

# Geriatric-Specific Considerations in Breast Surgical Oncology

MCW Cancer Disparities Symposium

September 29, 2023

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# Disclosures

None

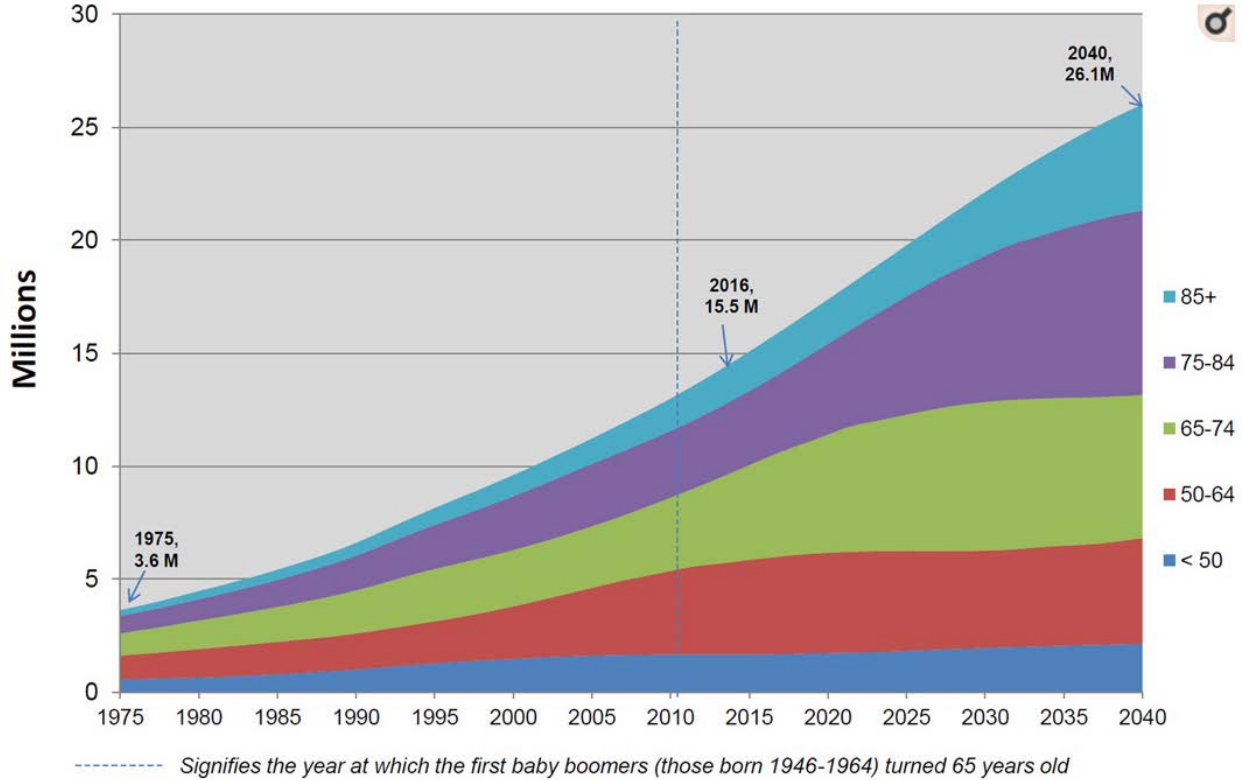


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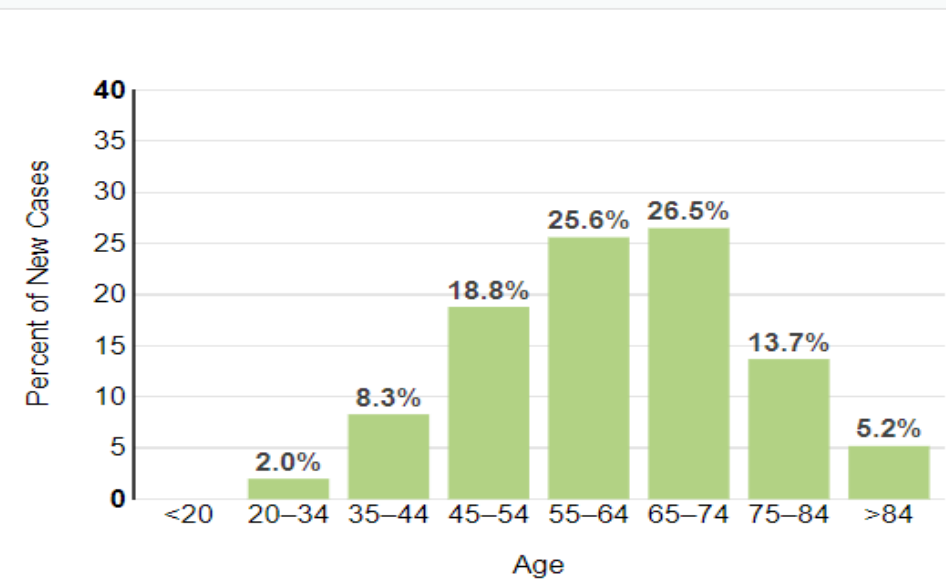
# Breast Cancer Incidence in Older Adults



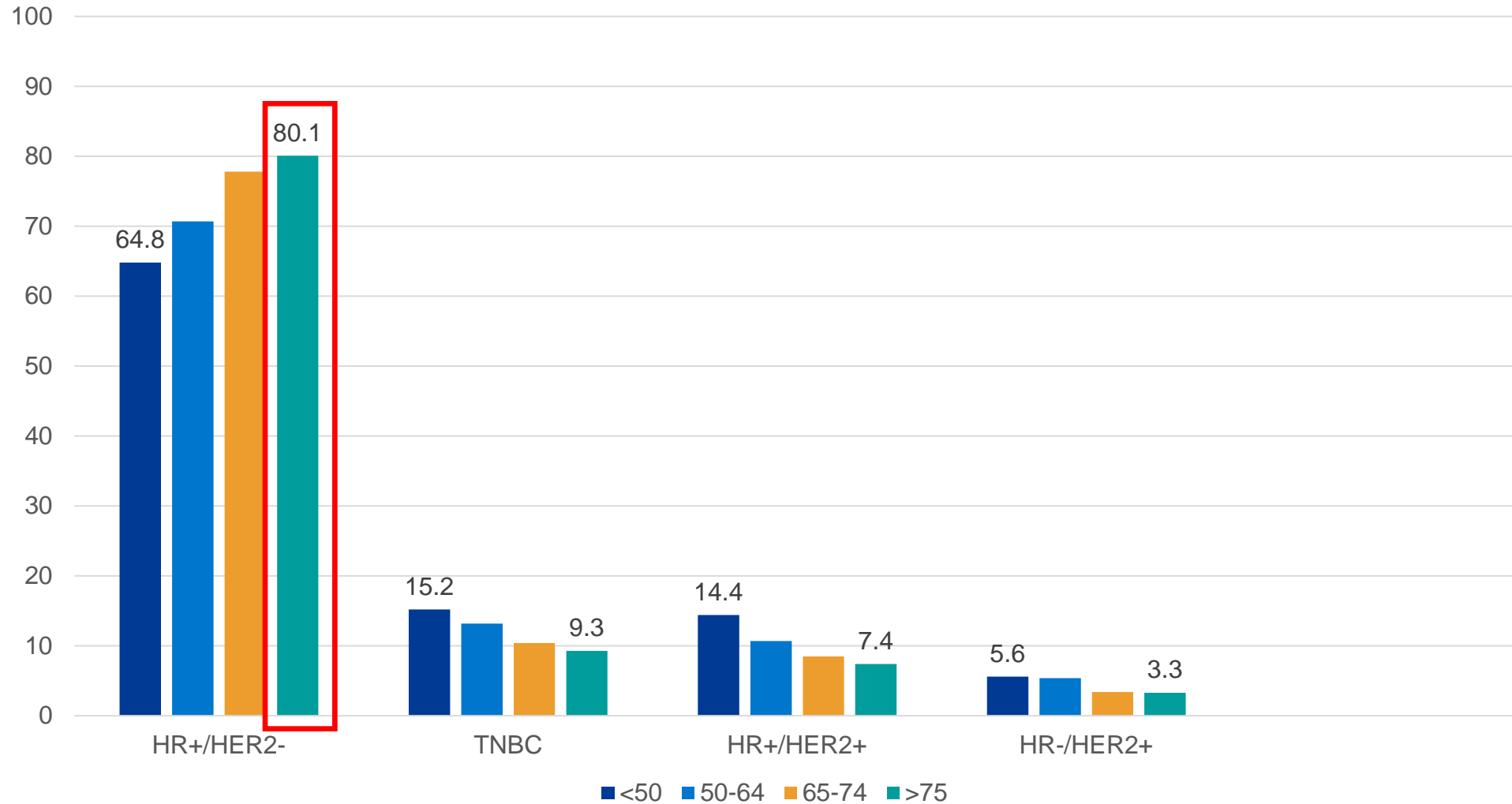
- The “Silver Tsunami” is coming

- 287,000 new cases of breast cancer estimated in 2022
- 45.4% of new breast cancer diagnoses are in women over 65
- 60% have stage 1 disease

Percent of New Cases by Age Group: Female Breast Cancer



# Most Older Adults are Diagnosed with HR+/HER2- Breast Cancer



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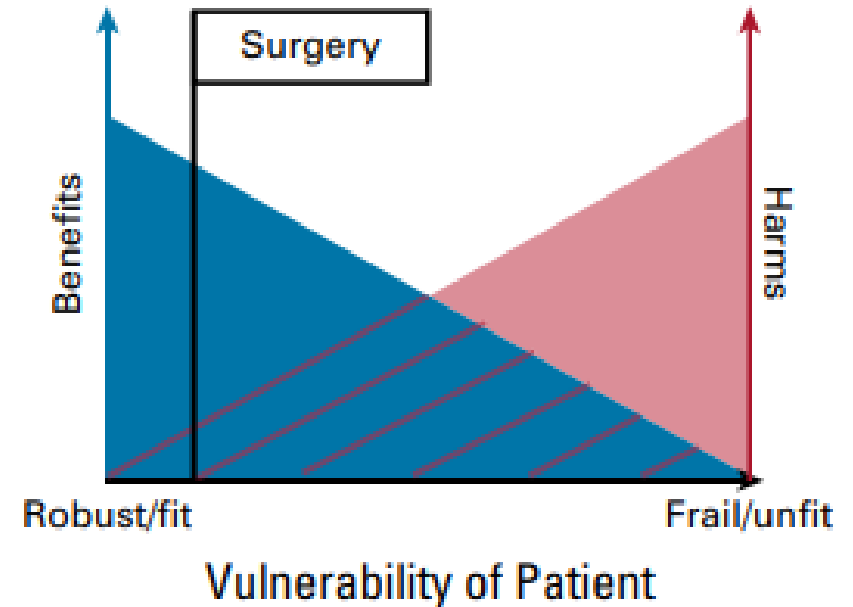


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# Defining Overtreatment and Undertreatment

