Pain



No See



No Radiation

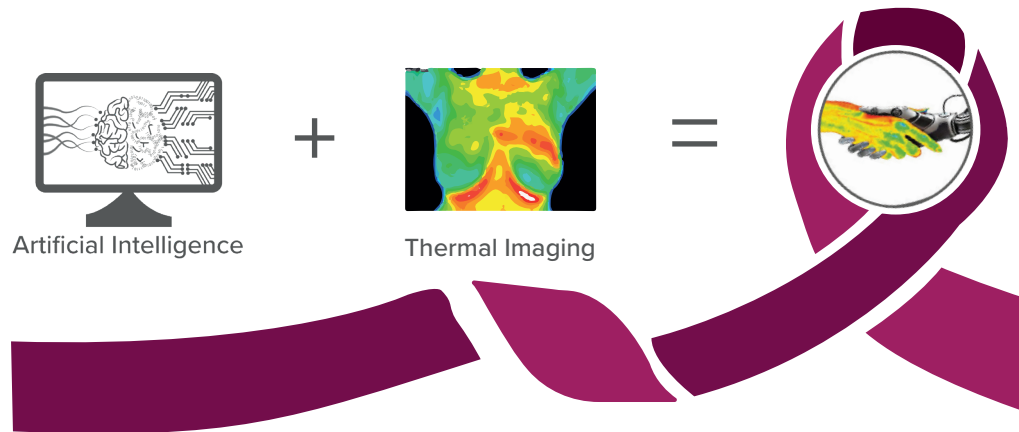
Accurate | Affordable | Accessible | Age-agnostic



THERMALYTIX™ – The Novel Breast Cancer Screening Solution by NIRAMAI



Thermalytix is a computer-aided diagnostic software medical device intended to aid qualified medical doctors, in detection and localization of malignant lesions in breast tissue using thermal imaging coupled with AI/Machine learning. The software device can be used for screening asymptomatic and symptomatic women above 18 years. NIRAMAI's Thermalytix stands for Thermal Analytics. It utilizes Machine Learning and Deep Learning algorithms to process thermal images, which basically represent temperature distribution on the chest, to generate a quantitative report showing breast health and assist doctors in identifying malignant breast lesions.



THERMALYTIX™ is different from THERMOGRAPHY

Thermography or Infrared Imaging is approved by USFDA as an adjunct modality for breast cancer screening diagnosis. There are many clinical trials that show the efficacy of thermography for breast cancer screening on thousands of subjects. However, interpretation of breast thermography requires special expertise and is very complex as visual analysis of 400,000 temperature points is hard. Thermography is therefore a subjective interpretation of complex thermal data and so far has seen limited adoption. Thermalytix technology however, takes Thermography to a whole new level by automating the analysis and eliminating subjective interpretation. Thermalytix is an AI-based solution that considerably improves clinical diagnosis by automating detection of abnormal thermal patterns and generating quantitative health scores that can assist radiologists in cancer diagnosis. With the improved accuracy and ease of interpretation brought in, Thermalytix is now being used by medical practitioners in many leading hospitals in India.

Awards & Recognition

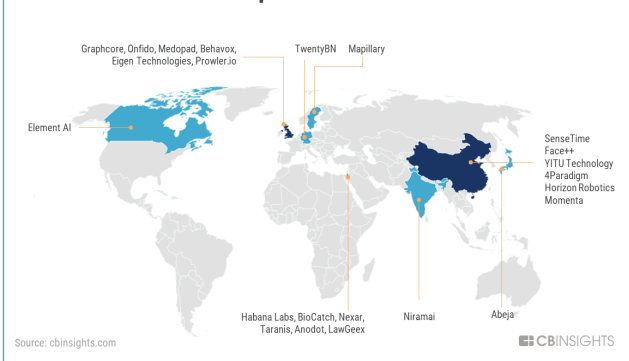


27 Indian and International Patents Granted

BILL & MELINDA GATES foundation
Research Grant



2019 AI 100: Startups outside the United States



Top Cancer Startup

Hack Osaka
2019 Gold Prize Winner



Aegis Graham Bell Awards in Data Science



Inception Program

Google Developers
Launchpad



CBINSIGHTS Only Company from India

NIRAMAI Thermalytix has been evaluated in clinical setting by expert radiologists and biostatisticians and these results have been published in the six international conferences and journals. Below are the details of two of such studies for quick reference:

