

**Navigating Patients
to Rehab and
Exercise:**

**Moving to Fill the
Cancer Recovery Gap**

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TurningPoint
Breast Cancer
Rehabilitation



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Session Objectives

- Understand the role of rehabilitation in the management of physical side effects common to all cancers, including fatigue, radiation effects and chemotherapy-related peripheral neuropathy.
- Understand common physical side effects of breast cancer treatment and the role of rehabilitation in their management.
- Understand the role of exercise in reducing cancer risk and risk of recurrence.
- Navigate patients to rehabilitation and exercise resources, including TurningPoint and local professionals and programs when available.

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The Oncology Rehabilitation Team

Specialized Oncology:

- Physical Medicine Physicians
- Physical Therapists
- Occupational Therapists
- Dietitians
- Exercise Physiologists and Specialists
- Massage Therapists
- Social Workers and Family Counselors
- Rehab Nurses
- Speech Pathologists

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**TurningPoint's
Mission**

TurningPoint Breast Cancer Rehabilitation is a nonprofit 501(c)3 organization with a mission to meet the needs and **improve quality of life for women and men with breast cancer** by providing, promoting, and advocating specialized and evidence-based rehabilitation. Care is provided regardless of ability to pay.

Care. Compassion. Clinical Excellence.


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TurningPoint

TurningPoint has a free-standing clinic in Atlanta.

Our financial assistance program means that no one is turned away, many of our programs and services are reduced-fee and complimentary.

Grants, donors and fundraising support our financial assistance program for patients in need and make up the difference between the cost of providing care and what is covered by insurance.



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TurningPoint Offers Evidence-Based Programs Designed to Meet the Needs of Women and Men During and After Breast Cancer:

- Specialized breast cancer physical therapy
- Lymphedema education, surveillance and management
- Exercise – individual and classes
- Education regarding important survivorship issues
- Specialized nutrition programs
- Oncology massage therapy
- Support groups and programs for patients with metastatic breast cancer

Programs are offered in our clinic and via TeleRehab.
(exception is massage therapy)



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TurningPoint Promotes and Advocates Locally and Nationally

TurningPoint educates health care providers locally, nationally and internationally to improve the quality of life and well-being for breast cancer patients and survivors.

TurningPoint is active in clinical research, presentation and publication to enhance the care provided to breast cancer patients.



Kristin Campbell, PT, PhD, internationally recognized Oncology Physical Therapy and exercise researcher, presenting at TurningPoint's 2019 Annual Healthcare Provider conference.

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TurningPoint Quick Facts

- 5,000 patients served since 2003
- 700 women and men served each year
- Over 20% of patients receive financial assistance for care
- Offering TeleRehab Services During the Current Covid-19 Crisis at No Charge to Our Patients

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The Need

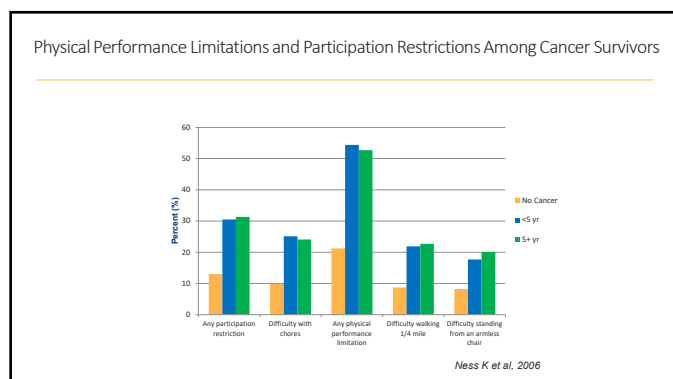
During and after cancer treatment patients face many physical and emotional challenges.



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National Standards for Inclusion of Rehabilitation for Patients with Cancer

National Accreditation Program for Breast Centers (NAPBC) and the **American College of Surgeons' Commission on Cancer** recognize the importance of cancer rehabilitation and include it as a standard of an accredited cancer care program.

