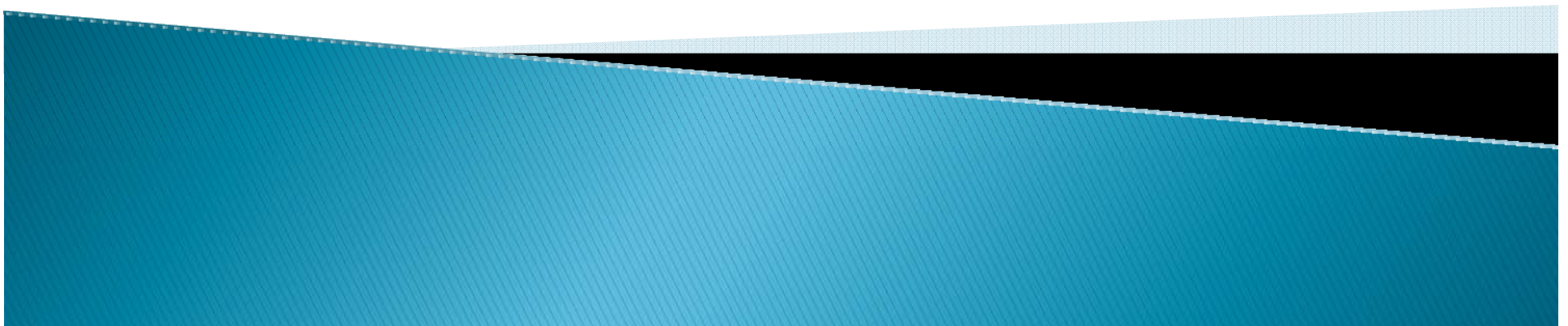


Hiding in Plain Sight: Delayed Care and Breast Cancer Health Disparities

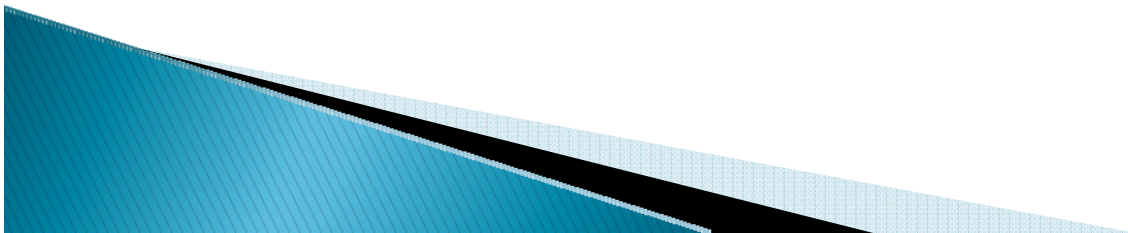
Dr. Lillian Burke, Medical Hematology and
Oncology

Dr. Sloane Burke; Health Education



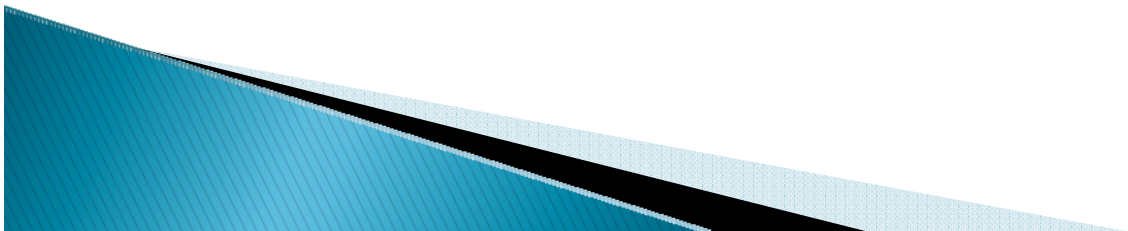
Topics

- ▶ Clinical Case Presentation of Patient with Large Breast Cancer
- ▶ Research on Demographics of Women Presenting with Large Breast Cancers
- ▶ Research on Potential Role of Self-Examination in Identification of Early Breast Cancers



