



**BC Cancer Agency**

CARE + RESEARCH

*An agency of the Provincial Health Services Authority*

**Family Practice Oncology Network**

# Primary Care Management of Breast Cancer Survivors

***Dr. Christine Simmons,***

***Medical Oncologist, BC Cancer Agency Vancouver Centre***

November 1, 2014

[www.fpon.ca](http://www.fpon.ca)

# Primary Care Management of Breast Cancer Survivors

Christine Simmons, MD MSc FRCPC  
Medical Oncologist, BCCA Vancouver  
Clinical Assistant Professor, Faculty of Medicine, UBC  
Founder and Chair, All in Cancer  
[www.allincancer.org](http://www.allincancer.org)

# Disclosures

- Honoraria – Roche, Novartis, Amgen, Genomic Health
- Advisory Board – Roche, Novartis, Amgen, Genomic Health
- Research Funding – Roche, Novartis, Amgen, Genomic Health, Esai

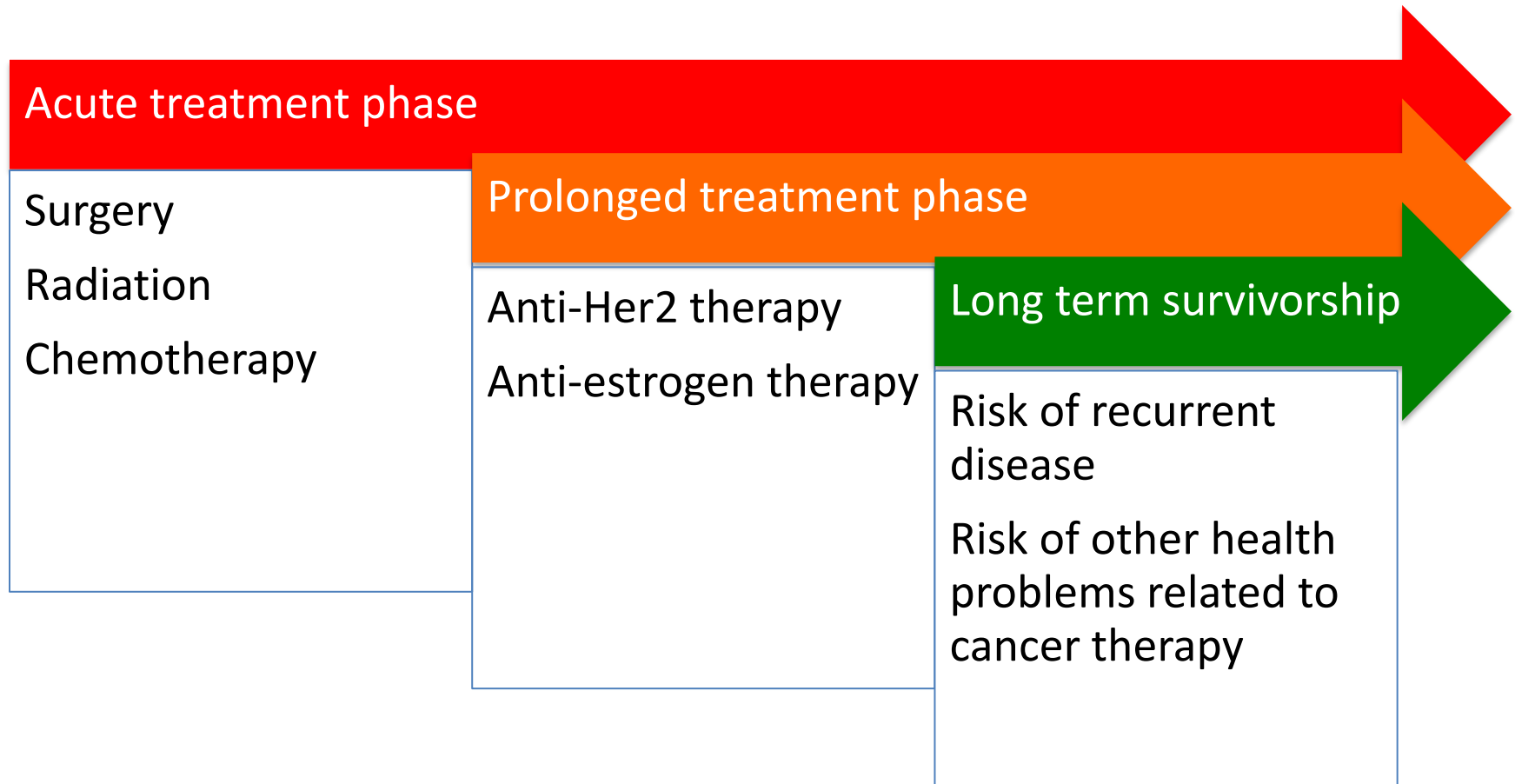
# Objectives

- By the end of this session participants will be able to:
  - Identify and have a plan for issues affecting breast cancer patients while on treatment
  - Identify and have a plan for issues affecting breast cancer patients after treatment completion
  - Have an understanding of the guidelines and evidence for the guidelines for long term follow up of breast cancer patients

# Role of Primary Care Physician - is CENTRAL!



# Phases of “Survivorship” in Breast Cancer



# Treatment Phase

- Breast Cancer treatment is divided into 3 modalities
  - Surgical excision
    - Mastectomy vs. Lumpectomy
    - Sentinel lymph node biopsy vs. axillary node dissection
  - Radiation
    - To remaining breast tissue +/- axilla
  - Chemotherapy and/or targeted therapy
    - Depending on pathological features of disease and risk of recurrence

# Supporting Patients During treatment phase: Surgery

- Complications post-operatively can include
  - Seroma
    - Very common
    - Usually resorbed by body naturally
    - Occasionally requires drainage by surgeon
  - Infection
    - Not very common
    - Typical presentation includes redness, pain, swelling, purulent drainage and fever
    - Antibiotic coverage is necessary to ensure healing
  - Lymphedema
    - #1 thing my patients come to my office worried about
    - What is the deal???



# Lymphedema: The real deal

- Incidence:
  - Systematic review and meta-analysis suggests that 1 in 5 breast cancer survivors will develop lymphedema
    - Defined as >2cm increase in arm circumference compared to contralateral side OR > 10% increase in size of arm compared to contralateral
- Risk Factors:
  - Disease related
  - Lifestyle related

# Lymphedema Risks

|  | Strong evidence                    | Moderate evidence          | Weak evidence                  |
|--|------------------------------------|----------------------------|--------------------------------|
| <b>Demographics</b>                      |                                    |                            |                                |
| Children in care aged ≤14 years*         | ..                                 | ..                         | 1 (OR 0.2)                     |