National Comprehensive Cancer Network (NCCN) also recognizes the benefits of rehabilitation for this population and recommends it at the outset of a cancer diagnosis.

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60-90% of cancer patients have impairments that are amenable to rehabilitation

Rehabilitation and exercise have been documented to reduce or prevent issues related to cancer treatment, but sadly,

MOST PATIENTS DO NOT RECEIVE THIS CARE.

Waltke, 2014; Cheville, 2008



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Barriers to Rehabilitation Care for Patients with Cancer

- Lack of established relations between rehab and oncology/surgery professionals
- Lack of clear guidelines for rehab referral
- Lack of availability of specialized care
 - Women and men with advanced cancer
 - Increased disparity in care options for minorities, lower socioeconomic groups and in smaller centers and rural areas
- Lack of appropriate environments
- Patient misconceptions regarding expectations following cancer
- Hesitancy for self-advocacy
- Financial

Binkley, 2012; Cheville, 2007; Olson, 2020


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Common Physical Challenges Faced by Patients During and After Cancer Treatment

- Fatigue related to surgery, chemotherapy and radiation
- Radiation-related issues
- Chemotherapy-related peripheral neuropathy (CIPN)
 - Secondary balance issues and increased fall risk
- Lymphedema
- Reduced mobility and function
- Secondary cardio-respiratory morbidity
- Osteoporosis

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Cancer-Related Fatigue



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Cancer-Related Fatigue

Cancer related fatigue is a syndrome that affects mind, body and spirit

Fatigue has repeatedly been identified as one of the most common and distressing problems for individuals with cancer.


Significant impact on **Quality of Life**

48% of patients with cancer report fatigue
70-100% of breast cancer patients undergoing chemotherapy report fatigue



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Cancer-Related Fatigue is a Multi-Factorial Syndrome: Contributing Factors and Related Issues



- Direct effect of cancer, chemotherapy, radiation, surgery
- Anemia
- Depression
- Nutritional issues
- Obesity
- "Chemo-pause"
- Sleep Disorders
- Pain
- Stress
- Deconditioning

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Patients' Perspectives on Fatigue...

- Unrelenting
- Overwhelming
- Emotional, Teary, Sad, Irritable
- Fragile
- Doesn't go away when I sleep or nap
- Like walking under water – all the time!



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Patients' Perspectives

"I should just accept my fatigue since my cancer is being cured"

"I don't understand why I am so tired. All they did was surgery on my chest"

"I'm so tired, my cancer must be getting worse"

"No one seems to understand... they all expect me to do xxx"

"I feel like I have been hit by a Mack truck... head on"

Binkley, 2012



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Research is clear that aerobic exercise and strength training reduces fatigue in patients during and after cancer treatment.



Furmaniak AC et al. 2016, Rogers LQ, Courneya KS et al. 2016, Stagl JM et al. 2014, Hagstrom, 2016


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Rehabilitation Approach to Fatigue Management

- Exercise – aerobic, resistance exercise
- Energy management
- Sleep
- Pain management
- Stress management
 - Yoga
 - Mindfulness
- Manage depression, if applicable
- Nutrition

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Radiation-Related Issues



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Side Effects of Radiation

- Pulmonary Complications
 - Radiation pneumonitis and fibrosis
- Cardiotoxicity
- Soft Tissue – skin, fascia and muscle
 - Initial inflammatory tissue response and later alteration in connective tissue
 - In breast cancer patients research has shown progressive loss of shoulder range of motion up to 4 years post-radiation
 - Dose dependent and worse with impairment in mobility pre-radiation
- Increases lymphedema risk due to direct effect on lymph nodes
- Neuropathies such as brachial plexopathy in breast cancer patients

Bentzen & Dische, 2000; Cheville, 2007; Senkus-Konefka, 2006; Lilla, 2007; Sassi et al. 2001

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Rehabilitation and Radiation Effects

- Adaptation of exercise related to cardio-pulmonary system
- Soft tissue mobility and range of motion
- Lymphedema surveillance and management
- Intervention for neuropathy
- Nutrition and speech pathology – head and neck cancers