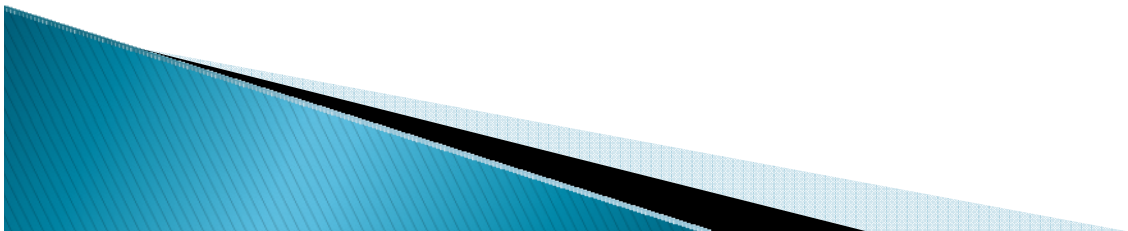
Clinical Summary

- ▶ Presented 10/08
 - 11 cm
 - Fungating Mass
 - Later told MDs that the mass had been growing for 2 years
- ▶ Received Neo–adjuvant hormonal therapy
 - ? Cytotoxic chemotherapy before surgery?
- ▶ Surgery: 3/26/09 (Dr. Bellin)
 - 6 cm tumor;
 - Pathology to be discussed



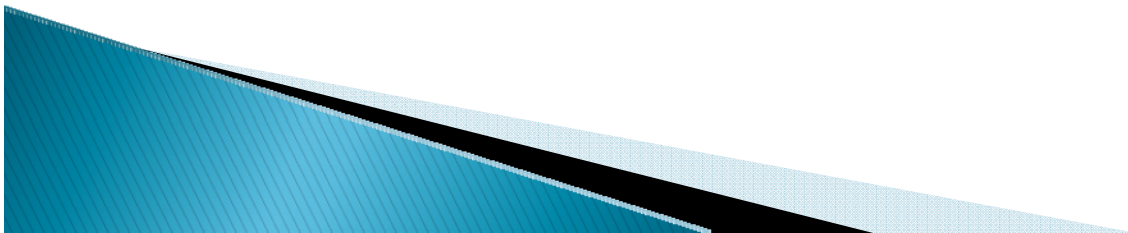
Post-operative Course

- ▶ TMN: Stage IIIB: T4N1M0; *ypT1apN1AM0
 - ▶ 4 cycles of TC (Taxotere: docetaxel + cyclophosphamide)
 - ▶ Radiation to the breast bed + axilla
 - ▶ Hormonal therapy + possible Zometa
- ▶ TMN: Stage IIIB: T4N1M0; *ypT1apN1AM0
 - T4, N0, M0
 - T4: Tumor of any size with direct extension to (a) chest wall or (b) skin, only as described below
 - T4a: Extension to chest wall, not including pectoralis muscle
 - T4b: Edema (including peau d'orange) or ulceration of the skin of the breast, or satellite skin nodules confined to the same breast
 - T4c: Both T4a and T4b
 - T4d: Inflammatory carcinoma
- ▶ T4, N1, M0
- ▶ N1: Metastasis to movable ipsilateral axillary lymph node(s)
- ▶ T4, N2, M0: no metastatic disease



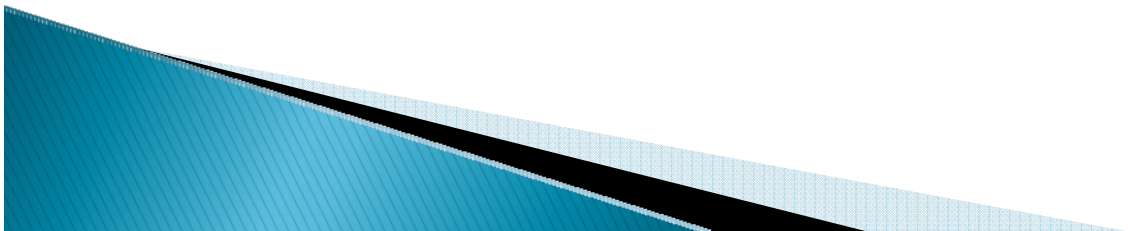
Clinical Summary

- ▶ 11.0 cm tumor, decreasing to 6.0 cm after neoadjuvant Arimidex
- ▶ 3/09: Surgery with Intraductal Carcinoma, papillary type:
 - No lymphovascular invasion
 - Ulcerated tumor; ER+/PR+, her2/neu negative
 - TMN: Stage IIB: 4N1M0; *ypT1apN1AM0
- ▶ Followed by chemotherapy, radiation, and (presumably, at least five years of hormonal therapy).



