



---

# Breast Health Naturally

James Biddle, MD

11-28-07



---

# Integrative Medicine and Nature's Template



# Breast Disorders

---

- **Fibrocystic Breast Disease**
- **Breast Cancer**
- Disclaimer – this is simply an educational program and is not intended to diagnose or treat any individuals. Diagnosis and treatment of any disease state should be done by a licensed health care practitioner in an office setting.



# Fibrocystic Breast Disease

---

- Multiple fluctuating benign cysts.
- 20-40% of women, especially during PMS.
- Related to increased ratio of estrogen/progesterone.
- Familial. Often tender and painful.
- Worse if  $<3$  BMs/week.
- Worse with caffeine and especially coffee.
- Leads to scarring and excessive biopsies.



# Fibrocystic Breast Disease

## Natural Treatment Options

---

- Avoid caffeine, especially coffee. Organic green tea may help.
- Identify and treat subclinical hypothyroidism. Check mid-day oral temps.
- Iodine Absorption Test. Oral iodine if indicated.
- Vitex (chasteberry) to boost progesterone levels. Raises LH. (no Vitex if PCOS or ovarian cysts).
- Cyclic progesterone, especially if PCOS.



# Fibrocystic Breast Disease

## Natural Treatment Options

---

- Vitamin E 800-1600 IU per day (“mixed”).
- Magnesium 250 mg twice daily.
- Activated Vitamin-B6 as P-5-P, 50 mg daily.
- Ground Flax Seeds – 2 Tbsp daily.
- **Omega-3 fatty acids:** fish oil for EPA and DHA; primrose oil for GLA.
- **Castor Oil Pack:** The castor oil cleanses the lymphatics to stimulate the immune system. Use for 30-60 minutes for 3 consecutive days; repeat 3 weeks each month.



# Breast Cancer Facts

---

- Every two minutes a woman is diagnosed with breast cancer.
- One woman in eight who lives to age 85 will develop breast cancer during her lifetime.
- Breast cancer is the most common cancer in women in the United States. According to the American Cancer Society, it's estimated that 211,240 women will be diagnosed with breast cancer in the US in 2005, and 40,410 women will die from the disease.



# Breast Cancer Facts, Cont.

---

- Breast cancer is the leading cause of death in women between the ages of 40 and 55.
- 1,600 men are expected to be diagnosed with breast cancer this year and 400 are predicted to die.
- Seventy percent of all breast cancers are found through breast self-exams. Not all lumps are detectable by touch.
- Eight out of ten breast lumps are not cancerous.



# Risk Factors

---

- Gender
- Age
- Personal history of breast cancer
- Family history of breast cancer
- High breast-tissue density
- Breast hyperplasia
- Long-term estrogen exposure
- Menopausal hormone replacement therapy



# Risk factors, Cont.

---

- Not having children or not breast-feeding
- Radiation exposure
- Ashkenazi Jewish heritage
- Diet
- Environmental factors
- Smoking

**Half of all women diagnosed with breast cancer have no identifiable risk**



# Breast CA Genetics

---

- BRCA1 mutation = 57% risk of breast CA and 40% risk of ovarian CA by age 70.
- BRCA2 mutation = 49% risk of breast CA and 18% risk of ovarian CA by age 70.
- Present in 2% Ashkenazi Jewish women, and 1 in 300-500 (~0.3%) of others.

The Medical Letter; Nov 19, 2007; 49(1274), pg 93.



# Estrogens & Risk

---

- 3 Hormone Ratios impact the growth of breast cells, and probably the cancer risk:
  - Progesterone : Estrogen.
  - Estrogen Quotient = Estriol / Estrone + Estradiol ( $E_q = E_3 / E_1 + E_2$ ).
  - 2-OH-estrone : 16-alpha-estrone.