## • Undertreatment:

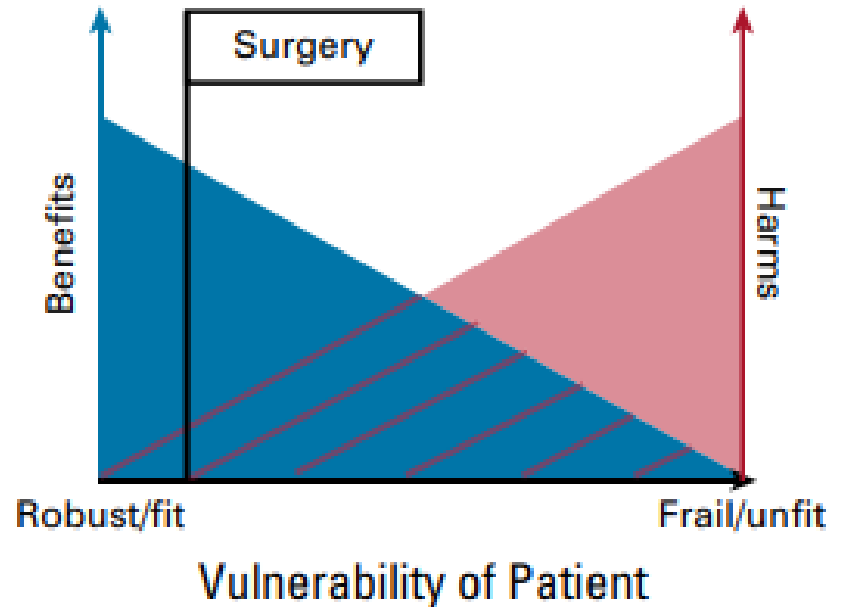
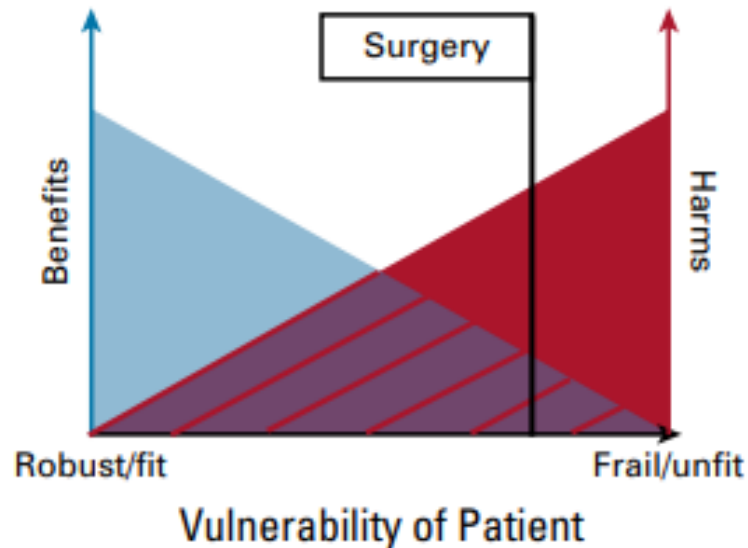
- *Use of less intensive cancer treatment in a fit older adult who would derive greater net benefit from more intensive treatment*
- *Not providing non-oncologic interventions for deficits in geriatric domains regardless of what therapy is chosen*



# Defining Overtreatment and Undertreatment

## • Undertreatment:

- *Use of less intensive cancer treatment in a fit older adult who would derive greater net benefit from more intensive treatment*
- *Not providing non-oncologic interventions for deficits in geriatric domains regardless of what therapy is chosen*



## • Overtreatment:

- 1) *Mismatch* between intensity of cancer therapy and **vulnerability** of a patient
- 2) *Cancer therapy without benefit in an older patient's remaining lifetime*

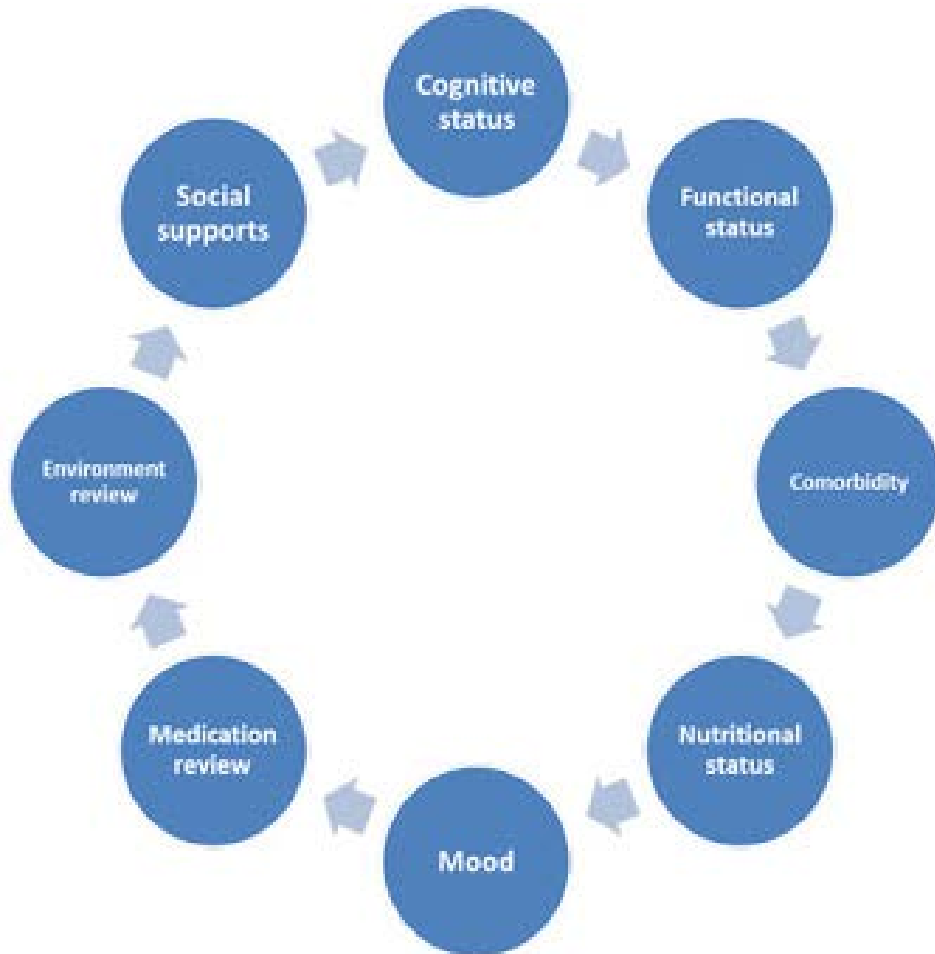


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# Geriatric Assessment as Gold Standard



Geriatric Assessment–Guided Interventions

| Table 2. Geriatric Assessment–Guided Interventions  |   |
|---|---|
| Geriatric Assessment Measure  | Geriatric Assessment–Guided Interventions   |
| Function and falls<br>Instrumental activities of daily living deficit<br>History of falls | Physical therapy and/or occupational therapy referrals to prescribe strength and balance training, assist device evaluation, home exercise program, and safety evaluation<br>Fall prevention discussion<br>Home safety evaluation   |
| Comorbidity domain<br>Comorbidity and polypharmacy considerations                         | Involve caregiver in discussions to assess risks of therapy and management of comorbidities<br>Involve primary care physician and/or geriatrician in decision making for treatment and management of comorbidities; consider referral to geriatrician<br>Review medication list and minimize medications as much as possible; consider involving a pharmacist |



# ASCO Recommends Calculating Life Expectancy

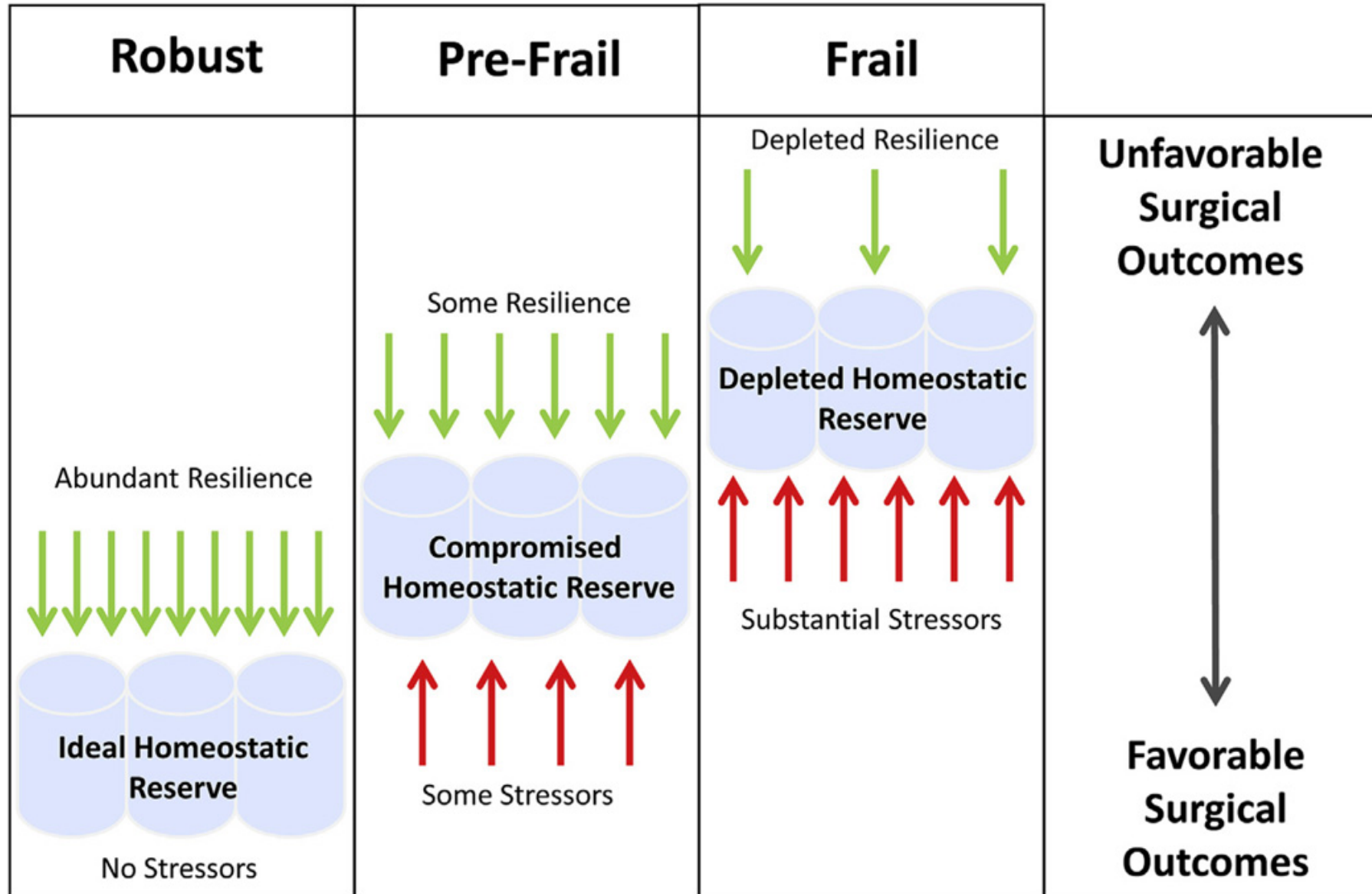
3. Based on the best clinical opinion of the Expert Panel, clinicians should use one of the validated tools listed at ePrognosis (<https://eprognosis.ucsf.edu>) to estimate life expectancy (LE)  $\geq$  4 years.