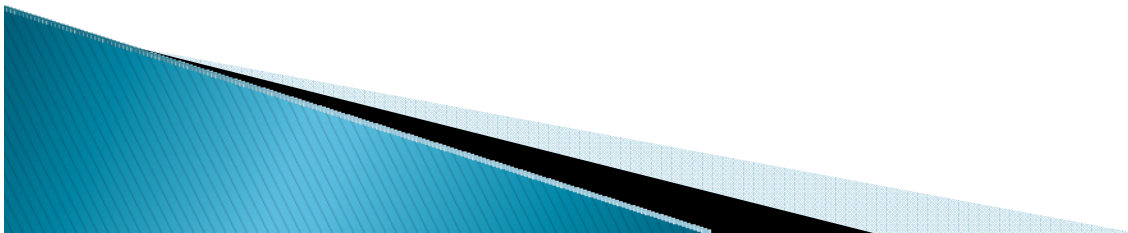
Large Tumors at UHS

- ▶ 178,000 women diagnosed with invasive breast cancer each year in the US
 - 40K will die
- ▶ Incidence of women diagnosed with breast cancer
 - 128 per 100K white women
 - 118 per 100K African American women
- ▶ Age adjusted death rates
 - 24.4 per 100K for white women
 - 33.5 per 100K for African American women
- ▶ Thus, AA women are less likely to be diagnosed but more likely to die from breast cancer.



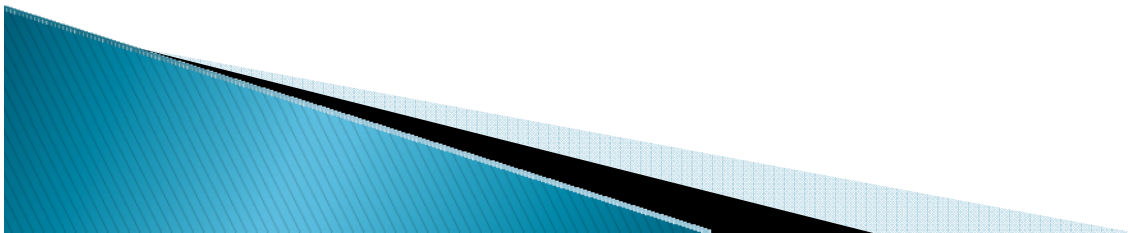
Why Disparities?

- ▶ Not one simple answer and probably multiple contributing causes
 - More aggressive disease?
 - Treatment disparities (not generally shown)
 - Etc.
- ▶ Clinicians here noted an apparently high proportion of large tumors



Very Large Breast Cancer

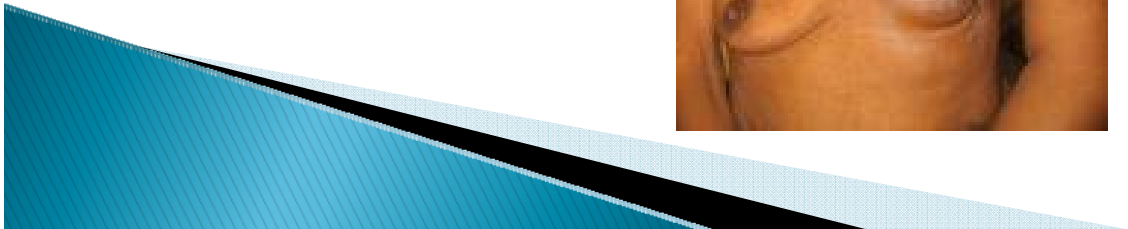
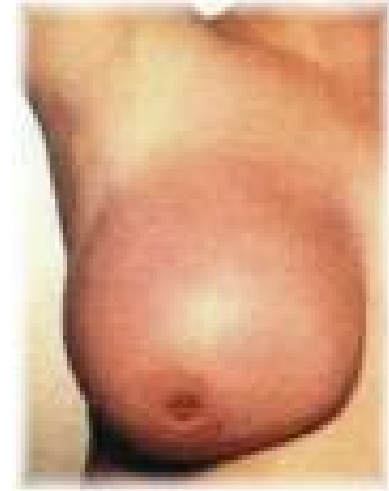
- ▶ Warning



