HHS Public Access

Author manuscript

Clin J Oncol Nurs. Author manuscript; available in PMC 2022 April 01.

Published in final edited form as:

Clin J Oncol Nurs. 2021 October 01; 25(5): 36–41. doi:10.1188/21.CJON.S1.36-41.

Cardio-Oncology Health Disparities:

Social determinants of health and care for Black breast cancer survivors

Lakeshia Cousin, PhD, APRN, AGPCNP-BC [assistant professor in the College of Nursing], University of Florida in Gainesville

Natalee Roper, RN, BSN, CHPN [RN and a nurse coordinator for cardio-oncology], H. Lee Moffitt Cancer Center and Research Institute in Tampa, FL

Timiya S. Nolan, PhD, APRN-CNP, ANP-BC [assistant professor in the College of Nursing] Ohio State University in Columbus

Abstract

BACKGROUND: Black women experience higher rates of cardiotoxicity and cardiovascular disease (CVD)–related comorbidities than White women. These racial and ethnic disparities are primarily from the earlier onset of CVD risk factors, social determinants of health (SDOH), and cardiotoxicity screening and surveillance disparities.

OBJECTIVES: This article discusses the role of SDOH in cardio-oncology and strategies to prevent and detect adverse cardiovascular outcomes among Black breast cancer survivors.

METHODS: Preliminary case study findings are presented, including treatment exposures to cardiotoxicity and SDOH in cardio-oncology influencing health outcomes in Black breast cancer survivors.

FINDINGS: Nurses can address SDOH and racial disparities in cardio-oncology by being mindful of Black breast cancer survivors' increased burden of CVD risk factors, evaluating barriers to receive preventive care and cardio-oncology rehabilitation, practicing cultural humility, and adhering to evidence-based guidelines for behavioral risk management for Black breast cancer survivors.

Keywords

social determinants of health; disparities; cardio-oncology; cardiovascular disease

CARDIOVASCULAR DISEASE (CVD) IS THE LEADING CAUSE OF DEATH in women overall in the United States, particularly among breast cancer survivors (Gulati & Mulvagh, 2018; Mehta et al., 2018). The increased risk of CVD among breast cancer survivors is mainly because of the cardiotoxic effects of treatment (e.g., anthracycline chemotherapy), as well as combined behavioral risk factors of breast cancer and CVD (e.g., obesity, physical inactivity, insulin resistance, alcohol consumption), which are preventive (Coughlin et al., 2020; Lin & Lengacher, 2019). To address the rising rates of adverse cardiovascular outcomes, the field of cardio-oncology has made an impact in

Cousin can be reached at lakeshiacousin@ufl.edu.

recognizing the importance of prevention and management of cardiovascular injuries from cancer therapies (Brown, 2020). Cardio-oncology focuses on cardiac toxicities caused by preexisting cardiovascular conditions, which can be exacerbated by cancer diagnosis and treatment (Parent et al., 2016). According to Brown (2020), the preventive cardio-oncology paradigm is shifting to target patients before they develop risk factors for CVD (e.g., hypertension, diabetes) after a cancer diagnosis.

Although advancements in cardio-oncology and breast oncologic therapies and treatments have raised awareness of preventive cardio-oncology, Black women still experience higher rates of cardiotoxicity and CVD-related comorbidities with a breast cancer diagnosis than White women (Gallagher et al., 2016, 2020). These racial and ethnic disparities are primarily from the earlier onset of traditional CVD risk factors (including metabolic syndrome), social determinants of health, and disparities in cardiotoxicity screening and surveillance (Gallagher et al., 2016, 2020; Prasad et al., 2020). The role of social determinants of health in cardio-oncology requires greater preventive nursing care for management and risk reduction during and after active treatment for Black women.

Social determinants of health—including poverty, neighborhood disadvantage, racial discrimination, lack of social support, and social isolation—play an essential role in breast cancer risk, stage, and survival and CVD risk among racial and ethnic minority populations (Coughlin, 2019). The lack of access to cardiotoxicity screening, surveillance, and preventive care management is likely an additional cause of the increased CVD risk among Black breast cancer survivors (Prasad et al., 2020). Black breast cancer survivors carry the burden of having a higher risk of CVD, which is exacerbated by cancer therapy (Prasad et al., 2020). Therefore, social determinants of health and health disparities in cardio-oncology underscore the need to emphasize screening, monitoring, and prevention in this population.

Eliminating racial and ethnic disparities in cardio-oncology and society will require a thoughtful understanding of Black women’s lived experiences of racism and cumulative stress of living in a disproportionate burden of social and environmental threats (Williams et al., 2016). In addition, Black women experience more early-life adversities, perceived discrimination, and a higher risk of metabolic syndrome than White women. Therefore, studies suggests that baseline CVD risk factors likely play a role in racial and ethnic differences in cardiovascular outcomes among Black women receiving cancer therapy (Gallicchio et al., 2017; Prasad et al., 2020).

