

# ADDRESSING THE LONG-TERM EFFECTS OF TREATMENT FOR YOUR YOUNG BREAST CANCER PATIENTS

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Lori Ranallo, RN, MSN, APRN-BC, CBCN  
Breast Cancer Survivorship Nurse Practitioner  
University of Kansas Cancer Center  
Kansas City, Kansas

- I have no conflict of interest with the information provided.
- I have been compensated by LBBC to present the information today.

# Breast Landscape



- A woman born today has about a 1 in 8 chance of being diagnosed with breast cancer at some time during her life
- 29% of all cancers diagnosed in 2014 are breast cancer
- 231,840 new cases of invasive breast
- 60,290 additional cases of in situ breast cancer
- 40,290 women are expected to die from breast cancer
- In 2015, about 2,350 men will be diagnosed with breast cancer and 440 men will die from the disease.
- Majority of patients have early stage and 80% will achieve extended survivorship

# Breast Cancer Survivorship

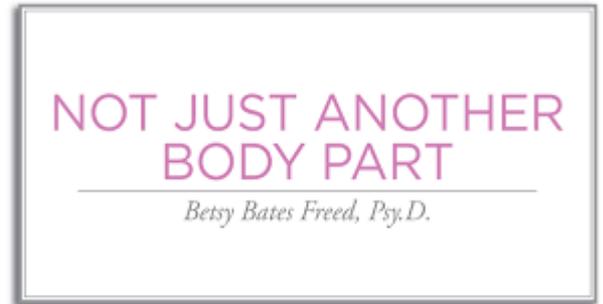
- 3.1 million US women living with breast cancer history
- Women < 39 account for 5-6% (~15,000) of all breast CA patients, however, their cancers are typically more aggressive and side effects more profound (NIH, 2016)



|                            |                      |
|----------------------------|----------------------|
| Body image                 | Fear of recurrence   |
| Lymphedema                 | Early menopause      |
| Insomnia/sleep disturbance | Secondary malignancy |
| Osteoporosis               | Cardiac disease      |
| Peripheral neuropathy      | Adherence to therapy |

<https://seer.cancer.gov/about/news/breast>

# Alterations in Body Image



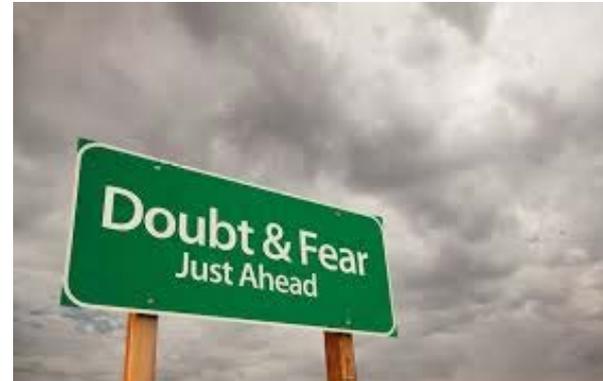
- Hair loss during chemotherapy
- Loss of breast tissue with surgery
- Between 25-33% of breast CA survivors have concerns over body image and appearance changes; highest number in younger breast patients < 40 years of age
- Radiation scarring; darkened or hard skin
- Volume loss of one breast causing asymmetry
- Mastectomy with/without reconstruction
- Lack of skin sensitivity
- Lymphedema (SLNBX 5-8% and ALND 30-40%)
- Pain (breast/chest wall/arm)

# Strategies for alterations in body image



- Close connection to sexuality
- Open, honest communication between HCP/patient and encourage between patient/caregivers
- Education regarding hair loss, body changes and setting realistic expectations
- Identify network for post-operative support
- Frequent screening using validated tools (BIBCQ; Body Image after Breast Cancer Questionnaire or FSFI; Female Sexual Function Index)
- Referral to psychology and/or psychiatry
- Reconstruction revision or prosthesis or asymmetry
- Early intervention of lymphedema and continued screening