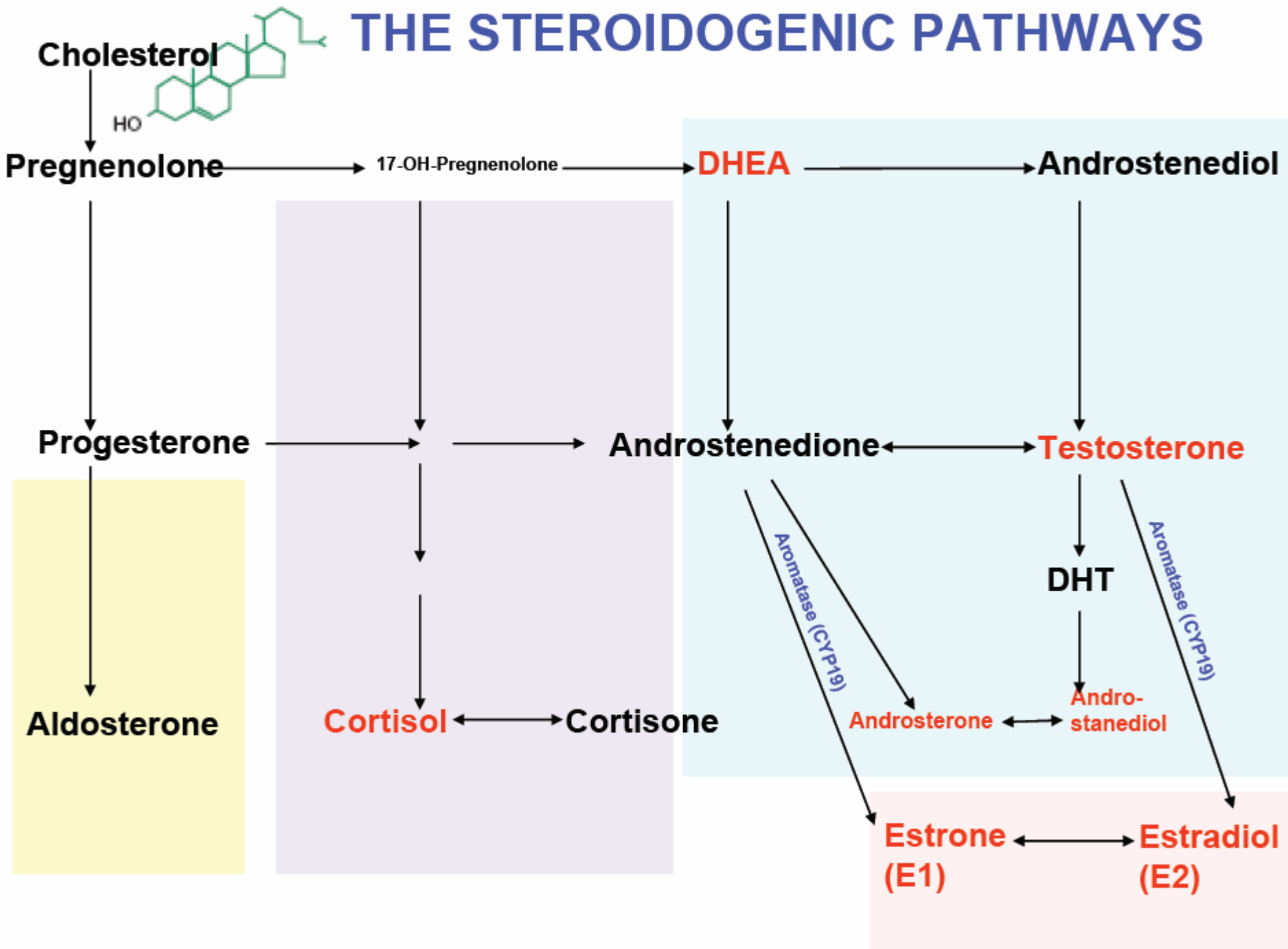


# Female Hormones

---

- 20% “strong” estrogens – E1 & E2 (Estrone and Estradiol)
- 80% “weak” estrogens – E3 (Estriol)
- Progesterone, Testosterone, DHEA, and adrenal hormones.

# THE STEROIDOGENIC PATHWAYS









# Causes of Hormone Imbalances

---

- Menopause, premature menopause, surgical menopause, and partial hysterectomy.
- Perimenopausal ovarian dysfunction; missed ovulations.
- Xenobiotics (Pesticides, Plastics, Petrochemicals).
- Thyroid, Adrenals, Obesity.





# 1. Estrogen Dominance

(too much estrogen relative to progesterone)

---

- Stimulates endometrial and breast tissue, stores fat, retains fluids.
- PMS, fibrocystic breasts, uterine fibroids, endometriosis, uterine and breast cancer.
- Food cravings, thyroid dysfunction, fatigue, depression, heavy menses



## 2. Estrogen Imbalance

(more strong estrogens than weak estrogen)

---

Estrogen Quotient (Eq) =  $E3 / E1 + E2$   
(weak / strong)

- In healthy women, only 21% had Eq < 1
  - In women with breast cancer, 62% had Eq < 1
- > Lemon HM. *JAMA* 1966; 196 (13):112-120.  
> Follingstad AH. *JAMA* 1978;239(1):29-30.



## 3. Estrogen Metabolism

---

### 2-OH-estrone : 16-alpha-estrone

- “Pro-carcinogenic” 16-alpha increases with pesticides, obesity, and low thyroid function.
- “Protective” 2-hydroxy increases with fiber, cruciferous vegetables, DIM, ground Flax, EPA, and exercise.



---

# Breast Cancer Prevention and Screening Options



# Nutrition

---

- Eat Organically to avoid xeno-estrogens.
- Adequate protein, healthy fat, high fiber, and low carbohydrate diet. Vegetarian.
- Avoid sodas, excess coffee or alcohol, and non-organic dairy (xeno-estrogens).



