



# **Help Is Here: Supportive Services for ALL Cancer Survivors**

**Eric Villanueva, MD**

Physical Medicine & Rehabilitation Attending Physician and Co-Medical Director  
Methodist Rehabilitation Center, Methodist Hospital, Omaha, NE  
Methodist Physicians Clinic – HealthWest, Omaha, NE



## Our learning objectives

1. Recognize common conditions that affect cancer survivors
2. Outline the support services available for common conditions among cancer survivors
3. Understand the role of the cancer rehabilitation physician, or physiatrist, in the continuum of cancer care



# Physical Medicine & Rehabilitation (PM&R) physicians

- Also known as physiatrists
- Direct programs that optimize patients' function and quality of life throughout the continuum of cancer care
- Comprehensively diagnose, treat, and manage disabling impairments and symptoms that result from cancer and its treatment; with emphasis on those of neuromusculoskeletal origin
- Provide continuity in care transitions from prehabilitation through long-term survivorship
- Physiatrist-led cancer rehabilitation medicine is recognized as a standard of care in national oncology treatment guidelines and credentialing criteria



# The cancer rehabilitation team

- Activities of daily living (ADLs)
- Instrumental Activities of Daily Living (IADLs)
- Assistive Devices
- Range of Motion
- Arm Strengthening
- Lymphedema

Physical Medicine & Rehabilitation (PM&R)

Occupational Therapy (OT)

Physical Therapy (PT)

- Gait
- Transfers
- Manual Therapy
- Assistive Devices
- Range of Motion
- Leg Strengthening
- Balance
- Mobility
- Lymphedema

## Goals of the rehab team

1. Minimize side effects
2. Maximize functional independence
3. Improve quality of life

Dietitian

Oncology

Return to Work

Vocational Therapy

Speech Therapy (ST)