| High income*                             | ..                                 | ..                         | 2 (OR 0.2–0.5)                 |
| Age†‡                                    | ..                                 | ..                         | ..                             |
| Education*                               | ..                                 | ..                         | ..                             |
| <b>Disease and treatment</b>             |                                    |                            |                                |
| Axillary lymph node dissection†§         | 9 (OR 1.3–6.7; RR 2.7; HR 2.5–2.6) | ..                         | ..                             |
| Greater number of lymph nodes dissected† | 6 (OR 1.0–2.1; HR 1.2)             | ..                         | ..                             |
| Mastectomy†                              | 3 (OR 2.7–7.4)                     | ..                         | ..                             |
| Higher number of metastatic lymph nodes* | ..                                 | 3 (OR 1.1–2.8; RR 2.0)     | ..                             |
| Radiotherapy†                            | ..                                 | 5 (OR 1.7–3.8; HR 1.3)     | ..                             |
| Receiving chemotherapy*                  | ..                                 | 5 (OR 1.6–2.0; HR 1.4–3.7) | ..                             |
| Axillary radiotherapy                    | ..                                 | ..                         | 5 (OR 0.1–7.7; HR 0.1; RR 2.7) |

# Lymphedema Risks - Lifestyle

Strong evidence

Moderate evidence

Weak evidence

## Lifestyle and behaviours

|  |                                 |                |                    |
|--|---------------------------------|----------------|--------------------|
| Higher body-mass index†‡                               | 14 (OR 0.1–5.5; HR 1.4; RR 5.5) | ..             | ..                 |
| Did not participate in regular physical activity*      | ..                              | 2 (OR 2.1–6.1) | ..                 |
| Had blood pressure readings taken on the treated side* | ..                              | ..             | 1 (OR 3.4)         |
| Had not done preventive self-care activities           | ..                              | ..             | 1 (OR 12.4)        |
| Presence of at least mild upper-body symptoms*         | ..                              | ..             | 1 (OR 2.3–3.1)     |
| Presence of comorbidities*                             | ..                              | ..             | 2 (OR 1.6; HR 0.1) |

# Lymphedema

- Based on systematic reviews and meta-analysis there is no reported negative association with risk of lymphedema and...
  - BP monitoring on affected side
  - IV access on affected side
  - Exercise (in fact evidence of benefit!)
- Encouraging patients to keep moving is key!!!