# Nutrition

---

- Add essential fatty acids and fibrous vegetables.
- Reverse insulin resistance.
- Add fresh ground flax seeds, 2-4 Tbsp daily. Broccoli sprouts for detoxification.
- Support thyroid. Use kelp for iodine, or iodine skin absorption test.



# Cancer Prevention

---

## Broccoli sprouts fight cancer:

- Johns Hopkins University was researching anti-cancer compounds from broccoli, and found that broccoli sprouts contain 30 to 50 times the concentration of the protective chemical “sulforaphane” found in mature broccoli plants.
- The usual recommendation is 200 to 400 mcg of sulforaphane daily from broccoli sprout extracts, or about ¼-½ cup daily. These benefits can be augmented by concentrates such as I3C (indole-3-carbinol) or DIM (di-indolyl-methane).
  - Broccoli sprouts in cancer prevention. *Nutr Rev* 1998;56:127-30;
  - Broccoli sprouts as inducers of carcinogen-detoxifying enzyme systems. *Proc Natl Acad Sci* 1997;94(21):11149-51.



# Endocrine

---

- Thyroid – identify and treat subclinical or “sub-laboratory” hypothyroidism. Check mid-day oral temps, 11 AM – 3 PM.
- Adrenals – avoid the “blood-sugar roller coaster”. Licorice if low BP.



# Endocrine

---

- Ovaries
  - If pre-menopausal and low in progesterone, support with Chasteberry (Vitex) if no PCOS, or use cyclic progesterone cream days 17-28.
  - If post-menopausal, use Identical-to-Natural HRT, especially progesterone.



---

# Natural Hormone Replacement Therapy



# What is a Natural Hormone?

---

- “Bio-Identical” = Biochemical structure identical to that produced in the body.
- May be synthetic or semi-synthetic.
- Usually fewer side effects and better biological actions than “alien” hormone mimics.



# Thyroid as an example:

---

- TSH, T4, T3
- T4 → T3 via an enzyme called “5-prime-de-iodinase.”

See [www.wilsonsyndrome.com](http://www.wilsonsyndrome.com)



# Goals of Natural HRT

---

- Maintain Quality of Life.  
(i.e. aging gracefully)
- Relief of symptoms without detrimental side effects.





# Goals of Natural HRT

---

- Prevention of Degenerative Diseases  
Osteoporosis, Alzheimer's, heart disease?
- Avoid increasing cancer risk and potentially **decrease** cancer risk.



---

# Screening Options



# Assessment Tools

---

## Structural Studies:

- Mammography
- Ultrasound
- MRI
- PET - Determines metabolic activity, presence and location.

## Other Tools:

- Hormone Profile (Blood, Urine, or Saliva Testing)
- Biopsy-Extraction of tissue sample. Can miss tumor, and can spread cancer (Lancet article, 2/2002).



# Ultrasound

---

- Able to determine if a lump is solid, which could either be a cancerous or non-cancerous lump, or if it is fluid-filled and therefore likely a benign cyst.
- No radiation exposure.
- Useful in patients with breast augmentation as it can see beyond the implants.
- Can be helpful in performing an ultrasound-guided biopsy, or in following the size of a lump thru time.



# Breast MRI

---

## Benefits:

- Sensitive. May show characteristics which are more or less suspicious for cancer, and whether the lesion is multi-focal vs. a single area. *This would be important to know in making the decision to have a lumpectomy or mastectomy.*
- Can visualize beyond implants that may obscure breast tissue with other forms of detection.
- Useful for dense breast tissue in younger women.
- New recommendations are indicating approval for women with high risk, and there is no radiation exposure.



# Breast MRI

---

## Disadvantages:

- MRI may indicate areas that are suspicious, but then turn out not cancerous, resulting in false positives and unnecessary biopsies.
- It is not yet as useful as ultrasound in guiding biopsy.
- Unable to see calcifications that are associated with DCIS.
- Cost > \$1200.



# Mammography

---

## Advantages:

- Currently the “Standard-of-Care”.
- Sees calcifications.
- Finds > 80% significant breast cancers.
- Covered by insurance and Medicare.



# Mammography

---

## Disadvantages

- Only useful to tell if there is any structure present (i.e. does not look at function).
- Does not differentiate between cysts, benign calcifications, or cancers.
- US Department of Health and Human Services 2/1/2005 included X-Rays on the list of known carcinogens (SF Chronicle).