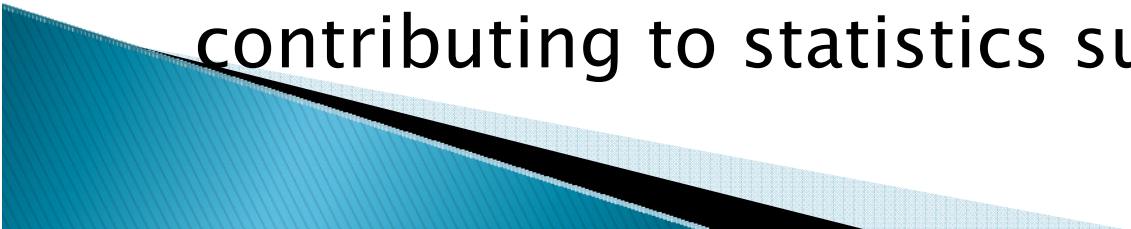
Pictures from Internet



Michelle died of cancer on 12/11/2005.
<http://www.wright.com/area/medical/06.htm>

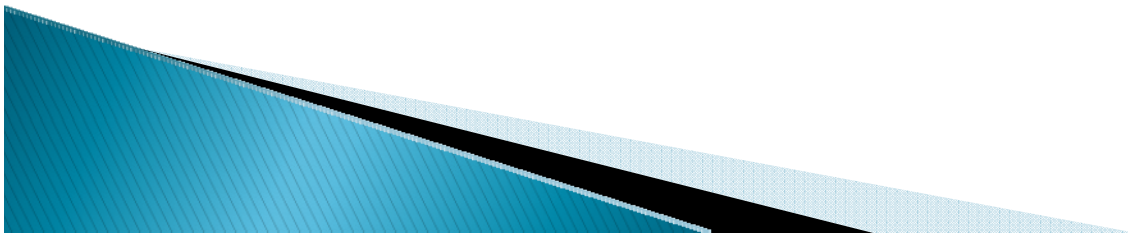


Study to Examine Demographic Characteristics of Women with Large Tumors

- ▶ Dr. Andrea Katz (Rosenberg)
 - ▶ Merrill Brinson
 - ▶ Much help from Dr. Paul Vos (Biostatistics)
 - ▶ Others who have contributed to this or related research:
 - Dr. Bellin
 - Dr. Kraemer
 - Dr. Talente
 - ▶ Department of Internal Medicine and Vice Chancellor of Research under Dr. Lehman for contributing to statistics support
- 

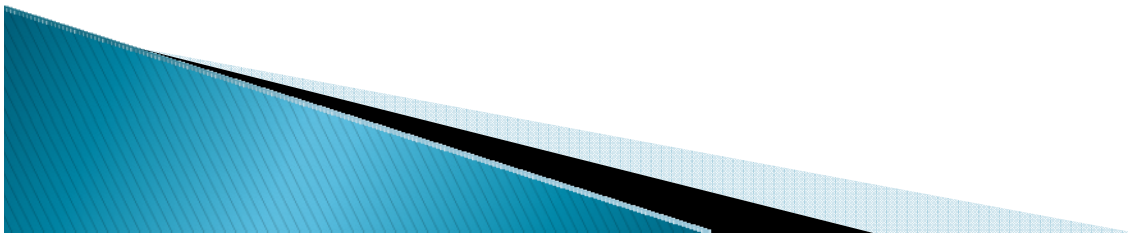
Study Design

- ▶ Question:
 - What are the demographic characteristics of women who present with large breast cancers?
- ▶ Design
 - UHS tumor board
 - Women with tumors ≥ 5.0 cm
 - Examined relationships between tumor size and age, race, marital status, and insurance status.




