Fear Of Breast Cancer Recurrence: A Medical Oncologist’s Perspective

Shail Maingi, MD
Attending Hematologist-Oncologist
St. Mary’s Cancer Treatment Center
12/10/15
OF COURSE!!!
Objectives

• An oncologist perspective on the proven risk factors for breast cancer recurrence:
  – What is recurrent breast cancer?
  – What do we know?
  – How we determine what is a risk factor for recurrence?
  – What you should know
Breast Cancer Incidence

• 230,000 newly diagnosed invasive breast cancers + 60,000 carcinoma in situ annually in the US

• 2.8 million breast cancer survivors/thrivers

• 1 in 8 of all women (12.5%) develop invasive breast cancer

• 1 in 36 of all women die from breast cancer (3%)
Do We Have An Epidemic Breast Cancer In The West?

- 1970: 68,000 new breast cancer cases a year
- 2014: 230,000 new cases
Statistically... No, But It Feels Like It

**Change in incidence of cancer over time**

- Increased cases from increased screening
- After 2000, decreased incidence once hormone replacement therapy no longer prescribed
Good News: Even As The Number of Cases Increased, Mortality Decreased
Regardless of Stage Women Are Unlikely To Die From Breast Cancer
And Survival Is Improving With New Treatments...
Why Did I Get Breast Cancer?

And, am I still doing it ... ?
Why Did I Get Breast Cancer?

• What are the risk factors?
  – Personalized
    • Obvious
    • Unknown

THESE DO NOT CAUSE BREAST CANCER

CAFFEINE  DEODORANT  MICROWAVES  CELL PHONES  CONTACT WITH SOMEONE WHO HAS CANCER
### Risk and protective factors for developing breast cancer

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Low risk</th>
<th>High risk</th>
<th>Relative risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deleterious BRCA1/BRCA2 genes</td>
<td>Negative</td>
<td>Positive</td>
<td>3.0 to 7.0</td>
</tr>
<tr>
<td>Mother or sister with breast cancer</td>
<td>No</td>
<td>Yes</td>
<td>2.6</td>
</tr>
<tr>
<td>Age</td>
<td>30 to 34</td>
<td>70 to 74</td>
<td>18.0</td>
</tr>
<tr>
<td>Age at menarche</td>
<td>&gt;14</td>
<td>&lt;12</td>
<td>1.5</td>
</tr>
<tr>
<td>Age at first birth</td>
<td>&lt;20</td>
<td>&gt;30</td>
<td>1.9 to 3.5</td>
</tr>
<tr>
<td>Age at menopause</td>
<td>&lt;45</td>
<td>&gt;55</td>
<td>2.0</td>
</tr>
<tr>
<td>Use of contraceptive pills</td>
<td>Never</td>
<td>Past/current use</td>
<td>1.07 to 1.2</td>
</tr>
<tr>
<td>HRT (estrogen + progestin)</td>
<td>Never</td>
<td>Current</td>
<td>1.2</td>
</tr>
<tr>
<td>Alcohol</td>
<td>None</td>
<td>2 to 5 drinks/day</td>
<td>1.4</td>
</tr>
<tr>
<td>Breast density on mammography (percents)</td>
<td>0</td>
<td>≥75</td>
<td>1.8 to 6.0</td>
</tr>
<tr>
<td>Bone density</td>
<td>Lowest quartile</td>
<td>Highest quartile</td>
<td>2.7 to 3.5</td>
</tr>
<tr>
<td>History of a benign breast biopsy</td>
<td>No</td>
<td>Yes</td>
<td>1.7</td>
</tr>
<tr>
<td>History of atypical hyperplasia on biopsy</td>
<td>No</td>
<td>Yes</td>
<td>3.7</td>
</tr>
</tbody>
</table>

### Protective factors

<table>
<thead>
<tr>
<th>Protective factors</th>
<th>Low risk</th>
<th>High risk</th>
<th>Relative risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast feeding (months)</td>
<td>≥16</td>
<td>0</td>
<td>0.73</td>
</tr>
<tr>
<td>Parity</td>
<td>≥5</td>
<td>0</td>
<td>0.71</td>
</tr>
<tr>
<td>Recreational exercise</td>
<td>Yes</td>
<td>No</td>
<td>0.70</td>
</tr>
<tr>
<td>Postmenopause body mass index (kg/m²)</td>
<td>&lt;22.9</td>
<td>≥30.7</td>
<td>0.63</td>
</tr>
<tr>
<td>Oophorectomy before age 35 years</td>
<td>Yes</td>
<td>No</td>
<td>0.3</td>
</tr>
<tr>
<td>Aspirin</td>
<td>≥Once/week for ≥6 months</td>
<td>Nonusers</td>
<td>0.79</td>
</tr>
</tbody>
</table>