# Mammography

---

## Disadvantages:

- Swedish study found no survival advantage in women under 50 (250,000 women).
- Detection late – after calcium deposits.
- 4/5 False–positives = unnecessary needle biopsies.
  - > (N England J Med, 1998; 338:1089-96)
- Safety, 1000x more radiation than a chest x-ray.
- Compression, can spread cancer cells.
  - > (Lancet, 11992; 3440:122)



# Mammography

---

David Dershaw, head of breast imaging at Memorial Sloan-Kettering Cancer Center, explained that reading mammograms is not easy, especially with doubts as to whether cancer is present.

Cancers in dense breasts are hard to detect, and fast-growing tumors are almost impossible to detect. (that is why they do so many unnecessary biopsies 750,000-800,000 per year!)

> Gladwell, Malcolm. "The Picture Problem". *The New Yorker*, Dec 13 2004.



# Mammography

---

“Mammograms are especially likely to miss the tumors that do the most harm” says a pathologist Peggy Porter, and “Most tumors develop very, very slowly, and those tend to lay down calcium deposits... mammograms are ... picking up those calcifications... so by definition, mammograms are picking up slow-growing tumors.”

In a study by Porter, many cancers were missed by mammography.

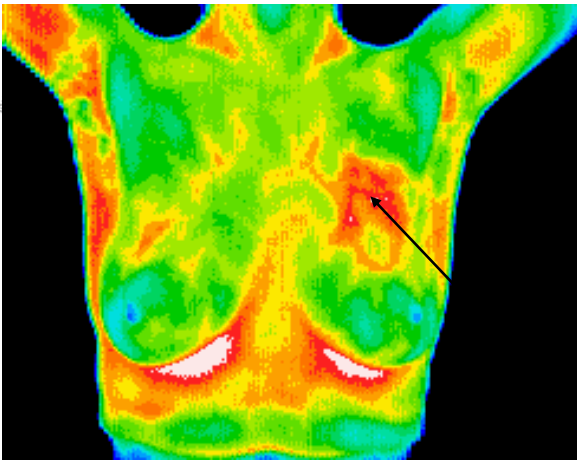
>Porter, Peggy. *JNCI Journal of the National Cancer Institute* 2001 93(2):152-151.



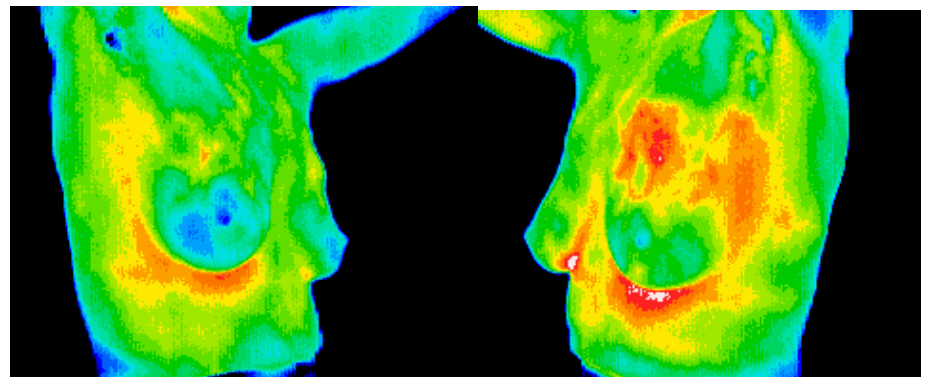
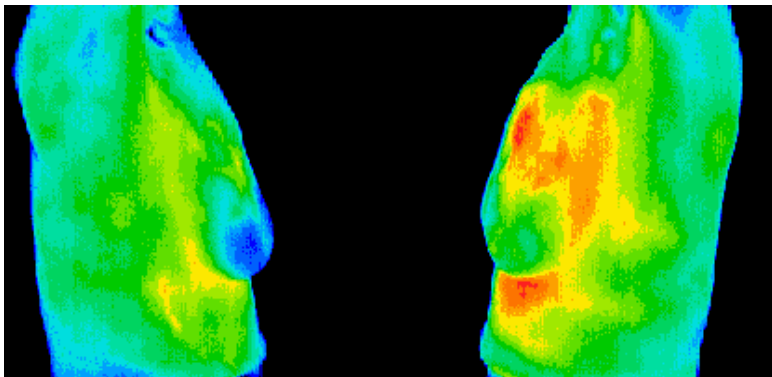
---

*The best chance of surviving  
breast cancer is  
if it is picked up early.*

*Thermal Imaging has a  
Lead-time advantage.*



Standard views for breast study. 2 cm DCIS





# Thermal Imaging (Breast Thermography)

---

Non-invasive screening tool that uses infrared technology to detect abnormal heat patterns of increased blood supply and metabolism caused by malignant angiogenesis.

- Especially useful in younger women with denser breast tissue.
- Has the ability to differentiate between fibrocystic breast disease and other abnormalities.
- There is no radiation exposure or breast compression.
- It has very few false positives, as it does not confuse fibrocystic breast disease with patterns of cancer the way mammography does.



