Helping Patients with Breast Cancer Survive and Thrive

November 15, 2023
Logistics

• All participants are muted during the webinar

• Questions – including technical issues you may be experiencing – should be submitted through the question pane

• Questions will be answered as time permits; additional questions and answers will be posted on the website

• Please complete the post-webinar evaluation you will receive via email
Introducing our Panelist

Kathryn Schmitz, PhD, MPH, FACSM, FTOS, FNAK  
Professor, Hematology Oncology, University of Pittsburgh  
Hillman Cancer Center  
(Vice-Chair, NAPBC Standards Committee)

Jennifer Ligibel, MD  
Dana-Farber Cancer Institute  
Harvard Medical School

Tracy E. Crane, PhD, RDN  
Associate Professor, Medical Oncology Miller School of Medicine  
Sylvester Comprehensive Cancer Center | University of Miami
Exercise, Diet, and Weight Management in Breast Cancer

Jennifer Ligibel, MD
Director, Zakim Center for Integrative Therapies and Healthy Living
Dana-Farber Cancer Institute
Harvard Medical School
Obesity is a poor prognostic factor in early breast cancer

BMI and All-Cause Mortality (64 studies; 32,507 deaths)

Higher BMI Also Linked To:

- Increased breast cancer mortality: 1.10 (1.06-1.14) per 5 kg/m²
- Increased risk of second cancers: 1.14 (1.04-1.26) per 5 kg/m²

Chan et al. IJC 2022
Physical activity and fitness also associated with outcomes in early-stage breast and other cancers

Cardiorespiratory fitness (CRF) and cancer-related mortality

Post-diagnosis physical activity and cancer mortality

Breast, colon and prostate cancers:
Pooled effect estimate 0.62
(active vs inactive survivors)

Guideline Question:

For adult patients with cancer undergoing active treatment with systemic antineoplastic therapy or radiotherapy, or who are in the peri-operative period, do interventions involving exercise, diet, and/or weight control compared with no intervention, lead to meaningful improvements in outcomes related to treatment toxicity, quality of life, or cancer control?
Guideline Question

For **adult patients** with cancer **undergoing active treatment** with systemic antineoplastic therapy or radiotherapy, or who are in the peri-operative period, do interventions involving exercise, diet, and/or weight control compared with no intervention, lead to meaningful improvements in outcomes related to treatment toxicity, quality of life, or cancer control?

* Does not include recommendations for individuals with breast cancer being treated with endocrine therapy, given the extensive representation of this population in other guidelines.
Guideline Question

For adult patients with cancer undergoing active treatment with systemic antineoplastic therapy or radiotherapy, or who are in the peri-operative period, do interventions involving exercise, diet, and/or weight control compared with no intervention, lead to meaningful improvements in outcomes related to treatment toxicity, quality of life, or cancer control?

• Guideline only considers evidence from RCT’s
• Guideline does not address mind-body exercise (such as yoga), dietary supplements, cancer cachexia, malnutrition, enteral feeding, or parenteral nutrition.
Guideline Question

For adult patients with cancer undergoing active treatment with systemic antineoplastic therapy or radiotherapy, or who are in the peri-operative period, do interventions involving exercise, diet, and/or weight control compared with no intervention, lead to meaningful improvements in outcomes related to treatment toxicity, quality of life, or cancer control?
Methods

• A systematic review of the literature identified systematic reviews and RCTs (with ≥ 25 subjects/arm) in adults during active treatment evaluating:
  • Aerobic and resistance exercise
  • Specific diets and foods
  • Intentional weight loss and avoidance of weight gain

• Outcomes:
  • Quality of life
  • Physical function
  • Treatment toxicity
  • Cancer control (recurrence, survival, second cancers, etc)

• GRADE quality assessment labels (i.e. high, moderate, low, very low) were assigned for each outcome by the project methodologist
Evidence Base

• PubMed and the Cochrane Library searched from 1/2000 to 5/2021

• Evidence base consisted of 52 systematic reviews and 23 additional RCTs:
  • 42 SR’s for exercise
  • 9 SR’s for diet, and
  • 1 SR for weight management

• Most commonly studied types of cancer
  • Breast
  • Prostate
  • Lung
  • Colorectal
Guideline Recommendations

Question 1: Does exercise during cancer treatment safely improve outcomes related to QoL, treatment toxicity, or cancer control?