The purpose of this article is to describe the social determinants of cardiovascular risk associated with cancer therapy among Black breast cancer survivors and provide nursing considerations to prevent and detect adverse cardiovascular outcomes in this population. The following case study illustrates the treatment exposures and social determinants of health that affect Black breast cancer survivors.

Case Study

K.F. is a 28-year-old Black woman who was diagnosed with stage III invasive ductal carcinoma of the breast in 2009. Her surgical treatment involved left mastectomy and axillary dissection in April 2009 with adjuvant chemotherapy (adriamycin and cyclophosphamide, followed by taxol in November 2009). K.F. had a baseline echocardiogram before initiating potentially cardiotoxic therapies and a comprehensive assessment, which included a history and physical examination, as well as screening for CVD risk factors (hypertension, diabetes, dyslipidemia, obesity, and smoking). K.F. received hormonal therapy with tamoxifen from November 2009 to March 2017. She has a history of CVDs, including coronary artery disease, hyperlipidemia, hypertension, and a genetic *PALB2* variation. Her current medications include diltiazem hydrochloride and metformin. K.F. established care with the cardio-oncology service clinic in September 2020 because she has a history of breast cancer and CVD. Her other non-cancer diagnoses include type 2 diabetes mellitus. Additional CVD concerns include being at risk for left ventricular dysfunction, dilated cardiomyopathy, and chronic heart failure because of treatment with adriamycin. K.F. also has a family history of hypertension, heart failure, and stroke.

K.F. does not engage in physical activity and is experiencing a recent weight gain of 10 pounds. Previously, she smoked one pack of cigarettes per day for seven years and stopped smoking in March 2020. She worked in social services as an adult protective investigator, but she was laid off from work six months ago and is experiencing difficulty attending her doctor appointments and maintaining a healthy lifestyle, which resulted in poor eating habits. K.F. does not have depression, anxiety, or any consultations to behavioral medicine, but she states that she is feeling more stressed than usual now that she is unemployed. She lives in an urban area where it is difficult to buy affordable or fresh quality foods and finds it hard to exercise outside in her neighborhood because there is not a safe area to walk, and she cannot afford a gym membership. Health practices to help her cope include prayer, meditation, and a strong family support network.

Cardio-Oncology Preventive Nursing Care

Preventive care is essential in the early detection and management of cardiovascular toxicities and therapies. An essential role of preventive cardio-oncology and nursing and the advanced practice nurse is managing the higher effects of cardiovascular morbidity and mortality among Black patients with breast cancer. Generally, cardiovascular toxicities from cancer treatment are exacerbated by preexisting CVDs or risk factors, highlighting the need for increased screening, monitoring, and prevention (Prasad et al., 2020). Although there are no formal academic training programs or certifications in this area, nursing knowledge is mainly driven by clinical experience in cardio-oncology nursing care and available cardio-oncology resources (Fadol, 2021) (see Figure 1).

The prevention of cardiovascular effects of cancer therapy should include assessment and monitoring of women who are receiving or who have received anthracycline-based therapy or radiation therapy to the chest (Armenian et al., 2017; Lyon et al., 2020). To date, there are few widely established evidence-based protocols to guide internists, oncologists,

cardiologists, and other clinicians in managing patients who are at risk for CVD who are being treated with hormonal therapies. Many providers believe that monitoring should include an electrocardiogram, biomarker testing, or magnetic resonance imaging, but they do not state that those examinations should be performed (Okwuosa et al., 2020). Cardio-oncology clinic referrals are also appropriate for specialized care, similar to the previously presented case study. For example, in the case study, K.F. attends a cardio-oncology clinic to help manage her chronic diseases (breast cancer and CVD). Cardio-oncology programs are a practical, interprofessional approach consisting of cardiology, oncology, and nursing to preserve cardiovascular health (Parent et al., 2016).

Nurses should be cognizant of the increased burden of traditional CVD risk factors (e.g., hypertension, diabetes mellitus, obesity, atherosclerotic CVD risk) that are commonly seen in Black patients with breast cancer (Carnethon et al., 2017). The most critical comorbidity to manage nursing care among Black patients with breast cancer is hypertension (Williams et al., 2020). Although hypertension is the most common comorbidity in patients with cancer and can increase from specific treatment, such as tyrosine kinase inhibitors, Black women have a higher risk and greater mortality risk (Williams et al., 2020). Early identification, monitoring, and management of hypertension in nursing care plans and patient education are crucial in this population because, left untreated, this adverse event can lead to a chain of toxicities and even death (Williams et al., 2020). Additional preventive strategies for nurses to help mitigate CVD risk for Black patients with breast cancer, such as hypertension and cardiotoxicity, are referrals to cardio-oncology and cardio-oncology rehabilitation programs.