# Thermal Imaging

---

- Is the only true **screening** tool (others are early detection).
- Detects the subtle physiologic changes that accompany breast pathology, whether it is cancer, fibrocystic disease, infection or a vascular disease.
- Allows for the ***earliest*** possible intervention.



# Thermal Imaging

---

## Limitations:

- Thermography is unable to detect DCIS (ductal carcinoma in situ) reliably.
- Like mammography, breast thermography misses about 15-18% of breast cancers, but they tend to miss different cancers.



# Thermal Imaging

---

- Non-invasive, inexpensive, comfortable test that does not cause radiation-exposure or compression of the breasts or any part of the body.
- Persistently abnormal thermogram is # 1 predictor of future breast cancer.



# Thermal Imaging

---

- Approved by FDA in 1982 as “adjunctive test”.
- Undergone extensive research since 1950’s.
- Over 800 peer-reviewed studies in index-medicus literature.
- Over 300,000 study participants.
- Patients followed up to 12 years.
- Strict standardizations protocols established over last 15 years.



# Thermal Imaging

---

- An abnormal thermogram is 10x more significant as a future risk indicator than 1<sup>st</sup> order family history.
- Persistently abnormal thermogram = 22x higher risk of future breast cancer.
- Extensive clinical trials show breast imaging significantly augments the long-term survival rates by as much as 61%.
- 95% of early stage cancers detected when used as multimodal approach (i.e. with mammograms, etc).



# How does it work?

---

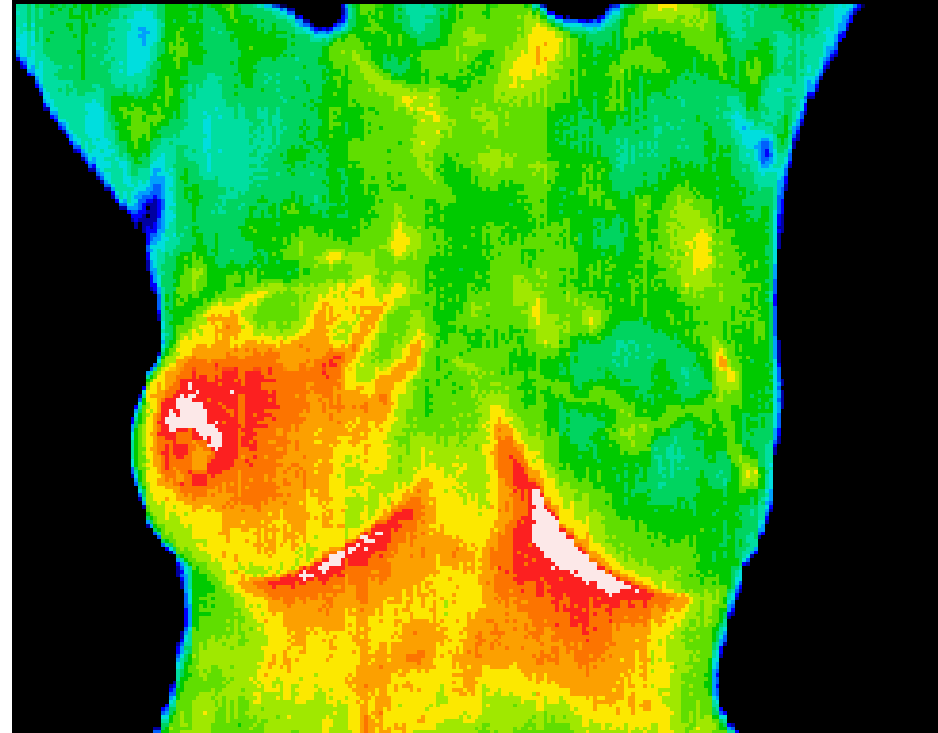
- The body produces heat which must be lost to the environment. The camera reads the heat being emitted from the body. That heat is turned into a color pattern similar to the weather maps on television. Research has shown that each abnormality has a distinct pattern.
- Pattern vs. color.