Recommendation 1.1: Oncology providers should recommend aerobic and resistance exercise during active treatment with curative intent to mitigate fatigue, improve physical functioning, and strength; and in some populations, improve QoL and reduce anxiety and depression. Exercise interventions during active treatment have low risk of adverse events. Evidence was not sufficient to recommend for or against exercise during treatment.

Exercise interventions during active treatment reduce fatigue; preserve cardiorespiratory fitness, physical functioning and strength; and in some populations (mostly breast cancer) improve QoL and reduce anxiety and depression.

- Evidence quality: moderate to low
- Strength of recommendation: strong
## Certainty of Evidence, by Outcome:

### Exercise during chemotherapy or radiation*

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Sample Size</th>
<th>Effect estimates</th>
<th>Certainty of the Evidence (Quality of evidence)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VO$_2$max, mixed cancer types</td>
<td>Based on data from 1318 participants in 13 studies$^3$</td>
<td>Difference: SMD 0.46 higher (CI 0.23 higher - 0.69 higher)</td>
<td>Moderate due to serious inconsistency$^a$</td>
</tr>
<tr>
<td>Fatigue, mixed cancer types</td>
<td>Based on data from 1788 participants in 21 studies$^{19}$</td>
<td>Difference: SMD 0.67 lower (CI 0.10 lower - 0.34 lower)</td>
<td>Moderate due to serious inconsistency$^b$</td>
</tr>
<tr>
<td>Self-reported physical function, mixed cancer types</td>
<td>Based on data from participants in 25 studies$^{15}$</td>
<td>Difference: SMD 0.22 higher (CI 0.13 higher - 0.32 higher)</td>
<td>Moderate due to imprecision$^c$</td>
</tr>
<tr>
<td>Quality of life, mixed cancer types</td>
<td>Based on data from participants in 32 studies$^{15}$</td>
<td>Difference: SMD 0.16 higher (CI 0.08 higher - 0.23 higher)</td>
<td>Moderate due to serious imprecision$^d$</td>
</tr>
<tr>
<td>Upper body strength in patients with breast cancer</td>
<td>Based on data from 974 participants in 8 studies$^c$</td>
<td>Difference: SMD 0.37 higher (CI 0.25 higher - 0.50 higher)</td>
<td>High</td>
</tr>
<tr>
<td>Upper body strength in patients with hematologic malignancies</td>
<td>Based on data from 494 participants in 8 studies$^{17}$</td>
<td>Difference: SMD 0.20 higher (CI 0.02 higher - 0.37 higher)</td>
<td>Low due to serious risk of bias, due to serious imprecision$^e$</td>
</tr>
</tbody>
</table>

* Showing 6 of 10 outcomes
Is exercise during cancer treatment safe?

- Frequency of reporting AE variable across studies
- Rate of exercise-related AE’s is low
- Literature review identified 11 systematic reviews/meta-analyses reporting exercise intervention-related AE’s during cancer treatment

<table>
<thead>
<tr>
<th>Author</th>
<th>Intervention</th>
<th>Cancer type</th>
<th>Results</th>
<th>AMSTAR quality score (out of 11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott</td>
<td>Aerobic and/or resistance</td>
<td>Mixed</td>
<td>13 of 14 studies of patients receiving cancer treatment reported on adverse events. Eleven exercise-related adverse events were reported: dizziness, hypotension, syncope, chest pain, acute MI, leg pain, musculoskeletal adverse event (n=4), and tiredness.</td>
<td>8</td>
</tr>
</tbody>
</table>
Diet and weight management recommendations

**Question 2:** Does consuming a particular dietary pattern or food(s) during cancer treatment safely improve outcomes related to QoL, treatment toxicity, or cancer control?

