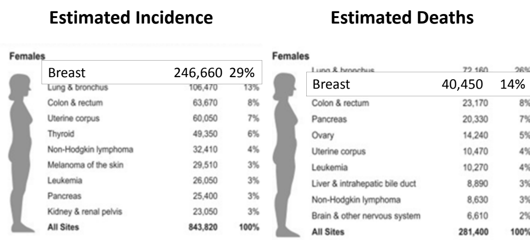
Overview

- Epidemiology
- Identifying Breast Cancer Survivors
- Long-term and Late Effects
- Survivorship Care Plans

Who Gets Breast Cancer?

- Female sex
- Increasing age
- Genetic Predisposition/Family History
  - *BRCA1*, *BRCA2*, *TP53*, *PTEN*
- Environmental Exposure
  - Radiation, Tobacco
- Hormonal
  - Early menarche, nulliparity, late age at first birth, hormone replacement therapy
- Dietary
  - High fat, Low fiber, ETOH
- 75% of women have no identifiable risk factor

Breast Cancer Statistics



Estimated Incidence

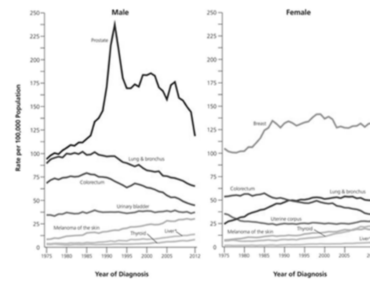
Females		
Breast	246,660	29%
Lung & bronchus	106,470	13%
Colon & rectum	63,670	8%
Uterine corpus	60,050	7%
Thyroid	49,350	6%
Non-Hodgkin lymphoma	32,410	4%
Melanoma of the skin	29,510	3%
Leukemia	26,050	3%
Pancreas	25,400	3%
Kidney & renal pelvis	23,050	3%
All Sites	**843,820**	**100%**

Estimated Deaths

Females		
Lung & bronchus	72,160	26%
Breast	40,450	14%
Colon & rectum	23,170	8%
Pancreas	20,330	7%
Ovary	14,240	5%
Uterine corpus	10,470	4%
Leukemia	10,270	4%
Liver & intrahepatic bile duct	8,890	3%
Non-Hodgkin lymphoma	8,630	3%
Brain & other nervous system	6,610	2%
All Sites	**281,400**	**100%**

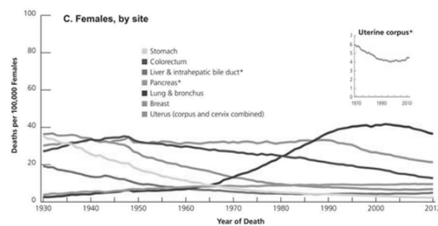
Siegel R, et al. CA Cancer J Clin 2016

Annual Cancer Incidence Rates



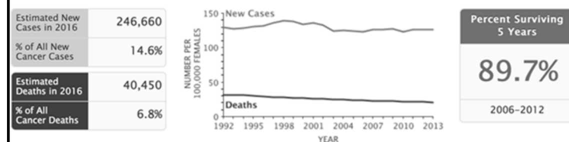
Siegel R, et al. CA Cancer J Clin 2016

Cancer Death Rates Among Women



Siegel R, et al. CA Cancer J Clin 2016

SEER Stat Fact Sheets: Breast Cancer

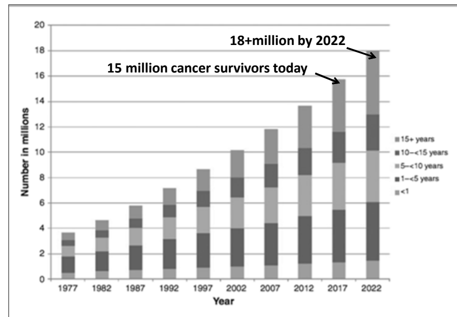


Number of New Cases and Deaths per 100,000: The number of new cases of female breast cancer was 125.0 per 100,000 women per year. The number of deaths was 21.5 per 100,000 women per year. These rates are age-adjusted and based on 2009–2013 cases and deaths.

Lifetime Risk of Developing Cancer: Approximately 12.3 percent of women will be diagnosed with female breast cancer at some point during their lifetime, based on 2010–2012 data.

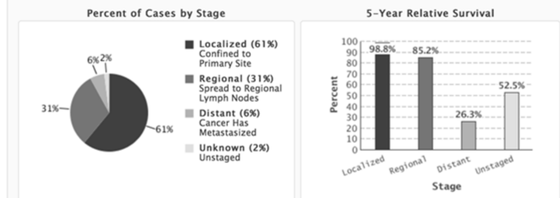
Prevalence of This Cancer: In 2013, there were an estimated 3,053,450 women living with female breast cancer in the United States.

Estimated # of cancer survivors since year of diagnosis



de Moor et. al. Cancer Epidemiology, Biomarkers & Prevention. 2013

5 year survival by stage of breast cancer

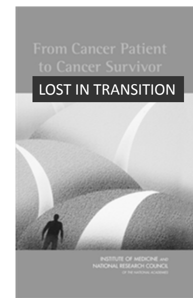


NCI: survivorship defined

An individual is considered a cancer survivor from the time of diagnosis, through the balance of his or her life. Family members, friends, and caregivers are also impacted by the survivorship experience and are therefore included in the definition.

Caregivers are sometimes referred to as secondary survivors.

2005 IOM Report



Hewitt M, Greenfield S, Stovall E. eds. From Cancer Patient to Cancer Survivor: Lost in Transition. Improving Care and Quality of Life. Washington D.C: National Academies Press; 2005.

From Cancer Patient to Cancer Survivor-Lost in Transition

EXECUTIVE SUMMARY *3*

BOX ES-1
Essential Components of Survivorship Care

1. **Prevention** of recurrent and new cancers, and of other late effects;
2. **Surveillance** for cancer spread, recurrence, or second cancers; assessment of medical and psychosocial late effects;
3. **Intervention** for consequences of cancer and its treatment, for example: medical problems such as lymphedema and sexual dysfunction; symptoms, including pain and fatigue; psychological distress experienced by cancer survivors and their caregivers; and concerns related to employment, insurance, and disability; and
4. **Coordination** between specialists and primary care providers to ensure that all of the survivor's health needs are met.

Challenges faced by cancer survivors

- Care is fragmented
- Patients are confused about provider roles
- Providers have differing views on their roles
- Long-term toxicities are poorly understood
- Little information on evidence-based follow-up guidelines

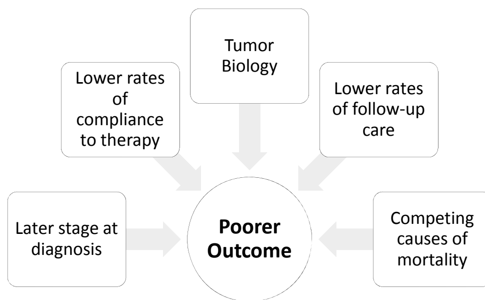
Why should PCPs be involved in cancer survivorship care?

Survivorship Care is Primary Care

Role of PCP in Cancer Survivorship

- 15 million cancer survivors living in US (1:21 Americans)
- 22% are breast cancer survivors
- Challenges are hard to navigate

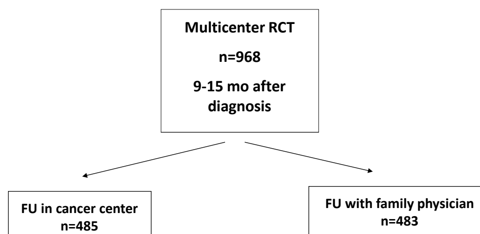
Factors associated with cancer survival disparity



Why do PCPs need to be educated about cancer survivorship?

- Studies show the further out from diagnosis-more care delivered by PCP
- Risk for breast cancer recurrence – persists beyond 15+ years5 years
- Risk for treatment related problems increases further out from completion of treatment

Primary Care vs Oncologist



- **Observed for 4.5 yrs after diagnosis**
- **Primary endpoint: Recurrence-Related Serious Clinical Events (SCEs)**
- **Secondary endpoint: health-related QOL**

Grunfeld E et al. J Clin Oncol 2006; 24:848-55

Primary Care vs Oncologist

	Family Practice	**Cancer Center**
Recurrences	54 (11.2%)	64 (13.2%)
Deaths	29 (6.1%)	30 (6.2%)
SCEs	17 (3.5%)	18 (3.7%)

- No difference in health-related QOL

Grunfeld E et al. J Clin Oncol 2006; 24:848-55

How do you provide survivorship care?

Treatment Modalities

- Surgery
  - Mastectomy vs lumpectomy
- Chemotherapy
  - For both early stage and metastatic disease
- Targeted therapy
  - Anti-estrogen therapy and anti-HER2 therapy
- Radiation therapy
  - Adjuvant and for palliation

Chemotherapy in the Management of Early Stage Breast Cancer

- 1980
  - CMF
- 1990
  - Anthracycline-based regimens
- 2000
  - Addition of a Taxane (paclitaxel or docetaxel)
- 2003
  - Dose dense AC→T
- 2005
  - Herceptin for HER-2/*neu* positive breast cancer

Online Resources

National Comprehensive Cancer Network® NCCN

NCCN Guidelines Version 1.2016 Preliminary
Invasive Breast Cancer

NCCN Guidelines Index
Breast Cancer Table of Contents
Discussion

SURVEILLANCE/FOLLOW-UP

- History and physical exam 1–4 times per year as clinically appropriate for 5 y, then annually
- Periodic screening for changes in family history and referral to genetic counseling as necessary
- Educate, monitor, and refer for lymphedema management
- Mammography every 12 mo[qq]
- In the absence of clinical signs and symptoms suggestive of recurrent disease, there is no indication for laboratory or imaging studies for metastases screening
- Women on tamoxifen: annual gynecologic assessment every 12 mo if uterus present
- Women on an aromatase inhibitor or who experience ovarian failure secondary to treatment should have monitoring of bone health with a bone mineral density determination at baseline and periodically thereafter[rr]
- Assess and encourage adherence to adjuvant endocrine therapy
- Evidence suggests that active lifestyle, healthy diet, limited alcohol intake, and achieving and maintaining an ideal body weight (20–25 BMI) may lead to optimal breast cancer outcomes

See NCCN Guidelines for Survivorship

→ See Recurrent Disease (BINV-17)

Online Resources

ASCO Guidelines

Created by Administrator, last modified by Brittany Harvey on May 31, 2016

The American Society of Clinical Oncology (ASCO) has launched a new wiki site to engage the cancer community in its clinical practice guideline development process. The new site will provide oncologists, practitioners and patients with an opportunity to provide feedback or submit evidence on individual published guidelines. All information is open for viewing. However, to comment or submit new evidence, an ASCO Guidelines Wiki user account is needed. To receive your user account, please contact guidelines@asco.org.

https://pilotguidelines.atlassian.net/wiki

VOLUME 34 · NUMBER 6 · FEBRUARY 20, 2016

JOURNAL OF CLINICAL ONCOLOGY — ASCO SPECIAL ARTICLE

American Cancer Society/American Society of Clinical Oncology Breast Cancer Survivorship Care Guideline

Carolyn D. Runowicz, Corinne R. Leach, N. Lynn Henry, Karen S. Henry, Heather T. Mackey, Rebecca L. Cowens-Alvarado, Rachel S. Cannady, Mandi L. Pratt-Chapman, Stephen B. Edge, Linda A. Jacobs, Arti Hurria, Lawrence B. Marks, Samuel J. LaMonte, Ellen Warner, Gary H. Lyman, and Patricia A. Ganz

See accompanying article on page 539

ABSTRACT

The purpose of the American Cancer Society/American Society of Clinical Oncology Breast Cancer Survivorship Care Guideline is to provide recommendations to assist primary care and other clinicians in the care of female adult survivors of breast cancer. A systematic review of the literature was conducted using PubMed through April 2015. A multidisciplinary expert workgroup with expertise in primary care, gynecology, surgical oncology, medical oncology, radiation oncology, and nursing was formed and tasked with drafting the Breast Cancer Survivorship Care Guideline. A total of 1,073 articles met inclusion criteria; and, after full text review, 237 were included as the evidence base. Patients should undergo regular surveillance for breast cancer recurrence, including evaluation with a cancer-related history and physical examination, and should be screened for new primary breast cancer. Data do not support performing routine laboratory tests or imaging tests in asymptomatic patients to evaluate for breast cancer recurrence. Primary care clinicians should counsel patients about the importance of maintaining a healthy lifestyle, monitor for post-treatment symptoms that can adversely affect quality of life, and monitor for adherence to endocrine therapy. Recommendations provided in this guideline are based on current evidence in the literature and expert consensus opinion. Most of the evidence is not sufficient to warrant a strong evidence-based recommendation. Recommendations on surveillance for breast cancer recurrence, screening for second primary cancers, assessment and management of physical and psychosocial long-term and late effects of breast cancer and its treatment, health promotion, and care coordination/practice implications are made.

This guideline was developed through a collaboration between the American Cancer Society and the American Society of Clinical Oncology and has been published jointly by invitation and consent in both *CA: A Cancer Journal for Clinicians* and *Journal of Clinical Oncology*. Copyright © 2015 American Cancer Society and American Society of Clinical Oncology. All rights reserved. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without written permission by the American Cancer Society or the American Society of Clinical Oncology.

J Clin Oncol 34:611-635. © 2015 by American Cancer Society and American Society of Clinical Oncology

INTRODUCTION

Breast cancer is the most common noncutaneous malignancy among women, representing 4 in 10 female cancer survivors in the United States.[1] Long-term survival is common after breast cancer treatment, with a 5-year survival rate of almost 90%[2]; thus, addressing survivors' unique post-treatment needs is critical to providing quality health care.[3]

Nearly a decade ago, two landmark publications from the Institute of Medicine highlighted the importance of surveillance, health promotion, and assessing and managing the myriad of physical, psychological, spiritual, social, and practical long-term and late effects faced by many cancer survivors after completing active treatment.[4,5] Recent publications affirm the importance of addressing health, wellness, and quality of life (QoL) concerns of post-treatment cancer survivors.[3,6,7] In recognition of the increasing need for information to support primary care clinicians who care for breast cancer survivors, this guideline was developed to provide recommendations to enhance the quality of clinical follow-up care for those who have completed initial treatment for female breast cancer (eg, surgery, radiation, targeted therapy, and/or chemotherapy).[8]

Although many evidence-based clinical guidelines exist for diagnosis and treatment, there are

ACS/ASCO Breast Cancer Survivorship Care Guidelines

- **Target population:** Female adult breast cancer survivors
- **Target audience:** Primary care providers, medical oncologists, radiation oncologists, and other clinicians caring for breast cancer survivors
- **Methods:** An expert panel was convened to develop clinical practice guideline recommendations based on a systematic review of the medical literature

5 Key Areas of Care

- 1. Surveillance for breast cancer recurrence
- 2. Screening for secondary primary cancers
- 3. Assessment and management of physical and psychosocial long-term and late effects
- 4. Health promotion
- 5. Care coordination and practice implications

1. Breast Cancer Recurrence

- Highest risk is different based on tumor subtype
  - ER- 2-3 years out
  - ER+ 5-6 years out
- Locoregional recurrence
  - Uncommon with appropriate surgery and radiation
- Second primary
- Metastatic disease
  - Liver, lungs, bones
  - CNS not common first site of relapse

History/PE and Patient Education

- All women should have a careful history and physical examination.

Years After Primary Therapy	History & Physical Exam Occurs:
1, 2, 3	Every 3 to 6 months
4, 5	Every 6 to 12 months
6+	Annually

- Health care providers should counsel patients about the symptoms of possible recurrence:
  - **New lumps**
  - **Bone pain**
  - **Chest pain**
  - **Rash or skin changes on breast or chest wall**
  - **Changes in contour/shape/size of the breast**
  - **Swelling of breast or arm**

Mammography

- Post-treatment mammograms should be performed adhering to the following schedule:

Post-Treatment Mammogram Schedule	
First	No earlier than 6 months after definitive radiation therapy
Subsequent	Every 6 to 12 months for surveillance of abnormalities
Subsequent (Conditional)	Yearly if stability of mammographic findings is achieved after completion of locoregional therapy

There is no routine endorsement of breast MRI or ultrasound, even if mammogram "missed" the original tumor

Testing that is NOT recommended

- Routine Blood Tests
  - CBC
  - Chem panel
- Imaging Studies
  - Chest x-rays
  - Bone scans
  - Ultrasound of the liver
  - Computed tomography
  - PET scanning
  - Breast MRI
- Tumor Markers
  - CA 15-3
  - CA 27.29
  - CEA

Patient-Clinician Communication

- The Update Committee encourages health care providers to have an open dialogue with patients, as part of a comprehensive treatment planning process
  - ASCO Cancer Treatment Plans and Summary templates are available at http://www.asco.org
- At a minimum, the discussion should include:
  - consideration of scientific evidence
  - weighing individual risks with potential harms and benefits
  - patient preferences

Doc, Shouldn't We Be Getting Some Tests?

Loprinzi CL, Hayes D, Smith T. *Doc, Shouldn't We Get Some Testing?* JCO. 2000;18 (11): 2345-2348.

Genetic testing

- One grandparent of Ashkenazi Jewish heritage
- 2 or more 1st or 2nd degree relatives with breast cancer at any age
- Bilateral breast cancer
- Male relative with breast cancer
- Age 60 years or younger with TN breast cancer

Prevention of Recurrence

- Counsel to adhere to endocrine therapy
  - Tamoxifen
  - Aromatase inhibitors
  - Ovarian suppression therapy
- Reported adherence to a 5-year course of therapy is 50-92%

Aromatase Inhibitors (AI)

- Anastrozole (Arimedex®)
- Letrozole (Femara®)
- Exemestane (Aromasin®)
- Used to treat postmenopausal women with hormone-receptor positive breast cancer*
- Superior to Tamoxifen alone (43% reduction in recurrence, mets.)
- Reduce Estrogen Levels by 90%
  - Inhibit peripheral tissue conversion of testosterone and androstenedione to estradiol and estrone
- Bone remodeling is increased and there is increased risk for osteoporosis and fractures
- Women on AI's should get BMD testing every 2 years

2. Screening for Second Primary Cancers

- Screen for age appropriate cancer as in general population
  - Cervical
  - Colon
  - Lung
- Skin cancer screening in those with XRT exposure
- Annual gynecologic assessment for postmenopausal women on selective estrogen receptor modulator therapies (SERMs)

3. Physical and Psychosocial effects

- Long-term effects
  - medical problems that develop during active treatment and persist after the completion of treatment
- Late effects
  - medical problems that develop or become apparent months or years after treatment is completed

Surgery

Long-term effect

- Lack of skin sensitivity
- Body image issues
- Sexual dysfunction
- Numbness
- Pain
- Limited range of motion
- Weakness
- Poor cosmetic outcome

Late effect

- Lymphedema
- Neuropathy

Radiation therapy

Long-term effect

- Fatigue
- Skin sensitivity/pain
- Sexual dysfunction
- Pain
- Pneumonitis
- Poor cosmetic outcome
- Breast asymmetry
- Lymphedema
- Numbness or weakness of UE

Late effect

- Skin discoloration
- Breast asymmetry
- Skin sensitivity/pain
- Telangiectasia
- Sexual dysfunction
- SOB
- Cardiovascular disease
- Numbness or weakness of UE
- Second primary cancers

Chemotherapy

Long-term effect

- Cognitive impairment
- Fatigue
- Ovarian failure
- Sexual dysfunction
- Infertility
- Weight gain
- Obesity
- Neuropathy
- Oral health issues
- Hair loss

Late effect

- Osteoporosis/osteopenia
- Cardiovascular disease
- Leukemia/MDS

Hormonal therapy: Tamoxifen and AI

Long-term effect

- Hot flushes: T
- Changes in menstruation: T
- Mood changes: T
- Increased triglycerides: T
- Vaginal dryness: AI
- Decreased libido: AI
- Cholesterol elevation: AI

Late effect

- Stroke: T
- Endometrial cancer: T
- Blood clots: T
- Osteopenia in premenopausal women: T
- Osteoporosis: AI
- Fractures: AI

Targeted therapy: Trastuzumab

Long-term effect

- Cardiac dysfunction

Late effect

Psychosocial

Long-term effect

- Depression
- Anxiety
  - Recurrence
  - Pain
- Death and dying
- Body image
- Challenges with self image
- Financial concerns

Late effect

- Depression
- Anxiety
  - Recurrence
  - Pain
- Death and dying
- Body image
- Challenges with self image
- Financial concerns

3. Physical and Psychosocial effects

- Body image concerns
  - Offer adaptive devices (breast prosthetics/wigs)
  - Refer for psychosocial care
  - Radiation-associated fibrosis: trental and vitamin E
  - Breast reconstructive surgery
- Lymphedema
  - Prevent/reduce risk of lymphedema including weight loss
  - Refer to lymphedema therapists

Cardiotoxicity

- Decrease in endogenous hormones with therapy
- Chemotherapy agents: epirubicin, anthracyclines, transtuzumab
- Monitoring of symptoms
  - Lipid levels
  - Cardiovascular monitoring
  - Healthy lifestyle modifications
  - Counsel on potential cardiac risk factors
  - Counsel on when to report relevant symptoms

Cognitive Impairment

- 75% in treatment
- 35% after treatment
- Multifactorial etiology
  - Fatigue
  - Insomnia
  - Depression
  - Link with adjuvant chemotherapy, surgery/anesthesia, endocrine therapy and cancer itself

Anxiety and Depression

- 22% prevalence among survivors
- Fear of recurrence
  - Shorter interval since diagnosis
  - Chemotherapy
  - Increased number of symptoms: pain
- Assessment tools
  - Distress thermometer (NCCN)
  - PHQ 9

Osteoporosis

- Premenopausal Women
  - Chemotherapy induces premature menopause
  - Accelerated bone loss is seen greater than with surgical oophorectomy
  - Tamoxifen is associated with bone loss
- Postmenopausal Women
  - Risk factors
  - Treatments such as Aromatase Inhibitors (AI)
  - Initial and q2 year DEXA scan screening

Premature Menopause

- Symptoms are more severe in younger women
- Management
  - SNRI/ SSRI: Venlafaxine
  - Gabapentin
  - Clonidine
  - Lifestyle modifications

4. Health Promotion

- Provide information
- Healthy weight
- Regular physical activity
- Diet high in vegetable, fruits, whole grains and legumes
- Smoking cessation

5. Care Coordination

- Survivorship Care Plan
  - Patient diagnosis and treatment received
    - Type and stage/side of cancer
    - Type of surgery
    - Name of chemotherapy/hormone/biologics
    - Cumulative doses of chemotherapy
    - Fields and extent of radiation
  - Recommendation for type and timing of follow-up imaging, testing, office visits

2015 CoC Mandate

- A summary of an individual's cancer diagnosis and treatment information (the treatment summary)
- An overview of both physical and psychosocial effects of diagnosis and treatment
- A detailed follow-up plan that outlines surveillance for recurrence and potential late effects as well as recommendations for health-promotion strategies
- Referrals and resources for physical, psychosocial, and practical needs.

Treatment of care

- Tumor information
- Diagnostic tests and results of tests
- All treatments received – including doses, toxicities, any clinical trials
- Receipt of supportive services (nutritional, psychosocial, other)
- Contact information for all providers and key institutional personal

Standard of care

- Medical Care Recommendations
  - Screening/testing needed and interval
  - Recommendations for health maintenance
  - Likely course of recovery from any toxicities of treatment
  - Genetic counseling (as appropriate)
  - Health behaviors
  - Referrals to other healthcare providers

Standards of care

- Information:
  - Late/long-term effects of treatment
  - Signs possible recurrence and second cancers
  - Chemoprevention strategies: e.g. aspirin for colon cancer
  - Impact on insurance, employment, finances
  - Impact on parenting, marriage/partner, work, sexual functioning, possible need for (future or ongoing) psychosocial support
- Resources

Survivorship Care Plan Templates

- https://www.asco.org/practice-guidelines/cancer-care-initiatives/prevention-survivorship/survivorship/survivorship-12
- http://bit.ly/L5C6je
- www.livestrongcareplan.org
- www.journeyforward.org

Summary

- There are a lot of breast cancer survivors
- Primary care physicians are well suited to care for them
- Survivors can develop long-term and late effects
- Understanding their treatment protocols will help guide assessment
- Survivorship care plans can aid in transition