Breast Cancer: Common Questions with Answers for the Internist

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My patient has breast cancer...

- Shouldn’t she be getting chemotherapy?
- What about her muscle/joint aches now on her anti-estrogen?
- Does she still need mammograms and tumor markers with labs?
- Can she use vaginal estrogen?
My patient doesn’t yet have breast cancer…

- But her mom (or sister) did, what should I do?
- Should she have genetic testing?
- How often and how long does she need mammograms?
- What about this weird biopsy she had (atypical hyperplasia, LCIS)?

Breast Cancer: basics....
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• 85-90% cases are thought to be sporadic

• 10-15% Familial

• BRCA represents only 3-4% of all breast cancers, more genes being discovered

• Any family history common

Adjuvant therapy:
Shouldn’t she be getting chemotherapy?

Chemotherapy is determined based on....

• Biology supersedes Stage (although stage still matters)
  – ER+ vs. ER-
  – HER2+ vs. HER2-
  – Pre-menopausal or not

• Genomic assays used more frequently then ever: OncotypeDX, Mammaprint, Prosigna, more
  – Only appropriate in ER+, Her-2 negative patients
  – Ideally for Lymph node negative
  – Some data in 1-3 LN involved POST-menopausal
**Adjuvant therapy:**

Shouldn’t she be getting chemotherapy?

**Chemotherapy most often for:**

- Pre-menopausal, Lymph node positive
- Estrogen-negative cancer, over 1 CM (LN or not)
- Her-2-neu positive cancer, over 1 CM (LN or not)

Use OncotypeDX (or mammaprint/Prosigna) for

- Estrogen positive, LN negative, any age. High score portends more/any benefit to chemo
- Estrogen positive, LN positive, post-menopausal, 1-3 nodes, low score implies little value to chemo

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**My patient is on an anti-estrogen...**

And has joint pain, hot flashes, vaginal dryness, muscle aches, fatigue, insomnia....

Adjuvant anti-estrogen therapy for all ER+ invasive breast cancers

**TAMOXIFEN** for pre-menopausal and peri-menopausal

**Aromatase Inhibitors** (AIs) for

Fully Post-Menopausal Women

(Anastrozole/Arimidex, Letrozole/Femara, Exemestane/Aromasin)
Impact of Exercise on AI-Induced Joint Pain

Changes in (A) worst pain, (B) severity, and (C) interference

Breast Cancer Screening

- The most effective screening method is mammography
- It is 90% accurate
- Recent work examining breast density as a factor in risk and efficacy
Breast Cancer Screening: Survivors

- Breast conserving surgery patients: Yearly mammogram with diagnostic mammogram for first 2 years, generally
- Mastectomy patients, no imaging on that side, yearly on contralateral if they have a breast
- ASCO Chose Wisely DOES NOT recommend tumor markers in cured breast cancer on any regular/routine basis

Vaginal Estrogen in Survivors

- There maybe small systemic absorption but it also may be very transient
- No proven risk of increased recurrence
- Lots of proven benefit to quality of life
- Ongoing work with DHEA/testosterone
- Non-hormonal trials as well like hyalogyn
Breast Cancer: Risk Factors

- Family history of breast cancer is common
- In all women with breast cancer, 15-20% have some family history
- RISK of breast cancer from a family member
  - One 1st degree relative, risk= 1.8x
  - Two 1st degree relatives, risk= 2.93x
The risk ratios are highest for women with young affected relatives

Clemons et al, 2001 NEJM

My patient has a family history...

- Assess her other risk factors like
  - Parity, Age at first OR last childbirth
  - Obesity
  - Alcohol consumption
  - Use of hormone replacement after menopause

There are several ‘risk models' that incorporate family history. They are not very accurate.
http://www.cancer.gov/bcrisktool
**Who should I send to genetics: Cancer Risk Assessment?**

**BRCA Testing Criteria:**

- Known BRCA mutation in relative
- Breast cancer <45
- Ovarian cancer at any age
- Male breast cancer
- Bilateral breast cancer if the first cancer is <50
- Triple negative breast cancer <60
- Breast cancer 46-50 if +family hx of BC <50, or ovarian cancer, male breast cancer
- Breast cancer >50 if 2 relatives with BC or combo of breast and/or male breast cancer or ovarian cancer
- Family history only in some circumstances
- Ashkenazi Jewish heritage + personal or family history of breast/ovarian cancer

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**Breast Cancer Screening**

My patient is more than average risk:

- Yearly mammogram, tomosynthesis preferred
- Stop when she would be too sick/old for surgery
- Discussed risk reduction
- Send to our high risk clinic! 215-7920

Does she need an MRI?
Screening: MRI

- **You should get yearly MRI:** (Evidence based)
  - BRCA mutation carrier
  - First degree relative of BRCA carrier, but untested (50% risk)
  - Lifetime breast cancer risk >20-25%, as defined by models that are largely dependent on family history (Claus)
  - Start by age 30, not before age 25

Screening: MRI

- **You should get yearly MRI** (Consensus opinion)
  - Radiation to the chest between ages 10-30 (start 8 years post-radiation but not before 25)
  - Carriers of other hereditary breast cancer syndrome gene mutations (Cowden, Li-Fraumeni, ?CHEK2, PALB2?)
Screening: MRI

- **Insufficient evidence** to recommend for or against screening breast MRI
  - Lifetime risk 15-20% using models dependent on family history
  - LCIS which is now LIN (lobular intraepithelial neoplasia)
  - Atypical ductal or lobular hyperplasia (which is also now LIN)
  - *Dense breasts on mammography*
  - **Personal history of breast cancer or DCIS**
- **Recommend against** screening breast MRI
  Women with <15% lifetime risk

Breast Cancer Prevention

- Chemoprevention in breast cancer
- Women who are at higher than average risk can reduce their risk by 50-60% by taking tamoxifen for 5yrs
- Evidence for exemestane and anastrozole as well

My patient had a biopsy with:

- LCIS (lobular carcinoma in situ),
- LIN (lobular intraepithelial neoplasia,
- ADH (atypical ductal hyperplasia, 
- ALH (atypical lobular hyperplasia, 
- atypical papillary lesion, radial scar, 
- sclerosing papillary lesion with atypia.....

Send them for full excision with surgeon
Send then then to high risk clinic

Conclusion/Questions

We are the center of hope.