**Recommendation 2.1.** Ketogenic or low-carbohydrate diets are not recommended to prevent infection in patients with neutropenia. Evidence quality: low; strength: weak.

Currently insufficient evidence to recommend for or against dietary interventions during treatment

**Recommendation 2.2.** Neutropenic diets (specifically diets that exclude raw fruits and vegetables) are not recommended to prevent infection in patients with neutropenia. Evidence quality: low; strength: weak.

Neutropenic diets (diets that omit raw fruits and vegetables) for the purpose of decreasing infection are not recommended during active treatment.

**Question 3:** Do interventions to promote intentional weight loss or avoidance of weight gain during cancer treatment safely improve outcomes related to QoL, treatment toxicity, or cancer control?

**Recommendation 3.** Currently insufficient evidence to recommend for or against weight loss/prevention of weight gain interventions during treatment.
### Certainty of Evidence, by Outcome:

**Diet interventions during chemotherapy or radiation**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Sample size</th>
<th>Effect estimates</th>
<th>Certainty of the Evidence (Quality of evidence)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of life, treatment toxicity, or cancer control</td>
<td>Based on data from 136 participants in 4 studies(^{45})</td>
<td>Due to variability in interventions, small sample sizes, and high risk of bias, data are insufficient for drawing conclusions regarding the effect of dietary restriction on quality of life, treatment toxicity, or cancer control.</td>
<td>Very low Due to serious risk of bias, due to very serious indirectness, due to very serious imprecision</td>
</tr>
</tbody>
</table>

Due to variability in interventions, small sample sizes, and high risk of bias, data are insufficient for drawing conclusions regarding the effect of dietary restriction on quality of life, treatment toxicity, or cancer control.
Evidence Gaps

• Impact of diet and weight management interventions during treatment on any outcome (QoL, patient reported outcomes, treatment toxicity, etc)

• Impact of exercise/diet/weight interventions in advanced disease

• Impact of exercise, diet or weight management interventions during treatment on treatment outcomes and on cancer recurrence, progression, or survival
How do we fill in these gaps?
The Breast Cancer Weight Loss Trial

**Primary Objective:** Invasive disease-free survival

**Key Secondary Objective:** Weight change

**3136 participants**

**Key Eligibility:**
- Stage II-III breast cancer
- HER-2 -
- BMI ≥ 27 kg/m²

**Health education +**
2-year telephone-based weight loss intervention
- 42 calls from health coach (DFCI)
- Supplemented with workbook and tools to promote weight loss
- Based on Social Cognitive Theory

**Health Education Alone**

Ligibel et al. npj Breast Cancer. 2017

NCT02750826
<table>
<thead>
<tr>
<th></th>
<th>CONTROL (n=1173)</th>
<th>WLI (n=1222)</th>
<th>P VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Weight Change at 6-months</td>
<td>+ 0.2 kg</td>
<td>- 4.4 kg</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>% Weight Change at 6-months</td>
<td>+ 0.3%</td>
<td>- 4.8%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Absolute Weight Change at 12-months</td>
<td>+ 0.7 kg</td>
<td>- 4.4 kg</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>% Weight Change at 12-months</td>
<td>+ 0.9%</td>
<td>- 4.8%</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>
ENICTO: Exercise and Nutrition Interventions to Improve Cancer Treatment-Related Outcomes

- NCI-funded consortium (2022-2027)

- Primary endpoints focused on impact of lifestyle interventions during treatment on chemotherapy toxicity and received dose intensity

- Four projects plus coordinating center funded through U-01 mechanism:
  - Breast
  - Ovarian
  - Colon
  - Rectal
Exercise to Preserve Functional Status and Prevent Disability among Cancer Patients Undergoing Chemotherapy

270 participants

Key Eligibility:
- Stage I-III breast cancer
- Starting anthracycline or taxane based neo/adjuvant tx
- Age ≥ 65 years

THRIVE-65 Intervention:
- Resistance and aerobic exercise training
- Protein support

Supportive Care Program:
- Provided with materials on mindfulness, art therapy, stretching and healthy nutrition

MPI: Schmitz, Ligibel, Berger
Exercise, Diet, and Weight Management in Breast Cancer Survivors

- Observational evidence provides strong evidence that obesity and inactivity are linked to higher risk of developing and dying from cancer.

