Some Selected Research:

Stark. A., Way, S. The Screening of Well Women for the Early Detection of Breast Cancer Using Clinical Examination with Thermography and Mammography. Cancer 33: 1671-1679, 1974
Researchers screened 4,621 asymptomatic women, 35% whom were under age 35 y.o. and detected 24 cancers (7.6 per 1000) with a sensitivity and specificity of 98.3% and 93.5% respectively

Y.R. Parisky, A. Sardi, R. Hamm, K. Hughes, L. Esserman, S. Rust, K. Callahan, Efficacy of Computerized Infared Imaging Analysis to evaluate Mammographically Suspicious Lesions. AJR:180, January 2003
Compared results of infrared imaging prior to biopsy. The researchers determined that Thermography offers a safe, noninvasive procedure that would be valuable as an adjunct to mammography in determining whether a lesion is benign or malignant with a 99% predictive value..

Gros, C, Gautherie, M. Breast Thermography and Cancer Risk Prediction. Cancer 45:51-56 1980 From a patient base of 58,000 women screened with thermography, researchers followed 1,527 patients with initially healthy breasts and abnormal thermograms for 12 years. Of this group, 40% developed malignancies within 5 years. The study concluded that "an abnormal thermogram is the single most important marker of high risk for the future development of breast cancer".

Spitalier, H., Giraud, D. et al. Does Infrared Thermography Truly Have a Role in Present Day Breast Cancer Management? Biomedical Thermology pp. 269-278, 1982
Spitalier and associates screened 61,000 women using thermography over a 10 year period. The false negative and positive rate was found to be 11% (89% sensitivity and specificity). 91% of the nonpalpable cancers (TO rating) were detected by thermography. Of all the patients with cancer, thermography alone was the first alarm in 60% of cases. The authors noted "in patients having no clinical or radiographic suspicion of malignancy, a persistent abnormal breast thermogram represents the highest known risk factor for the future development of breast cancer"

Jiang LJ, Ng Fy et al A Perspective on Medical Infrared Imaging. J Med Technol 2005 Nov-Dec;29 (6):257-67 Since the early days of thermography in the 1950's, image processing techniques, sensitivity of thermal sensors and spatial resolution have progressed greatly, holding out fresh promise for infrared (IR) imaging techniques. Applications in civil, industrial and healthcare fields are thus reaching a high level of technical performance. In many diseases there are variations in blood flow, and these in turn affect the skin temperature. IR imaging offers a useful and non-invasive approach to the diagnosis and treatment (as therapeutic aids) of many disorders, in particular in the areas of rheumatology, dermatology, orthopedics and circulatory abnormalities. This paper reviews many usages (and hence the limitations) of thermography in biomedical fields.

Am J Surg. 2008 Oct; 196(4):523-6.
Effectiveness of a noninvasive digital infrared thermal imaging system in the detection of breast cancer.
BACKGROUND: Digital infrared thermal imaging (DITI) has resurfaced in this era of modernized computer technology. Its role in the detection of breast cancer is evaluated. METHODS: In this prospective clinical trial, 92 patients for whom a breast biopsy was recommended based on prior mammogram or ultrasound underwent DITI. Three scores were generated: an overall risk score in the screening mode, a clinical score based on patient information, and a third assessment by artificial neural network. RESULTS: Sixty of 94 biopsies were malignant and 34 were benign. DITI identified 58 of 60 malignancies, with 97% sensitivity, 44% specificity, and 82% negative predictive value depending on the mode used. Compared to an overall risk score of 0, a score of 3 or greater was significantly more likely to be associated with malignancy (30% vs 90%, $P < .03$). CONCLUSION: DITI is a valuable adjunct to mammography and ultrasound, especially in women with dense breast parenchyma.