# Fear of Recurrence



- Phases of breast cancer survival:
  - Acute (diagnosis – 6 months); active planning, frequent visits
  - Chronic (treatment 6 months – 2 years); still short term visits with team
  - Extended (observation 2 years – 5 years); less contact with team, no active surveillance. This phase is where fear of recurrence is most prominent (especially in younger women diagnosed before age 40)

# Fear of recurrence



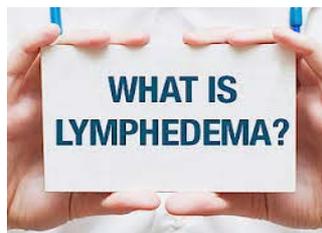
- Patients may feel “dropped” by HCP in survivorship
  - One study with as many as 90% of breast cancer survivors reporting inadequate support (Matthews, 2016).
  - This perceived lack of support, increases anxiety regarding fear of recurrence (Koch et al. 2014).
- The fear of recurrence and perceived lack of support often leads to reduced well-being and decreased quality of life (Ogden, 2004).
- Risk of recurrence is based on many factors:
  - Size of tumor, age at diagnosis, treatment received
  - Lymph node involvement, extracapsular extension
  - Prognostic markers (ER/PR, HER-2)
  - Proliferation rate (Ki-67)

# Strategies for fear of recurrence

- Continued observation; assure them you are available
- Build a trusting relationship with the patient and family
- Good communication between primary care and oncology
- Clear plan for follow-up (ie; SVR care plan)
- Educate patient on signs or symptoms to report
- Develop good listening skills; be familiar with differential diagnoses and refer to specialist when appropriate
- Empower patient to utilize risk reduction life style behaviors to put them back in control
  - Community resources
  - Exercise classes/nutrition/weight loss
  - Adherence to therapy
  - Refer to psychology/psychiatry when necessary



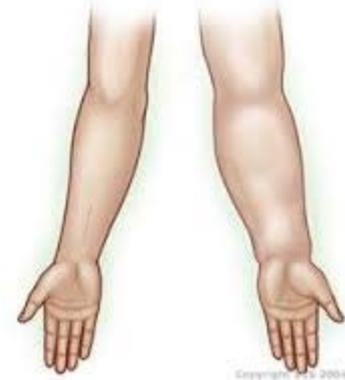
# Lymphedema



- 3 - 5 million patients in the USA suffer from lymphedema, with a significant proportion who developed the disease as a consequence of cancer or its treatment
- In oncology, the most common etiology for the development of lymphedema is the disrupted flow of lymph fluid through the draining lymphatic vessels and lymph nodes, usually as a consequence of surgery and/or radiation therapy.
- Without intervention lymphedema can lead to:
  - Progressive swelling
  - Fibrosis of the tissues
  - Neurologic changes (e.g., pain and/or paresthesia)
  - Infection
- Early identification of the signs and symptoms of lymphedema should be integral to the management of all patients who have received surgery and/or radiation, and are high risk. When treated in the earliest stages, complications of this condition may be minimized.

# Strategies for lymphedema

- Educate the patient regarding risk (surgery/XRT/obesity/injury/trauma/infection/extreme overuse)
- Try to prevent the problem; identify the condition early
- Initiate therapy; monitor for worsening of symptoms
- Be familiar with resources for your patient:
  - Cancer Care Organization
    - <http://www.cancercare.org/tagged/lymphedema>
  - National Lymphedema Network
    - <http://www.lymphnet.org/resources>
  - Lymph Notes
    - <http://www.lymphnotes.com/resources.php>
  - Lymphatic Network
    - <http://lymphaticnetwork.org>



# Fertility

- Menopause in the US (~51); cancer treatments in young women (< 40) may adversely affect their fertility and induce premature menopause.
- Fertility and family planning are major concerns for young women with breast cancer.
  - Some studies: fertility is the most difficult and emotionally challenging issue; which is complicated by limitations of the data, particularly with regards to predicting fertility as well as safety of intervention.
  - Fertility after some treatments are possible and the patient may be interested in having a future biologic child.