- Consistent evidence from RCT’s shows that exercise during cancer treatment has significant benefits for cancer patients.

- Important evidence gaps remain regarding whether weight loss, increased exercise and other lifestyle interventions during and after cancer treatment will impact cancer and treatment outcomes.
Nutrition and Breast Cancer - Review of the Evidence

Tracy E. Crane, PhD, RDN
Associate Professor, Medical Oncology Miller School of Medicine
Co-Lead Cancer Control Research Program & Director of Lifestyle Medicine, Prevention and Digital Health
Sylvester Comprehensive Cancer Center | University of Miami
Diet and Breast Cancer Risk

• 119 studies from around the world, >12 million women and > 260,000 cases of breast cancer

• **Strong evidence** consuming alcoholic drinks INCREASES the risk of pre and post menopausal breast cancer

• Some evidence consuming non-starchy vegetables might decrease the risk of ER– breast cancer

• consuming foods containing carotenoids might decrease the risk of breast cancer (unspecified)

• consuming dairy products might decrease the risk of premenopausal breast cancer

• **diets high in calcium** might decrease the risk of pre and post menopausal breast cancer
Diet and Breast Cancer Risk RCT

Low-fat diet, with increased fruit, vegetables and whole grains.
WHI

• Initial 8.5 year follow up:
  • No significant difference in breast cancer incidence (8% lower intervention, p = 0.09) or death from breast cancer (HR 0.67; 95% CI, 0.43-1.06, p=0.08)
  • In sub-group analysis ER-/PR- breast cancer had a statistically significant reduction in deaths after breast cancer (HR 0.64; 95% CI, 0.49-0.84, p=0.02) however deaths from breast cancer specifically was not significant

• Longer term 19.6 year follow-up:
  • Significant reduction in deaths after breast cancer (HR 0.85; 95% CI, 0.74-0.96, p=0.01) and breast cancer specific deaths (HR 0.79; 95% CI, 0.64-0.97, p=0.02)

Chlebowski RT et al. JCO 2020
PREDIMED Trial – diet and breast cancer risk

• Secondary analysis of women at high risk for CVD
• N = 4,282 women (2003-2009)
• Mediterranean diet (+ olive oil or nuts) vs. advice to follow a low-fat diet
What about diet after a diagnosis of breast cancer?
WINS and WHEL Trials

- **WINS** (n = 2,437)
  - ≤ 1 year of diagnosis, post-menopausal
  - Low-fat diet (<15% of calories from fat)
  - 2.6% between-group difference for breast cancer events, however this was non-significant (p=0.077)

- **WHEL** (n = 3,088)
  - Invasive breast cancer
  - Followed for 7.3 years
  - 5 vegetable servings, 16 oz of vegetable juice, 3 fruit servings, 30g of fiber and 20% energy from fat vs. ACS dietary guidelines
  - No reduction in breast cancer events or mortalities

Pierce JP. Curr Opp Obst & GYN 2009
WINS and WHEL post-hoc analyses

**WINS**

ER+ Breast Cancer

**ER- Breast Cancer**

**WHEL**

Highest quartile of plasma total carotenoid concentration had significantly reduced risk for a new breast cancer event (HR, 0.57; 95% CI, 0.37 to 0.89).