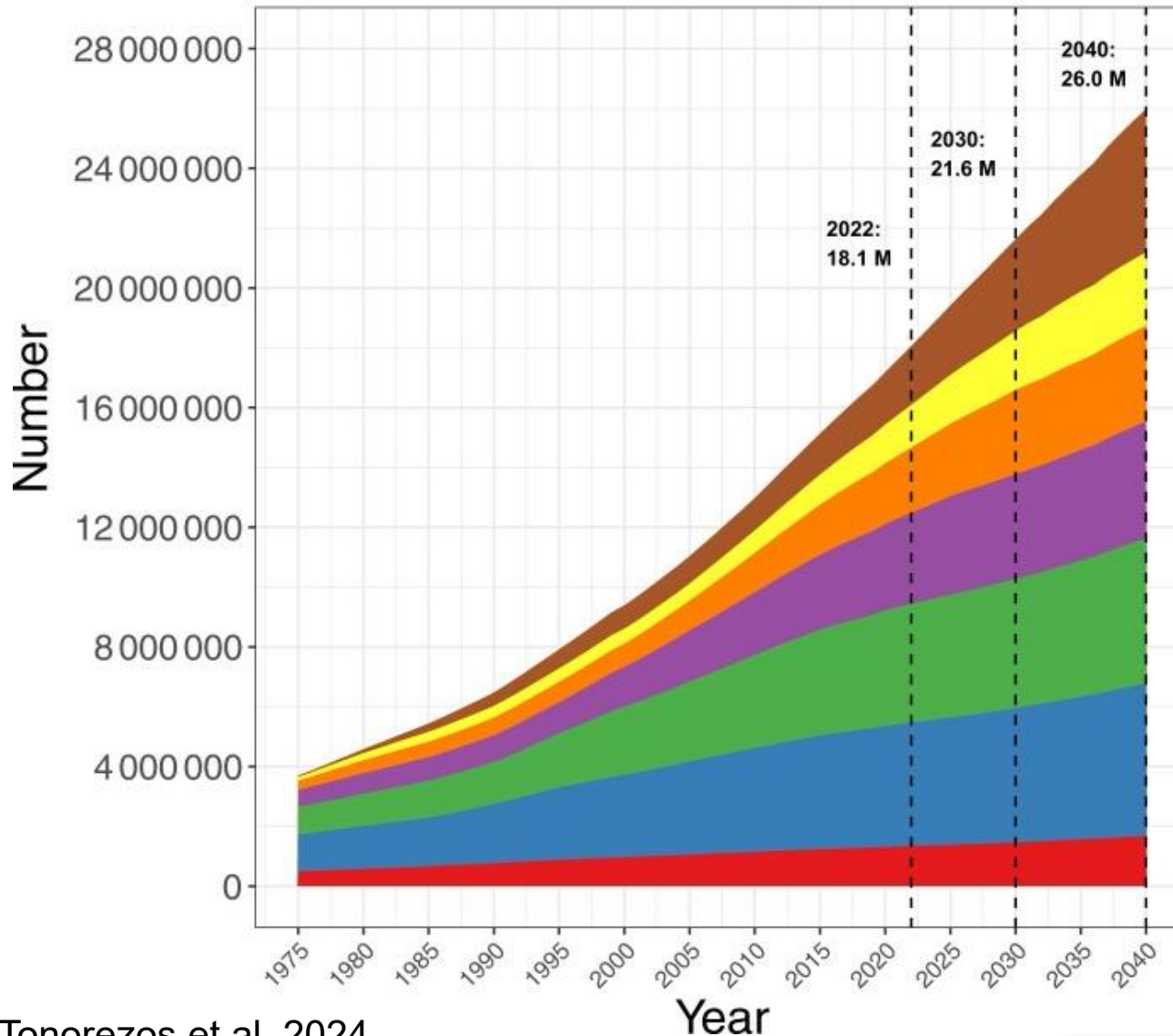
- Swallowing
- Speech
- Cognition

Caregiver

Neuropsychology

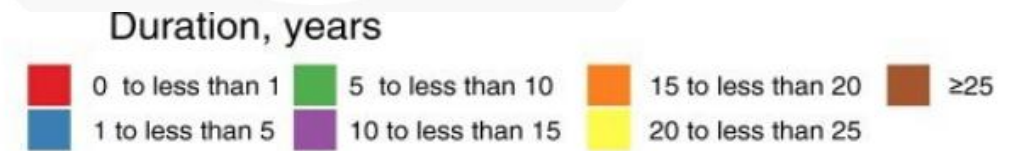


# Growing number of cancer survivors



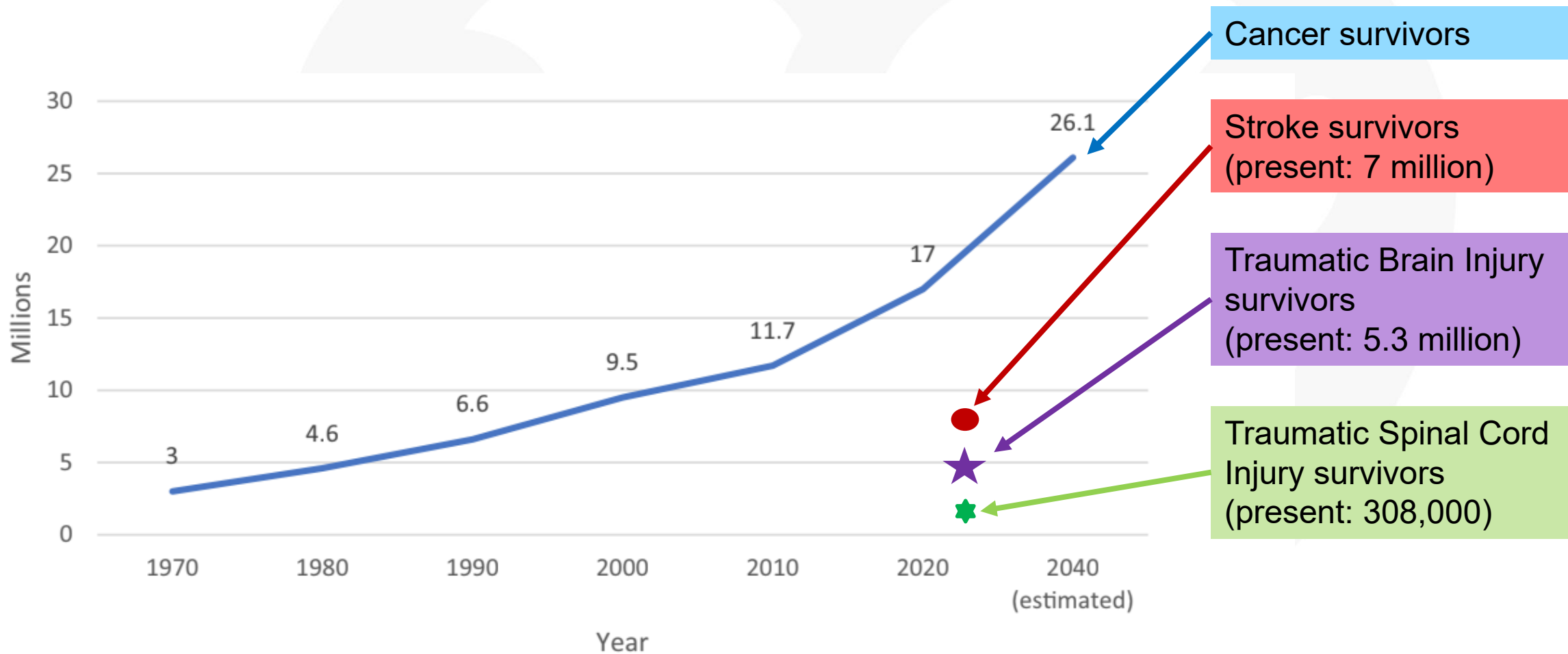
## Key Takeaways

- The number of people who 1) are living after having been diagnosed with cancer and 2) are aging with cancer is increasing
- Notably, people who have had cancer for decades are living longer and are projected to live longer (widening orange, yellow, and brown segments)



