Today's symposium is sponsored by Med-IQ in collaboration with the Chicago Breast Cancer Quality Consortium.

ACKNOWLEDGMENT OF COMMERCIAL SUPPORT
This activity is supported by an educational grant from sanofi-aventis U.S.

We acknowledge generous funding from Susan G. Komen for the Cure Foundation to establish and operate the Chicago Breast Cancer Quality Consortium, facilitating the Consortium's mission to eliminate racial health disparities in breast cancer in Chicago.
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Activity Planners: Allison Gardner, PhD, Sara Miller, MS, Danielle Dupuy, MPH

Please see syllabus for full faculty information
Learning Objectives

- Recognize the racial disparity in breast cancer mortality in the United States and potential causes, especially those related to the healthcare system
- Identify health-system factors that may exacerbate this problem in Chicago by evaluating differences in breast cancer outcomes among black and white women
- Interpret quality clinical-care data with respect to breast cancer screening and treatment
- Review new and/or less commonly understood clinical-care methods, practices, or topics around breast cancer within participants’ respective fields
- Identify system barriers and best practices related to data collection, screening mammograms, breast cancer treatment, and timeliness of care, as well as other areas related to breast care in the clinical setting
- Describe methods for disseminating data-collection best practices to organizations where improvement in this area is needed

Statement of Need

Despite substantial efforts to increase the availability of screening mammograms that can lead to the earlier detection of breast cancer, the gap between the mortality rates for women of different races continues to widen. Specifically, in the United States (US), a black woman with breast cancer is approximately 38% more likely to die from her disease than a white woman with a similar diagnosis. In Chicago, the disparity is even greater, and the most recent data indicate a 116% difference in the mortality rates between women of these races. Additional studies have shown that the recent growth in these disparities is largely due to an almost 50% decrease in mortality rates for white women, but virtually no change in the mortality rates for black women.
Statement of Need (cont.)

The Chicago Breast Cancer Quality Consortium is a quality-improvement project initiated by the Metropolitan Chicago Breast Cancer Task Force to reduce these alarming disparities. The goal of the Consortium is to bring metropolitan Chicago healthcare institutions together to collect and analyze data on quality measures in breast-cancer screening and treatment, report the results back to the institutions, and assist institutions in acquiring the resources needed to improve quality of care and eliminate quality deficits. Approximately 75% of metropolitan Chicago hospitals have agreed to participate. The Consortium has recently completed the first year of data collection around three major areas: screening rates and quality, treatment quality, and the ease at which patients with breast cancer are able to navigate the healthcare system.

Activity Overview

This symposium is designed to disseminate information to care teams participating in the Chicago Breast Cancer Quality Consortium’s quality improvement (QI) project. In addition to discussions regarding the aggregate results of year-1 data assessing breast cancer screening and treatment, participants will be encouraged to discuss best practices and continued challenges in providing optimal breast cancer screening and treatment to all women, as well as processes for assessing those services. These discussions will serve as the foundation for both collaboration between institutions and the impetus to implement QI interventions, with the ultimate goal of reducing the alarming mortality disparities for women living in metropolitan Chicago who are diagnosed with breast cancer.
Target Audience

This activity is intended for family practice/general practice physicians, hematologists/oncologists, internal medicine physicians, medical directors, nurses, hospital QI and senior leadership, radiologists, radiologic technologists, breast-care coordinators, and cancer registrars.

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Ruta D. Rao, MD
Consulting fees/advisory boards: Genentech
Fees received for promotional/non-CME activities: Genentech, sanofi-aventis U.S.

Gene R. Solmos, MD
Consulting fees/advisory boards: Ethicon Endo-Surgery, Inc.

The following faculty have indicated no real or apparent conflicts:

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The activity planners (Allison Gardner, PhD, Sara Miller, MS and Danielle Dupuy, MPH) and the other employees of Med-IQ and the Chicago Breast Cancer Quality Consortium have no financial relationships to disclose.

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Achieving Quality in Breast Cancer Treatment

Ruta Rao, MD
Rush University Medical Center
Basic Premise

• We, as hospital and healthcare staff, are in the service industry
• As representatives not only of ourselves but of our professions and the institutions we work for, we have a responsibility to uphold quality standards for the well being of the people we serve

Elements of Quality
Breast Cancer Care

• Understanding and implementing treatment guidelines and knowledge about literature
• Appropriate and effective communication with patients and staff
• Sensitivity and understanding of patient barriers to treatment adherence
Elements of Quality

- Understanding and implementing treatment guidelines and knowledge about literature
- Appropriate and effective communication with patients and staff
- Sensitivity and understanding of patient barriers to treatment adherence