Chlebowski R. et al. JNCI 2006; Rock C. et al. JCO 2005
DIANA-5

• 1,542 patients with elevated risk for breast cancer recurrence (stage I-III) due to estrogen receptor–negative cancer, or metabolic syndrome, or high plasma levels of insulin or testosterone and within 5 years of treatment completion.

• Random assignment to an active dietary intervention or a control for 12 months with 5-year follow-up
  • Both groups given AICR dietary guidelines
  • Intervention diet included cooking classes, education and community meals and based on Mediterranean diet pattern
  • A priori diet index to measure the difference between recommended and discouraged foods

Berrino F et. al. Clin Ca Res 2023
No impact on recurrence of disease HR = 0.99; 95% CI: 0.69–1.40.
### DIANA-5 post-hoc analysis

#### Overall recurrence-free survival

![Graph showing overall recurrence-free survival over time for different tertiles of DI (Dietary Index).](image)

#### Dietary Index change

<table>
<thead>
<tr>
<th></th>
<th>1st Tertile</th>
<th>2nd Tertile</th>
<th>3rd Tertile</th>
<th>P_{trend}</th>
<th>Continuous</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breast cancer events (n)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total population</td>
<td>142/1,300</td>
<td>1.00</td>
<td>0.86 (0.58-1.29)</td>
<td>0.59 (0.36-0.92)</td>
<td>0.04</td>
</tr>
<tr>
<td>ER+</td>
<td>29/265</td>
<td>1.00</td>
<td>2.58 (0.67-8.66)</td>
<td>2.25 (0.58-8.74)</td>
<td>0.81</td>
</tr>
<tr>
<td>ER-</td>
<td>113/1,045</td>
<td>1.00</td>
<td>0.68 (0.42-1.09)</td>
<td>0.42 (0.26-0.77)</td>
<td>0.005</td>
</tr>
<tr>
<td>ER+ and tamoxifen treatment</td>
<td>71/606</td>
<td>1.00</td>
<td><strong>0.45 (0.24-0.85)</strong></td>
<td>0.30 (0.15-0.60)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>ER+ and aromatase inhibitors</td>
<td>42/444</td>
<td>1.00</td>
<td>1.26 (0.56-2.84)</td>
<td>1.09 (0.42-2.98)</td>
<td>0.62</td>
</tr>
<tr>
<td>ER+ and premenopausal at diagnosis</td>
<td>66/625</td>
<td>1.00</td>
<td><strong>0.60 (0.32-1.10)</strong></td>
<td><strong>0.24 (0.11-0.54)</strong></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>ER- and postmenopausal at diagnosis</td>
<td>47/412</td>
<td>1.00</td>
<td>0.99 (0.46-2.14)</td>
<td>1.27 (0.24-3.24)</td>
<td>0.63</td>
</tr>
</tbody>
</table>

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What about diet during treatment for breast cancer?
DIRECT Trial

- Women with HER2-negative stage II/III breast cancer w/ planned neoadjuvant chemotherapy (n = 131)
- Randomly assigned to fasting mimicking diet (FMD) vs. usual diet 3 days prior to and day of chemo
- FMD higher odds of radiological complete response (OR 3.16, p=0.039) vs. usual diet
- FMD higher odds of pathological response w/ 90-100% tumor cell loss (OR 4.11, p=0.016) vs. usual diet
- No differences in toxicity between groups
Prolonged Overnight Fasting and Exercise

Figure 1. FastER mechanisms to improve fatigue, body composition, treatment toxicities and patient reported outcomes.

