Session Title: Surviving Twice: Navigating the Crossroads of Cancer and Cardiovascular Disease in Rehabilitation

Session Description

Cardiovascular disease (CVD) and cancer remain the two leading causes of death in the United States and are increasingly recognized as interconnected rather than independent conditions. Shared mechanisms such as chronic inflammation, oxidative stress, and metabolic dysfunction drive the development and progression of both diseases. Moreover, cancer therapies such as anthracyclines, trastuzumab, and thoracic radiation can induce significant and lasting cardiotoxicity. This convergence has led to the emergence of cardio-oncology, a growing field that addresses the complex overlap between cancer and cardiovascular health. However, awareness and clinical integration within physical therapy remain limited.

This platform session will explore the bidirectional relationship between CVD and cancer, emphasizing implications for exercise prescription, rehabilitation, and survivorship care. Participants will examine the Cardio-Oncology Rehabilitation (CORE) model, review current evidence-based guidelines from the ACSM and AHA, and learn strategies for identifying and managing treatment-related impairments such as frailty, deconditioning, and reduced exercise tolerance.

Through discussion and case-based examples, attendees will gain practical tools to design safe, individualized exercise programs for patients with coexisting oncologic and cardiovascular conditions.

By the end of this session, participants will be able to describe the shared pathophysiology linking cancer and cardiovascular disease, recognize exercise as a critical therapeutic intervention for this population, and integrate cardio-oncology principles into comprehensive physical therapy practice.

Teaching Method

Lecture Discussion

Objectives

At the end of the session the participant will be able to:

1. Describe the bidirectional relationship between cancer and cardiovascular disease, as each can impact the pathogenicity of the other.

2. Discuss current recommendations for exercise prescription, rehabilitation, and survivorship care in the cardio-oncology patient with a focus on the Cardio-Oncology Rehabilitation (CORE) model.

3. Utilize practical tools to design safe, individualized exercise programs for patients with coexisting oncologic and cardiovascular conditions.

4. Recognize exercise in physical therapy as a critical therapeutic intervention in this population while managing treatment-related impairments such as frailty, deconditioning, and reduced exercise tolerance.

What will be the clinician/educator takeaways/skills that can be utilized immediately?

1. A clearer understanding of the cardio-oncology patient profile and how to appropriately prescribe and monitor therapeutic exercise across settings.

2. Knowledge of the shared pathophysiology of cancer and cardiovascular disease to inform clinical decision-making regardless of the primary diagnosis.

3. Practical frameworks for modifying and individualizing exercise to manage frailty, fatigue, and cardiotoxicity effects in cancer survivors and those undergoing treatment.

Recommended Content Level

Intermediate

References:

1. Lyon AR, Dent S, Stanway S, et al. Baseline cardiovascular risk assessment in cancer patients receiving cardiotoxic therapies: a position statement. J Am Coll Cardiol. 2022.

2. Gilchrist SC, Barac A, Ades PA, et al. Cardio-Oncology Rehabilitation to Manage Cardiovascular Outcomes in Cancer Patients and Survivors. Circulation. 2019; 139(21)

3. Scott JM, Nilsen TS, Gupta D, et al. Exercise Therapy and Cardiovascular Toxicity in Cancer. Circulation Research. 2021.

4. American College of Sports Medicine. ACSM's Guidelines for Exercise Testing and Prescription. 11th ed. 2021.

5. Koelwyn GJ, Newman AA, Afonso MS, et al. Exercise-dependent regulation of inflammation across cancer and cardiovascular disease. Cell Metabolism. 2020.

6. D'Ascenzi F, Anselmi F, Fiorentini C, Mannucci R, Bonifazi M, Mondillo S. The benefits of exercise in cancer patients and the criteria for exercise prescription in cardio-oncology. Eur J Prev Cardiol. 2021;28(7):725-735.

7. Schmitz KH, Courneya KS, Matthews C, et al. American College of Sports Medicine roundtable on exercise guidelines for cancer survivors. Med Sci Sports Exerc. 2010;42(7):1409-1426

8. Lee KCS, Breznen B, Ukhova A, Koehler F, Martin SS. Virtual healthcare solutions for cardiac rehabilitation: a literature review. Eur Heart J Digit Health. 2023;4(2):99-111

Speaker Bios:

Jordan Felsberg:

Jordan earned his Bachelor of Science in Biology from the University of Georgia in 2010 and his Doctor of Physical Therapy (DPT) degree from Emory University in 2013. He became a board-certified Cardiovascular and Pulmonary Clinical Specialist (CCS) in 2017.

He has practiced physical therapy clinically for 13 years, with primary experience in acute care and home health settings. His acute care practice includes roles at Piedmont Fayette Hospital in Fayetteville, Georgia, as well as Atrium Mercy and Atrium Pineville in Charlotte, North Carolina. In the home health setting, he has worked with CenterWell and Adoration Home Health in Charlotte since 2014.

Jordan began teaching in 2016 and has served as adjunct faculty in the cardiovascular and pulmonary curricula at Wingate University, High Point University, Howard University, and Tufts University–Boston. His teaching experience includes developing and delivering lecture and laboratory content, as well as integrating simulation-based learning to enhance students' clinical reasoning, skills practice, and confidence prior to long-term clinical rotations. In 2022, he joined the Doctor of Physical Therapy program at Wingate University as a full-time assistant professor.

Originally from Atlanta, Georgia, Jordan now lives in Charlotte, North Carolina, with his wife and six children. In his free time, he enjoys traveling with his family and playing and coaching ice hockey.

G.S. Morris:

Dr. Stephen Morris earned a Ph. D. in Exercise Science from the Univ. of Texas at Austin, completed an NIH post-doctoral fellowship in the Dept. of Physiology and Biophysics at UC Irvine. He then earned a degree in physical therapy (PT) from Texas Woman's University. Since earning

his PT license, he has taught in 3 academic physical therapy programs, served both as a clinician and researcher in the Dept. of Rehabilitation Services of UT MD Anderson Cancer Center and as the director of Rehabilitation Services at St. Jude Children's Rehabilitation Hospital.

He has published over 45 refereed journal articles and has spoken locally, nationally and internationally on exercise in the oncology setting. He held a 4-year tenure as the President of American Physical Therapy's (APTA) Academy of Oncologic Physical Therapy and as the APTA's liaison to the Multidisciplinary Roundtable on Exercise and Cancer Prevention and Control. This Roundtable was organized by the American College of Sports Medicine and endorsed specific exercise prescription for the management of adverse effects of cancer and its treatment. He was a recipient of a Lucy Blair award from the APTA.

Dr. Morris retired from full-time academic work in 2023, but was promoted as a Distinguished Professor in the Physical Therapy Dept. at Wingate University prior to this. He has also served on the editorial board of the Rehabilitation Oncology and Acute Care Physical Therapy journals and serves as the liaison between the Academy and the APTA.