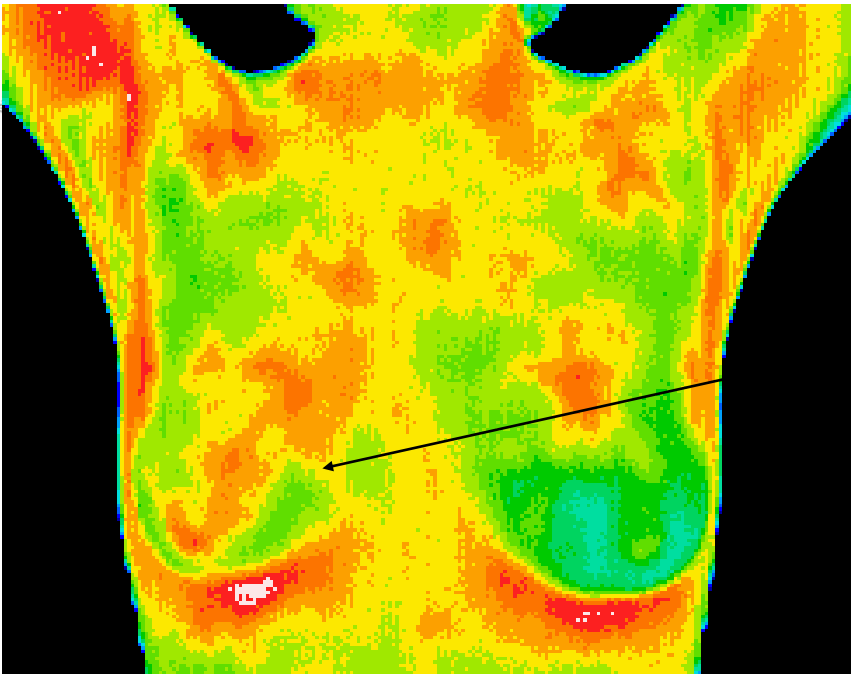


# Inflammatory Breast CA

---

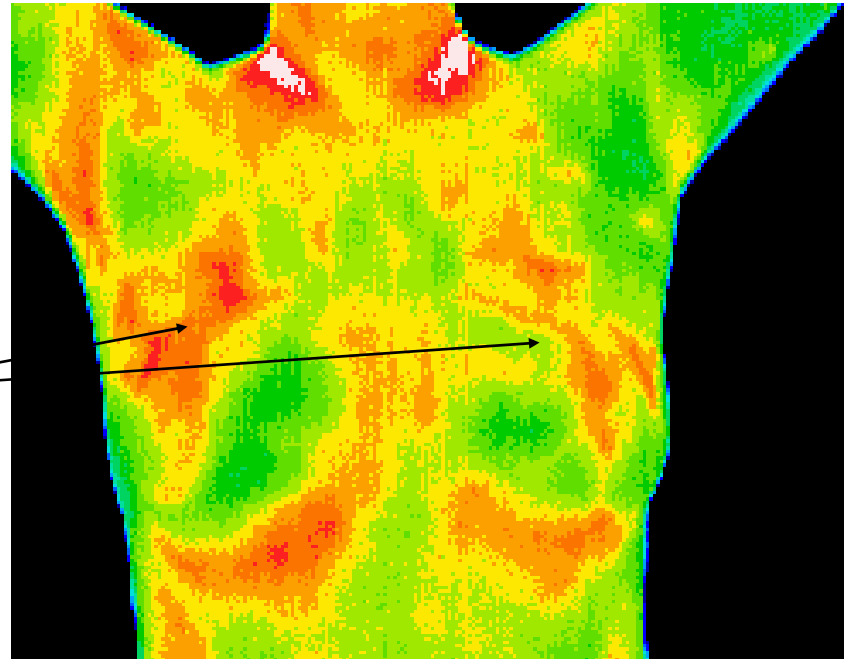
There were no clinical indications at this stage. (Thermography can show significant indicators several months before any of the clinical signs of inflammatory breast CA: skin discoloration, swelling, and pain). Inflammatory breast CA cannot be detected by mammography and is most commonly seen in younger women; the prognosis is always poor. Early detection provides the best hope of survival.