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Chemotherapy-Related Peripheral Neuropathy (CIPN)



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Chemotherapy-Induced Peripheral Neuropathy (CIPN)

- CIPN is a symmetrical distal polyneuropathy
- Presence of signs and symptoms of peripheral nerve dysfunction, including numbness, tingling and weakness
- Consequence of nerve damage caused by certain chemotherapeutic agents e.g. taxane therapy
- CIPN is dose dependent
- Related to balance issues and increased fall risk due to reduced sensation and proprioception

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Rehabilitation Intervention for CIPN



- Exercise
- Sensitization activities
- Balance training
- Assistive devices, special footwear etc.

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Common Side Effects of Breast Cancer Treatment



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Contributors to Physical Issues Faced by Women with Breast Cancer

Surgery

- Mastectomy/Breast Conserving Surgery (lumpectomy)
- Axillary Lymph Node Dissection (ALND)
- Number of nodes removed is important factor in short and long-term morbidity
- Breast Reconstruction, including Donor Sites
- Drain Sites

Radiation

- Breast/Chest Wall
- Axilla

Chemotherapy

- Fatigue
- Port Site Pain
- Joint and Muscle Pain
- Weight Gain
- Cardiotoxicity

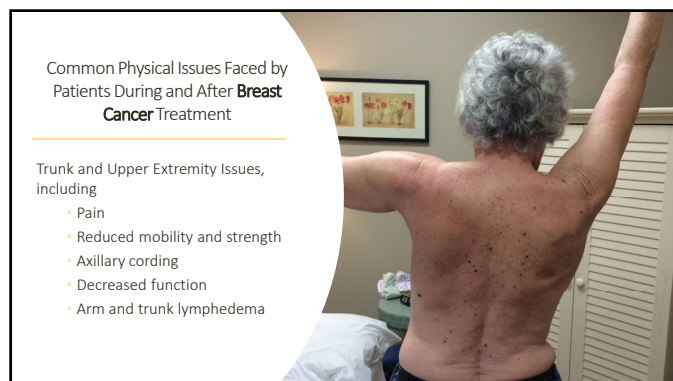
Hormone-Base Therapy

- Aromatase Inhibitor-related Arthralgias and Osteoporosis
- Hot Flashes

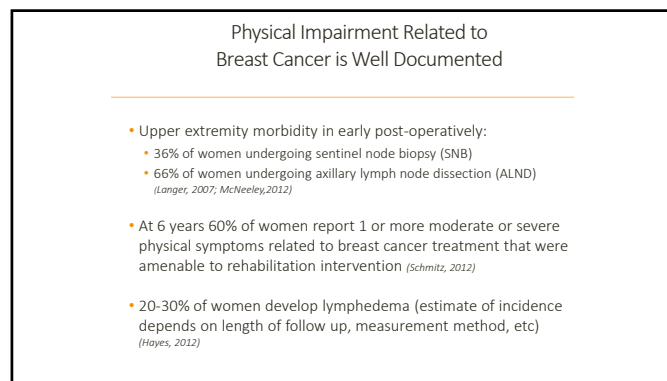
Quality of Recovery Advice

- Lack of information regarding maximizing recovery
- Lack of understanding of role of rehabilitation in breast cancer