Results

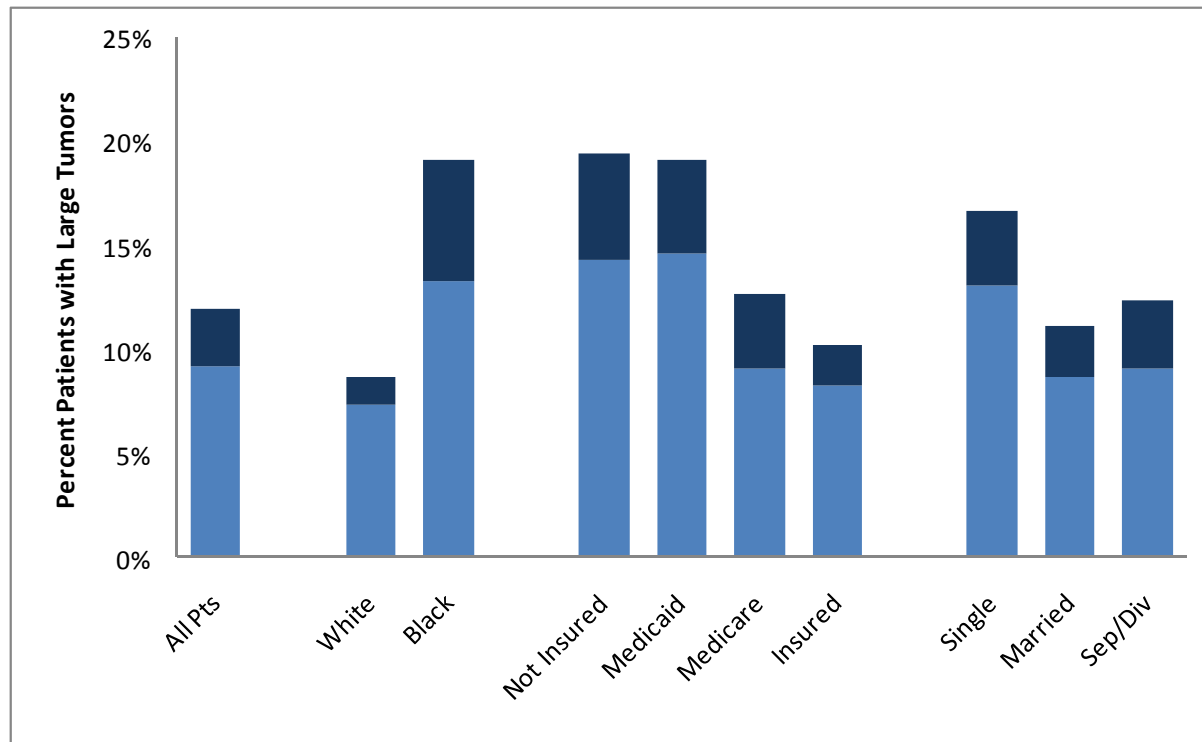
- ▶ As of August 2006, 25,926 patients in registry
 - 1,565 women with first diagnosis of cancer in the years 1999 to 2004, inclusive
 - 32.1% AA; 67.9% White; Hispanic 4%; Native American? Etc.)



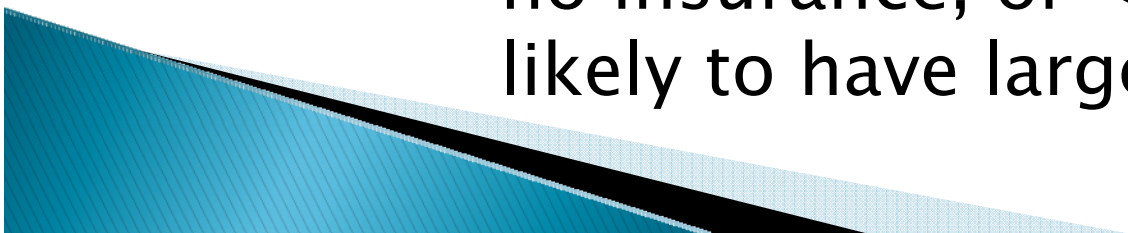
Large Tumors ≥ 5.0 cm

- ▶ 12.0% of all patients (161 women)
 - 82 (19.1%) of AA
 - 79 (8.7%) of White women
 - ▶ Tumors ≥ 10.0 cm
 - 37 women with huge tumors
 - 25% of our study group
 - 25 (30.5%) of the AA patients with large tumors
 - 12 (15.2%) of the White patients with large tumors
 - ▶ Tumors ≥ 25.0 cm in 5 patients
 - 2 AA and 3 W
 - ▶ Note that, for both groups, once the tumor gets large, it may be huge at the time of presentation
- 

Univariate Analysis of Demographic Factors Associated with Large Tumors

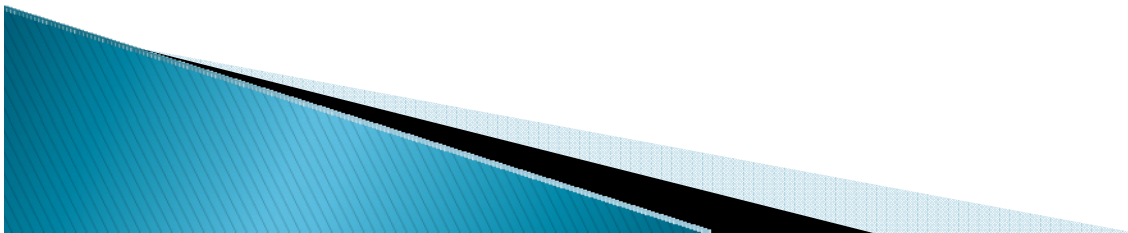


- ▶ AA patients and those with Medicaid, no insurance, or <age 65 were more likely to have large tumors