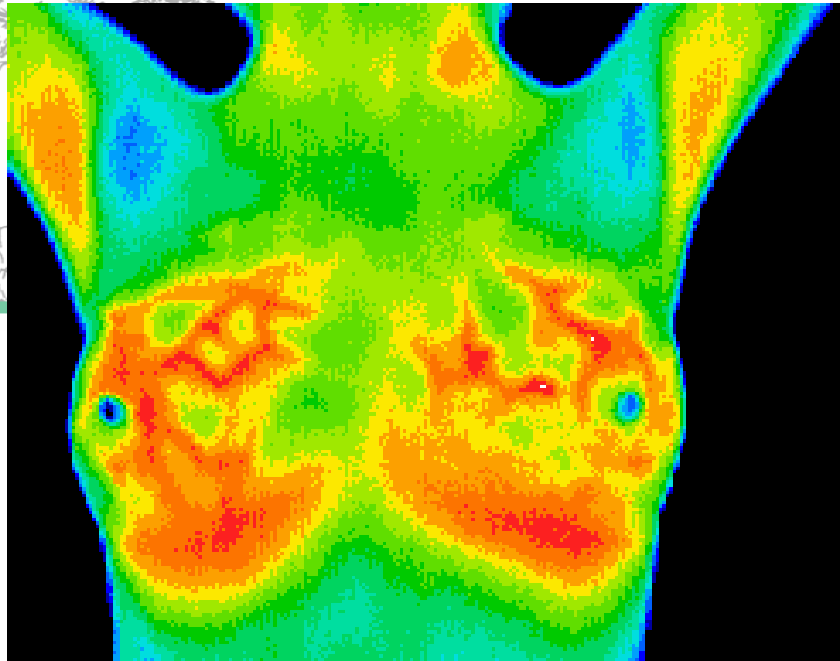




Fibrocystic

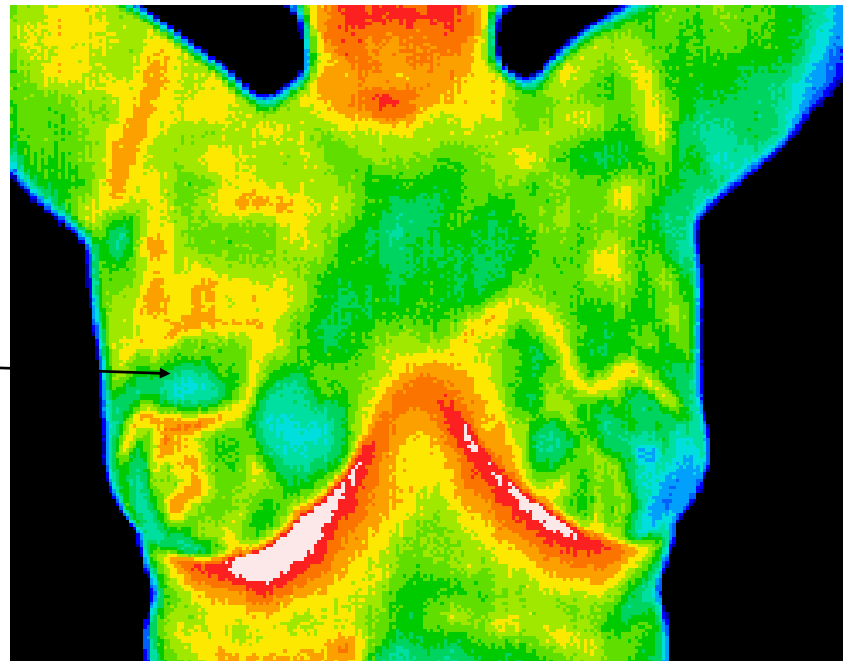
Fibrocystic

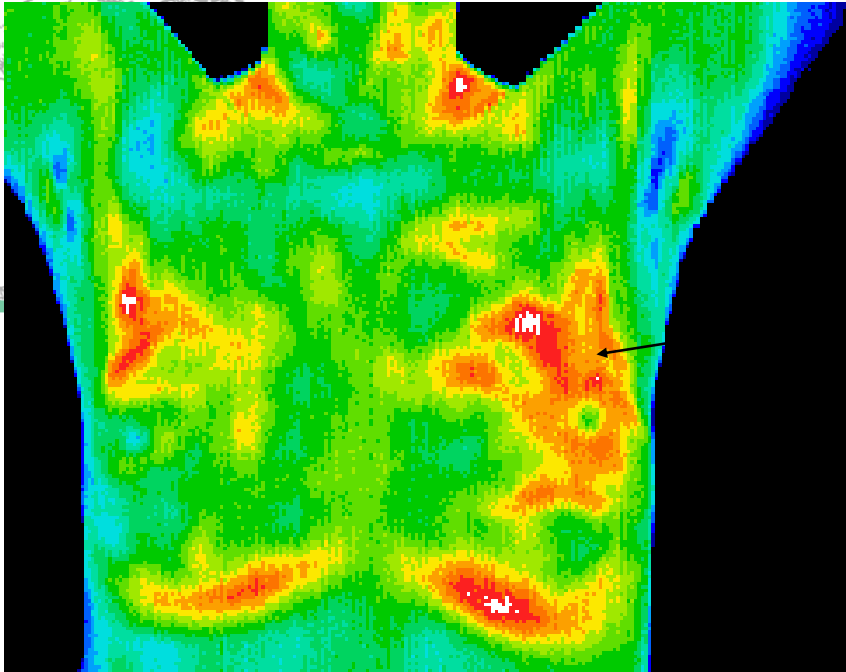




Pregnancy

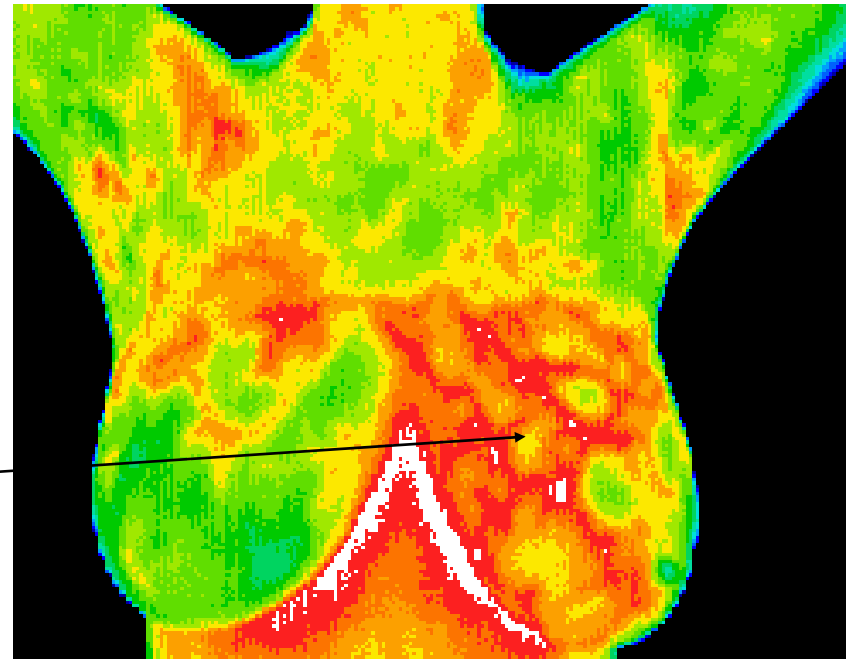
Benign Cyst





Mastitis

Significant vascular activity.  
(Angiogenesis)





# Proper Protocol for Thermal Imaging

---

- Pre-imaging protocols observed; no hot showers within 4 hrs, no hot or cold drinks, no coffee, no black tea, no sunburns, no shaving morning of, no lotions or deodorants, and identify any new injuries, scratches, etc.
- Stable ambient room temperature 68-72 degrees F.
- Patient equilibration to the room temperature.
- 5 - 10 minutes to perform exam.



# Thermal Image Report

---

- Your thermal image report is 5-6 pages of full color images with commentary by board-certified thermologists.
- Your report arrives by mail within 3 weeks.
- Please go over the report with your practitioner of choice.
- No physician prescription required as there is no risk from radiation exposure.



# Responding to an Abnormal Screening Exam:

---

- How to respond to an abnormal breast screening test?
  - lump on physical exam,
  - micro-calcification on a mammogram, or
  - suspicious thermal pattern on breast thermogram.
- A Thermography report will sometimes describe thermal asymmetries, but without definite indication of neovascularity. This can be related to fibrocystic changes and/or normal variability, and not necessarily suspicious for cancer, but is still important to monitor for changes. The recommendation will be to have a repeat scan in 3 - 6 months, as opposed to the standard yearly exam.



# Thermogram Report

---

When a Thermogram indicates abnormalities suspicious for neovascularity with clinical correlation suggested, or a mammogram is abnormal, we will often recommend the following actions:

- Breast exam with qualified practitioner, and ...
- Digital Diagnostic Mammogram, and/or
- Breast Ultrasound, and/or
- Breast MRI.



# Needle Biopsy

---

- If further screening or diagnostic test results are positive, a breast biopsy is recommended, and is the only way to define a lesion as cancerous or not.
- Needle biopsies, the most frequently used and accepted test, have recently had their safety called into question. The technique may cause malignant cells to break away from a tumor, allowing it to spread to other areas of the body.



# Needle Biopsy

---

- A recent study showed that needle biopsy increased the spread of cancer by 50% as compared to patients who received an excisional biopsy, or lumpectomy.

“Manipulation of the Primary Breast Tumor and the Incidence of Sentinel Node Metastases From Invasive Breast Cancer”

[Nora M. Hansen, MD; Xing Ye, MS; Baiba J. Grube, MD; Armando E. Giuliano, MD](#)

*Arch Surg.* 2004;139:634-640.



# Needle Biopsy

---

**Results-** Of the 676 cancers, 126 were biopsied by FNA, 227 by large-gauge needle core biopsy, and 323 by **excisional biopsy** before sentinel lymph node dissection. ... the incidence of SN metastases was higher in patients whose cancer was diagnosed by FNA (**odds ratio 1.531**) or large-gauge needle core biopsy (**odds ratio 1.484**) than by excision.

*Arch Surg.* 2004;139:634-640.



# Excisional Biopsy

---

Therefore, an excisional biopsy or lumpectomy is preferred. However, many breast specialists are reluctant to perform an excisional biopsy rather than a needle biopsy due to higher costs.

Your due diligence may require you to seek out a surgeon who agrees to perform a lumpectomy, and assure that your insurance will pay for it. Sometimes a breast MRI will help convince them to do so.



---

# Breast Health Naturally

James Biddle, MD

11-28-07