- a. The Expert Panel especially recommends either the Schonberg or Lee Index (<https://eprognosis.ucsf.edu/leeschonberg.php>). The most common variables considered in these indices include **age, sex, comorbidities** (eg, diabetes, chronic obstructive pulmonary disease), **functional status** (eg, activities of daily living [ADLs], instrumental activities of daily living [IADLs], mobility), **health behaviors and lifestyle factors** (eg, smoking status, body mass index), and **self-reported health**.<sup>89-91,127,128</sup>
- b. Several indices have “presence of cancer” as a relevant variable, and answering no to this question will allow for estimation of “noncancer” life expectancy to consider competing risks of mortality.

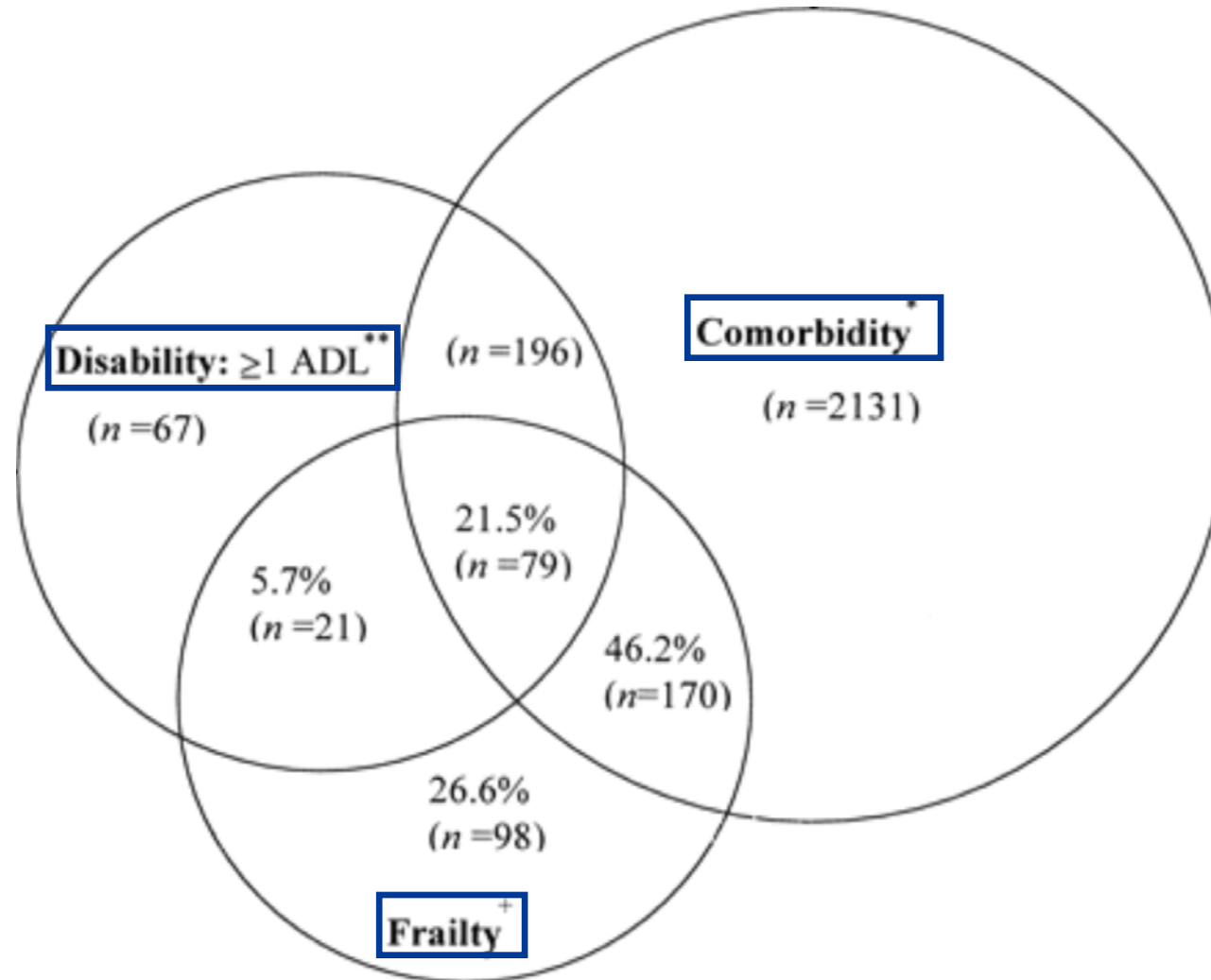




# How Else Can We Characterize Physiologic Age?



# Separate Constructs: Disability vs Multimorbidity vs Frailty



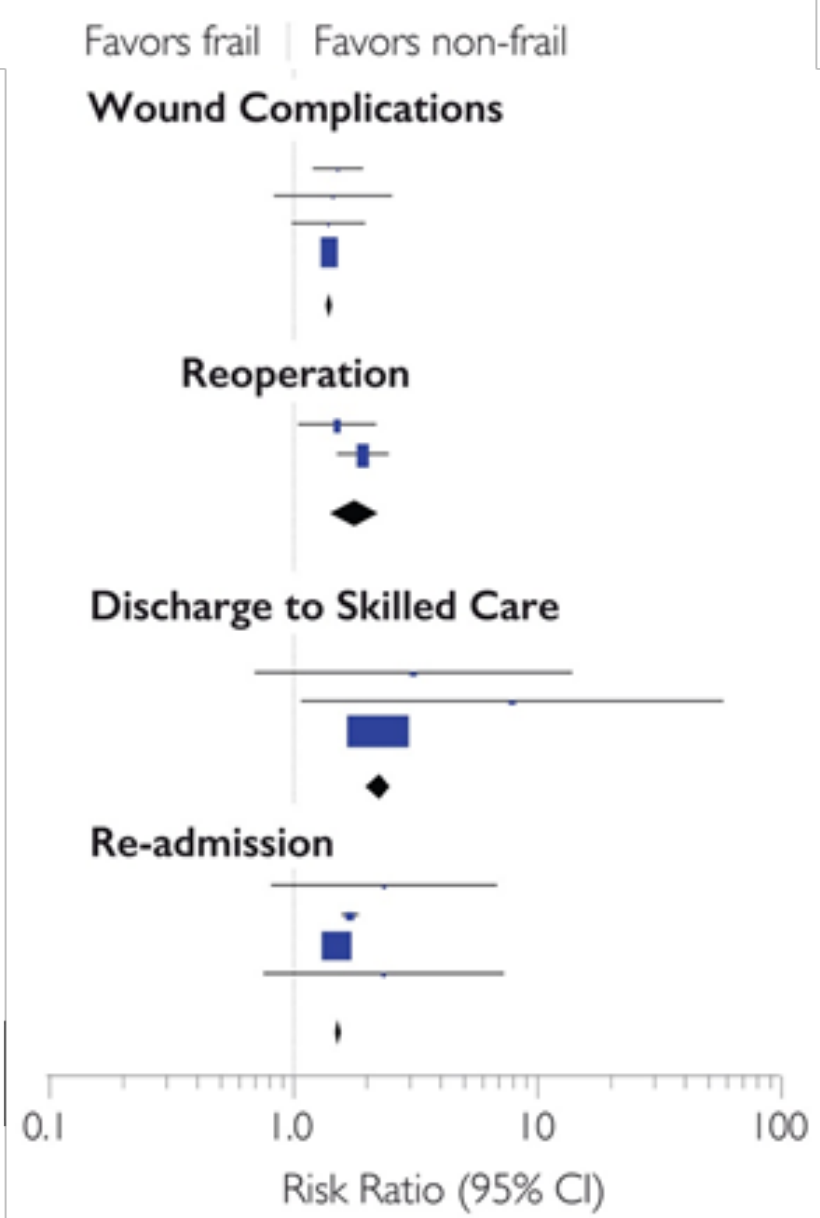
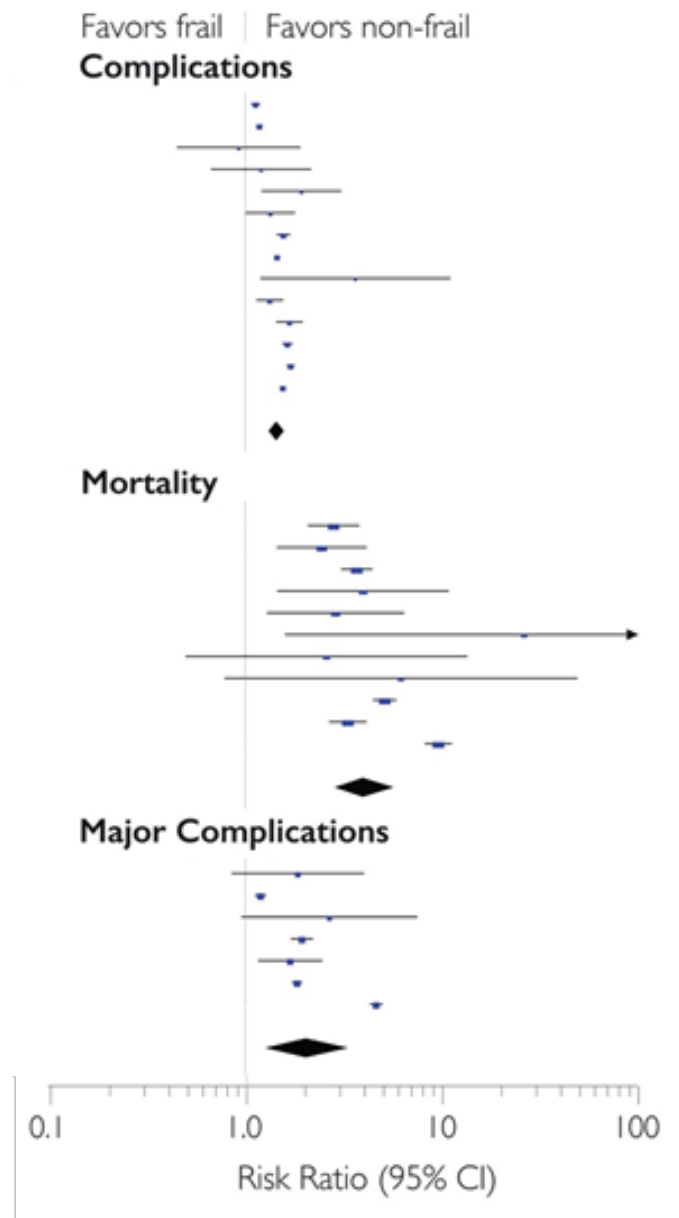
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# Frailty As a Risk Factor in Major Surgery