There is a call to action in the oncology community for developing high-quality cardio-oncology rehabilitation programs that begin at diagnosis and continue through survivorship (Brown, 2020; Prasad et al., 2020). Cardiac rehabilitation programs and cardio-oncology programs may be potential solutions for Black patients with breast cancer; however, there are multiple challenges for Black patients to access these programs because of social determinants of health, including socioeconomic factors, such as low access to rehabilitation care, fewer referrals, lower utilization rates, and perceived bias (Odonkor et al., 2021). Regarding the patient in the case study, K.F., social determinants can become a barrier in receiving preventive care. K.F. lives in a lower socioeconomic neighborhood, has to travel a farther distance to appointments, and is experiencing difficulties after being laid off from her employment. Providers, nurses, researchers, and policymakers can consider ways at the social and cultural levels to optimize rehabilitation care and reduce these social determinants of racial disparities for Black patients with breast cancer. Some examples include improving awareness of health disparities in cardio-oncology, training on cultural humility, and implementing quality measures to standardize preventive care to reduce implicit bias (Prasad et al., 2020).

Disparities in Cardio-Oncology

Social Determinants of Health

Variations in social determinants and access to state-based early detection programs between Black and White patients with breast cancer are attributable to socioeconomic disadvantages

(i.e., residential segregation, racial discrimination, income, and education) in the Black community and are also risk factors for CVD that extend to cardiotoxicity (Babatunde et al., 2020; Coughlin, 2019; Prasad et al., 2020). The levels in which socioeconomic status shapes the trajectory of breast cancer survivorship among Black women are complex and multifactorial (Williams et al., 2016). In addition, structural racism exists in multiple social systems and contributes to care and treatment-related racial disparities in CVD and breast cancer (Lee et al., 2020; Zavala et al., 2020). For example, residential segregation by race is one of the critical mechanisms that affects breast cancer survival in Black women, and neighborhood conditions are related to a variety of exposures, such as access to medical care, nutritious foods, and places to exercise (Coughlin, 2019). Providing preventive care can become complicated when these specialized clinics and providers are not readily accessible in the geographic area where economically deprived patients live. Therefore, Black patients with breast cancer living in these disadvantaged communities experience longer travel times, public transportation hassles, and inconvenient hours of operation that prevent doctor visits (Newman & Kaljee, 2017; Pellom et al., 2020). The patient in the case study, K.F., experienced difficulties in achieving a healthy lifestyle and attending important preventive doctor visits. She lives in a lower socioeconomic area, resulting in obesity and more psychosocial stressors. More efforts are needed to facilitate access to and use of preventive healthcare services for all individuals to address these structural inequities.

Nurses can advocate for improving social determinants of health by helping to find social services or interventions that can provide access to preventive health services, exercise, and nutrition programs that can help to reduce the risks of CVD and breast cancer. Nurses have successfully collaborated with community partners and National Cancer Institute–designated cancer centers to develop platforms dedicated to population-specific preventive interventions for cancer and obesity education, awareness, and research initiatives, specifically in Black communities (Bryant et al., 2017). However, much more work is needed in understanding how socioeconomic status and racism can increase the risk of breast cancer and CVD among Black women.

Increased Risk of Metabolic Syndrome

Evidence-based nursing guidelines for behavioral risk management are essential in delivering follow-up care to Black breast cancer survivors, particularly those with an increased risk of metabolic syndrome (Gallagher et al., 2016, 2020). Metabolic syndrome is defined as a set of biologic factors (i.e., obesity, hypertension, dyslipidemia, and dysglycemia) that contribute to racial disparities in breast cancer prognosis in the United States. These disparate outcomes highlight the importance of preventive cardio-oncology (Brown, 2020; Christian et al., 2017). The continuation of joint screening for cancer and CVD based on baseline factors is crucial in follow-up care. In the case study, K.F. was at risk for heart failure because of her treatment with adriamycin and radiation therapy to the left breast. She received a referral to cardio-oncology care services at a cancer center and received appropriate preventive care to mitigate CVD and cancer. However, K.F. remains physically inactive and has type 2 diabetes and hyperlipidemia. In this case, additional assessment is needed to determine the best approach for promoting a healthier lifestyle and reducing metabolic risk. There may be an association with food insecurity that leads K.F.

to consume a nutrient-poor diet and a neighborhood disadvantage resulting in unsafe areas to exercise, increasing her risk for metabolic syndrome. She has a cluster of symptoms associated with metabolic syndrome, which places her more at risk for heart attack and stroke.