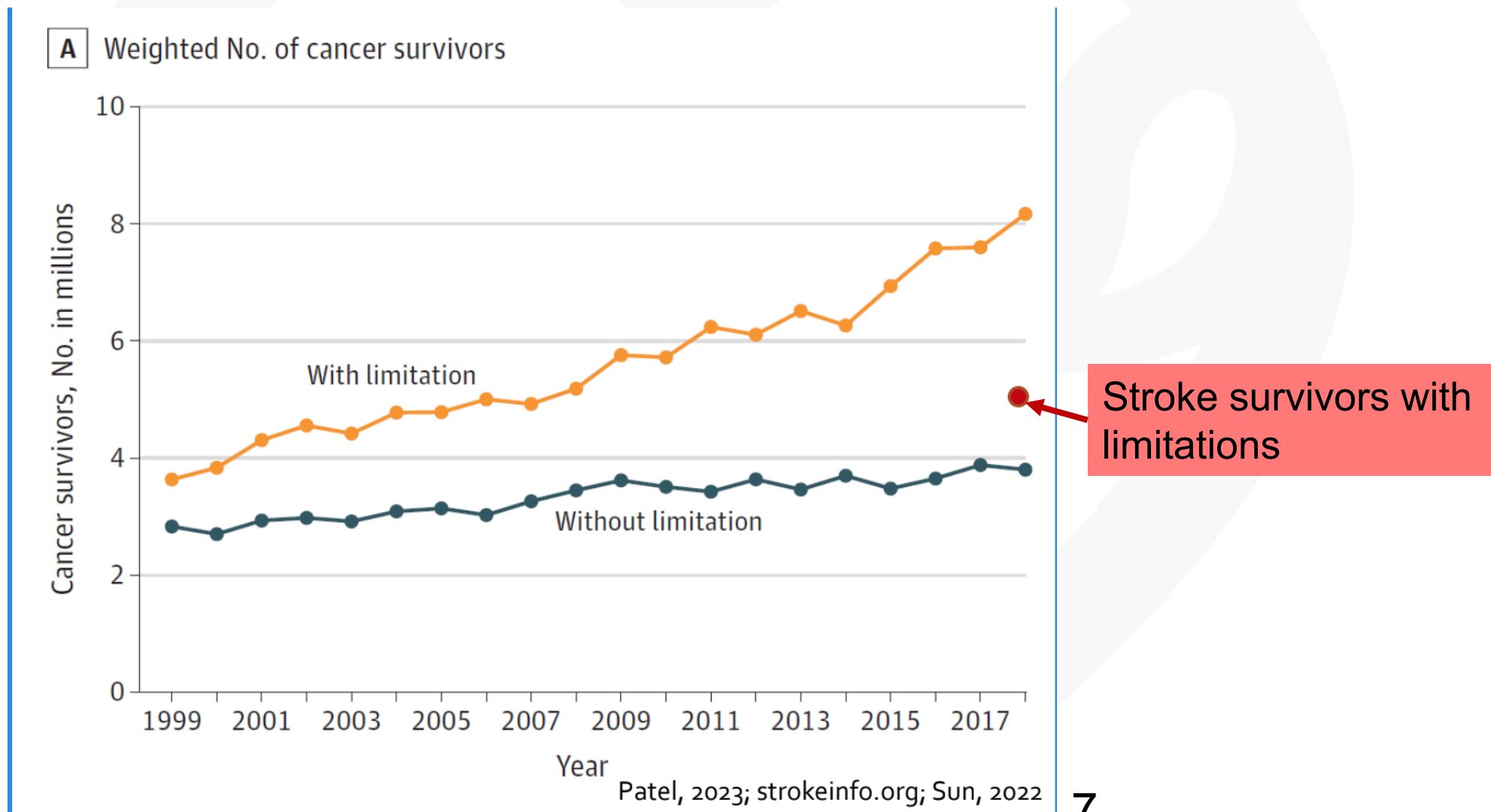


# Number of cancer survivors outnumbers those with other common rehab diagnoses





# Number of cancer survivors with limitations outnumbers stroke survivors with limitations





## Status check

- Cancer survivors are living longer
- There are more cancer survivors than those with other common rehab diagnoses
- Many cancer survivors have functional limitations



Source: Austin Powers

***CANCER REHAB IS NEEDED!***



- Decreased exercise tolerance and deconditioning
- Muscle weakness, spasticity, and muscle wasting
- Chemotherapy-induced peripheral neuropathy
- Cancer-related lymphedema
- Musculoskeletal pain
- Radiation fibrosis syndrome
- Neurologic dysfunction
- Post-mastectomy shoulder dysfunction, restriction, and pain
- Difficulty opening jaw
- Cancer-related fatigue
- Cognitive deficits and “chemo-brain”
- Gastrointestinal and urologic dysfunction
- Sexual health



# Unmet rehab needs of cancer survivors

- ACS-SCS II survey of 9105 cancer survivors at least 2 years after treatment (mixed diagnoses)
- Most common unmet need was physical problems (38.2%)

Symptom	Percentage with Symptom	Percentage Not Receiving Care
Poor Energy	59%	56%
Concentration Difficulty	55%	83%
Sexual Dysfunction	46%	71%
Neuropathy	42%	60%
Pain	34%	37%
Lymphedema	23%	33%
Incontinence	22%	69%



## Unmet rehab needs of cancer patients, cont'd

- Study: 163 patients with metastatic breast cancer
  - 92% found to have at least one physical impairment that can benefit from rehab
    - Less than 30% were referred for rehab
- Study: 1325 cancer patients surveyed (mixed diagnoses)
  - 43% of patients reported need for physical therapy
- Study: 87% of inpatient oncology unit patients had motor/functional needs but only 18% received consultation with rehabilitation physician



# Physical function impacts cancer mortality

- Physical functional measures can predict mortality
- Activity of daily living (ADL) impairments can predict recurrence-free survival and overall survival
- Cancer treatment decisions may be based on physical performance status (how/when to treat and how long to continue)
- Treatment response may be better in patients who are more fit



## Resources for decreased exercise tolerance or deconditioning

- Outpatient physical therapy
  - Endurance, strengthening, aerobic exercises, home exercise program (HEP)
- Exercise programs: Harper's Hope Wellness Classes and LIVESTRONG at the YMCA
- Vocational rehabilitation: <https://vr.nebraska.gov/>
- Cancer rehabilitation physician



# Harper's Hope Wellness Classes

- For any person with current or past cancer diagnosis
- All classes taught by licensed professionals
- No one turned away for financial reasons
- All participants required to get medical clearance
- Multiple class offerings
  - Aerobics
  - Weight training
  - Pilates
  - Yoga
  - Tai Chi
  - Aquatics
  - Myofascial stretching
  - Meditation

Please contact  
Wendy Teetor, PT for more  
information:  
(402) 354-0847





## LIVESTRONG® at the YMCA

- 12-week small group exercise program to improve endurance, strength, flexibility, balance, and overall quality of life
- Free to any adult cancer survivor
- Small groups of 8-12 cancer survivors meet twice a week for 1 hour and 15 minutes
- Complimentary membership to the YMCA for the duration of the program