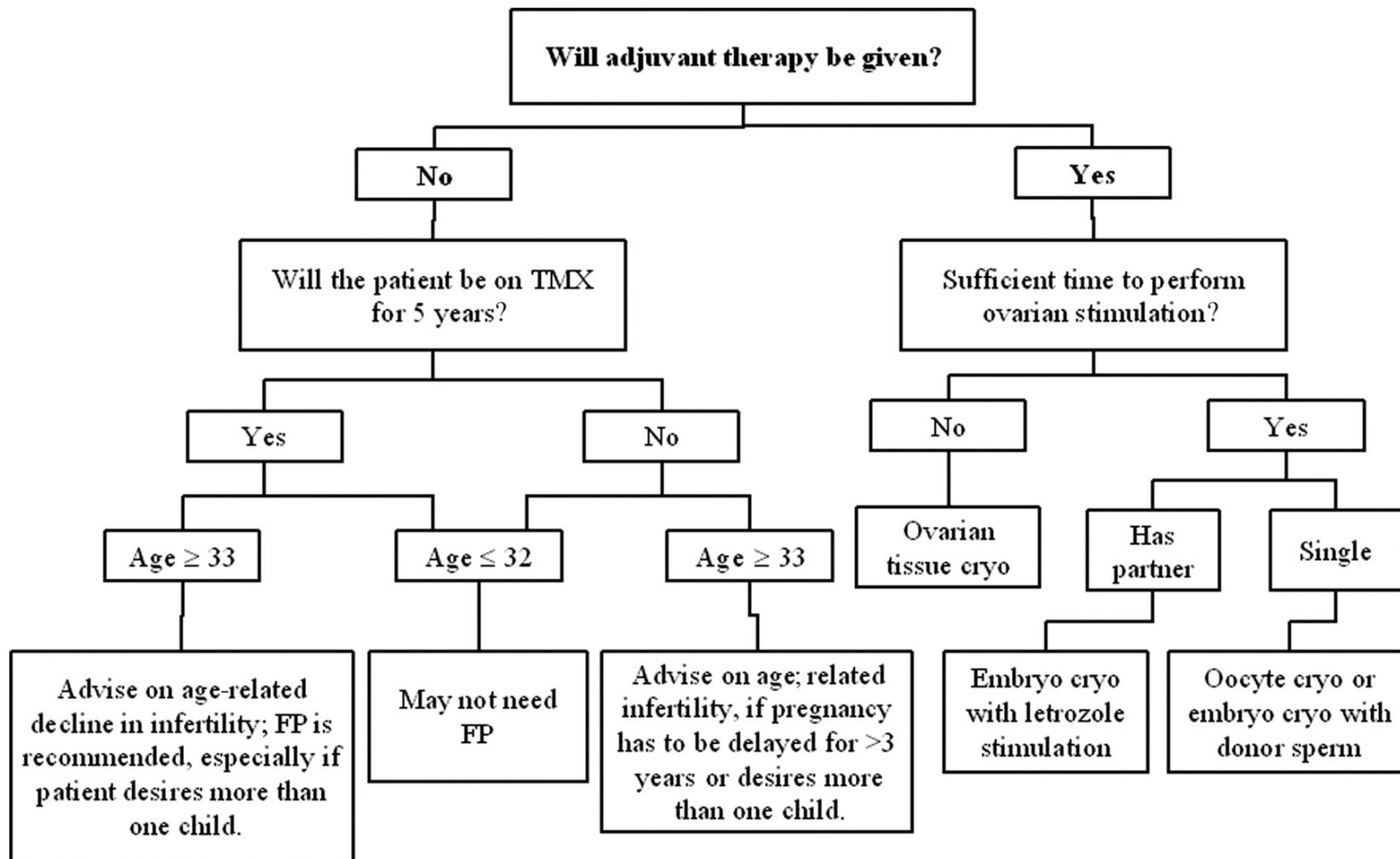


# Strategies for fertility



- Discussion of these issues at diagnosis is critical and understanding your patients interest in future fertility
- Educating the patient regarding risk of amenorrhea as well as premature menopause is very important.
- Pregnancy is prohibited during active treatment of breast cancer so effective contraception is recommended:
  - Exogenous hormonal contraception is generally contraindicated in breast cancer survivors and alternative strategies (i.e. barrier methods such as condoms, cervical diaphragm and copper IUDs, or male contraception) should be considered