Meta-analysis of 16 studies (n=683,487)



# What Does Frailty Predict in Low-Risk Surgery?

## VA Population

- 432,828 patients undergoing surgeries with differing operative stress scores
  - OSS: scale of 1-5
  - Lumpectomy: 2 (low stress)
  - Mastectomy: 2 (low stress)
  - Modified Radical Mastectomy: 3 (moderate stress)
- 30-day mortality rate among frail patients
  - Undergoing lowest-stress surgical procedures (e.g. cystoscopy): 1.55%
  - Who underwent moderate-stress surgical procedures (e.g. modified radical mastectomy): 5.13%
  - *Note: A 1% mortality rate often used to define high-risk surgery*
- Among frail and very frail patients: 180-day mortality after moderate-stress procedure: 43%



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# Trial Data in Axillary Management in Older Adults

| Study   | Year | Study Type | Population  | Intervention  | Results   |
|---|------|------------|---|---|---|
| International Breast Cancer Study Group 10-93 | 2006 | RCT        | 473 women $\geq 60$ years old with cT1-T3N0 disease | Breast surgery + ALND + Tamoxifen vs Breast Surgery + Tamoxifen (RT if BCS) | <p><u>Median 6-year f/u</u><br/> <b>No difference in DFS or OS</b></p> <p><b>Axillary recurrence rate:</b><br/>           3% in no-ALND arm<br/>           1% in ALND arm</p>     |
| Martelli et al                                | 2012 | RCT        | 219 women 65-80 years w/T1N0 disease                | Quadrantectomy + RT + ALND vs Quadrantectomy + RT                           | <p><u>Median 15-year f/u</u><br/> <b>No difference in OS, BCSS, DM</b></p> <p><b>Axillary recurrence rate:</b><br/>           6% in no-ALND arm<br/>           0% in ALND arm</p> |



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# Trial Data in Omission of RT in Older Adults

| Study                            | Year | Study Type | Population  | Intervention  | Results   |
|----------------------------------|------|------------|---|---|---|
| Cancer and Leukemia Group B 9343 | 2013 | RCT        | 636 women $\geq 70$ with cT1N0 ER+ disease  | Lumpectomy + RT + Tamoxifen<br>vs<br>Lumpectomy + Tamoxifen<br><br>Axillary surgery discouraged<br>(No axillary surgery in $>60\%$ of patients) | <u>10-year f/u</u><br>No difference in OS or DM<br><br>Axillary recurrence rate:<br>3% in no-RT arm<br>0% in RT arm |
| PRIME II                         | 2023 | RCT        | 1,326 women $\geq 65$ w/T1-2N0 (<3cm) ER+ disease (could not have LVI AND grade 3 disease ) | Surgery + RT + ET<br>vs<br>Surgery + ET   | <u>10-year f/u</u><br>No difference in OS, BCSS, DM<br>LRR, RT group: 0.9%<br>LRR, no-RT group: 9.5%                |

# Treatment Decisions in Older Adults with Early-Stage HR+/HER2- Disease

## Less Aggressive

### Lumpectomy

- bleeding
- infection
- seroma
- cosmetic changes

### No SLNB

- 3-6% axillary recurrence risk

### No RT

- 10% local recurrence risk

## More Aggressive

### Mastectomy

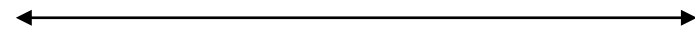
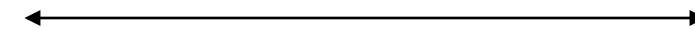
- bleeding/infection
- chronic pain
- cosmetic changes
- decreased quality of life

### SLNB

- lymphedema
- bleeding/infection
- chronic pain
- 0-1% axillary recurrence risk

### RT

- erythema
- fibrosis
- radiation-induced malignancy
- 2% local recurrence risk



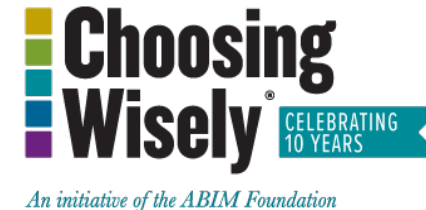
### Geriatric-specific Considerations

- life expectancy
- frailty
- comorbidities
- functional status
- cognitive status

# U.S. Recommendations: Omission of Axillary Surgery

## SSO Choosing Wisely Recommendation:

Don't routinely use SLNB in cN0 women  $\geq 70$  years of age with early-stage HR+/HER2- invasive breast cancer



## NCCN Guidelines:

“In the absence of definitive data demonstrating superior survival, *the performance of axillary staging, may be considered optional* in patients with particularly favorable tumors, patients for whom the selection of adjuvant systemic and/or RT is unlikely to be affected, *the elderly, or those with serious comorbid conditions.*”



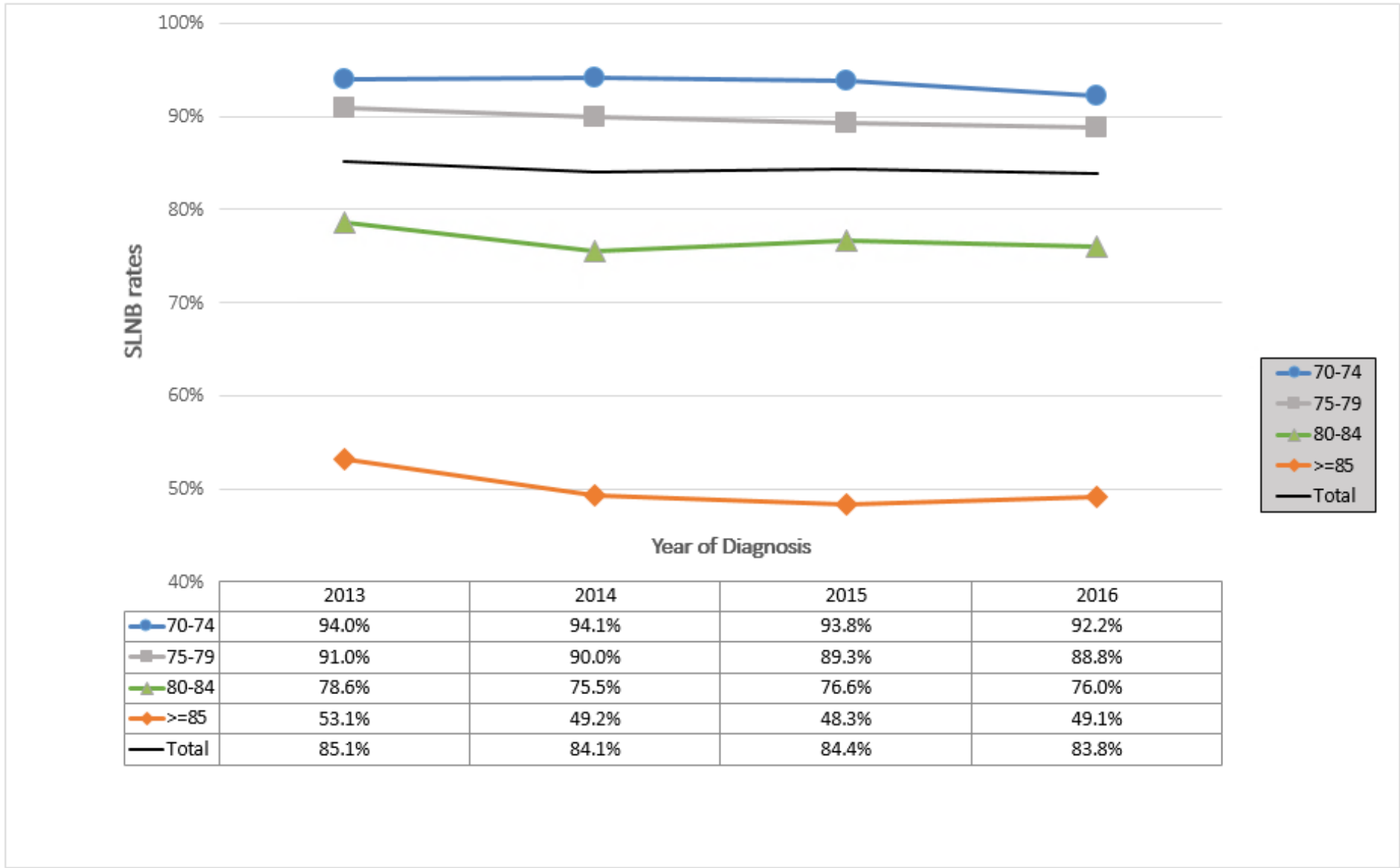
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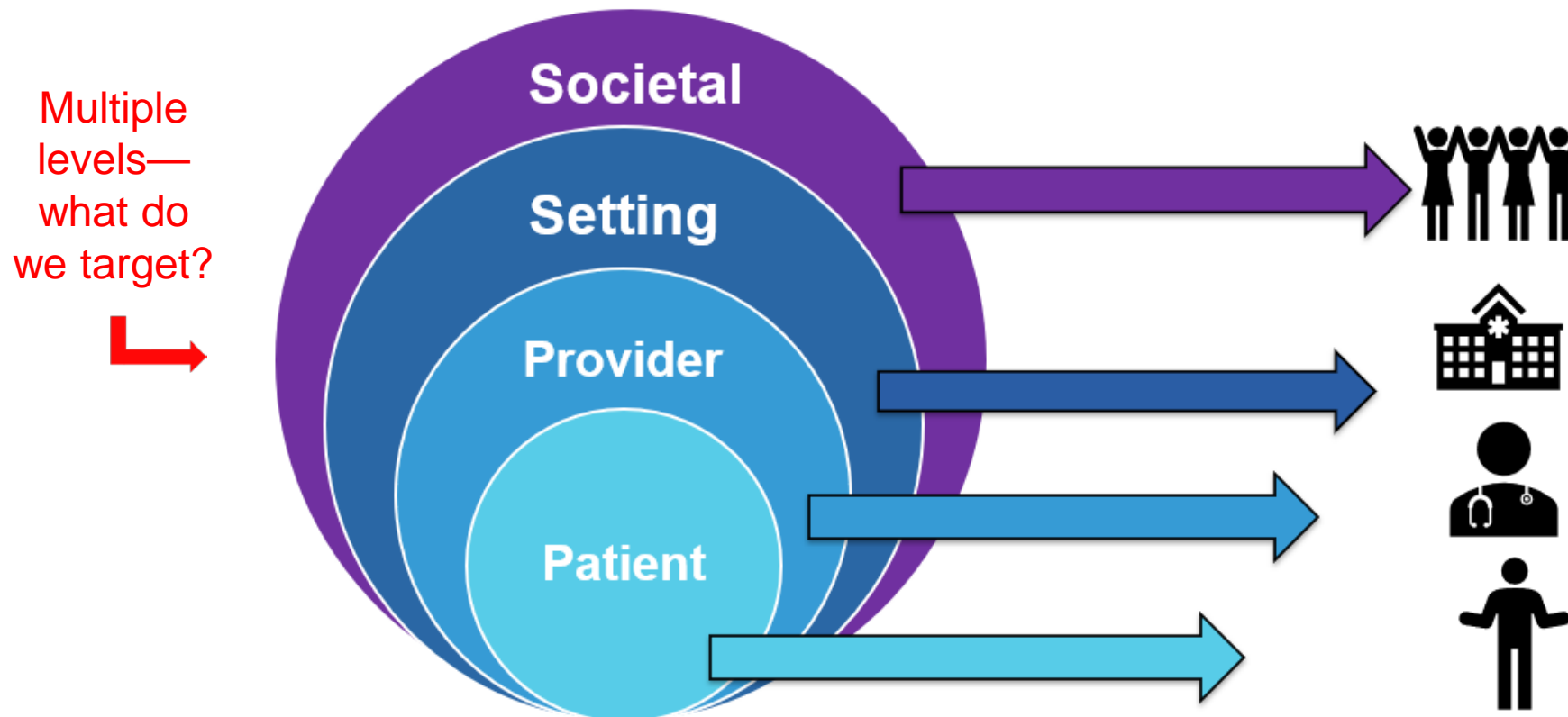
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# Trends in SLNB in Patients $\geq 70$ with cT1N0 ER+/HER2- Disease



# Need for De-Implementation Research



- “Study of *how* to reduce or stop the use of an ineffective health service or practice provided to individuals (e.g., patients, members of the community) by practitioners (e.g., healthcare, public health) and delivery systems (e.g., hospitals, community-based organizations, health departments).”