# What about alternative forms of exercise?

- Pilates, yoga, Tai Chi, Qigong and various forms of dance
- May offer more accessibility and affordability
- Cancer survivors practicing yoga both during and after cancer treatment reported improved quality of life and fatigue
- More research needed to evaluate observed potential to improve sleep, depressive symptoms, anxiety/distress, and cancer-related cognitive change
- Activities counter the feelings of isolation that are experienced by many cancer survivors
- The mindfulness dimension of yoga, Tai Chi, and Qigong has been shown to relieve stress, dysphoria, and anxiety in some cancer populations



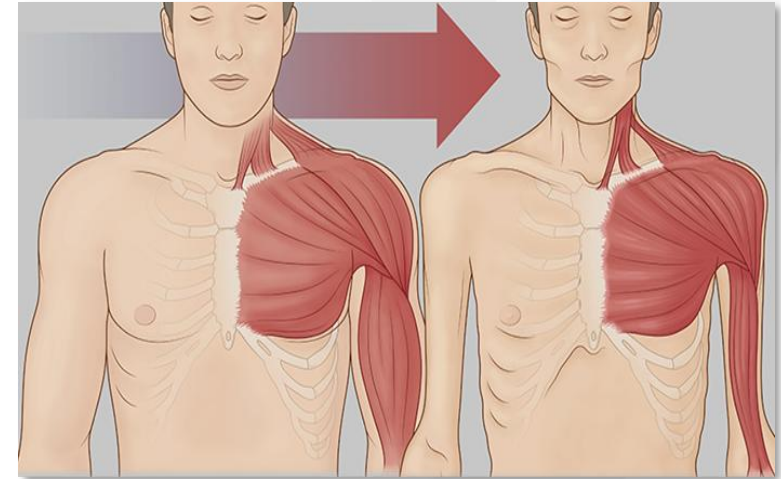
# Muscle weakness or muscle wasting (cont'd)

- Skeletal muscle metastases
- Primary muscle tumors – rhabdomyosarcomas
- Myopathies
  - Graft-Versus-Host Disease
  - Immune Checkpoint Inhibitors (eg, Keytruda)
  - Steroids
    - Affects up to 60% of survivors with chronic steroid use



# Muscle weakness or muscle wasting with cancer

- Cachexia – “bad appearance”
  - Body weight loss (muscle  $\pm$  fat loss) due to an underlying illness
- 50% prevalence in cancer
- 80% prevalence in advanced cancer
- 30% of cancer deaths
- 50-75% develop disability



Courtesy of OSU Comprehensive Cancer Center



# Approach to treating cachexia in clinic



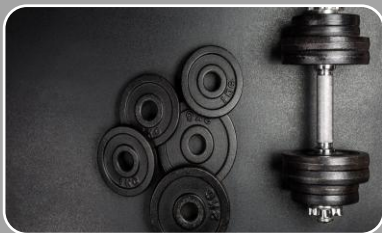
## Optimize nutrition

- Ideally in parallel to dietary medicine
- Focus on macro-nutrients



## Address nutrition impact symptoms

- May be in parallel to palliative care or primary onc. team
- Nausea, diarrhea, constipation, appetite, fatigue



## Customized physical rehab program

- Dependent on timing and extent of impairment
- Complement medical needs of cancer treatment



# Resources for muscle weakness or wasting

- Outpatient physical therapy and/or occupational therapy
- Exercise programs: Harper's Hope Wellness Classes and LIVESTRONG at the YMCA
- Vocational Rehabilitation
- Orthotist
  - Bracing of knee or ankle
- Cancer rehabilitation physician



# Numbness or tingling

- Chemotherapy-induced neuropathy
- Metastases to nervous system
- Neuropathy due to swelling



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# Resources for numbness or tingling

- Cancer rehabilitation physician
  - Evaluation
  - Management of bothersome pain
  - Referral to therapy
- Outpatient physical therapy and/or occupational therapy
  - Neuromuscular re-education, balance, assessment for assistive devices, home safety assessment



# Fatigue

- One of the most common complaints after cancer diagnosis and treatment
- May develop weeks, months, or years after cancer diagnosis and/or treatment
- May be correlated with treatment
- Central versus peripheral fatigue



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# Exercise breaks the cycle of fatigue, inactivity, and deconditioning



Fig. 2 Breaking the Cycle of Fatigue, Inactivity and Deconditioning with Exercise



# Resources for fatigue

- Outpatient physical therapy and/or occupational therapy
  - Energy conservation, strengthening, balance, assessment for assistive devices, home safety assessment
- Exercise programs
- Psychologist
  - Cognitive behavioral therapy
- Cancer rehabilitation physician
  - Evaluation and treatment
  - Medications?