HRT: hormone replacement therapy.
Levels of Evidence In Research

• Ia - Evidence from Meta-analysis of Randomized Controlled Trials
• Ib - Evidence from at least one Randomized Controlled Trial
• IIa - Evidence from at least one well designed controlled trial which is not randomized
• IIb - Evidence from at least one well designed experimental trial
• III - Evidence from case, correlation, and comparative studies.
• IV - Evidence from a panel of experts
Breast Cancer Recurrence

• Cancer coming back after treatment and after a time when the cancer is not detected

• Different Types of Recurrence:
  – Local
    • Risk Factors: treatment a
  – Regional
  – Distant

• Sometimes a new breast cancer

• Different than progression of cancer
Fear of Uncertainty Is Natural

• “what ifs”:
  • Will it come back?
  • What are the chances it will come back?
  • How will I know if it has come back?
  • What will I do if it comes back?
  • When will it come back?

• Support is available

• Talking to your doctor is very important because the answers are both very individualized and nonspecific
What Do We Know About Recurrence Risk Factors?

- Tumor
- Stage
- Treatment
- Noncompliance with treatment
- Obesity/Body mass index
- Exercise
- Alcohol
- Diabetes / prediabetes, uncontrolled insulin levels
- Genetic Syndromes*
- Other Medical Problems: HIV, immunosuppression
- Smoking
Evidence for Definitive Risk Factors

Mature Analysis From the Women’s Intervention Nutrition Study (WINS) Evaluating Dietary Reduction and Breast Cancer Outcomes

Eligibility Criteria:
- Women 48-79 years
- Early breast cancer
- Primary surgery ± RTx
- Systemic therapy (ER+: tamoxifen/chemotherapy; ER−: chemotherapy)
- Dietary fat intake > 20% of calories

Randomization 60:40 within a year from primary surgery

Random: Dietary intervention: reduced fat intake (n = 975)
Control (n = 1462)

Primary Endpoint: Relapse-free survival
Some Evidence Supporting a Risk Factor

- Study limitations:
  - Alcohol
    - One observational study following 1897 women during their first two years after completing breast cancer treatment.
    - There is consistent evidence that breast cancer risk is higher for women consuming both low (<1 drink/day) to high (≥3 drinks/day) levels of alcohol compared with abstainers.
    - There appears to be a dose response relationship beginning with intakes as low as three to six drinks per week.

- Smoking
  - Mixed results in observational studies.
No Clear Evidence: Hair Dyes

• Because early hair dye formulations contained chemicals that were found to cause cancer in animals, manufacturers changed the ingredients in hair dye products to eliminate some of these chemicals in the mid- to late 1970s.

• Some studies have indicated that people who began using hair dyes before 1980 have an increased risk of developing non-Hodgkin lymphoma.

• The evidence for increased risks of other cancers from hair dye use is limited and conflicting.
No Clear Evidence: Continued

- Deodorants
- Soy Products
  - “Although there is no convincing evidence that soy affects the risk of recurrence, the theoretical risk that phytoestrogens could stimulate the growth of hormonally sensitive cancers raises the concern that high soy intake could be dangerous. Thus, moderation of soy intake is generally suggested.”

- Genetically Manipulated Foods
- “Many complementary mistletoe, high doses of vitamins, and trace elements like selenium, zinc, and copper remains uncertain”
  - Under investigation (Google: MSKCC and CAM)
### Guidelines for Lifestyle Modifications to Reduce the Risk of Recurrent Breast Cancer

| Diet and Weight | • Weight and weight gain may be associated with higher rates of breast cancer recurrence especially in
| | - Those who have never smoked
| | - Premenopausal women
| | - Women who were normal weight at diagnosis
| | - Women with early stage cancers
| | • Some studies have shown that a diet high in fat may be associated with an increased risk of recurrence
| Exercise | • Regular moderate exercise may improve survival, particularly in women with hormone receptor–positive tumors
| Alcohol | • Limited alcohol consumption is recommended by the NCCN to promote a healthy lifestyle

GeneDc Syndromes

Should I get tested?