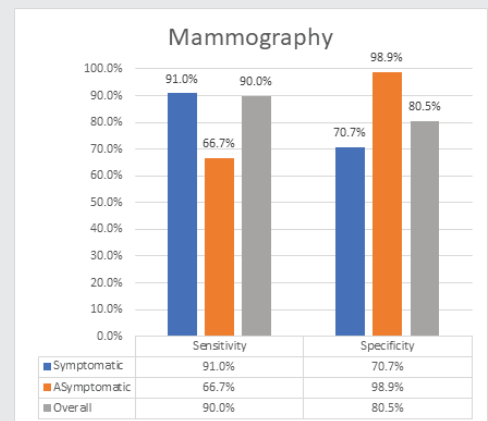
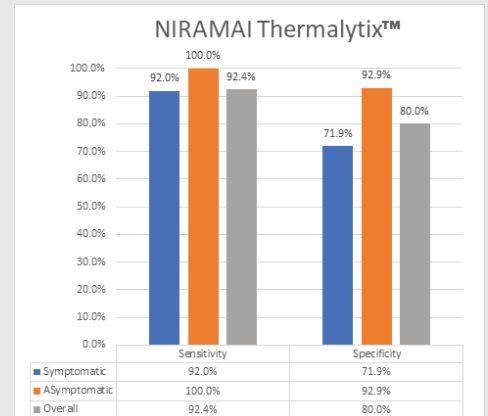
Study 1: Results presented at American Society of Clinical Oncology (ASCO) Breakthrough Summit, October 2019, Bangkok

Objective: To evaluate the efficacy of Thermalytix as a Breast Cancer screening modality in comparison to standard of care.

Method: We compared performance of Thermalytix with mammography on a total of 769 subjects who walked into 3 sites for mammography screening. Subjects were sent for NIRAMAI screening prior to other tests (X-ray mammography or sono-mammography). Pregnant women, lactating mothers and cancer survivors were excluded from the study. 534 subjects had either lump or nipple discharge as a symptom and 235 subjects did not have any symptoms. Mammography was conducted on 407 subjects and rest went through sono-mammography as per the discretion of radiologist.

Results: Sensitivity of Thermalytix was found to be 92% in symptomatic women with a specificity of 71.9%; while in women without symptom (screening efficacy), a sensitivity of 100% and specificity of 92.9% was found. Mammography, on the other hand, showed 91% sensitivity and 70.7% specificity in symptomatic women. In case of asymptomatic women, mammography showed 67% sensitivity and 98.9% specificity.

Conclusion: Thermalytix was found to be a promising screening and diagnostic tool while mammography worked better as a diagnostic tool.



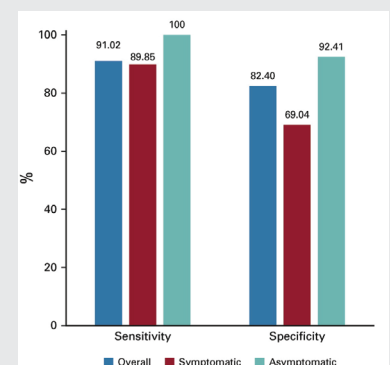
Study 2: Published in ASCO Journal of Clinical Oncology Global Oncology, vol. 6, 1472-1480, 2020.

Objective: To evaluate the sensitivity and specificity of Thermalytix, an artificial intelligence–based computer-aided diagnostics (CADx) engine, to detect breast malignancy by comparing the CADx output with the final diagnosis derived using standard screening modalities.

Method: A multisite observational study on 470 asymptomatic and symptomatic patients who presented for a breast health checkup in two centers.

Results: For the 470 women, Thermalytix resulted in a sensitivity of 91.02% (symptomatic, 89.85%; asymptomatic, 100%) and specificity of 82.39% (symptomatic, 69.04%; asymptomatic, 92.41%) in detection of breast malignancy with an overall area under the curve (AUC) of 0.90 (0.82 for symptomatic & 0.98 for asymptomatic women).

Conclusion: Thermalytix, with its automated scoring and image annotations of potential malignancies and vascularity, can assist the clinician in better decision making and improve quality of care in an affordable and radiation-free manner making it a promising modality for breast cancer screening.



Peer-reviewed published clinical evaluation results of Thermalytix™

1. International Conference on Breast Cancer Management, Amsterdam, February, 12-13, 2018.
2. International Conference on Advances in Breast Cancer Treatments, Kyoto, Japan, April 26-27, 2018.
3. SABCS 2018 San Antonio Breast Cancer Symposium International Conference on Breast Cancer Research, Dec 2018.
4. ASCO Breakthrough Summit, Thailand, Oct 2019. Also Among top 50 abstracts.
5. SABCS 2019 San Antonio Breast Cancer Symposium International Conference on Breast Cancer Research, Dec 2019.
6. ASCO JCO Global Oncology Journal, October 2020.
7. SABCS 2020 San Antonio Breast Cancer Symposium International Conference on Breast Cancer Research, Dec 2020.

THERMALYTIK CASE STUDY 1



Shanti (58 years) was facing some discomfort in her breast. She learnt that there was a free screening camp being conducted in a nearby hospital where the Niramai test was being offered. She underwent Niramai breast health check up which was carried out in an enclosed, cool room where no one would see or touch the women – with the technician seated outside providing necessary instructions. Shanti recalls being very comfortable during the test which lasted less than 15 minutes. The Niramai test detected suspicious thermal activity and recommended that an ultra-sonography (USG) be conducted in the left breast. The results were generated in real-time and shared with the doctor. The USG revealed the case as “more in favour of malignancy”. Doctor then proceeded to conduct a biopsy immediately and found Grade III Infiltrating Ductal Carcinoma with moderate lymphoid infiltrate in the same location as indicated by Niramai test. Detection at an early stage and immediate follow-up treatment made all the difference for Shanti. She has since undergone surgery and followed up with chemotherapy. Her recovery has been smooth and the family is relieved to have put the worst behind them.