Modifiable lifestyle interventions can help to lower the risk of metabolic syndrome among Black breast cancer survivors. With the prevalence of comorbidities (CVD and cancer) among Black breast cancer survivors, there is a need for culturally tailored health-promotion programs to combat this problem and capitalize on teachable moments (Highland et al., 2015). For example, nurses can implement the American Heart Association's Life's Simple 7 My Life Check®, which checks seven different domains (total cholesterol, physical activity, healthy diet, fasting glucose, current smoking, body mass index, and blood pressure) to guide the conceptualization of ideal cardiovascular health in reducing the development of cancer and CVD, in addition to referrals to cardio-oncology programs (Benjamin et al., 2019). Additional pharmacologic therapies and oncologic treatment maneuvers by providers, such as anti-hypertensive therapies and dose reductions or limitations for chemotherapy and radiation therapy, can manage hypertension and contribute to the prevention of cardiomyopathy (Brown, 2020; Pellom et al., 2020; Prasad et al., 2020).

Disparities in Psychosocial Distress

Black patients with breast cancer experience unique socio-ecologic stressors that can affect overall cardiovascular risk factor burden and cancer risk (Sánchez-Díaz et al., 2021). Black patients with breast cancer also experience greater unmet social support needs (emotional, spiritual, informational, financial, and practical) that mediate disparate psychosocial stress outcomes. Evidence suggests that perceived discrimination and racism experienced by Black women are significant factors to psychological distress, low-grade chronic inflammation, and CVD, and extend to cardio-oncology (Conway-Phillips et al., 2020). The higher stressful events and social strains experienced by Black women are associated with higher incidence of CVD, and it is essential to consider attributes of latent CVD that may exist in this population (Felix et al., 2019). All these disparate outcomes contribute to lower health-related quality of life for Black breast cancer survivors.

Additional evidence-based complementary therapy interventions are needed to reduce chronic stress and increase awareness of stressors associated with perceived racism and create a sense of empowerment and positive emotion regulation to reduce CVD and cancer risk (Conway-Phillips et al., 2020). Studies suggest that positive psychological interventions (i.e., gratitude interventions) may play an essential role in preventive cardiology care (Cousin et al., 2020a). Positive psychological states, such as gratitude, are associated with superior cardiovascular outcomes in individuals with or without CVD (Cousin et al., 2020a). In one study of a majority of Black women at risk for CVD in the community (n = 298), Cousin et al. (2020b) found that gratitude was positively correlated with positive affect and spiritual well-being and negatively correlated with depressive symptoms. In other studies of the breast cancer population, gratitude was strongly associated with reduced distress, post-traumatic growth, and increased positive emotions (Ruini & Vescovelli, 2013; Sztachańska et al., 2019). The exploration of positive psychological interventions suggests

the importance of creating culturally tailored interventions to enhance self-efficacy to reduce metabolic syndrome among Black breast cancer survivors.

However, additional work is needed to determine if complementary therapy interventions can help to reduce chronic stress, CVD risk, and cancer risk despite recent work in the field of cardio-oncology. Developing culturally tailored nursing interventions that incorporate several common areas of life shared by Black breast cancer survivors (i.e., faith in God, gratitude, spirituality, and support networks) may be the first step in understanding the social context among Black breast cancer survivors that leads to cardio-oncology disparities (Gaston-Johansson et al., 2013; Torres et al., 2016; Williams et al., 2016). In the case study presented in this article, K.F. incorporated prayer and meditation and relied on her family support network to cope with her psychosocial stressors.

Implications for Nursing and Conclusion

Nurses play an essential role in the risk assessment, monitoring, and prevention of cardiovascular complications specific to Black patients with breast cancer undergoing treatment and in the elimination of barriers to care. However, addressing these critical health disparities in cardio-oncology requires an interprofessional approach with cardiologists, oncologists, and nurse navigators. The case study presented in this article provides an example of the cardiovascular risks that Black women face during all phases of cancer. Additional nursing opportunities include patient education tailored to mitigate cardiovascular risk, provide therapeutic relations with patients and families for social support, and advocate for referrals to cardio-oncology rehabilitation programs. There is a call to nursing researchers to develop culturally tailored interventions that can help address psychological distress or reduce metabolic syndrome among Black breast cancer survivors. By focusing on social determinants of health, including social support, access to care, and cardio-oncology services, nurses can evaluate and address barriers to receiving health care among Black breast cancer survivors to help promote health equity.

Acknowledgments

The authors take full responsibility for this content. Funding was provided by the National Cancer Institute (K08CA245208 [Nolan]). The article has been reviewed by independent peer reviewers to ensure that it is objective and free from bias.

REFERENCES

Armenian SH, Lacchetti C, & Lenihan D (2017). Prevention and monitoring of cardiac dysfunction in survivors of adult cancers: American Society of Clinical Oncology clinical practice guideline summary. