

Early breast cancer are we making progress

MARY JO K VOELPEL, DO, FACOI, FACNM, MA, CS

CLINICAL ASSOCIATE PROFESSOR

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CHEMOPREVENTION

1. begin conversation with healthy lifestyle

2. discuss exercise, weight, diet

3. What are modifiable risks?

- ▶ BREAST CANCER IN WOMEN IS NOW SECOND ONLY TO SKIN CANCER
- ▶ We use sunscreen to prevent and/or minimize skin cancer, but
- ▶ What do we do preventatively for breast cancer.

- ▶ As a society we are changing our estrogen window and increasing our risk factors for breast cancer.
- ▶ 1. earlier menses
- ▶ 2. delaying having children or not having children
- ▶ 3. exposure to more carcinogens
- ▶ 4. alcohol
- ▶ Obesity, inactivity, genetics, irradiation to chest wall before age 30

WHAT DO WE CONSIDER AS CHEMOPREVENTION

- ▶ Bench work has been done over the past 20 years looking at retinoids and how they regulate the estrogenic effect of cell proliferation and apoptosis. Animal model trials have looked at combinations of tamoxifen, retinoids, and trastuzumab (if cells were HER-2-neu +)
- ▶ Tamoxifen/retinoids provided excellent control a brief summary of some of the data is in
- ▶ Simeon, AA, Tari, A. “How Retinoids regulate breast cancer cell proliferation and apoptosis” *Cell Molecular Life Sci* 2004, 61:1475-84.
- ▶ Tamoxifen is still currently the standard to reduce risk of developing breast
- ▶ Cancer in selective high risk groups

Breast Cancer Risk Assessment

- ▶ Six risk factors
 - ▶ 1. age
 - ▶ 2. age at menarche
 - ▶ 3. age at first live birth
 - ▶ 4. number of breast biopsies
 - ▶ 5. hx of atypical hyperplasia
 - ▶ 6. # of first degree relatives with breast cancer

- ▶ White Females—what about other ethnicities and born outside of US/BRCA

Risk factors-Gail Model

- ▶ If a woman's risk is over 1.7% over 5 years-discuss modifiable risk factors
- ▶ If a woman's risk is over 3% over 5 years-recommend therapy
- ▶ If a woman's risk is 10% over 10 years-recommend therapy
- ▶ Remember that breast cancer is hormone dependent-consider all sources of access to hormones-fat cells, adrenals, liver breakdown of testosterone, etc.
- ▶ If a 78 year old woman can expect to live another 10 years, why not reduce her risk of breast cancer by 52%
- ▶ The estrogen window of a woman's life is the telling story in the majority of cases
- ▶ Refer to NCCN.org for extensive references, guidelines, and printable patient education...it's free

IS MAMMOGRAPHY THE BEST EARLY DIAGNOSTIC TOOL

- ▶ WHEN DO WE START-AGE 40, IF THERE IS A FAMILY HX OF BREAST CANCER IN THE EARLY 40'S, THEN NEXT GENERATION SHOULD BEGIN AT 35.
- ▶ Do we stop mammography after the age of 70?
- ▶ How do we manage dense breast tissue results-how does this hamper early diagnosis

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- ▶ Surgery becomes the next clinical issue
- ▶ Needle aspiration of suspicious area?
- ▶ Excisional bx?
- ▶ Do we recommend lumpectomy and sentinel node bx
- ▶ Do we discuss mastectomy preventatively, curatively, as part of treatment plan for cancer?
- ▶ What about reconstruction-when, how, why.

What are the 5 subtypes of breast cancer via genetic profiling

- ▶ 1. Luminal A: express cytokeratins 8 & 18, have the highest level of estrogen receptor expression, and are low grade..good outcome
- ▶ 2. Luminal B: cells of luminal epithelial origin but gene expression is different and less favorable prognosis
- ▶ 3. Normal breast like: the gene profile is similar to nonmalignant cells and have variable prognosis based on gene expression
- ▶ 4. HER2 amplification: previously this carried a poor prognosis but with targeted therapies such as trastuzumab the outcome is good.
- ▶ 5. Basal: now referred to as triple negative disease that tends to have a poor prognosis they tend to be high grade

- ▶ Ref:Longo.Dan, Harrison's Hematology and Oncoogy 3rd edition p529-539.

What is low grade Luminal A breast cancer

- ▶ Age over 55
- ▶ 30-40,000 women annually diagnosed
- ▶ ER>1% or PR>20% HER2-neg
- ▶ Ki67 of 13.25% or less
- ▶ Tumor size 1.1cm mean
- ▶ Node negative
- ▶ Hormone therapy alone-do they need radiation

LUMINA TRIAL

- ▶ Inclusion-women over 55 with all characteristics of lumina A breast cancer
- ▶ One arm of trial provides hormones
- ▶ One arm is irradiation
- ▶ How do you advise a patient who comes to you and says “The Oncologist said I didn’t need any further treatment, I am cancer free, take this pill everyday for 5 years.” Then I get a call that says I may need irradiation would you consider going on a trial where you are randomized to either receive RT or not? I thought I was cancer free
- ▶
- ▶ Axelrod, Deborah, “Luminal A Trial”HemOnc toay, August 2022, pg 32.

- ▶ IS LESS MORE?
- ▶ WHAT IS TOO MUCH
- ▶ AT WHAT AGE DO WE STOP
- ▶ THE 92 YO HAS A RIGHT TO SAY I AM NOT DOING ANYTHING