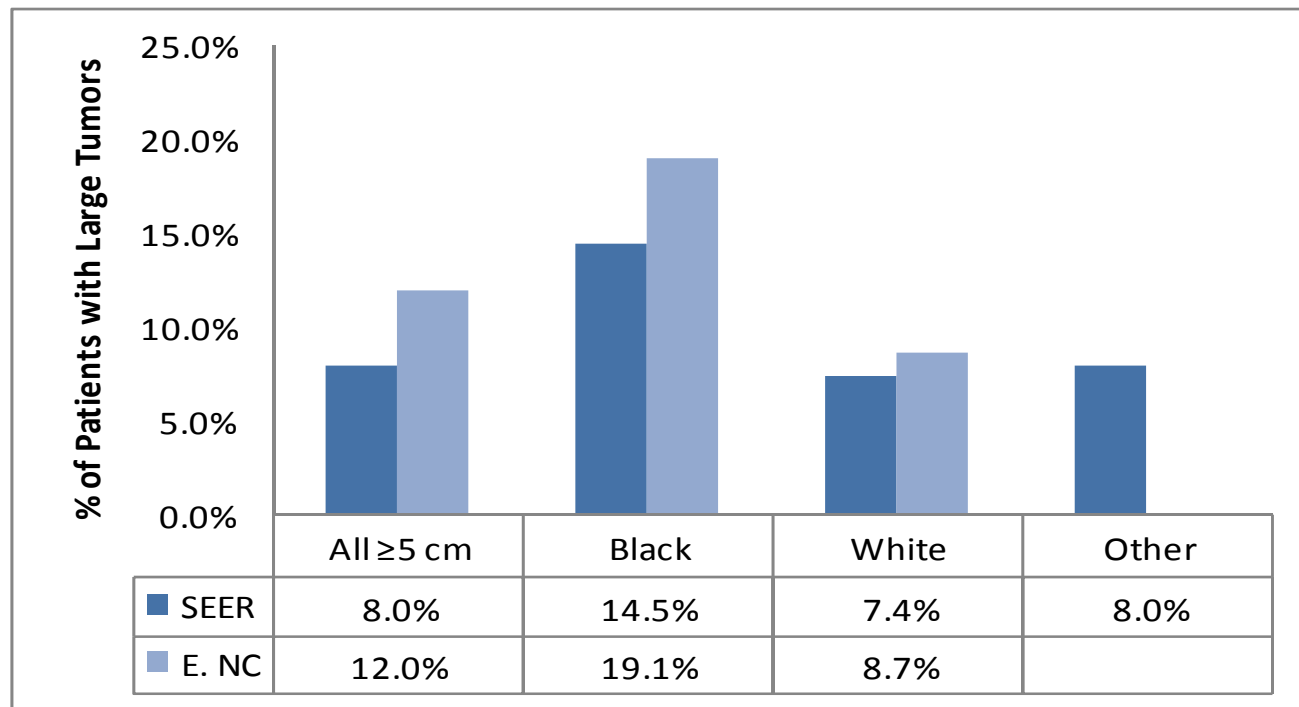


Multivariate Analysis

- ▶ Within insurance groups due to confounding of insurance and race
- ▶ Uninsured Patients
 - AA vs. White only marginally significant
- ▶ Insured Patients
 - AA vs. White is highly significant
- ▶ Medicaid
 - Race not significant but marital status is



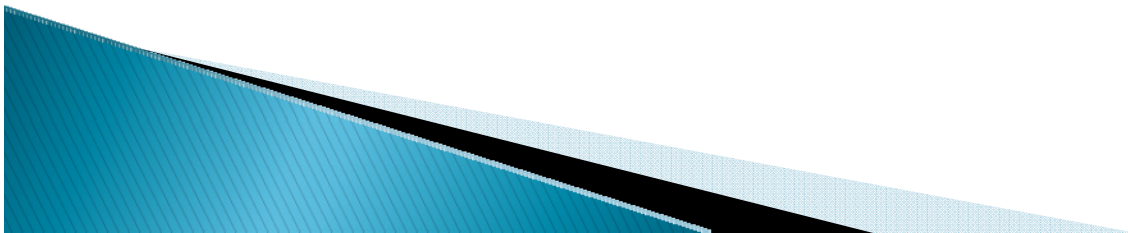
Comparisons with SEER Database



- ▶ In US, almost 20,000 women per year with tumors ≥ 5.0 cm
- ▶ Significant Public Health Problem

Why does it matter?