# A proposed algorithmic approach to decision making for fertility preservation in breast cancer patients.



Murat Sonmezer, and Kutluk Oktay *The Oncologist* 2006;11:422-434

# Early Menopause



- Premature menopausal symptoms may include:
- Vasomotor symptoms, sleep disturbance, fatigue and weight gain as well as sexual dysfunction – all of which can be very distressing for young women
- Bone health: bone loss due to hormone depletion

# Strategies for Early Menopause

- Pharmacological therapy:
  - Antidepressants: Citalopram (Celexa) 10mg daily, Venlafaxine (Effexor) 75mg daily, Paroxetine (Paxil) 10mg daily
  - Clonidine 0.1mg daily
  - Gabapentin 300-900mg daily
- Non-pharmacological therapy:
  - Acupuncture: 2 times weekly x 4 weeks, then weekly x 8 weeks
  - Hypnosis: Three 1-hour inductions (1 week apart) and home audio (CD)
- Lifestyle modification
  - Avoid ETOH
  - Weight management





# Insomnia or Sleep Disturbance

- Twice as prevalent among breast cancer survivors as those in the general population
- Common in all breast cancer survivors, however younger survivors <50 report these issues more when compared to older survivors
- Young survivors <50, comprises 25–30 % of breast cancer survivors in the USA
  - Loss of sleep may increase:
    - Time away from work
    - Relationship and sexual difficulties
    - Struggles with child-rearing





"A cure for insomnia is a good night's sleep."

# Strategies for Insomnia Sleep Disturbances



- Pharmacological prescription:
  - Benzodiazepines (Restoril, Xanax)
  - Anti-depressants (Trazodone, Remeron)
  - Sedative hypnotics (Ambien, Lunesta, Sonata)
- Pharmacological OTC:
  - Anti-histamines (Benadryl, Unisom)
  - Melatonin
- Sleep hygiene
- Cognitive behavioral therapy

# Secondary malignancies/late effects

- Genetic predisposition:
  - BRCA (breast, ovarian, melanoma)
  - CDH1 (gastric, breast)
  - CHEK2 (breast, colon, prostate)
  - pTEN (breast, Cowden syndrome)
- Risk is small:
  - MDS (anthracycline)
  - Congestive heart failure (anthracycline/radiation therapy)
  - Contralateral breast cancer
  - Hypothyroidism (radiation)
  - Osteoporosis (AI, steroids)



# Screening for Secondary Malignancies

- Follow guidelines
  - Continue screening mammogram/ultrasound
  - Colonoscopy age 50
  - Lung screening with low-dose CT chest in smokers
  - Dermatology evaluation of changing moles
- Educate patient regarding life-style modification
  - Limit alcohol consumption
  - Practice sensible exposure to the sun
  - Reduce environmental hazards
  - Not smoking
  - Weight management
  - Exercise



# Osteoporosis – thinning of bone

- T-score compares to expected for age group
- Normal (-1.0 and above 0.5)
- Osteopenia (-1.0 to -2.4)
- Osteoporosis (-2.5 and below)

## STAGES OF OSTEOPOROSIS

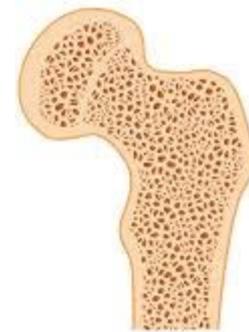
**NORMAL BONE**



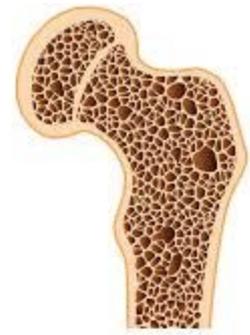
**OSTEOPOROSIS**



**SEVERE OSTEOPOROSIS**



Healthy bone



Osteoporosis



# Strategies for Osteoporosis

- The FRAX® tool is a tool to estimate risk of fracture
  - Postmenopausal
  - Osteopenia
  - Not previously on a medication regimen for osteoporosis
- Vitamin D supplementation
- Bisphosphonate therapy (Fosamax, Actonel, Boniva, Reclast) or Rank-ligand inhibitor (Prolia)
- Weight bearing exercise
- Treat at risk patients (AI therapy) with medication for prevention