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# Targeting Patient/Physician Communication

## Provider-Level Barriers



Negative Past Experience



Cognitive Dissonance



Fear of Medical Malpractice/Defensive Medicine



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# Oncologists' Thoughts Regarding Omission of SLNB

National qualitative study w/surgeons, medical oncologists, radiation oncologists (n=29)

## Disease Considerations

- Larger tumor size
- Higher grade
- Presence of LVI
- Low ER-positivity

## Multidisciplinary Concerns

- Need for information to determine chemotherapy
- Low likelihood for endocrine therapy adherence
- Ability to offer partial-breast irradiation
- Anxiety regarding other oncologists' opinions regarding omission

## Geriatric-specific Concerns

- Older age
- Comorbidities
- Low life-expectancy

## Information from other modalities

- Axillary U/S
- Oncotype

Perform SLNB

Omit SLNB

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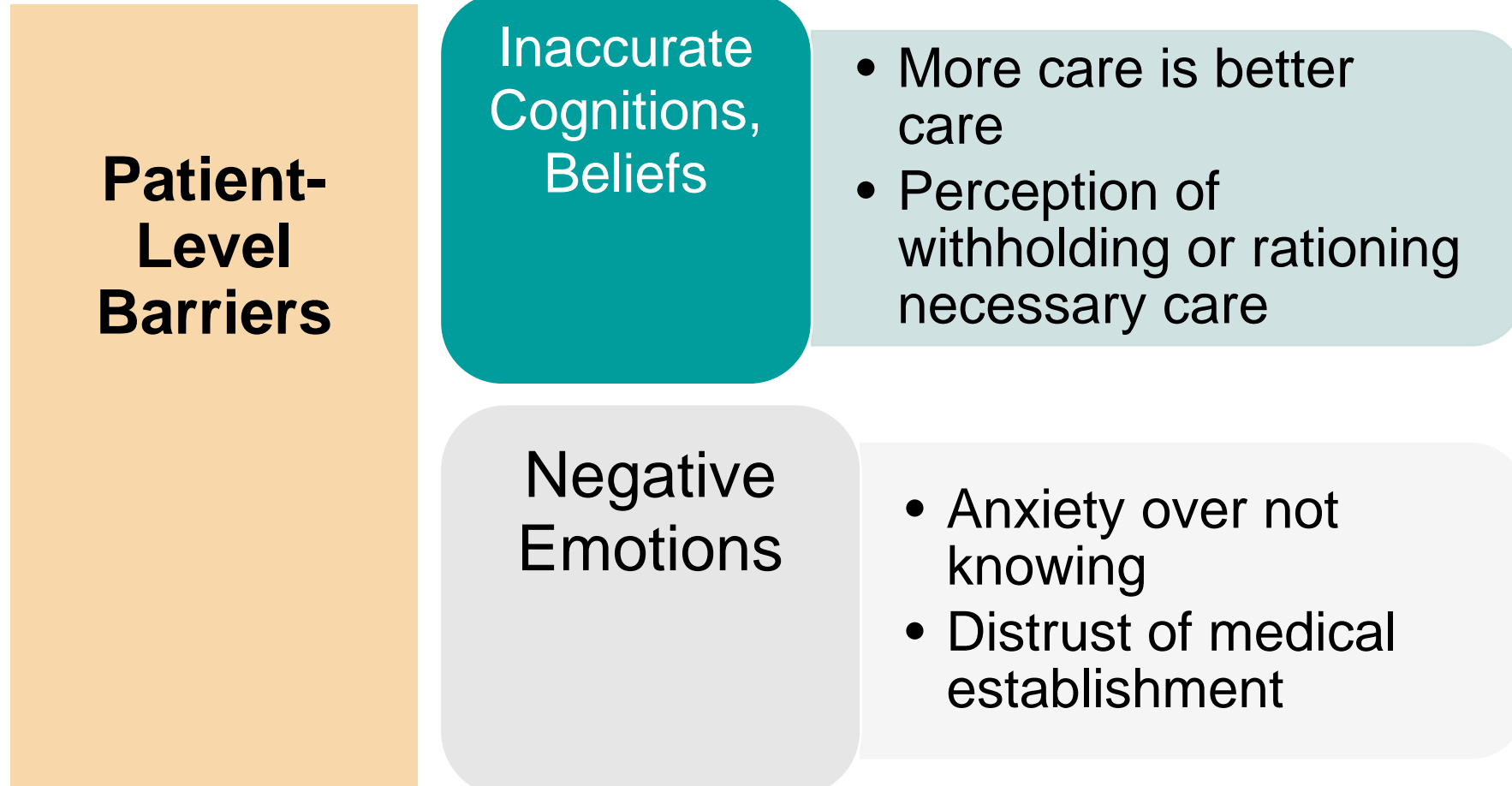
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**Perform SLNB**

**Omit SLNB**

# Targeting Patient/Physician Communication



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# Shared Decision Making as a Part of De-Implementation

## Shared Decision Making to Improve Care and Reduce Costs



The NEW ENGLAND  
JOURNAL of MEDICINE

Emily Oshima Lee, M.A., and Ezekiel J. Emanuel, M.D., Ph.D.

- SDM interventions have been associated with lower rates of low-value care:
  - antibiotics for acute respiratory infections:
    - 27.2% (SDM intervention) vs 52.2% (control)
  - cardiac stress tests in patients at low risk for ACS:
    - 75% (SDM and DA intervention) vs 91% (control)
- Cochrane Review:
  - Up to 20% of patients who participated in SDM chose less invasive surgical options than patients who didn't use DAs (RR 0.84; 95% CI 0.73 to 0.97; 17 studies)
- Excluding a study of CPM in BRCA mutation carriers



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# Shared Decision Making Support May Aid in De-Implementation

## Breast Cancer Treatment Choices

For Women Age 70 and Older with Stage 1 Breast Cancer



### ***Part 1 (surgery and radiation treatment)***

*You will need a pen or pencil to complete parts of this workbook.*

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# Decision Aid for Women $\geq 70$ with Early-Stage HR+/HER2-

**Learning about Your Health (continued)**

7. Do you need help from other people with household chores or to go shopping?  
 No (0 points)      Yes (2 points)      write your points here----->      \_\_\_\_\_

8. By yourself without help, how difficult is it for you to walk a quarter of a mile  
 (about 3 city blocks)?  
 Not at all difficult (0 points)      }      -->      \_\_\_\_\_  
 A little difficult to very difficult (3 points)      }  
 I can only do it with a cane or walker (3 points)

9. Which best describes your cigarette use?  
 Never smoked or smoked less than 100 cigarettes in your life (0 points)      }      -->      \_\_\_\_\_  
 Former smoker (1 point)      }  
 Current smoker (3 points)

10. In the past 12 months, how many times did you stay in a hospital overnight?  
 None- I did not stay in a hospital overnight (0 points)      }      -->      \_\_\_\_\_  
 Once (1 point)      }  
 Two times or more (3 points)

Now add up all of your points from questions 1-10 from BOTH pages: ----->      \_\_\_\_\_

**Please circle your TOTAL point score (from both pages) below.**

**Based on your total points, you fall into one of three health groups (Good, Fair, or Poor health). Please remember your **health group** as you read this workbook.**

**1, 2, 3, 4, 5, 6, 7, 8, 9**  
Points

**Good**  
Health

**10, 11, 12, 13, 14**  
Points

**Fair**  
Health

**15 or more**  
Points

**Poor**  
Health

5

- Written with low-literacy principles and geriatric-specific preferences in mind
- Integrates health status

# Decision Aid for Women $\geq 70$ with Early-Stage HR+/HER2-

## *Should I have radiation treatment after a lumpectomy?*

- Deciding whether or not to have radiation after a lumpectomy is a personal decision.  
There is no right or wrong answer.
- Having radiation lowers the chance of breast cancer coming back in the breast or chest within 10 years.
- Having or not having radiation does not affect survival over 10 years.
- Most women find it stressful to have breast cancer come back anywhere in their body.
- For women in **Fair or Poor Health** the chance of dying in 10 years from their other health conditions is often much greater than their chance of dying from this type of breast cancer.
  - Therefore, for women in **Fair or Poor health**, the chance of harm from radiation usually outweighs the chance of benefit.
- The next page shows a picture of the number of women who may have breast cancer come back within 10 years if they choose to have or not to have radiation after a lumpectomy.
  - The numbers in the picture assume that a woman takes hormone pills after a lumpectomy.
  - The numbers for women who choose not to take hormone pills after a lumpectomy are in Part 2 of this workbook.