- ▶ Poor survival
- ▶ May be difficult or impossible to control the tumor locally
- ▶ Suffering in the last months of life:
 - Tumor necrosis
 - Pain due to erosion into chest wall
 - Odors which lead to embarrassment and social isolation

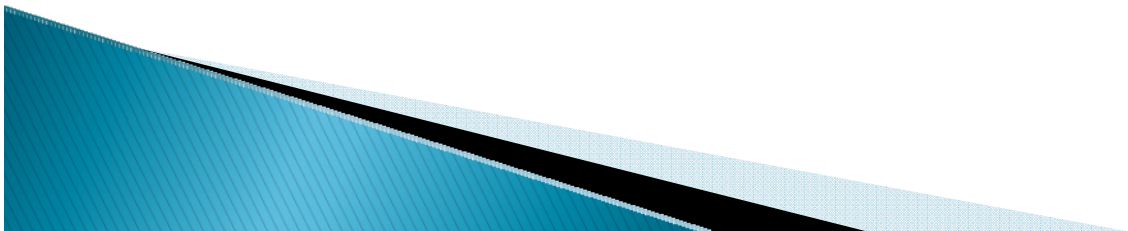


SELF EXAM IS THE MOST COMMON METHOD OF BREAST CANCER IDENTIFICATION

»» Andrea Katz MD and Lillian
Burke MD
Statistics: Paul Vos, Ph.D.

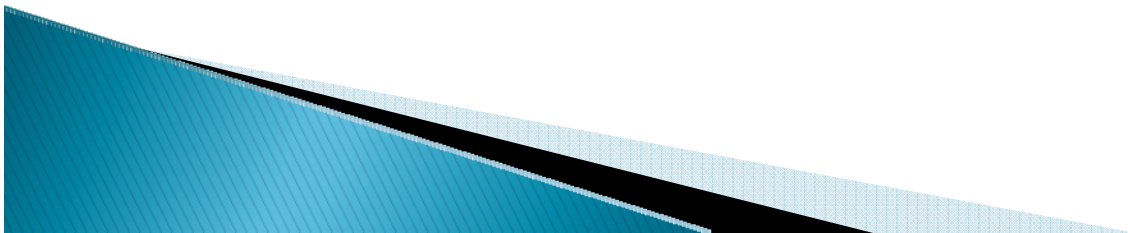
Background

- ▶ Breast cancer survival is improved by early diagnosis.
- ▶ The role of self-exam as an adjunct to screening mammography has been questioned as some studies suggest that self-examinations lead to unnecessary diagnostic procedures without improving survival.



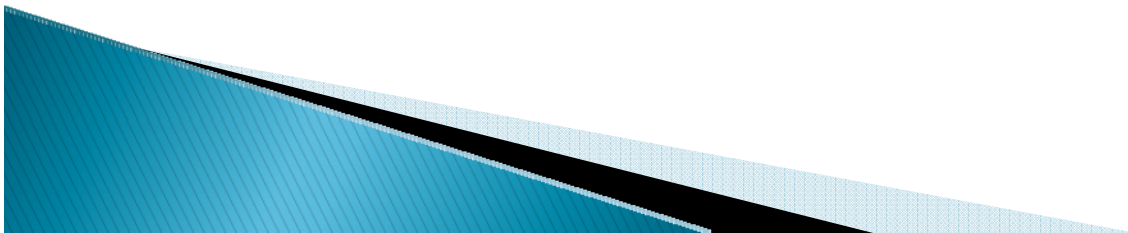
Methods

- ▶ Patients who had been diagnosed with breast cancer and who were attending a university-based cancer clinic were interviewed
- ▶ structured questionnaire,
- ▶ Goal: determine the way in which their breast cancers were first identified
- ▶ Inference was conducted using exact methods (Clopper–Pearson intervals for proportions and Fisher’s test for odds ratios).



