



APTA OncologySM

An Academy of the American
Physical Therapy Association

Student and New
Professional Subcommittee



Dx

Downloads:

Cardiotoxicity



Cardiotoxicity



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Impact

- **CVD is the 2nd leading cause of morbidity and mortality in cancer survivors** after recurrent malignancy

Why it matters to PTs

- Improvements in long-term survival rates has prompted a **shift in the care paradigm from cancer survival to cancer survivorship**
- **↑ likelihood that a PT will treat cancer survivors** demonstrates the **importance of understanding the long-term consequences of their cancer treatments**, and how it may impact our role in their care

Exercise Training

- Evidence shows that **exercise training is safe and feasible** across the entire cancer continuum, and **can improve physical functioning and psychosocial outcomes**
- **Exercise Training & Cardiac Dysfunction:**
 - **Evidence that it may mitigate treatment-induced cardiotoxicity is limited**
 - Available evidence indicates it's not capable of affecting markers of subclinical cardiotoxicity, but the **exercise bout was shown to have positive systemic effects on hemodynamics, musculoskeletal symptoms, mood, and body weight**

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Who's @ highest risk?

High Risk Treatments

- **High-dose anthracycline** (eg, doxorubicin ≥ 250 mg/m², epirubicin ≥ 600 mg/m²)
- **Lower-dose anthracycline** (eg, doxorubicin, 250mg/m²,epirubicin, 600mg/m²) in combination with lower-dose RT (< 30 Gy) where the heart is in the treatment field
- **Treatment with lower-dose anthracycline** (eg, doxorubicin, 250 mg/m², epirubicin, 600 mg/m²) **or trastuzumab alone, and presence of any of the following risk factors:**
 - Multiple cardiovascular risk
 - Older age
 - Compromised cardiac function at any time before or during treatment
- **Treatment with lower-dose anthracycline followed by trastuzumab (sequential therapy)**
- **High-dose radiotherapy (RT ≥ 30 Gy) where the heart is in the treatment field**
 - *Late effects of radiation-related toxicity manifests a median of 10-15 years after exposure*

- **Anthracyclines (“icin”):** used to treat many cancers, including leukemias, lymphomas, breast, stomach, uterine, ovarian, bladder, and lung cancers
- **Trastuzumab (Herceptin):** may be used to treat breast, stomach, and esophageal cancers
- **Radiation therapy:** improves cancer-related outcomes in a variety of malignancies — heart may be in the radiation field for treatment of lymphoma, breast, lung, and head and neck cancers

Rx
Info

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Physical Therapist's Role

Assess

Perform risk assessment for cardiotoxicity and cardiac dysfunction

Intervene

Support survivors in safely engaging in regular physical activity



Screen

For cardiovascular dysfunction using outcome measures (e.g. 6/2MWT, 2-min step test, 30 STS)

Educate

Patients about the importance of physical activity for their long-term health and wellbeing



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Takeaways

1

As PTs we can **recognize sign/symptoms of exercise intolerance & cardiac dysfunction** in cancer survivors

2

The **whole spectrum of cancer treatments**, not just those mentioned, can **cause acute and long-term cardiac dysfunction**

3

Moderate-intensity aerobic, resistance or combined training can significantly **improve self-reported physical function**

4

Effective Ex Rx: Moderate-intensity aerobic, resistance or combined training performed **≥ 3x/wk** (Supervised exercise appears to be more effective)

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Resources

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