# Preventing Breast Cancer Recurrence

- Purpose of radiation
  - To reduce loco-regional recurrence risk
  - Side effects largely related to local skin inflammation
- Purpose of chemotherapy/targeted therapy
  - To reduce risk of systemic recurrence and development of metastatic disease
  - Side effects related to type of systemic therapy

# Treatment related side effects

- Chemotherapy
  - Febrile Neutropenia
    - Incidence 5-40% depending on regimen
    - Rate if G-CSF prophylaxis is used is <5%
      - Role of Primary Care physicians office in administration of G-CSF
  - Nausea and vomiting
    - Rate of vomiting should be low, treated preventatively with anti-emetics
  - Fatigue
    - Physical activity may help to reduce fatigue

# Prolonged Treatment Phase

- Targeted therapy
  - Anti-her2 therapies
    - Cardiotoxicity long term in 5-20% of patients
      - Guidelines for assessment and long term management of cardio-toxicity related to chemotherapy are in development
        - » Canadian Cardiovascular Society October 2015
  - Anti-estrogen therapies
    - Hot flushes
    - Bone health
    - Urogenital atrophy and sexual health

# Duration of therapy

- Anti-Her2 therapy
  - Trastuzumab IV q3 weeks x 1 year
    - Subcut formulation developed and may change mode of delivery
    - Cardiac monitoring q12 weeks
- Assessing for drop in LVEF on anti-Her2 therapy
  - If LVEF falls below 50% or pt experiences >10% drop in LVEF Trastuzumab may need to be held
  - Cardiotoxicity from Trastuzumab is reversible damage to myocytes
    - If occurs in setting of irreversible damage from Anthracycline use long term consequences more severe



# Heart Health

- Cancer and Heart disease are #1 and #2 killers of Canadians
  - Canadian Cardio-Oncology Network developed to help disseminate evidence and bring together cardiologists and oncologists for risk reduction strategies
  - Cardio-Oncology Clinics
    - Vancouver - Diamond Health Centre
  - Joint meetings held annually
    - [www.cardiaconcology.ca](http://www.cardiaconcology.ca)

# Prolonged treatments – Anti-estrogen therapy

- Current recommendations
  - Pre-menopausal patient with ER+ disease
    - 10 years of Tamoxifen (Atlas and ATTOM studies)
    - Possible we will suggest addition of LHRH agonist if results of SOFT are positive (expected Dec. 2014)
  - Post-menopausal patient with ER+ disease
    - 10 years of Tamoxifen (OS benefit)
    - 2 years Tamoxifen followed by 3 year AI (OS benefit)
    - 5 years AI (OS equivalent to switch)
    - 5 years Tamoxifen followed by 5 years AI (DFS benefit only)

# A decade is a long time!



The screenshot shows the original Thefacebook website. At the top left is a pixelated profile picture of Mark Zuckerberg. The top right features the logo "[ thefacebook ]" in blue, with links for "login", "register", and "about" below it. On the left side, there is a registration form with fields for "Email:" and "Password:", and buttons for "register" and "login". The main content area has a blue header that says "Welcome to Thefacebook!". Below this is a large heading "[ Welcome to Thefacebook ]". The text describes the site as an online directory for colleges and lists features like searching for people at school, finding out who is in your classes, looking up friends' friends, and seeing a social network visualization. It also includes "Register" and "Login" buttons. At the bottom, there are links for "about", "contact", "faq", "terms", and "privacy", along with the text "a Mark Zuckerberg production" and "Thefacebook © 2004".

[ thefacebook ]  
login register about

Email:   
Password:   
[register](#) [login](#)

Welcome to Thefacebook!

[ Welcome to Thefacebook ]

Thefacebook is an online directory that connects people through social networks at colleges.

We have opened up Thefacebook for popular consumption at **Harvard University**.

You can use Thefacebook to:

- Search for people at your school
- Find out who are in your classes
- Look up your friends' friends
- See a visualization of your social network

To get started, click below to register. If you have already registered, you can log in.

[Register](#) [Login](#)

[about](#) [contact](#) [faq](#) [terms](#) [privacy](#)  
a Mark Zuckerberg production  
Thefacebook © 2004

# Long term issues in Breast Cancer Survivors

- Long term consequences of therapy
  - Systemically
    - Bone health
    - Sexual health
- Long term health issues generally
  - Surprising gaps in transitioned care!

# Long term treatment effects on bone

- Chemotherapy
  - May induce premature menopause
- Aromatase Inhibitor therapy
  - Associated with increased risk of osteoporosis over time
    - Continued exposure may increase risk further
- Fatigue and weight gain
  - Seen commonly in women going through therapy, sedentary lifestyle may further increase bone complications

# Bone Health – Benefit beyond osteoporosis?

**[S4-07] Effects of bisphosphonate treatment on recurrence and cause-specific mortality in women with early breast cancer: A meta-analysis of individual patient data from randomised trials**

***Coleman R, Gnant M, Paterson A, Powles T, von Minckwitz G, Pritchard K, Bergh J, Bliss J, Gralow J, Anderson S, Evans V, Pan H, Bradley R, Davies C, Gray R, On Behalf of the Early Breast Cancer Trialists' Collaborative Group (EBCTCG)'s Bisphosphonate Working Group. Sheffield Cancer Research Centre***

|  | No. events | Rate Ratio (SE) | 10 year gain | 2p value |
|--|------------|-----------------|--------------|----------|
| <b>All women (n=17,016)</b>            |            |                 |              |          |
| Breast cancer mortality                | 2,049      | 0.91 (0.04)     | 1.7%         | 0.04     |
| Breast cancer recurrence               | 3,284      | 0.94 (0.04)     | 1.0%         | 0.13     |
| Distant recurrence                     | 2,751      | 0.92 (0.04)     | 1.3%         | 0.05     |
| <i>Bone recurrence</i>                 | 825        | 0.79 (0.07)     | 1.4%         | 0.002    |
| <i>Other distant recurrence</i>        | 1,926      | 0.99 (0.05)     | 0.1%         | 0.8      |
| <b>Postmenopausal women (n=10,540)</b> |            |                 |              |          |
| Breast cancer mortality                | 1,107      | 0.83 (0.06)     | 3.1%         | 0.004    |
| Breast cancer recurrence               | 1,809      | 0.86 (0.05)     | 3.0%         | 0.002    |
| Distant recurrence                     | 1,503      | 0.83 (0.05)     | 3.3%         | 0.0007   |
| <i>Bone recurrence</i>                 | 445        | 0.65 (0.08)     | 2.9%         | 0.00001  |
| <i>Other distant recurrence</i>        | 1,058      | 0.93 (0.06)     | 0.7%         | 0.26     |

# Long term effects of treatment on sexual health

- Major quality of life issue
- Treatment induced menopause
  - Dyspareunia
  - Vaginal dryness
  - Loss of libido
- Anti-estrogen therapy
  - AI shown to increase risk of vaginal dryness, urogenital atrophy and dyspareunia
  - Rate of symptoms of UA in this population likely in range of 70%
  - If you don't ask you'll never know