THERMALYTIK CASE STUDY 2



Kaveri (name changed) had expressed pain in her right breast and consulted multiple experts. There was a great deal of uncertainty about presence of malignant lump in her breast. She was advised to get X-ray Mammography done at a diagnostic center which noted the evidence of soft tissues density lesion. Kaveri was also asked to undergo MRI. The combined results of MRI and Mammography showed a lesion with 29% to 77% chances of malignancy. As a result, Kaveri and her family were in a dilemma as they were advised to proceed with surgery for removal of the lump, followed by biopsy to ascertain whether or not it is cancerous. The family decided to get the NIRAMAI test as well. The report from the test showed minimal thermal activity and suggested a low thermalogical score. The test concluded absence of malignancy and recommended regular check-up. Patient's family was still concerned and decided to go ahead with the follow-up treatment plan based on findings of Mammography. Ultrasound and MRI. The patient underwent excision surgery where breast region sized 7.5mm x 5mm x 2.5 mm was removed. Biopsy test found calcified nodule with no malignancy, proving NIRAMAI analysis to be correct.

What the experts say



Dr Sudhakar Sampangi
Breast Imaging Specialist,
HCG Hospital

“Mammogram and ultrasound, the most common modalities used for the diagnosis of the disease, have their limitations. For instance, with a mammogram it's difficult to detect the micro calcification in dense breasts (common in the case of young women), while ultrasound scans are largely subjective, wherein the results vary from radiologist to radiologist. Now, with Thermalytix, bringing together the dual advantages of thermography and artificial intelligence, it's possible to do away with errors of manual interpretation. It's a highly accurate and effective way of detecting malignant tumours or lesions at an early stage, thereby preventing a majority of cancer deaths.

Unlike traditional diagnostic modalities, here the patient doesn't have to endure any pain, touch, or radiation. It's completely non-invasive, yet highly accurate. We can repeat the process any number of times; it's as easy and quick as taking a photograph. Besides, there are no side-effects. Patients appreciate the fact that they are not exposed to additional pain, discomfort, or unnecessary biopsies, while medical practitioners are able to make early and accurate breast cancer diagnosis. In my clinical practice, I see immense value in a health-tech innovation like Thermalytix that makes healthcare more accessible to people”.

Benefits of THERMALYTIX™

For Women

- 1. Age-agnostic:** It is density-agnostic and is effective even for women under 40 years, for whom Mammography is not recommended
- 2. Early detection:** It detects tumors significantly smaller (5 mm) than what can be detected with physical examination (25 mm).
- 3. No side effects:** Thermalytix does not use radiation of any form, and just measures temperature on the body.
- 4. Non-contact, absolutely private screening:** Our equipment is placed at 3 feet from the patient. This no-touch, no-see screening makes it a painless procedure. The privacy-awareness is very much appreciated by women. It also enables post-surgery follow-ups and monitoring during treatment procedures.
- 5. Portable equipment:** The thermal sensor used by Niramai can be carried to any location in an ordinary backpack increasing accessibility of screening test.
- 6. Low cost per screening:** Niramai technology cost per screening is significantly lower compared to other modalities.

For Radiologist

- 1. Ease of interpretation:** Niramai's automated solution processes 400000 temperature values per person process and generates a report with quantitative clinical parameters and a breast health score that can be used by medical specialists to make accurate diagnosis of the patient condition.
- 2. Complements Sono-Mammography:** Since Thermalytix provides information about the location of possible lesion, the annotated images can help to perform targeted breast ultrasound, which saves precious radiologist time.
- 3. Complements Mammography:** Interpretation of mammography images for dense breasts is somewhat difficult. Using Thermalytix test as a complementary modality helps increase confidence in diagnosis

What the experts say



Dr Kiran Mazumdar-Shaw
Chairperson and Managing
Director, Biocon Limited

"I congratulate Team NIRAMAI for developing an innovative thermal analytics based Breast Cancer Solution for early stage detection. This Non-Invasive Risk Assessment with Machine Intelligence (NIRAMAI) is relevant for women of all ages and poses minimal health hazard since it is contact and radiation free. I believe NIRAMAI will enable easy adoption for early cancer screening and will play a key role in improving outcomes in our ongoing battle against breast cancer. I am delighted to support this initiative".



Dr H V Ramprakash
Senior Radiologist and
Expert Thermographer

"Thermography can detect breast cancer in ways that are non-invasive, non-ionizing and non-traumatizing. In addition to detecting tumor growth earlier, this innovation can bring breast cancer screening to the doorsteps of women all over the world. I am happy to partner with NIRAMAI on this journey".

CONTACT US

For more details on THERMALYTIX™ and access to our research reports, please contact:

✉ Email: contact@niramai.com

☎ Phone: +91 8660922978

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