# Decision Aid for Women $\geq 70$ with Early-Stage HR+/HER-2 - Disease

## *Should I have radiation treatment after a lumpectomy?*

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Minami et al, J Geriatr Oncol, 2021; Schonberg et al, J Geriatr Oncol, 2019

# Frailty and Limited Life Expectancy Screening at DFCI

## Population

- 70 years and older
- Scheduled consult with a breast surgeon at DFCI Longwood or DFCI Chestnut Hill



## Prior to Consult

- Geriatric-8 and Schonberg Index performed by RA



Data Handed to Surgeon Prior to Initiation of Consult

## October 2021

- Started at Longwood clinics



## November 2022

- Expanded to Chestnut Hill



## July 2023

- Expanded to Dana-Farber Brigham Cancer Center at South Shore Hospital



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# Geriatric Surgery Pathways at Brigham and Women's Hospital

SSTEP ✨

Superior Surgical Treatment for sEniors Pathway

Patients 75+  
screened with  
FRAIL scale  
surgery

Admission +  
SSTEP Order  
Set all patients  
70+

SSTEP  
Discharge  
Instructions

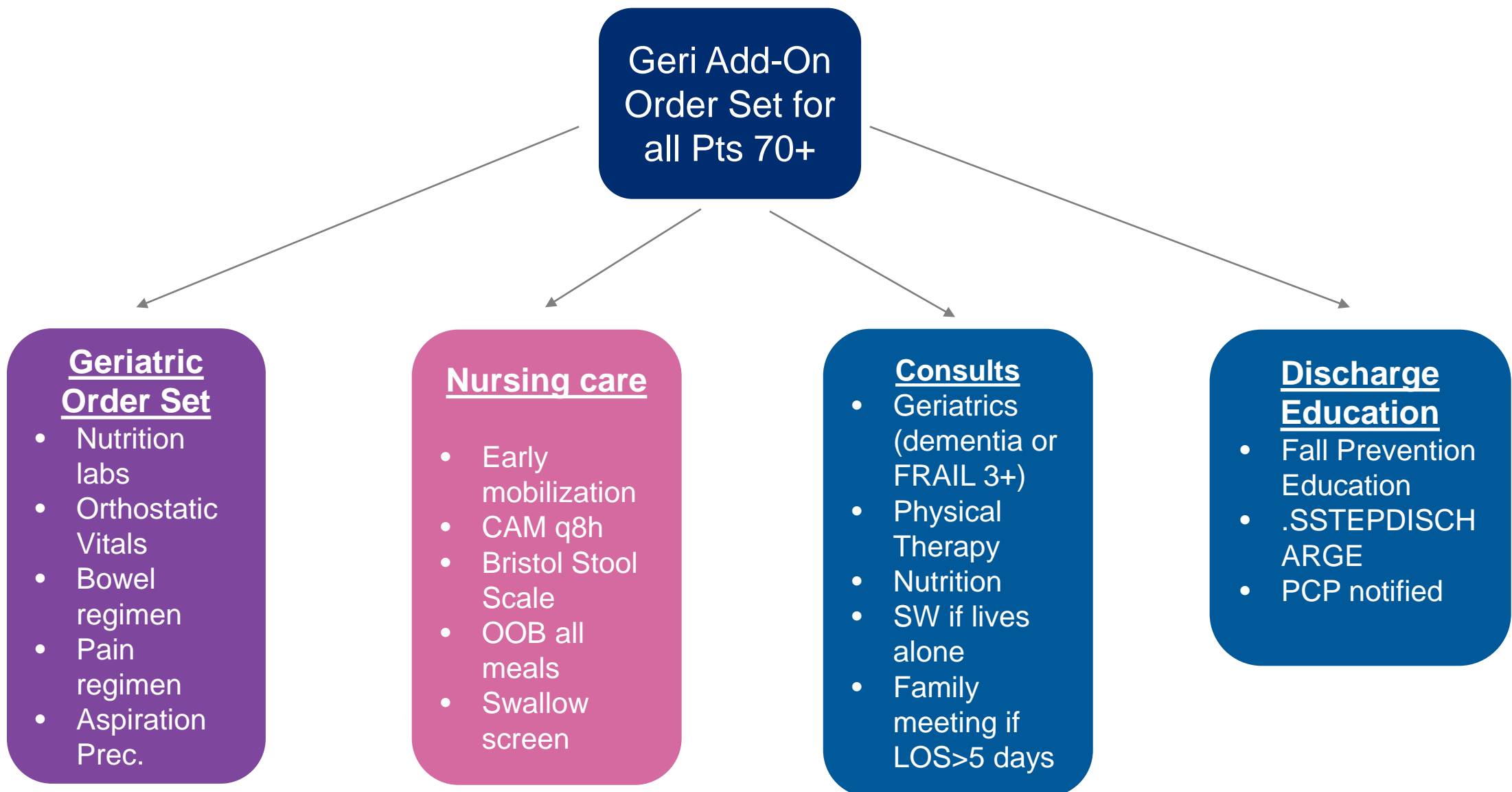
Pre-op Weiner Visit  
with Geriatrician if  
FRAIL 3+ or has  
dementia

Geriatric  
Surgery Team  
Follows High-  
Risk Pts  
Inpatient

## Services Covered by Preoperative Weiner Geriatric Consultation:

Colorectal Surgery  
Vascular Surgery  
Neurosurgery Spine  
Orthopedic Surgery

# Spreading Geriatric Surgery Pathways throughout the MGB Network



# Acknowledgments

## BWH

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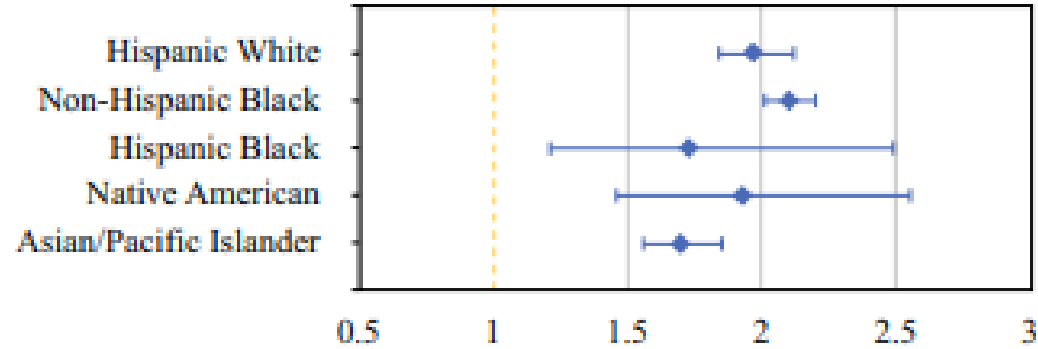
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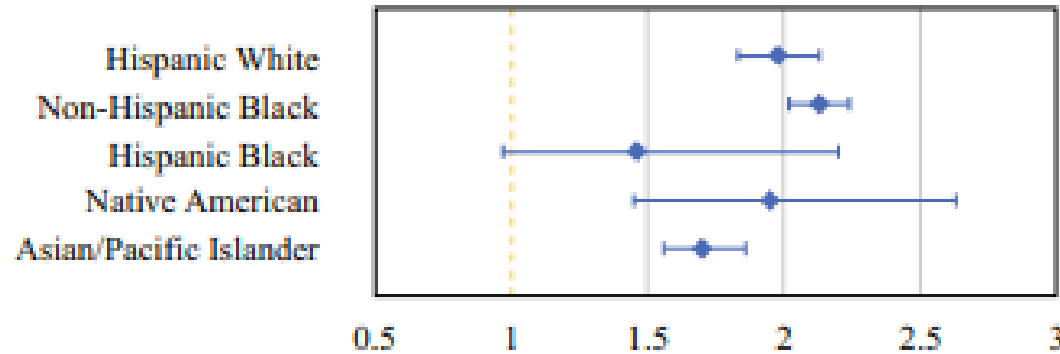
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# Race/Ethnicity and Site of Care Impact Treatment Delays in Older Women

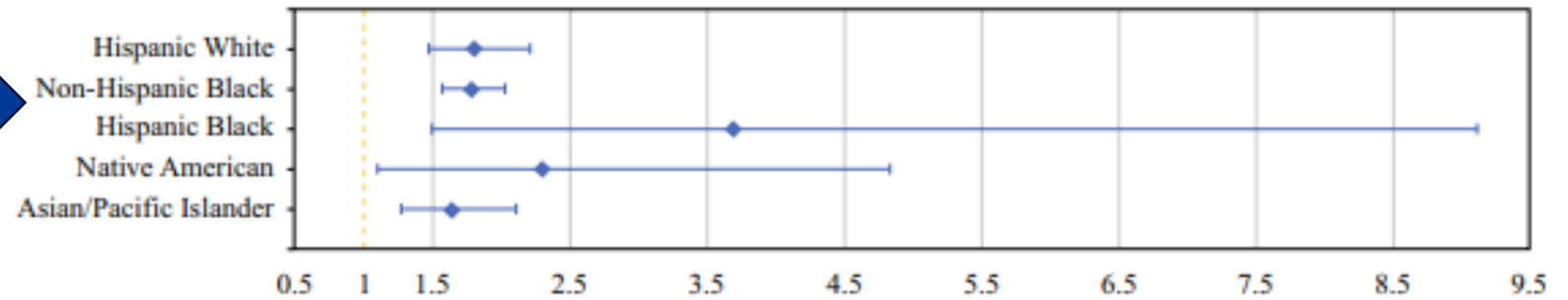
Delay in any treatment (>90 days from diagnosis)



Delay to upfront surgery



Systemic treatment delay

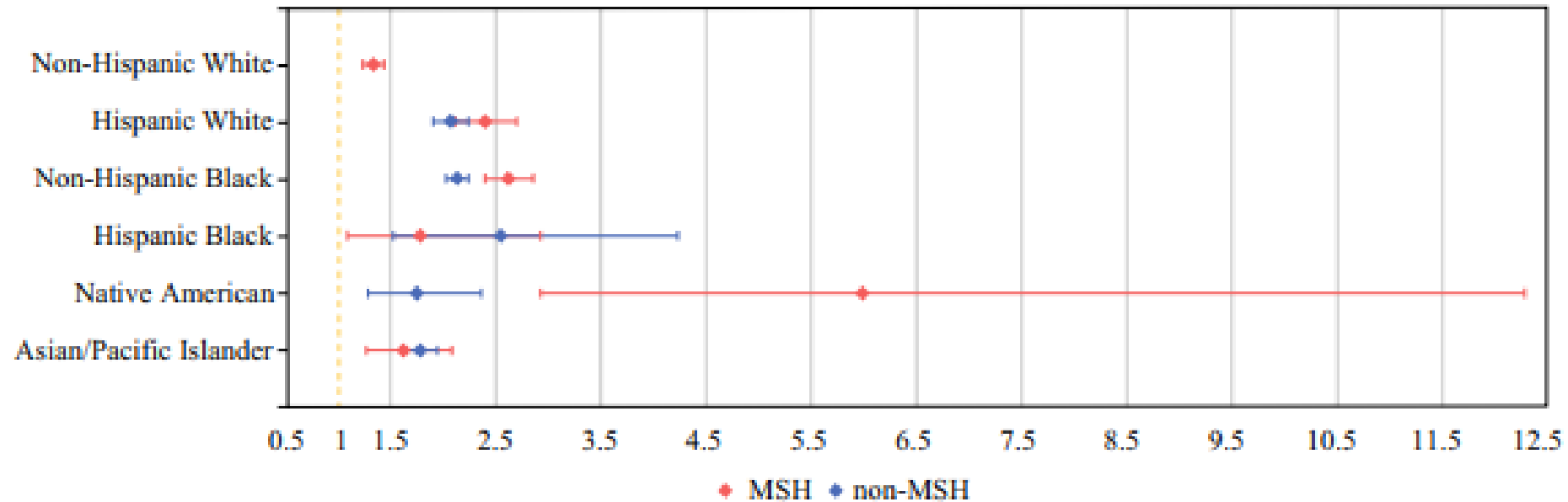


Adjusted odds, compared to Non-Hispanic White women

National Cancer Database, 2010-2017  
Women ≥65 with non-metastatic breast cancer

# Delay in Any Treatment by Race/Ethnicity and Minority-Serving Hospital Status

Minority-Serving Hospital: top decile of facilities in the National Cancer Database w/r/t proportion of black or Hispanic patients



**FIG. 3** Adjusted odds of any treatment delay compared with non-Hispanic White women treated at non-MSHs. *MSH* minority-serving hospital

# Example of a Frailty Screener

## Geriatric-8

- 8 items
- Average 4 minutes to administer

|                    | Items  | Possible answers (score)                             |
|--------------------|--|--|
| <b>A</b>           | Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties? | 0 : severe decrease in food intake                   |
|                    |  | 1 : moderate decrease in food intake                 |
|                    |  | 2 : no decrease in food intake                       |
| <b>B</b>           | Weight loss during the last 3 months   | 0 : weight loss > 3 kg                               |
|                    |  | 1 : does not know                                    |
|                    |  | 2 : weight loss between 1 and 3 kgs                  |
|                    |  | 3 : no weight loss                                   |
| <b>C</b>           | Mobility   | 0 : bed or chair bound                               |
|                    |  | 1 : able to get out of bed/chair but does not go out |
|                    |  | 2 : goes out   |
| <b>E</b>           | Neuropsychological problems  | 0 : severe dementia or depression                    |
|                    |  | 1 : mild dementia or depression                      |
|                    |  | 2 : no psychological problems                        |
| <b>F</b>           | Body Mass Index (BMI (weight in kg) / (height in m <sup>2</sup> ))   | 0 : BMI < 19   |
|                    |  | 1 : BMI = 19 to BMI < 21                             |
|                    |  | 2 : BMI = 21 to BMI < 23                             |
|                    |  | 3 : BMI = 23 and > 23                                |
| <b>H</b>           | Takes more than 3 medications per day  | 0 : yes  |
|                    |  | 1 : no   |
| <b>P</b>           | In comparison with other people of the same age, how does the patient consider his/her health status?                            | 0 : not as good                                      |
|                    |  | 0.5 : does not know                                  |
|                    |  | 1 : as good  |
|                    |  | 2 : better   |
|                    | Age  | 0 : >85  |
|                    |  | 1 : 80-85  |
|                    |  | 2 : <80  |
| <b>TOTAL SCORE</b> |  | <b>0 - 17</b>  |

# Example of a Frailty Screener

## Geriatric-8

- 8 items
- Average 4 minutes to administer

## Other Examples of Screeners:

- Vulnerable Elders Score-13
- Clinical Frailty Scale
- Gait-speed
- Timed-Up and Go
- Grip-Strength

|                    | Items  | Possible answers (score)                             |
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| <b>F</b>           | Body Mass Index (BMI (weight in kg) / (height in m <sup>2</sup> ))   | 0 : BMI < 19   |
|                    |  | 1 : BMI = 19 to BMI < 21                             |
|                    |  | 2 : BMI = 21 to BMI < 23                             |
|                    |  | 3 : BMI = 23 and > 23                                |
| <b>H</b>           | Takes more than 3 medications per day  | 0 : yes  |
|                    |  | 1 : no   |
| <b>P</b>           | In comparison with other people of the same age, how does the patient consider his/her health status?                            | 0 : not as good                                      |
|                    |  | 0.5 : does not know                                  |
|                    |  | 1 : as good  |
|                    |  | 2 : better   |
|                    | Age  | 0 : >85  |
|                    |  | 1 : 80-85  |
|                    |  | 2 : <80  |
| <b>TOTAL SCORE</b> |  | <b>0 - 17</b>  |

# Example of a Frailty Screener

## Geriatric-8

- 8 items
- Average 4 minutes to administer

## Other Examples of Screeners:

- Vulnerable Elders Score-13
- Clinical Frailty Scale
- Gait-speed
- Timed-Up and Go
- Grip-Strength

Choose the one that fits with your clinic flow!

|                    | Items  | Possible answers (score)                             |
|--------------------|--|--|
| <b>A</b>           | Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties? | 0 : severe decrease in food intake                   |
|                    |  | 1 : moderate decrease in food intake                 |
|                    |  | 2 : no decrease in food intake                       |
| <b>B</b>           | Weight loss during the last 3 months   | 0 : weight loss > 3 kg                               |
|                    |  | 1 : does not know                                    |
|                    |  | 2 : weight loss between 1 and 3 kgs                  |
|                    |  | 3 : no weight loss                                   |
| <b>C</b>           | Mobility   | 0 : bed or chair bound                               |
|                    |  | 1 : able to get out of bed/chair but does not go out |
|                    |  | 2 : goes out   |
| <b>E</b>           | Neuropsychological problems  | 0 : severe dementia or depression                    |
|                    |  | 1 : mild dementia or depression                      |
|                    |  | 2 : no psychological problems                        |
| <b>F</b>           | Body Mass Index (BMI (weight in kg) / (height in m <sup>2</sup> ))   | 0 : BMI < 19   |
|                    |  | 1 : BMI = 19 to BMI < 21                             |
|                    |  | 2 : BMI = 21 to BMI < 23                             |
|                    |  | 3 : BMI = 23 and > 23                                |
| <b>H</b>           | Takes more than 3 medications per day  | 0 : yes  |
|                    |  | 1 : no   |
| <b>P</b>           | In comparison with other people of the same age, how does the patient consider his/her health status?                            | 0 : not as good                                      |
|                    |  | 0.5 : does not know                                  |
|                    |  | 1 : as good  |
|                    |  | 2 : better   |
|                    | Age  | 0 : >85  |
|                    |  | 1 : 80-85  |
|                    |  | 2 : <80  |
| <b>TOTAL SCORE</b> |  | <b>0 - 17</b>  |

# Who is an “Older Adult”?

≥65?

≥70?

International Society of Geriatric Oncology (SIOG):

*“There is no universally accepted age cut-off defining ‘elderly.’ This reflects the fact that chronological age itself is less important than biological events in driving the ageing process within an individual.”*



# PRIME II Design and Baseline Characteristics

- 2003-2009: 1326 women,  $\geq 65$  years, randomized to WBI (40-50 Gy in 15-25 fractions) vs none
- HR+, T1-2N0 (up to 3 cm), clear margins; could not have LVI AND grade 2 disease

|                         | No radiotherapy<br>(n=668) | Radiotherapy<br>(n=658) |
|-------------------------|----------------------------|-------------------------|
| Age (years)             | 70 (67-74)                 | 69 (67-73)              |
| Tumour size (mm)        |                            |                         |
| 0-10                    | 258 (39%)                  | 265 (40%)               |
| 10.1-20                 | 326 (49%)                  | 319 (48%)               |
| 20.1-30                 | 84 (13%)                   | 74 (11%)                |
| Margins                 |                            |                         |
| <1 mm                   | 10 (1%)                    | 9 (1%)                  |
| 1-5 mm                  | 315 (47%)                  | 296 (45%)               |
| >5 mm                   | 227 (34%)                  | 239 (36%)               |
| Re-excision*            | 112 (17%)                  | 110 (17%)               |
| Unknown                 | 4 (<1%)                    | 4 (<1%)                 |
| Grade                   |                            |                         |
| 1                       | 271 (41%)                  | 292 (44%)               |
| 2                       | 368 (55%)                  | 352 (53%)               |
| 3                       | 23 (3%)                    | 13 (2%)                 |
| Unknown                 | 6 (<1%)                    | 1 (<1%)                 |
| Side                    |                            |                         |
| Left                    | 359 (54%)                  | 345 (52%)               |
| Right                   | 302 (45%)                  | 305 (46%)               |
| Unknown                 | 7 (1%)                     | 8 (1%)                  |
| Lymphovascular invasion |                            |                         |
| No                      | 631 (94%)                  | 628 (95%)               |
| Yes                     | 32 (5%)                    | 27 (4%)                 |
| Unknown                 | 5 (<1%)                    | 3 (<1%)                 |

|                                  | No radiotherapy<br>(n=668) | Radiotherapy<br>(n=658) |
|----------------------------------|----------------------------|-------------------------|
| Axillary surgery                 |                            |                         |
| Sentinel node biopsy only        | 223 (33%)                  | 198 (30%)               |
| Sample only                      | 174 (26%)                  | 211 (32%)               |
| Sample with sentinel node biopsy | 105 (16%)                  | 107 (16%)               |
| Clearance I/II                   | 129 (19%)                  | 101 (15%)               |
| Clearance III                    | 29 (4%)                    | 34 (5%)                 |
| Unknown                          | 8 (1%)                     | 7 (1%)                  |
| Preoperative endocrine treatment |                            |                         |
| No                               | 608 (91%)                  | 598 (91%)               |
| Yes                              | 60 (9%)                    | 54 (8%)                 |
| Unknown                          | 0                          | 6 (<1%)                 |
| Oestrogen receptor status        |                            |                         |
| Rich†                            | 593 (89%)                  | 601 (91%)               |
| Poor                             | 65 (10%)                   | 55 (8%)                 |
| Unknown                          | 10 (1%)                    | 2 (<1%)                 |
| Radiotherapy‡                    |                            |                         |
| Within 40-50 Gy§                 | --                         | 573/584 (98%)           |
| Boost                            | --                         | 91/584 (16%)            |

Kunkler et al. Lancet 2015



# PRIME II Local Recurrence Results

At 10 years:

- IBTR in RT arm: HR 0.12 (95% CI 0.05, 0.31)( $p < 0.0001$ ).
- Regional recurrence: 2.3% no RT vs 0.5% RT ( $p = 0.014$ ),
- No difference in:
  - Contralateral breast cancer
  - Distant metastases
  - Breast specific survival
  - OS
- 80/88 deaths in the no-RT group and 76/79 deaths in the RT group were not linked to breast cancer recurrence with no influence of RT ( $p = 0.17$ ).

|                               | No RT    | RT       | Total |
|-------------------------------|----------|----------|-------|
| <b>Cause of death</b>         |          |          |       |
| <b>Cancer</b>                 | 25 (28%) | 29 (37%) | 54    |
| <b>Of which breast cancer</b> | 8 (9%)   | 3 (4%)   | 11    |
| <b>Cardio-vascular</b>        | 9 (10%)  | 14 (18%) | 23    |
| <b>Other/unknown</b>          | 54 (61%) | 36 (45%) | 90    |
| <b>Total</b>                  | 88       | 79       | 167   |

Kunkler et al. SABCS 2020/

# Breast Surgery Outcomes in a Vulnerable Population

## Population of Nursing Home Patients

- Medicare claims, 2003-2012 (Minimum Data Set)
- 5,969 nursing-home residents
- Mean age 82±7
- 57% cognitively impaired
  