Trends Since 1950 in Age-Standardized Death Rates of Selected Types of Cancer

Major Players in Quality Guidelines

- National Comprehensive Cancer Network (NCCN)
- American College of Surgeons (ACS)
  - Commission on Cancer (CoC)
- National Quality Forum (NQF)
- American Society of Clinical Oncology (ASCO)
  - National Initiative on Cancer Care Quality (NICCQ)

Breast Cancer Treatment Standards / Guidelines
(NCCN / ASCO / NQF)

- Radiation therapy is administered within 1 year of diagnosis for women under age 70 receiving breast-conserving surgery
- Combination chemotherapy is considered/administered within 4 months of diagnosis with AJCC T1c, stage II or III hormone-receptor–negative breast cancer
Breast Cancer Treatment Standards / Guidelines (NCCN / ASCO / NQF)

- Tamoxifen or 3rd-generation aromatase inhibitor is considered or administered within 1 year of diagnosis for women with AJCC T1c or stage II or III hormone-receptor–positive breast cancer
- HER2 status should be determined for all invasive breast cancer
- Trastuzumab is considered/administered in women with HER2+ breast cancer*

* Not yet formally endorsed by cancer quality entities, but generally accepted practice according to clinical trial successes


Measures Simplified

Treatment measures
- Percentage of invasive–breast-cancer patients with breast-conserving surgery who go on to receive radiation therapy
- Percentage of hormone-receptor–positive, invasive cancers treated with hormonal therapy
- Percentage of HER2+ invasive cancers treated with trastuzumab
- Percentage of patients treated within 30 days of diagnosis
Radiation Therapy: Evidence

• Local excision with radiation therapy produces equivalent results in terms of survival when compared with mastectomy
• For women who are treated with breast-conserving surgery
  – The most common site of local recurrence is the conserved breast itself
  – The risk of recurrence in the conserved breast is substantial (> 20%)
• In a meta-analysis of more than 25,000 women, the risk of local recurrence was reduced from 26% to 7% with the use of radiation therapy
• The breast cancer mortality at 15 years was reduced from 50% to 45%


Hormonal Therapy: The Evidence

ER+ women with hormonal therapy
• 5 years of adjuvant tamoxifen reduces the annual risk of recurrence by 40%
• 5 years of adjuvant tamoxifen reduces the annual breast cancer death rate by 31%, irrespective of the use of chemotherapy and age

Effects of Hormonal Therapy on Recurrence and 15-Year Survival

Breast Cancer Recurrence
- Control (no adjuvant tamoxifen)
- About 5 years of tamoxifen

<table>
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<th>Years</th>
<th>Recurrence (%)</th>
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<tr>
<td>5</td>
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<td>15</td>
<td>45.0%</td>
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15-year gain 11.8% (SE 1.3)
Logrank 2P < 0.00001

Breast Cancer Mortality
- Control (no adjuvant tamoxifen)
- About 5 years of tamoxifen

<table>
<thead>
<tr>
<th>Years</th>
<th>Mortality (%)</th>
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<td>0</td>
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</tr>
<tr>
<td>5</td>
<td>17.8</td>
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<tr>
<td>10</td>
<td>25.7</td>
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<tr>
<td>15</td>
<td>34.8%</td>
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</tbody>
</table>
15-year gain 9.2% (SE 1.2)
Logrank 2P < 0.00001

N = 10,986 women: 20% ER-unknown, 30% node-positive. Error bars are ±1SE

Early Breast Cancer Trialists’ Collaborative Group

HER2 Overexpression in Breast Cancer

- HER2/neu is a member of a family of genes encoding transmembrane receptors for growth factors (includes EGFR, HER2, HER3, and HER4)
- Normal cells have approximately 20,000 to 50,000 HER2 receptors
- Amplification of HER2 in some breast cancer tumors results in up to 2,000,000 HER2 receptors (10-100x amplification)
- These tumors are more aggressive and are often associated with worse overall survival
- HER2 is overexpressed in approximately 25% of breast cancers

Trastuzumab

- Has been studied in the adjuvant setting in more than 10,000 patients with early stage breast cancer
- 1 year of trastuzumab therapy has been shown to:
  - Decrease the rate of breast cancer recurrence by ~40%-50%
  - Significantly reduce the risk of breast cancer death

Interactions Between Trastuzumab and Tumor Cells

**Trastuzumab Cardiotoxicity**

- Boxed warning: cardiomyopathy
- Cardiac dysfunction and CHF incidence higher than expected
  - Up to 4% incidence in adjuvant trials
  - Incidence greater with concomitant anthracycline chemotherapy
  - Long-term implications less clear than those of anthracycline-induced cardiotoxicity
- Asymptomatic declines in LVEF much more common
- Cardiac damage manifests as late sequential stress when used following an anthracycline