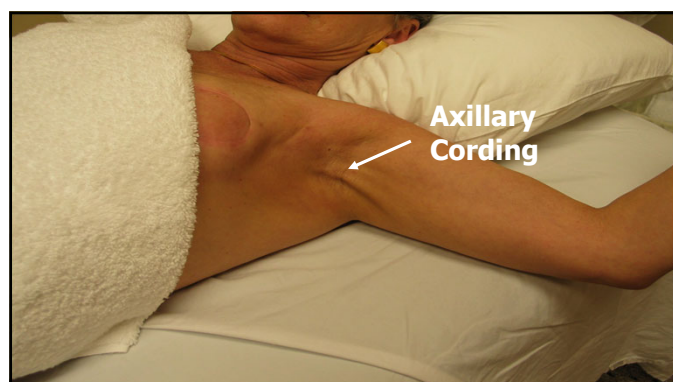
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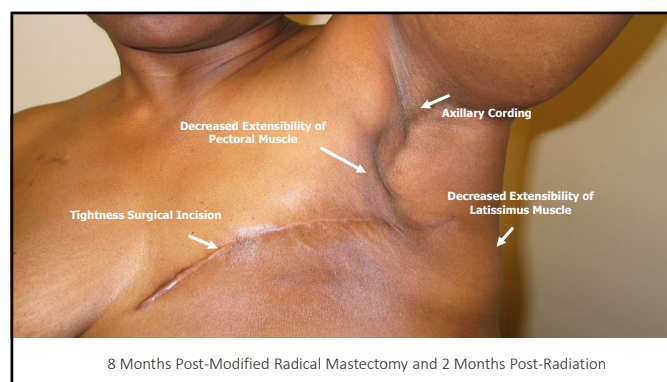
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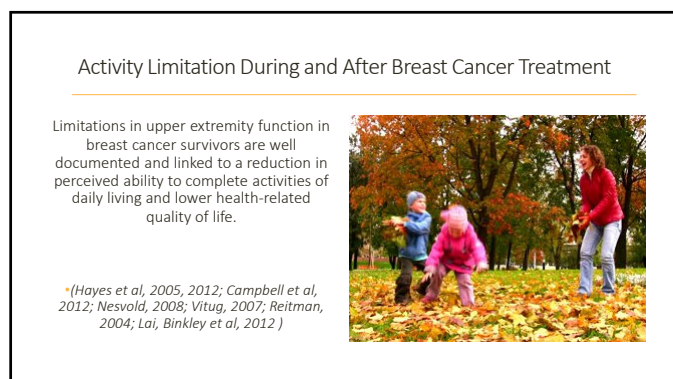
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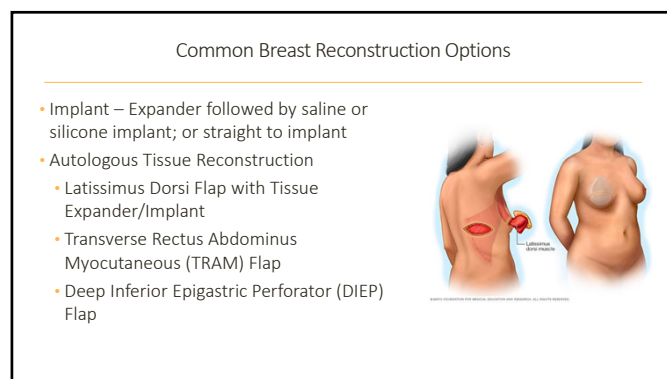
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Evidence Supporting Early Upper Limb Range of Motion Exercise

24 studies involving 2132 participants:

- 10 studies examined the effect of early versus delayed implementation of post operative upper-limb exercise
- 14 studies examined the effect of structured upper-limb exercise compared to usual care/comparison

Synopsis of findings:

- Physical therapy based exercise results in a significant and clinically meaningful improvement in shoulder ROM and restoration of strength after breast cancer treatment
- There was no evidence of increased risk of lymphedema from exercise at any time point

*Cochrane Systematic Review
McNeeley et al. 2010*

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Lymphedema

- Lymphedema is a chronic, progressive disorder
- Secondary lymphedema impairment of lymph flow from tissues to the blood circulation due to damage of the lymphatic system
- Results in accumulation of tissue fluid in the interstitial space.
- Damaged or blocked lymphatic vessels are caused by surgery, radiation, injury, limb paralysis, infection, or an inflammatory condition

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Lymphedema Risk Factors in Breast Cancer Patients