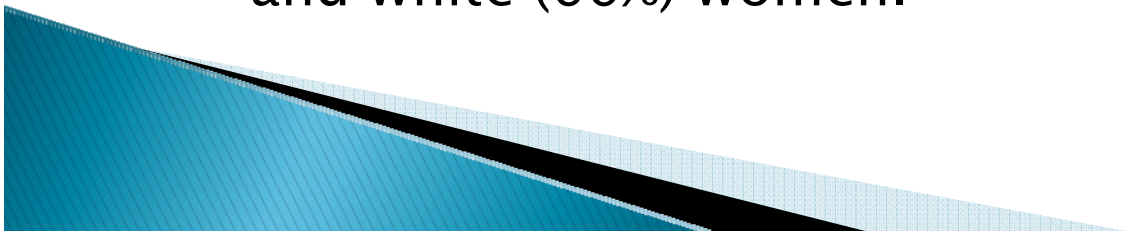
Method of Identification

- ▶ mammogram in 16% of women, by
- ▶ provider in 9%, by the
- ▶ spouse in 2%.
- ▶ Seventy-five percent (95% CI=61% to 85%) of patients first identified their tumors by self exam.



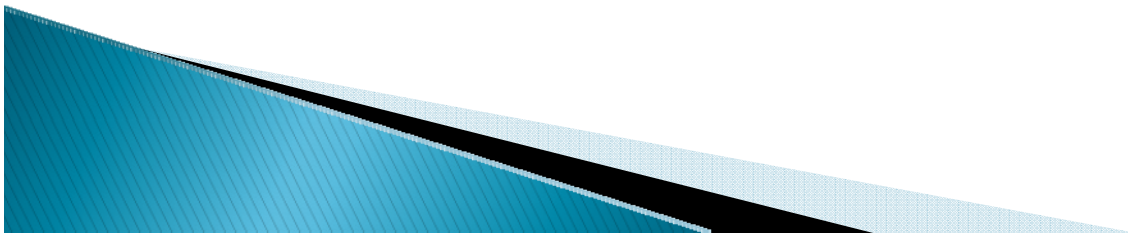
Demographics of Self-Identifiers

- ▶ Self-identifiers occurred in all demographic groups.
- ▶ Type of Insurance
 - Private insurance (68%),
 - Medicare (60%),
 - Medicaid (100%), or
 - no insurance (85%);
- ▶ Education:
 - 77% with college education and
 - 75% with high school;
- ▶ Income levels: e.g:
 - 79% with annual incomes of <\$10K and
 - 73% with incomes >\$50K; and among both black (91%) and white (66%) women.



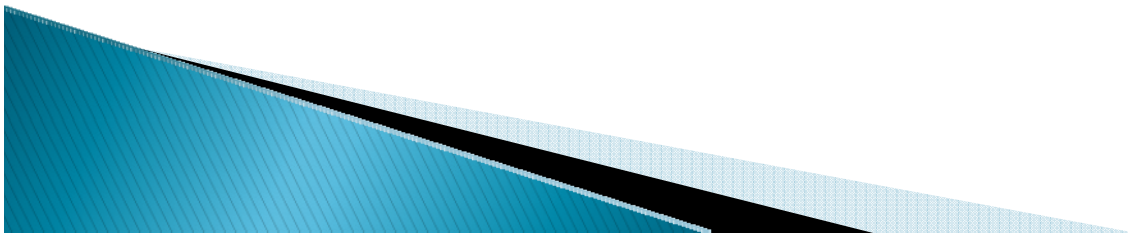
Mammography

- ▶ Of the women who reported both regular mammograms and regular self-examination:
 - (N=35), 77% (95% CI=60 to 90%) were self-identifiers.
- ▶ Cancers found by mammography were more likely to be \leq Stage I than were those identified by self-examination
 - (Odds ratio=3.9, 95% CI .9 to 17.5, p=.047).



Conclusions on Self-Exam

- ▶ Most breast cancers (75%) were found by self-examination,
- ▶ True even among women who had regular mammography.
- ▶ No demographic factor predicted mammography as the primary method of tumor identification.
- ▶ These findings suggest that self-examination remains an important method of breast cancer identification.



Future Plans

- ▶ Narrative Study using techniques of Qualitative Research
- ▶ Collaborators:
 - Drs. Sloane Burke, Lisa Campbell, Suzanne Lea, Lloyd Novick
- ▶ Opening for Collaborators for Future Projects
- ▶ burkel@ecu.edu