**Timeliness in Breast Cancer Treatment: A Different Type of Measure**

- Variation in the literature regarding treatment delay
  - Depends on stage, size, and other characteristics of the breast cancer
  - Depends on whether the delay is from diagnosis to recommended surgery or to the initiation of adjuvant/neoadjuvant therapy
  - Literature supports that outcomes are affected negatively in treatment delays of 3 months or more (from symptom to treatment)
- Based on IBCCP program goals
  - 60 days between initial screening and definitive diagnosis
  - 30 days between definitive diagnosis and initiating treatment
  - 90 days between screening and treatment*
Tailored to the Patient

- Every patient has a different set of circumstances
- Treatment regimens need to be tailored to the person
- Critically think about standards as they apply to the patient population
  - Age
  - Comorbidities
  - Socioeconomic factors
  - Social situation

When Tailoring Treatment Does Not Meet Benchmarks

- If your patient population is ____, benchmarks may not accurately reflect quality
  - Awareness of exceptions in standards and how they apply to your patient population
What Is Involved in Quality Treatment?

• Understanding and implementing treatment guidelines and knowledge about literature
• Appropriate and effective communication with patients and staff
• Sensitivity and understanding of patient barriers to treatment adherence

Quality Care

Patient

Effective Communication

Staff

Provider
Patient-Provider Communication

Effective communication is not that the doctor has told the patient, but rather that the patient understands

- The language of medicine
- Sensitivity

Provider-Staff Communication

- Work as a team
- Respect
- Trust
- Understand each other’s role
Staff-Patient Communication

• Facilitate the transfer of information from doctor to patient
• Staff help create the atmosphere that the patient is in while receiving and dealing with breast cancer treatment

A Patient’s Role in Quality Care

• Encourage patients to ask questions
• Patients should be vocal about concerns with care and reactions or effects of treatment
• A patient’s full disclosure to the doctor is necessary for optimal care
What Is Involved in Quality Treatment?

• Understanding and implementing treatment guidelines and knowledge about literature
• Appropriate and effective communication with patients and staff
• Sensitivity and understanding of patient barriers to treatment adherence

Barriers to Treatment

• Misconceptions and lack of knowledge
• Fear of the unknown
  – Breast cancer
  – Treatment
  – Death
• Trust
  – Typically takes time
  – Affects adherence
Barriers to Treatment

- Support system
- Knowledge base
- Language barriers

Case Study: CH

- 49-year-old African-American woman who presented in May 2005 with a palpable mass in her left breast; biopsy confirmed cancer, and she underwent a mastectomy
  - The tumor was ER/PR negative and HER2 positive
  - She was not interested in pursuing any adjuvant therapy
Case Study: CH

• Came back to clinic in 2007 when she had new masses on her left chest wall
• Excision of these showed recurrent breast cancer
• No other evidence of metastatic disease
• Was seen in clinic and offered chemotherapy + trastuzumab and radiation
• Refused all treatments

Case Study: CH

• Presented to ER multiple times in early 2009 with chest-wall pain
• Work up led to a diagnosis of metastatic breast cancer: multiple chest-wall masses, pleural and pericardial effusions
• Was on significant doses of morphine for pain control
Case Study: CH

• After much persuasion, finally agreed to start trastuzumab + radiation therapy in April 2009
• Tolerated it well and responded with a decrease in the size of masses
• Was able to stop taking all pain medications

Case Study: CH

• In August 2009, progressed again with disease on left chest wall, right breast, and right axilla
• Refused to believe it was breast cancer, insisted on a biopsy of her right breast to prove it (it was the same breast cancer)
• Recommended adding chemotherapy to trastuzumab; patient refused
Case Study: CH

- In January 2010, CH agreed to chemotherapy
- Had immediate response with decrease in masses on exam
- Now feels great
- Has volunteered to help other patients who are resistant to initiating treatment

Future Directions

- Monitoring clinical standards
  - Chemotherapy
  - Age-appropriate treatment plans
- Monitoring process
  - Cancer committee presence and involvement
  - Patient satisfaction
  - Team building
  - Ongoing staff education/training
What Does It Take to Overcome Barriers to Treatment?

- Multi-faceted approach
  - Following clinical standards
  - Customer-service values
- Multi-disciplinary team
  - “It takes a village”
- Beyond quality standards to best practices
  - Willing to think outside of the box
  - Tailor to the individual
  - Commit to progress

This activity was available for credit to only the healthcare professionals who attended the live symposium on June 2, 2010.

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