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# Swelling

- Lymphedema versus other causes (ie, blood clot, infection, heart or kidney issues)
- Lymphedema – Lymphatic system interrupted by treatment (ie, surgery, radiation etc.)
- Areas affected:
  - Arm(s) on side of breast cancer
  - Leg(s) after pelvic or abdominal surgery or radiation
  - Neck and face after head and neck surgery or radiation



# Resources for swelling

- **Certified lymphedema therapist (CLT)**
  - Specially trained physical or occupational therapist
  - Complete decongestive therapy (CDT) – manual lymphatic drainage, compression wraps or garments, exercises for reduction, education on skin care and monitoring
- **Cancer rehabilitation physician**
  - Evaluation
  - Treatment of lymphedema





# How does a physiatrist support a patient with lymphedema?

- Diagnosis
- Prescribing equipment: garments, compression pumps
- Prescribing rehabilitation
- Monitoring/measuring over time
- Evidence-based education





# Joint pain

- **Treatment/cancer-specific causes**
  - Aromatase inhibitor-associated musculoskeletal syndrome
  - Overuse syndromes (eg, rotator cuff dysfunction)
- **Resources**
  - Physical therapy and/or occupational therapy
  - Pain medicine physician
  - Cancer rehabilitation physician
    - Oral or topical medications
    - Ultrasound-guided injections
    - Individualized rehabilitation
    - Bracing





# Nerve pain

- **Treatment/cancer-specific causes**
  - Chemotherapy, radiation, or surgery-associated
  - Metastases or tumor involvement of nervous system
- **Resources**
  - Physical therapy and/or occupational therapy
  - Pain medicine physician
  - Cancer rehabilitation physician
    - Oral or topical medications
    - Individualized rehabilitation



# Post-breast surgery shoulder dysfunction, restriction, or pain

- Also commonly known as post-mastectomy pain syndrome
- Resources
  - Physical therapy and/or occupational therapy
  - Cancer rehabilitation physician
    - Evaluation
    - Oral or topical medications
    - Individualized rehabilitation
    - Ultrasound-guided injections



# Radiation fibrosis syndrome

- May present soon after or delayed from radiation treatment
- Fibrosing of the muscles in the field of radiation that can cause pain, limited range of motion, and difficulty with speaking or swallowing
- Resources
  - Physical therapy, occupational therapy and/or speech therapy
  - Cancer rehabilitation physician
    - Oral or topical medications
    - Individualized rehabilitation
    - Ultrasound-guided injections



# Generalized cancer-related pain

- Resources
  - Physical therapy and occupational therapy
  - Exercise program
  - Cancer rehabilitation physician
    - Oral or topical medications
    - Individualized rehabilitation
    - Ultrasound-guided injections



## Difficulty eating

- Dysphagia – difficulty swallowing
- Trismus – difficulty opening jaw
- Poor appetite/taste changes
- May be related to tumor involvement in nervous system or mouth or neck





# Resources for difficulty eating

- Dietitian
  - Nutritional evaluation
  - Nutritional supplements
- Speech therapy
  - Swallowing evaluation
- Cancer rehabilitation physician
- Palliative medicine provider



# Difficulty speaking

- Aphasia – difficulty speaking
  - Word finding difficulty
  - Difficulty with comprehension
  - Difficulty with reading or writing
- Dysarthria – garbled speech
- May be due to metastases or tumor involvement of nervous system, mouth, or throat
- May be due to surgery or radiation



# Resources for difficulty speaking

- **Speech therapist**
  - Speech evaluation
  - Exercises
  - **Communication strategies**
    - Communication board
    - ElectroLarynx
- **Cancer rehabilitation physician**
  - Prescribing rehabilitation
  - Ordering devices



## Cognitive deficits or “chemo-brain”

- Nearly three out of every four cancer patients
- Executive function – time management, organization, self-control, and problem solving
- Working memory – remembering phone numbers, names, and breakfast
- Processing speed – transitioning between tasks and reacting to hazards while driving



# Resources for cognitive deficits or “chemo-brain”

- **A Time To Heal Cancer Foundation – “Navigating Brain Fog” Class**
  - Free for adult cancer survivors and caregivers
  - 90-minute sessions once per week for six weeks
  - Currently undergoing IRB study in partnership with UNMC
- **Speech therapist**
  - Cognitive evaluation
  - Cognitive exercises
- **Cancer rehabilitation physician**
  - Referral to speech therapy
  - Referral to driving rehabilitation