<table>
<thead>
<tr>
<th>Primary Aim</th>
<th>Fatigue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Aim</td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>Sleep, treatment toxicities and patient reported outcomes (depression, anxiety, QOL)</td>
</tr>
<tr>
<td>b)</td>
<td>Physical function and body composition</td>
</tr>
<tr>
<td>Tertiary Aim</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relation between circadian activity rhythms and 1) fatigue, sleep, depression, anxiety and QOL and 2) physical function and body composition</td>
</tr>
</tbody>
</table>

NCT06123988; R01CA273209 Crane/Dieli-Conwright/Ligibel (MPI)
# FastER Study Schema

<table>
<thead>
<tr>
<th>Exercise (EXE) Intervention</th>
<th>Prolonged Overnight Fasting (POF) Intervention</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>12-week program (POF-EXE):</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Weekly telephone calls (12 total) with</td>
<td></td>
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<tr>
<td></td>
<td>a Registered Dietitian and behavioral</td>
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<tr>
<td></td>
<td>health coaching to fast for 14 hours each</td>
<td></td>
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<tr>
<td></td>
<td>day</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Daily tracking of start and stop time for</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>eating</td>
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<td></td>
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<tr>
<td></td>
<td>• 3 x per week (36 sessions total) Exercise</td>
<td></td>
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<tr>
<td></td>
<td>Trainer supervised* resistance + aerobic</td>
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<tr>
<td></td>
<td>exercise sessions</td>
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<td></td>
<td>• Exercise sessions are completed during</td>
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<tr>
<td></td>
<td>daylight hours to align circadian rhythm</td>
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<tr>
<td></td>
<td>12-week program (EXE):</td>
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<tr>
<td></td>
<td>• 3 x per week (36 sessions total) Exercise</td>
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<tr>
<td>NO</td>
<td>12-week program (POF):</td>
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<td></td>
<td>eating</td>
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<td></td>
<td>Attention Controls:</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Printed materials on nutrition and physical</td>
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<tr>
<td></td>
<td>activity information publicly available</td>
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<td>through the American Cancer Society</td>
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<td></td>
<td>(cancer.org)</td>
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<tr>
<td></td>
<td>• Every other week calls (6 total) general</td>
<td></td>
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<tr>
<td></td>
<td>health education telephone calls with no</td>
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<td></td>
<td>discussion of any intervention content</td>
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NCT06123988; R01CA273209 Crane/Dieli-Conwright/Ligibel (MPI)
Considerations & Future Directions

- Diet is challenging to measure
- Study design and follow-up

- Complexities of diet
  - Patterns
  - Meal timing
  - Nutrients
  - Environmental & Gene Interactions
Additional research is needed to understand the impact of diet on breast cancer outcomes with specificity for tumor type and stage across the cancer continuum.
Exercise and Nutrition in the New NAPBC Standards

Kathryn Schmitz, PhD, MPH, FACSM, FTOS, FNAK
Professor, Hematology Oncology, University of Pittsburgh
Hillman Cancer Center
(Vice-Chair, NAPBC Standards Committee)
Overview

• New Standards
  • Revisions intended to focus on the patient journey
• Pilot Sites in 2023
• New Standards in effect January 2025
How We Came to View

Old Model

New Model
Intensity of the Emotional Experience across the Journey

- "It's become so routine to the providers as it's become a job to them. It's new for the patient. It was for me."
- "Waiting for the pathology report was worse than waiting for the test itself."
- "The only result I want is to be still alive. I'd rather be missing some parts and alive than in a casket with all my parts."
- "My boys were 11 and 12. We were in the garage when I told them I had cancer. I could feel the energy go out."
- "Words are so important. 'Survivorship' feels like a 'don't call us, we'll call you'."

Journey Over Time (does not depict relative duration)
The 2024 NAPBC Standards

Paradigm shift: Care through the patient’s lens

Align with ACS emphasis on value-based care and CoC’s cancer care goals

Standards will help provide high value patient care that is feasible, educational and not punitive

Adjustable, fluid with long roll out for programs to adapt and grow
Nutrition

Standard 2.3  Breast Care Team

- **Nutritionists** are specifically called out as being among the health care professionals appropriate for the Breast Program Director and Breast Program Leadership Committee to include in the Breast Care Team.
Nutrition