5%-10% of breast cancers diagnosed in the US are association with a known (obvious) genetic syndrome:

- BRCA testing recommended in specific circumstances
- Genetic Testing and Counseling Available

- Early onset breast cancer (diagnosed before age 50)
- Two primary breast cancers, either bilateral or ipsilateral
- Family history of early onset breast cancer
- Male breast cancer
- Personal or family history of ovarian cancer (particularly nonmucinous types)
- Ashkenazi (Eastern European) Jewish heritage in the setting of a newly diagnosed breast cancer
- or family history of breast cancer
- A previously identified BRCA1 or BRCA2 mutation in the family
- “Triple negative” (ER-, PR-, Her2 normal) breast cancer diagnosed prior to age 60.
- Pancreatic cancer associated with a family history of hereditary breast and ovarian related
High-Rate of Long Term Breast Cancer Survival for Those Who Have Undetectable Breast Cancer after Treatment

There are an estimated 2.5 million breast cancer survivors in the United States

<table>
<thead>
<tr>
<th>Years After Diagnosis</th>
<th>Patients Alive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>90</td>
</tr>
<tr>
<td>10</td>
<td>81</td>
</tr>
<tr>
<td>15</td>
<td>74</td>
</tr>
</tbody>
</table>

Overall Survival From Breast Cancer Is Improving

5-Year Relative Survival Rate for Breast Cancer

Autonomy and Collaboration: Survivorship Care Is Evolving

- Prevention: Recurrence, new cancers, late effects
- Surveillance: Recurrence, second cancers, and assessing medical and psychosocial late effects
- Intervention: Treating the consequences of cancer and its treatments
- Coordination: Interdisciplinary coordination between PCPs and specialists

ASCO Survivorship Care Plan

Follow-Up Care | Providers to Contact
--- | ---
Medical history and physical examination | • First 5 years  
• Year 6+
Posttreatment mammography | • First 5 years  
• Year 6+
Breast self-examination | • N/A
Pelvic examination | Ob/gyn
Coordination of care | • First 5 years  
• Year 6+
Genetic counseling | If indicated, based on risk factors

**Follow-Up Care**

<table>
<thead>
<tr>
<th>Visit Frequency</th>
<th>Visit Frequency</th>
</tr>
</thead>
</table>
| Medical history and physical examination | • Years 1 to 3: every 3 or 6 months (including key notes for 1st-year visits)  
• Years 4 to 5: every 6 or 12 months
Mammography | • Every 6 or 12 months as indicated
Notes | • May include any relevant patient notes and/or education

ASCO Treatment Plan and Summary

![Breast Cancer Adjuvant Treatment Plan and Summary](http://www.asco.org/ASCOv2/Practice+26+Guidelines/Quality_Care/Quality_Measurement%26amp;Improvement/Chemotherapy_Treatment_Plans_and_Summary_Assess)

- **Name, age, contact information**
- **Breast cancer diagnosis**
- **Surgery (type/dates)**
- **Patient history, including comorbid conditions**

- **Adjuvant chemotherapy/radiation therapy (planned and received)**
  - Details on agents/doses prescribed (dates initiated/completed)
  - Toxicities (anticipated, experienced)

- **Overview of page 2 (not shown)**
  - Hormonal therapy (agent, duration, date to be initiated)
  - Trastuzumab (dates, ejection fraction)
  - Provider contacts (including referrals)
  - Pre- and posttreatment comments (eg, baseline assessments, patient counseling, follow-up recommendations)

Reproduced with permission from the American Society of Clinical Oncology.
Conclusion: There Is A Lot You Can Do

• Exercise
• Avoid Obesity
• Take your medicines
• Come to appointments and ask to be seen if you are concerned
• Moderate Alcohol Intake
• Genetic Testing if appropriate
• Avoid excess soy (in theory)
• HEALTH PROMOTION
  • Helps with mental and physical well-being
    – Smoking cessation, stress relief, emotional well-being
Thank You!
Any Questions?

Our Mission
To promote thrivership, educational initiatives related to cancer for both the community and healthcare providers, access to lymphedema management, and to support fundraising efforts to sustain the viability of the fund.