# Cardiac disease



- Cardio-toxic chemotherapy
  - LVSD/HF (anthracyclines)
    - May lead to cardio-myocyte apoptosis and necrosis; cumulative and dose-dependent
    - 10-50% of patients, generally within first year
    - Early asymptomatic loss of LV function may progress over time (years) to symptomatic heart failure
    - More common in women >65
  - LVSD/HF (HER2-antagonists)
    - 14% systolic HF or cardiomyopathy over 3 years of F/U
    - LV function assumed to be reversible and not related to cumulative dose but to number of treatment sessions

# Cardiac disease

- Radiation therapy (especially left-sided)
  - Risks are > in women with CVD risk factors
  - Pericardial DX, cardiomyopathy, PVD
- Endocrine and anti-angiogenic therapy
  - Tamoxifen
    - Low cardiovascular risk; caution in patients with increased thrombotic and CVD risk, as tamoxifen may increase the occurrence of VTE and stroke
  - AI
    - CVD with longer duration
    - Hyperlipidemia
- Personal risk
  - Hyperlipidemia
  - Hypertension
  - Left chest radiation therapy
  - Obesity
  - Smoker



# Strategies for Cardiac disease

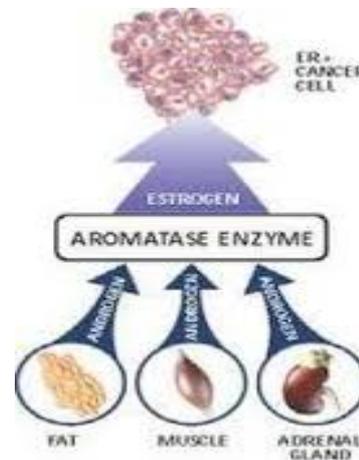
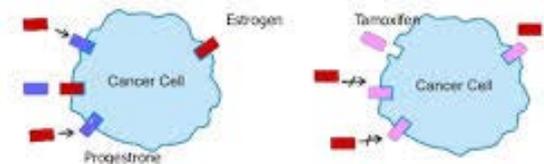
- Educate signs/symptoms
- Identify risk factors
  - Obesity, HTN, Hyperlipidemia, previous cardio-toxic therapy, FH heart disease
  - Framingham tool
- Evaluation with ECHO/MUGA
- Referral to cardiology with decrease in EF
- Weight management
- Good HTN and lipid control
- Exercise
- Smoking cessation



# Adherence of long term endocrine therapy

- Tamoxifen/AI therapy (consider 10 years)
  - Oral medications
  - Must take daily to be efficacious
- 75% of invasive CA is ER positive
- Cost prohibitive (AI's)
- Side effects:
  - Hot flashes
  - Weight gain
  - Bone loss
  - Joint/muscle pain
  - Vaginal atrophy/dryness

## Hormonal Therapy - Tamoxifen

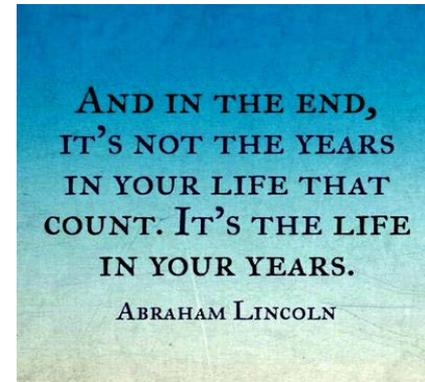


# Strategies for adherence

- Reminder methods
  - Pill boxes
  - Calendars
  - Alarms on phone
- Education
  - Reinforce importance of drug compliance at each visit
  - Written materials
  - Consider health literacy skills and cultural beliefs
- Drug adverse effects
  - Discuss common side effects
  - Maintain open communication/trust



# Quality of Life (QOL)



- Age may impact clinically significant differences in QOL in patients with a history of cancer
  - < 39 had higher physical functioning than those > 60
  - Emotional functioning most impaired in 40-59 year olds
  - Social functioning most impaired in the younger <40 year olds
  - Fatigue most pronounced in the 40-59 year olds
  - Women report stronger impairments than men
  - Breast cancer patients report increased fatigue, decreased emotional and cognitive functioning compared to other cancer patients

# Summary

As clinical professionals it is important that we understand the potential late effects of treatment and options available for our patients.