- Lumpectomy: 11%
- Mastectomy: 28%
- Lumpectomy or Mastectomy with ALND: 61%



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## Outcomes

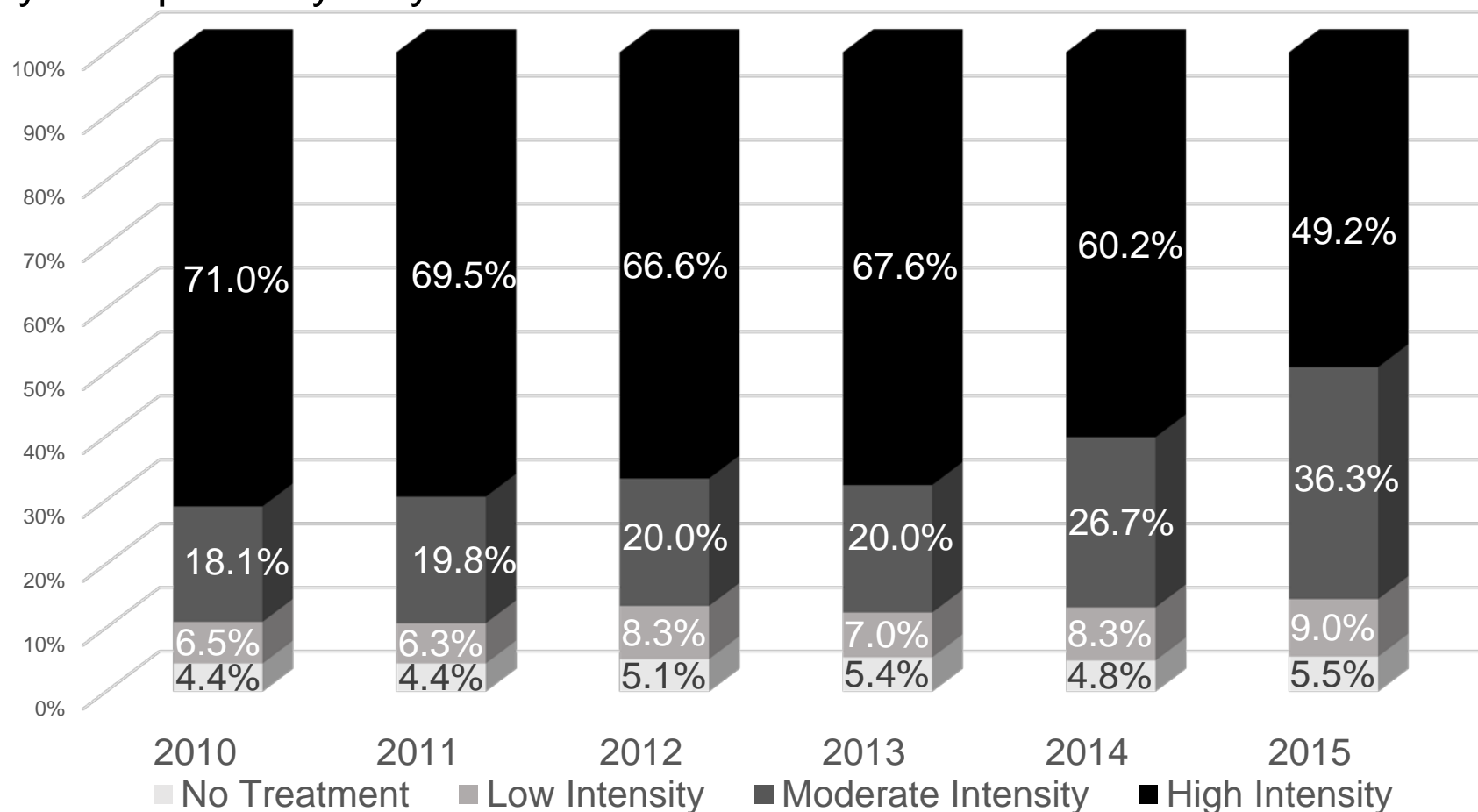
- **30-day mortality**
  - Lumpectomy only: 8%
  - Mastectomy only: 4%
  - Lumpectomy or Mastectomy with ALND: 2%
- **1-year mortality**
  - Lumpectomy only: 41%
  - Mastectomy only: 31%
  - Lumpectomy or Mastectomy with ALND: 29%
- Among 1-year survivors, **functional decline rate** was 56–60%.



# Trends Over Time in Patients >70 Years with cT1N0 HR+ Disease

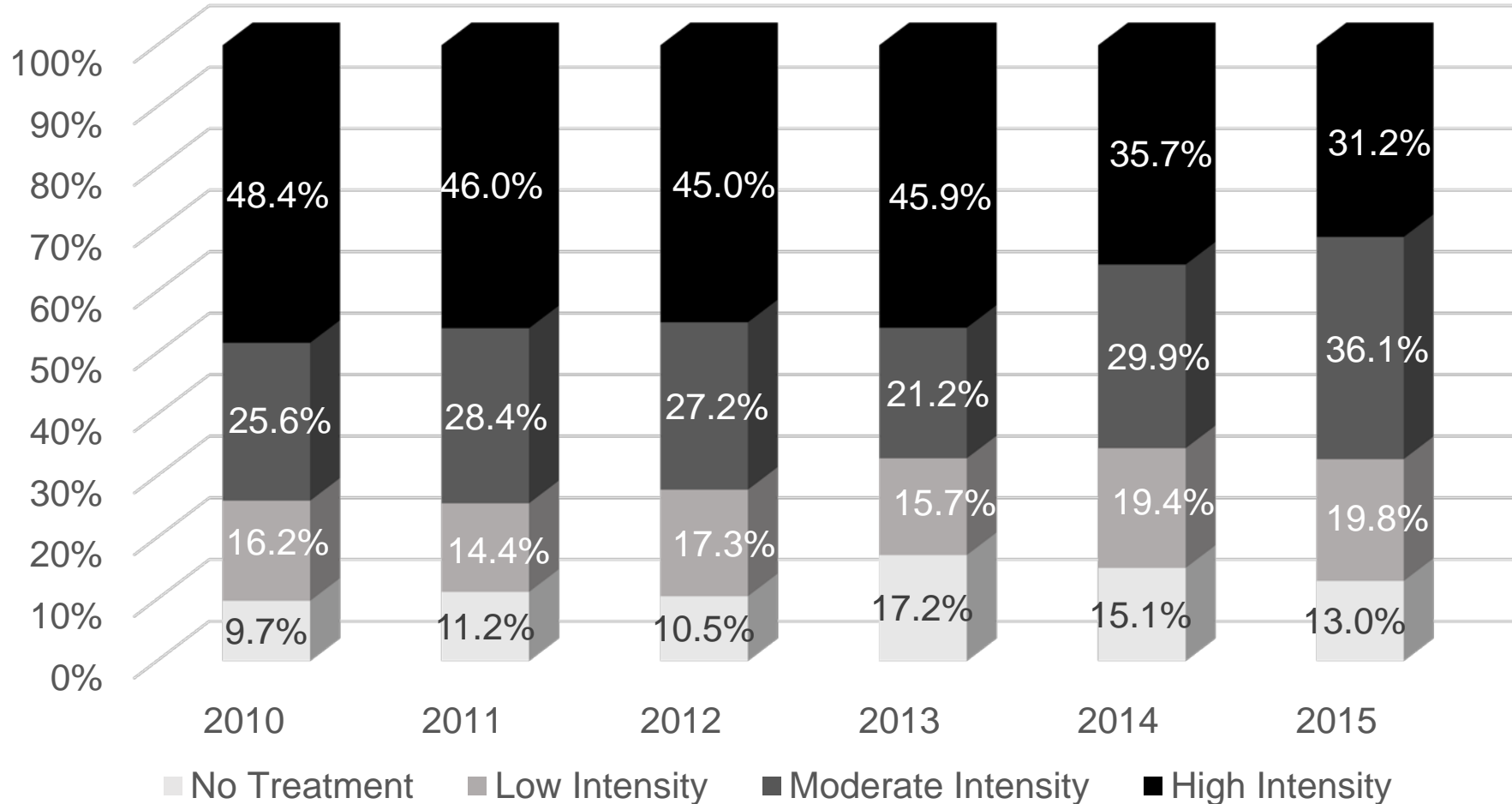
SEER-Medicare cohort: 2010-2015

- High-intensity: Lumpectomy + axillary surgery + RT, mastectomy + axillary surgery
- Moderate-intensity: Lumpectomy + axillary surgery, lumpectomy + RT, mastectomy-only
- Low-intensity: Lumpectomy only



# Trends Over Time in Patients >70 Years with cT1N0 HR+ Disease **Frail Patients and <5 Year Life Expectancy**

- Similar trends to whole cohort
- Over 30% still getting high-intensity therapy at the end of the study period



# Frailty and Limited Life Expectancy Screening at DFCI

## Patients Screened: 314 patients

- 36% at risk for being frail
- 64% not frail

## Mixed-Methods Program Evaluation is Ongoing

- Baseline Surgeon Semi-Structured Interviews: 11
- Longwood Surgeon Surveys (for each patient encounter): 176 surveys (97% response rate)

### Current:

- Post-Intervention Surgeon Semi-Structured Interview
- Surgeon Surveys from South Shore Hospital

### Schonberg Index

1. How would you describe your general health?  
 Fair or Poor  Good  
 Very good
2. Do you have any of the following co-morbidities:  
 Emphysema or chronic bronchitis  
If yes, does the lung disease limit usual activities or require home oxygen? Y  N   
 Congestive heart failure  
 Diabetes/high blood sugar  
 Any history of cancer (excluding basal and squamous cell carcinoma)?
3. History of smoking?  
 None  Current  Former
4. Mobility: Do you have any difficulty walking 1/4 a mile (several city blocks) without assistance or special equipment?  
 Yes  No
5. In the past 12 months, have you ever been hospitalized overnight? If so, how many times?  
 Yes \_\_\_\_\_  No
6. Do you need assistance with everyday chores, activities, shopping, or routine needs?  
 Yes  No
7. Any difficulty pushing or pulling large objects? (ex. living room chair)  
 Yes  No
8. Difficulty showering and/or bathing?  
 Yes  No
9. Difficulty managing money (ex. paying bills or taxes)?  
 Yes  No

Mortality Risk =  
5yr [            ]  
10yr [           ]  
14yr [           ]

### Geriatric-8

1. Age:
2. BMI:
3. Do you take > 3 medications per day? (excluding vitamins)  
 Yes  No
4. Have you experienced any sort of weight loss in the last 3 months? If so, how much would you say?  
 Yes, 0 – 3kg  
 Yes, > 3kg  
 No  Does not know
5. Have you experienced any decrease in food intake in the last 3 months?  
 Yes  No  
 Does not know
6. Do you have any difficulty getting out of chairs and/or beds? Are you able to go out independently?  
 Chair / bed bound  
 Not chair/ bed bound but does not go out  
 Able to go out
7. Do you have any psychological or mental problems (examples include depression or forgetfulness)?  
 Yes  No
8. In comparison with other people of the same age, how would you consider your health status?  Not as good  
 Does not know  As good  
 Better

Total Score =

Risk of Being Frail / Not Frail