- Number of axillary lymph nodes removed
- Risk increases with the number of nodes removed
- Radiation Therapy
- Lymph node fibrosis occurs with radiation and decreases the filtering function of the nodes which deters the immune response
- Soft tissue fibrosis
- Increased Body Mass Index increases the incidence of lymphedema BMI>25
- Arm Infection/Injury has been shown to be a trigger for lymphedema onset

Herd-Smith 2001; Shaw, 2001; Petrek, 2001; Campbell, 2012

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Summary of Evidence to Reduce Risk of Lymphedema in Breast Cancer Patients

Approach should be based on individual risk of lymphedema

Education re: early signs and symptoms of lymphedema to facilitate early intervention

Baseline measures of upper extremity volume (ideally pre-op) to allow early detection

Lifestyle Advice:

- Exercise Regularly- include stretching, strengthening and aerobic activity
- Maintain ideal body mass index (19 - 22)
- Weight loss, if applicable
- Diet/Hydration

Understand Potential Triggers and Be Prepared to Initiate Treatment

- Avoid injury, sprains and strains – lift within your capacity, work up weights gradually
- Avoid infection/inflammation – gloves when gardening, extra care for cuts and burns
- Take a compression sleeve with you for long trips so that you can initiate treatment at the first sign of swelling, including while flying

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Tamoxifen

- There is some evidence supporting the benefit of acupuncture in the treatment of hot flashes
- Vaginal dryness, abnormal discharge or bleeding
- Reduced libido
- Endometrial changes, including increased risk of uterine cancer

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Side Effects of Aromatase Inhibitors: Musculoskeletal Implications

- Osteopenia/osteoporosis
- Joint arthralgia (20-36%)
 - most common sites are hands, feet, knees and back
- Carpal tunnel syndrome
- Tenosynovitis and tendonitis
- Bursitis
- Exacerbation of osteoarthritis

(Henry et al, 2008; Campbell et al, 2012; Maltser et al, 2017)

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Evidence Related Exercise and Breast Cancer



- Decreases risk of breast cancer recurrence
- Reduces fatigue
- Decreases lymphedema risk and reduces lymphedema
- Improved upper extremity range of motion, strength and function
- Improves bone health
- Important component in the management of :
 - CIPN and balance issues
 - Arthralgia related to aromatase inhibitor therapy



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Timing of Rehabilitation and Exercise Intervention



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Pre-Operative Assessment of Breast Cancer Patients by Physical Therapists Improves Lymphedema Diagnosis and Treatment

Measured arm volume in 193 breast cancer patients

- Pre-op baseline, 1-month post-surgery and 3-month intervals for one year
- Goal was to identify lymphedema early, defined as 3% increase over baseline
- 43 patients were determined to have early lymphedema and were treated with simple over the counter compression garments

Findings:

Treatment with compression in early phase of lymphedema is effective in reducing volume and may be effective in limiting progression of lymphedema

Conclusions:

A surveillance program may be useful to successfully detect and treat lymphedema at earliest stage that may in turn reduce progression.

Stout Gergich, 2008

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A Prospective Surveillance Model for Rehabilitation for Women With Breast Cancer

Nicole L. Stout, MPT, CLT-LANA¹, Jill M. Binkley, PT, MCIsc, FAAOMPT, CLT², Kathryn H. Schmitz, PhD, MPH, FACS³, Kimberly Andrews⁴, Sandra C. Hayes, PhD⁵, Kristen L. Campbell, PT, MSc, PhD⁶, Margaret L. McNeely, PT, PhD⁷, Peter W. Soballe, MD⁸, Ann M. Berger, PhD, RN, AOCNS, FAAN⁹, Andrea L. Cheville, MD¹⁰, Carol Fabian, MD¹¹, Lynn H. Gerber, MD¹², Susan R. Harris, PT, PhD¹³, Karen Johansson, RPT, Dr Med Sci¹⁴, Andrea L. Pusic, MD, MHS, FRCSC¹⁵, Robert G. Provenza, MD, MPH¹⁶, and Robert A. Smith, PhD¹⁷



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Robert Smith, PhD

Stout et al Cancer 2012; 118 (Suppl 8): 2191-200

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10 Common Physical Side Effects of Breast Cancer Treatment Were Identified