“My mission in life is not merely to survive,  
but to thrive,  
and to do so with some passion,  
some compassion, some humor  
and some style.”

- *Maya Angelou*

# References

- Boquiren, V.M., Esplen, M.J., Wong, J., Toner, B., Warner, E. & Malik, N. *Psycho-Oncology* (2016) 25:66-76. Sexual functioning in breast cancer survivors experiencing body image disturbance.
- Eastman, P. *Oncology Times* (2016) 38:19. Relationships, Intimacy, & Body Image After Breast Cancer.
- Hall, D.L., Mishel, M.H. & Germino, B.B. *Support Care Cancer* (2014) 22: 2489. doi:10.1007/s00520-014-2243-y
- Hewitt, M., Greenfield, S. & Stovall, E. eds. (2006). *From Cancer Patient to Cancer Survivor: Lost in Transition*. Committee on Cancer Survivorship Improving Care and Quality of Life, Institute of Medicine and National Research Council. ISBN: 0-309-54883-7, 536

# References

- Johns, C., Seav, S.M., Dominick, S.A., Gorman, J.R., Li, H., Natarajan, L, Mao, J.J., & Su, H.I. (2016) 156:415-426. Breast Cancer Research Treatment. Informing hot flash treatment decisions for breast cancer survivors: a systematic review of randomized trials comparing active interventions.
- National Institute of Health: Insomnia  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2757010/>

# References

- Peters, E., Schulz, L.M. & Reuss-Borst, M. (2016) 16:787. Bio-Med Central Cancer Quality of life after cancer – How the extent of impairment is influenced by patient characteristics.
- Paluch-Shimon, S., Pagani, O., Partridge, A.H., Bar-Meir, E., Fallowfield, L., Fenlon, D. et al (2016) 26: 87-99. The Breast. Second international consensus guidelines for breast cancer in young women (BCY2). Accessed 2/24/2017 <http://dx.doi.org/10.1016/j.breast.2015.12.010>

# References

- van der Meer, P., Gietema, J.A., Suter, T.M., & vanVeldhuisen, D.J. (2016) 37, 1681-1683. European Heart Journal. Cardiotoxicity of breast cancer treatment: no easy solution for an important long-term problem. doi:10.1093/eurheartj/ehw133.

# Resources for your patients

- LBBC.ORG/GUIDES
- Guide to Understanding Bone Health:  
<http://www.lbbc.org/get-support/print/guides-to-understanding/guide-understanding-bone-health>
- Guide to Understanding Fear of Recurrence:  
<http://www.lbbc.org/get-support/print/guides-to-understanding/guide-understanding-fear-recurrence>
- Guide to Understanding Intimacy and Sexuality:  
<http://www.lbbc.org/intimacyguide>
- Guide to Understanding Lymphedema:  
<http://www.lbbc.org/get-support/print/guides-to-understanding/guide-understanding-lymphedema>

# Resources for your patients

- Guide to Understanding Insomnia and Fatigue:  
<http://www.lbbc.org/get-support/print/guides-to-understanding/guide-understanding-insomnia-and-fatigue>
- Guide to Understanding Hormonal Therapies:  
<http://www.lbbc.org/hormonaltherapyguide>
- LBBC's website for young women:  
LBBC.ORG/YOUNGWOMEN

# To Ask a Question....

- By Phone: Press \*1 on your telephone and you will be added to the queue. To remove yourself from the queue, press \*2.
- By Web: Type your question in the “**Ask a Question**” text box on the left hand side of your screen and press send.

