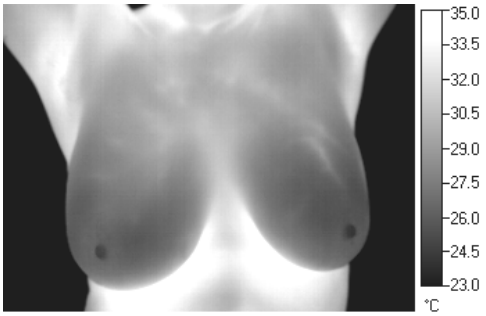
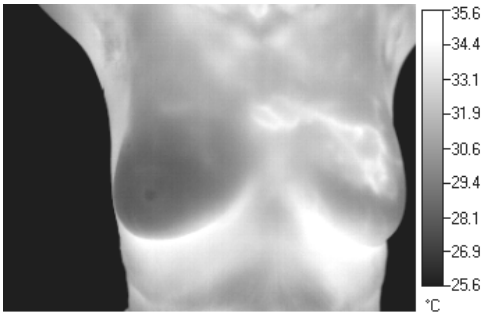
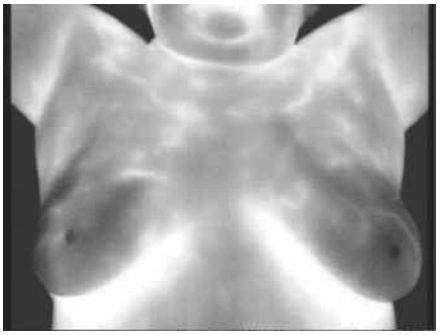


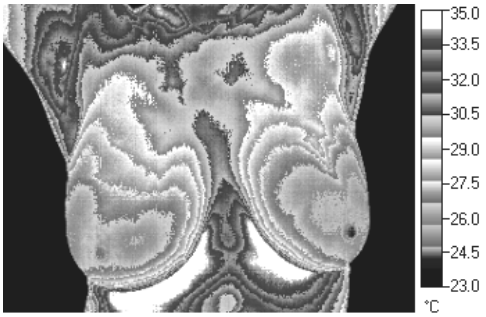
Normal Grey Scale



Left Breast Cancer Grey Scale

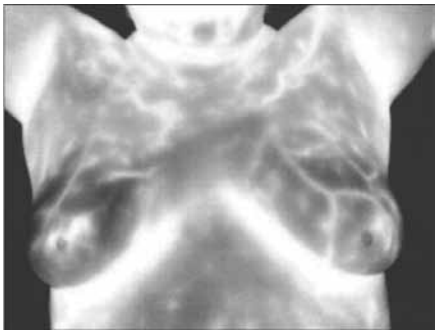


Before Intervention



Color Breast Temperature

Color Breast Temperature



After Intervention

ings on a thermogram while it may be missed by mammography because it is too small.

Perhaps more importantly, thermography provides predictive information allowing us to use it as a method to determine risk. Numerous studies have documented the presence of physiological changes consistent with cancer prior to anatomical detection with mammography. Gutherie and Gros observed that 38% of the patients with 'false positive' thermograms developed cancer within 4 years. Stark observed that 23% of the patients with 'false positive' thermograms developed cancer within 10 years. According to Gutherie and Gross, a high risk thermogram is considered to be 10x more ignificant than a first order family history of breast cancer. Hobbins further states that a sustained high risk thermogram carries with it a 22x greater likelihood of developing breast cancer than a low risk examination.

This is extremely important if we are attempting to prevent breast cancer. If thermography can be used to identify physiological signs that precede cancer and signal future risk, it can also be used to monitor the ability of therapeutic intervention to effectively lower risk.

Although a scientifically proven method to prevent breast cancer does not exist, there is a growing body of research identifying dietary and lifestyle factors that significantly contribute to risk. More importantly, many of these risk factors are modifiable and can be improved or eliminated through lifestyle, diet and natural treatment. This provides us with a starting point for creating breast cancer prevention treatments. Therapeutic interventions can then be monitored with thermography to determine if the risk has reduced.

What are the benefits of thermography over other tests that attempt to assess risk? BRCA genetic testing identifies a non modifiable risk factor that cannot be used to determine the effectiveness of treatment. Testing estrogen, estrogen metabolite (2:16 hydroxy ratios) and progesterone levels provide systemic information and do not directly evaluate the effects of these hormones on the breast tissue itself. In addition, the serum levels of hormones may not match the tissue levels. Breast tissue can have up to 50x the estrogen concentration as serum. Salivary tests have been used to assess tissue hormone levels but do not take into account that the breasts produce estrogen locally while salivary gland tissue does not. Laboratory tests such as these are still very helpful in determining a therapeutic intervention and monitoring its effects and should not be discounted. Thermography, however is a direct measure of breast physiology and ultimately needs to reflect the desired change.

In the case of estrogen, thermography offers another unique piece of information. Thermography can help identify Breast Specific Estrogen Dominance. This is different that systemic estrogen dominance in that it occurs specifically in the breasts and may or may not be systemic. Breast Specific Estrogen Dominance produces vascular changes similar to pregnancy and

lactation. These changes are distinctly different that those of cancer and can let us know whether or not breast specific estrogen dominance exists and whether or not it is currently elevating the risk for developing breast cancer. If identified, thermography can then be used to monitor the effectiveness of intervention.

For breast cancer to be eliminated we must move beyond early detection to the realm of prevention. To create a prevention intervention we must be able to identify the modifiable risk factors and learn to improve or eliminate them. To determine if that intervention is effective, we need thermography to objectively assess the effects of that intervention on the physiology of the breasts.

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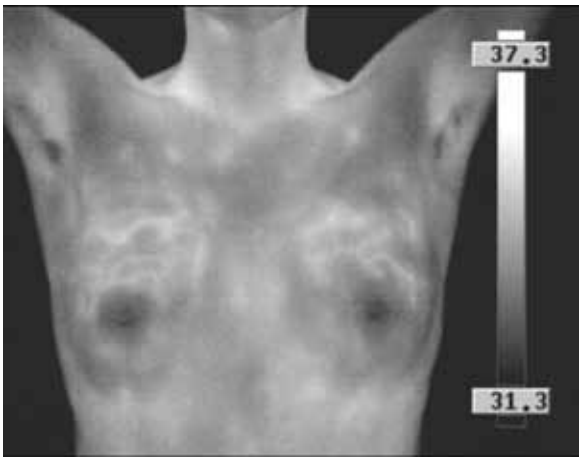
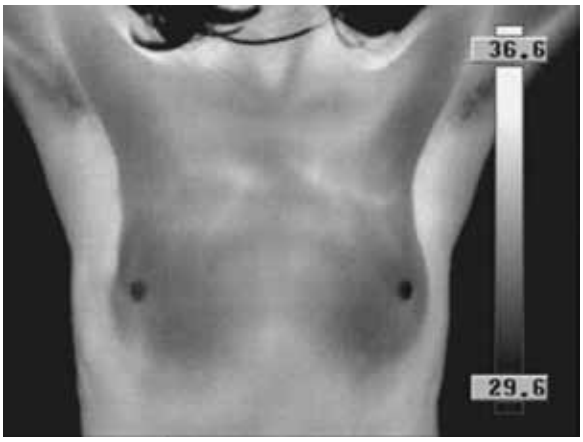


Normal Breast Temperature



Breast Specific Estrogen Dominance