Acta Clin Croat. 2013 Mar;52(1):35-42.

Influence of hormonal status on thermography findings in breast cancer.

Website: http://www.ncbi.nlm.nih.gov/pubmed/23837271

Zore Z[1], Boras I, Stanec M, Oresić T, Zore IF.
Author information

- [1]Department of Surgical Oncology, Sestre milosrdnice University Hospital Center, Zagreb, Croatia. zore.zvonimir@gmail.com

Abstract

The aim of this study was to investigate the association of infrared imaging findings and hormone receptor (estrogen and progesterone) status in breast cancers. The study was carried out at Department of Surgical Oncology and Department of Pathology, Sestre milosrdnice University Hospital Center, in collaboration with licensed infrared thermography experts. The study involved 75 female patients with invasive breast tumors. Thermography findings were compared with different immunohistochemical findings (hormone status positive or negative). Seventy-five female patients aged 36 to 86 years, mean age 64 +/- 11.36 years, were examined. The tumor itself and the breast containing the tumor were statistically significantly warmer ($p < 0.001$) than the healthy breast in all study patients. There was no statistically significant difference ($p > 0.05$) between patients with positive and those with negative estrogen receptors. Unlike all previously published results of various thermographic studies, results obtained in this study on the hormone receptor status analyzed and its impact on thermographic findings indicated that estrogen negative tumors had a higher maximum and average temperature than estrogen positive tumors. It was also observed that estrogen negative tumors had lower impact on warming of the entire breast, and that maximum and average temperature of the affected breast was higher in estrogen positive tumors. Arithmetic means of maximum and average tumor temperatures were statistically significantly higher for progesterone negative tumors compared with progesterone positive tumors ($p < 0.05$). Thermographic findings correlated with the specific hormonal status of breast invasive tumors, which reflects the biological behavior of tumors as well as their clinical variables.

PMID:

23837271

[PubMed - indexed for MEDLINE]