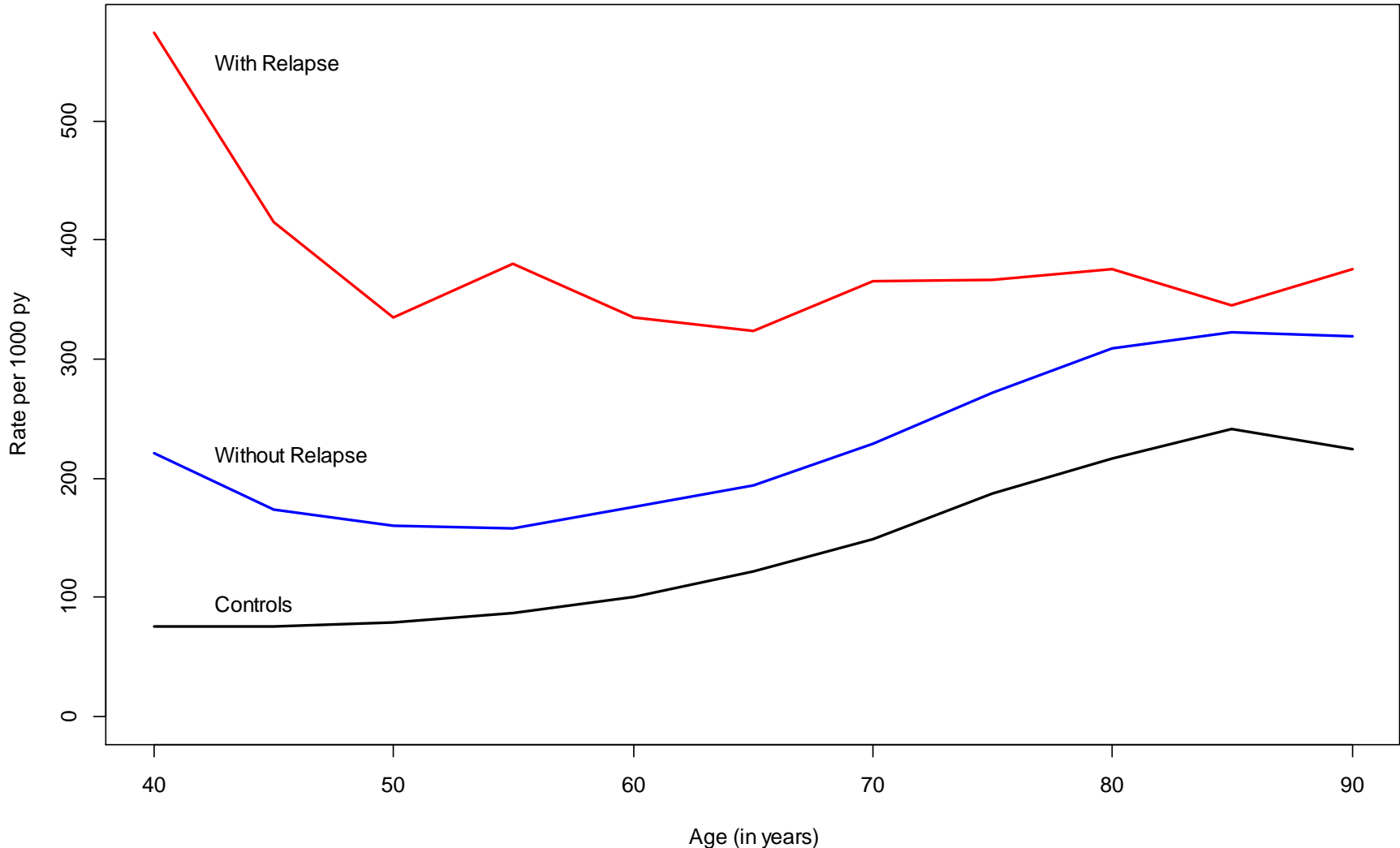
# Sexual Health – what to do?

- No clear guidelines
- Topical non-hormonal moisturizers
- Topical hormonal therapy
  - Fraught with controversy
  - VERY LITTLE EVIDENCE!!!!!!
    - Dowsett et al. “WARNING – topical vaginal estrogens should not be used” Lancet Oncology 2006
      - Cohort study of 7 patients only!!!!!!!
  - Risk of systemic absorption very very low in patients with no previous diagnosis of breast cancer
    - Likely safe, but we have no evidence supporting harm or supporting safety



# Long term issues – Are breast cancer survivors sicker than “regular” population?

Incidence rate of Non-Cancer Morbidity,  
Breast Cancer Survivors Dx 40+



# Increased Incidence of Hospitalization Amongst Breast Cancer Survivors

- Birth year matched cohort of breast cancer patients >3 years out from diagnosis and women with no diagnosis of breast cancer
  - Linked registry data
- Rate Ratio (RR) for overall non-cancer morbidity
  - 1.52 (181.4 per 1000 p-y; 95% CI 1.47-1.57).
    - Nervous System (35.8 per 1000 p-y; RR 1.16, 95% CI 1.10-1.22),
    - Digestive System (33.4 per 1000 p-y; RR 1.32, 95% CI 1.28-1.36),
    - Genitourinary System (29.5 per 1000 p-y RR 1.52, 95% CI 1.43-1.61).

# Why is this?

- Aren't we friendly enough?
  - Could be due to “too many cooks” or too few?
    - Medical oncologist may consider non-cancer related complaints trivial and under-estimate their impact on overall health
    - Family medicine may not know what is long term toxicity of cancer therapy vs. other health related problem
  - Does a diagnosis of breast cancer bias us in our approach to this patient in the future?

