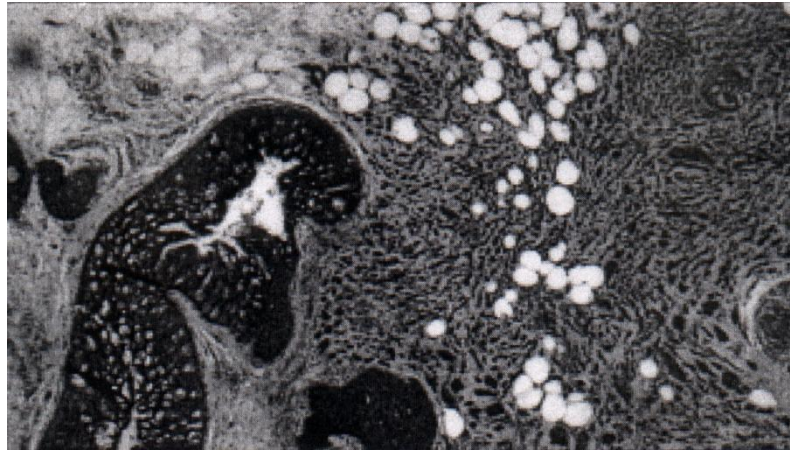


Breast Cancer 101

This presentation provides a basic overview and does not substitute for medical advice. We hope it stimulates further questions and discussion.

Breast Cancer: What Is It?

- ◆ **Many diseases**
- ◆ **Common element: cells growing out of control in the breast**



Is breast cancer always deadly?

- ◆ **Breast cancer in the breast cannot kill**
- ◆ **Metastasis to other organs does**
 - ◆ **Primary sites: liver, bone, brain, lung**
 - ◆ **It's still breast cancer**

Kinds of breast cancer

- ◆ **Invasive**
- ◆ **Inflammatory**
- ◆ **Paget's disease**
- ◆ **In situ**

Invasive Breast Cancer

Capable of spreading beyond the breast

- ◆ **Where did it start?**
 - ◆ ductal (75%)
 - ◆ lobular
- ◆ **What do cells look like?**
 - ◆ affects prognosis
 - ◆ medullary, mucinous, tubular, papillary

Other Kinds of Breast Cancer

- ◆ **Inflammatory (1%)**
- ◆ **Paget's Disease (3%)**
- ◆ **In situ**
 - ◆ **Ductal (2.5%)**
 - ◆ **Lobular (2.5%)**
 - ◆ **Cancer or pre-cancer?**
 - ◆ **Not life-threatening at diagnosis**

Diagnosis

Diagnosis: cells under a microscope

- ◆ **Fine needle aspiration**
- ◆ **Biopsy**
 - ◆ **core needle**
 - ◆ **excision**
- ◆ **Axillary lymph node dissection**
 - ◆ **sentinel node biopsy**

Staging: An imprecise tool

- ♦ **Has or will the cancer spread?**
 - ♦ **Tumor size**
 - ♦ **Number of lymph nodes**
 - ♦ **Metastasis beyond the breast**
- ♦ **Stage 1 is earliest, Stage 4 is latest**
 - ♦ **Combination of TNM**

Moving toward better classification

- ◆ **Hormone status: ER/PR**
 - ◆ **Luminal A and B cell types mostly positive**
- ◆ **Her2/neu: test matters (FISH)**
 - ◆ **Over-expression = aggressive disease**
 - ◆ **Herceptin option**
- ◆ **Basal cell type**
 - ◆ **Aggressive disease – ER/PR neg and Her2 normal – chemo is only current option**

Treatments

- ◆ **Local control: surgery**
 - ◆ Lumpectomy
 - ◆ Mastectomy
- ◆ **Local control: radiation**
- ◆ **Systemic treatment**
 - ◆ **Chemotherapy: fast growing cells**
 - ◆ **Hormonal therapies: targeting estrogen**



Treatments: New Horizons

- ◆ **Biologics: more targeted therapies**
 - ◆ E.g., Herceptin, Lapatanib
 - ◆ Cost, approval standards, who should get them
- ◆ **New hormonal treatments: aromatase inhibitors**
- ◆ **Only clinical trials can determine effectiveness**
 - ◆ Off-label uses

Surviving Breast Cancer

- ◆ **Diagnosis on screening mammogram:
96% alive 5 years later**
- ◆ **Invasive breast cancer can recur at any time**
- ◆ **Survival depends on**
 - ◆ **Stage at diagnosis**
 - ◆ **Aggressiveness of disease**
 - ◆ **Treatment**
 - ◆ **Luck**

For More Information

- ◆ **Breast Cancer Action:** www.bcaction.org
- ◆ **The National Cancer Institute's Cancer Information Service (CIS):** <http://www.nci.nih.gov/>
- ◆ **Dr. Susan Love Research Foundation:** <http://www.dsirf.org/breastcancer/>
- ◆ **Oncolink:** <http://www.oncolink.org>