Standard 5.7 Comprehensive Evaluation of Patient Factors Before Treatment

• Each calendar year, the Breast Program Leadership Committee must review and assess one of multiple possible categories of patient pre-treatment evaluations
  • Evaluations for referrals to nutrition counseling is included in these possible categories
  • (Other options include functional assessments, evaluation for referrals to oncofertility, cardiooncology, exercise programs, genetics, physical therapy, or social well-being)
Nutrition

Standard 5.11 Medical Oncology

• Protocols must be developed and implemented for assessment of side effects of systemic therapy and appropriate referrals and interventions.
  • Multiple possible interventions to address side effects are listed including:
    • **Nutrition support is offered for patients to maintain a healthy diet while experiencing the side effects of chemotherapy**
    • Acupuncture is offered for control of chemotherapy induced neuropathy
    • Pharmacologic interventions are available to address symptoms
    • Cold caps are offered to avoid chemotherapy induced alopecia
Exercise

Standard 2.3  Breast Care Team

• **Exercise Professionals** are specifically called out as being among the health care professionals appropriate for the Breast Program Director and Breast Program Leadership Committee to include in the Breast Care Team.
Exercise

Standard 5.7 Comprehensive Evaluation of Patient Factors Before Treatment

• Each calendar year, the Breast Program Leadership Committee must review and assess one of multiple possible categories of patient pre-treatment evaluations
  • Evaluations for referrals to exercise programs and physical therapy are included in these possible categories
  • (Other options include functional assessments, evaluation for referrals to oncofertility, nutrition counseling, cardiooncology, genetics, or social well-being)
Exercise

Standard 5.9 Surgical Care
Standard 5.10 Reconstructive Surgery
Standard 5.11 Medical Oncology
Standard 5.12 Radiation Oncology

• Protocols must be developed for pre-treatment functional assessment and appropriate referrals to exercise, physical therapy, and/or lymphedema management
  • Specific protocol for functional assessment
  • Same protocol for pre-treatment functional assessment before surgery, chemotherapy, and radiation oncology
Functional Assessment Protocol

- Shoulder abduction
- Timed up and go

**Timed Up & Go (TUG)**

**Purpose:** To assess mobility

**Equipment:** A stopwatch

**Directions:** Patients wear their regular footwear and can use a walking aid, if needed. Begin by having the patient sit back in a standard arm chair and identify a line 3 meters, or 10 feet, away, on the floor.

1. **Instruct the patient:**
   - When I say “Go,” I want you to:
     1. Stand up from the chair.
     2. Walk to the line on the floor at your normal pace.
     3. Turn.
     4. Walk back to the chair at your normal pace.
     5. Sit down again.

2. **On the word “Go,”** begin timing.
3. **Step timing after patient sits back down.**
4. **Record time.**

**Time in Seconds:**

An older adult who takes 12.2 seconds to complete the TUG is at risk for falling.

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Exercise

Standard 5.11 Medical Oncology

• Patients with breast cancer must receive the following care with documentation in the patient medical record:
  • Guideline/evidence based care
  • Pre-treatment functional assessment and appropriate referrals
  • Exercise therapy recommendations for pain control, fatigue, depression, sleep, loss of function, and improved survival

• Site reviewer will evaluate preselected medical records to confirm compliance with standard, including:
  • Exercise therapy recommendations
Exercise

Standard 5.15 Survivorship

• The NAPBC accredited program must use evidence based guidelines to develop and implement a protocol addressing persistent symptoms, functional issues, and social and behavioral determinants of health...

• Examples of evidence-based guidelines include:
  • Referral to local or online exercise programs
  • Referral to outpatient rehabilitation
Exercise

Standard 5.15 Survivorship

• The protocol to address symptoms, functional issues, and social and behavioral health must also address how patients with breast disease or breast cancer rare connected to evidence-based elements of breast cancer recovery.
  • For example, ensuring that breast cancer survivors receive referrals to exercise programming at follow-up appointments.
In summary:

The new standards highlight **Nutrition and Exercise** in a way intended to support the patient journey, to reflect that evidence base supporting their inclusion in breast care, and recognizing that what sites have available to them will vary widely.
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