# Why/How/When to Follow?

- Why follow-up patients?
  - To detect early local recurrences or contralateral breast cancer
  - To evaluate and treat therapy-related complications
  - To motivate patients continuing hormonal treatments
  - To provide psychological support and information in order to enable a return to normal life.
- How to follow up?
  - Ipsilateral (after BCS) and contralateral mammography is recommended every 1 to 2 years
  - Clinical breast exam every 3-6 months in first 3 years and annually thereafter



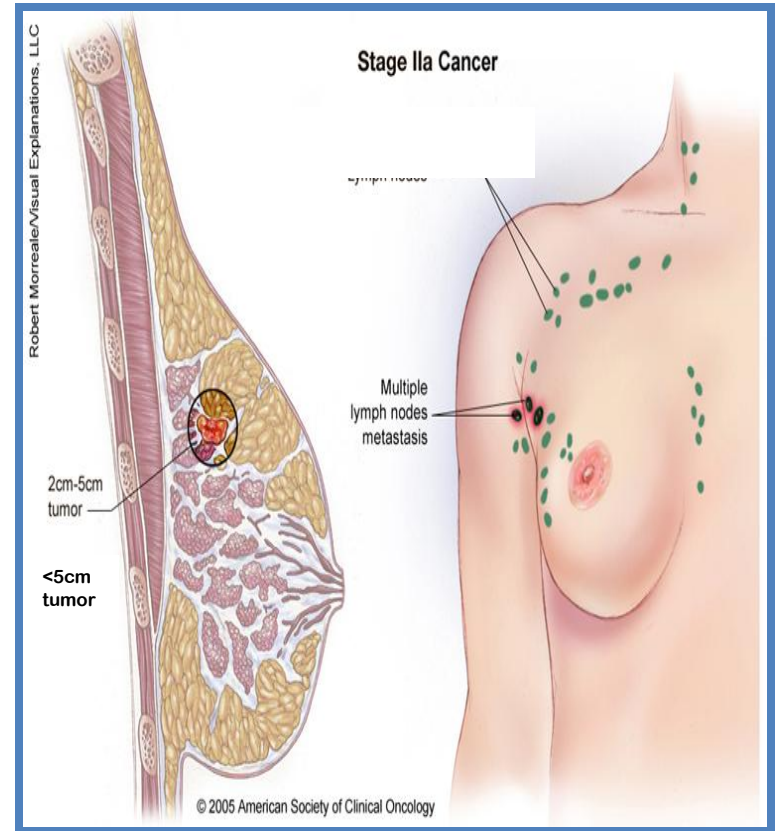
## RECOMMENDATION

# Coordination of Care

- Risk of breast cancer recurrence continues through **15 years** after primary treatment and beyond.
- Any physician performing continuity of care for breast cancer survivors should be experienced in:
  - ▶ Surveillance of patients in cancer
  - ▶ Breast examination (including irradiated breasts)
- Follow-up by a PCP seems to lead to the same health outcomes as specialist follow-up, with good patient satisfaction.

# Coordination of Care (cont'd)

- Patients with early stage breast cancer (tumor <5cm and fewer than 4 positive nodes) who desire follow-up exclusively by a PCP may be transferred approximately 1 year post-diagnosis.
- If care is transferred to a PCP, both the PCP and the patient should be informed of the appropriate follow-up and management strategy.
- If the patient is receiving adjuvant endocrine therapy, she will need to be re-referred for oncology assessment.



# Where are we now?

- In transition
  - Most medical oncologists continue to follow breast cancer patients up to 5 years
  - Some may discharge to PCP earlier
    - Depends on overall workload of oncologist BUT is this really fair?
- Likely that collaborative form of follow up would be ideal in the first 5 years
  - Would also ensure patient can be advised re: changes in anti-estrogen therapy or anti-Her2 therapy as further evidence arises



# Collaborative approach is necessary for Clinical Care AND Research!



# Summary

- PCPs play an important role in treatment and follow up of breast cancer patients
  - Treatment decisions with practitioner they trust
- Acute treatment related effects
  - Lymphedema
  - Radiation effects
  - Chemotherapy effects
- Longer term treatment effects
  - Cardiotoxicity
  - Bone health
  - Sexual health

# Summary cont.

- Follow up guidelines indicate that patients should have clinical breast exam and follow up appointment q3-6 months x3 year then annually
  - Oncologist vs. PCP
  - Both is probably best!

# Thank you!

- [www.allincancer.org](http://www.allincancer.org)