1. Upper Body Morbidity – shoulder, arm and chest wall
2. Fatigue
3. Pain
4. Chemotherapy-induced peripheral neuropathy (CIPN)
5. Lymphedema
6. Cardiotoxicity
7. Weight Management and Body Composition Issues
8. Osteoporosis
9. Arthralgia
10. Functional Limitations

* Psychosocial Issues Not Addressed in the Model

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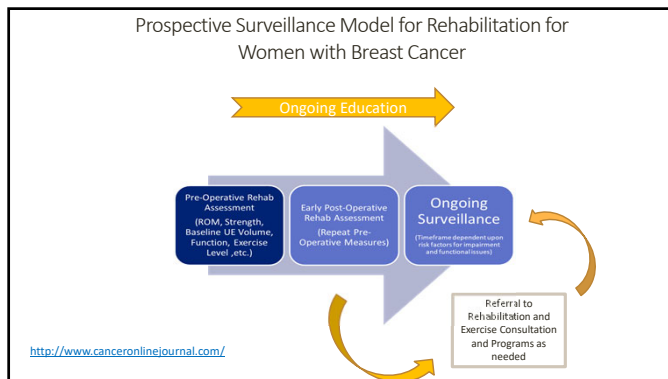
Evidence Supporting Early and Prospective Approach to Breast Cancer Rehabilitation and Exercise

There is mounting evidence supporting an **early and prospective approach** to breast cancer rehabilitation and exercise is effective in reducing and preventing treatment side effects, including shoulder morbidity, lymphedema, fatigue, CIPN, balance issues.

Cinar et al, 2008; Gerber et al, 2010; Springer et al, 2010; Torres Lacomba, 2010; McNeely et al, 2010; DeGroef et al, 2015; Yang et al, 2018.



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Evidence Supporting Early and Prospective Approach to Cancer Rehabilitation and Exercise

While there is most evidence in breast cancer, growing evidence to support an early and prospective approach to rehabilitation and exercise in other cancers as well.

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Navigating Patients to Rehabilitation: How TurningPoint Can Support Your Patients

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TurningPoint Care for Breast Cancer Patients During COVID-19
No Out-of-Pocket Charge to Patients

- TeleRehab:** TurningPoint offers physical therapy evaluations and treatments via an easy, secure connection from the safety of your home. Our specialized breast cancer physical therapy team will help you get back to full motion and strength, monitor and manage lymphedema and get back to the activities you love!
- Emotional Support:** TurningPoint continues to host monthly support groups for people with metastatic breast cancer virtually with our counselor who is specialized in the needs of breast cancer patients. TurningPoint has added new support groups to ease the emotional needs of patients during this difficult time.
- Physical Activity:** TurningPoint offers virtual physical activities designed for breast cancer survivors. Try out our 15-minute workout easier for you to do throughout the day. Workout Wednesdays featuring a new workout each week and join our TurningPoint walking group. All on our Facebook page!
- Education:** TurningPoint's monthly education programs are going virtual. Watch for live interactive and recorded educational programs that address breast cancer survivorship topics, such as cancer, navigating a recent diagnosis, nutrition, lymphedema, caregiver needs.
- Keeping in Touch:** TurningPoint is following up with our amazing alumni by telephone during this difficult time. We want to continue with you on your journey to recovery and discover how we can help fill up your needs with compassionate care.
- Nutrition:** Sound nutrition is essential in your recovery during and after breast cancer. TurningPoint is offering educational sessions and TeleRehab appointments with our specialized oncology dietitian.

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TurningPoint TeleRehab Program

HIPPA Compliant TeleRehab Appointments For Breast Cancer Patients Across Georgia

Serving the Needs of Breast Cancer Patients Across Georgia

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TurningPoint TeleRehab Program

TurningPoint Physical Therapists Specialized in Oncology Rehabilitation

Physician Referral Required, but TurningPoint can work with patients on obtaining.

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