## Mood changes

- Common anytime during cancer survivorship
- Can affect quality of life and/or tolerance or desire for treatment
- May influence appetite, sleep, concentration, and energy levels
- Presents as feelings of low mood, hopelessness, frustration, racing thoughts, and/or anxiety



# Resources for mood changes

- Licensed mental health practitioner (LMHP) – talk therapy
  - [PsychologyToday.com](https://www.psychologytoday.com)
- Psychiatrist – talk therapy and/or medication management
  - Referral from cancer rehabilitation physician, primary care physician, or oncology provider
- Support groups
  - ATTH – Psychosocial Support Programs
  - Methodist Prostate Cancer Support Group
  - Support for People with Oral, Head, and Neck Cancer
  - Leukemia and Lymphoma Society Omaha Community Support Group



## Resources for mood changes (cont'd)

- Exercise programs: Harper's Hope Wellness Classes and LIVESTRONG at the YMCA
- Vocational rehabilitation: <https://vr.nebraska.gov/>
- Cancer rehabilitation physician
  - Referral to licensed mental health practitioner (LMHP)
  - Referral to vocational rehabilitation



# Sexual dysfunction

- May affect 40-100% of cancer survivors depending on cancer type and treatment
- Common with cancer or treatment affecting abdomen, pelvis (eg, prostate), and breast
- Erectile or ejaculatory dysfunction, Loss of libido (desire), vaginal dryness, painful intercourse
- Psychosocial factors such as mood changes and altered body image may compound physical dysfunction



# Resources for sexual dysfunction

- Physical therapy
  - Pelvic floor therapy
- Psychologist
  - Sex therapy
- Urologist and/or gynecologist
- Cancer rehabilitation physician



## Gastrointestinal or urinary issues

- Bowel or bladder incontinence
- Constipation
- Urinary retention
- May be related to location of cancer or its treatment
- More common in colorectal, prostate, and uterine cancers



# Resources gastrointestinal or urinary issues

- Physical therapy
  - Certified pelvic floor therapist
  - Incontinence specialists
- Dietitian
  - Diet adjustments
  - Supplements
- Urologist – surgeon that specializes in urinary system
- Gastroenterologist and/or colorectal surgeon



## Resources gastrointestinal or urinary issues (cont'd)

- **Cancer rehabilitation physician**
  - Referral to certified therapist
  - Referral to specialty
  - Evaluation and treatment



# Resources for hair loss

- Chemotherapy or Radiation-induced
- Preventative measures
  - Scalp Cooling
- Hair camouflage products
  - Wigs, hairpieces, head coverings
  - Hair tattoos
- Hair restoration options
  - Medications or surgery



## Resources for hair loss (cont'd)

- Referral to dermatologist
- <https://www.mskcc.org/cancer-care/patient-education/hair-loss-cancer-treatment>



## Summary

- The number of cancer survivors is growing and with that, the number of cancer survivors who have functional impairments
- As a multidisciplinary field, cancer rehabilitation is growing to meet the needs of cancer survivors and their caregivers
- Cancer rehabilitation physicians, or physiatrists, are uniquely trained and suited to treat and support cancer survivors



# Thank you!

- A Time To Heal Cancer Foundation
- Methodist Health System
- Ishan Roy, MD PhD
- Madonna Klein, PT, MPT
- My patients
- My wife and son



Eric Villanueva, MD FAAPMR  
16120 W. Dodge Rd, 3<sup>rd</sup> Floor  
Omaha, Nebraska 68118  
Clinic: (402) 354-0707  
Fax: (402) 354-1338



# Resource summary

- Nebraska Vocational Rehabilitation: <https://vr.nebraska.gov/>
- Harper's Hope Wellness Classes: Wendy Teetor, PT at (402) 354-0847
- LIVESTRONG at the YMCA: <https://metroymca.org/wellness-programs/livestrong-at-the-ymca>
- <https://www.exerciseismedicine.org/eim-in-action/moving-through-cancer-2/>

## Cancer Rehabilitation Resources



Rehabilitation of  
Individual with Cancer



Cancer Rehab FAQs



American Cancer Society -  
Cancer Rehab Patient Info



Developing High-Quality  
Cancer Rehabilitation  
Programs: A Timely Need



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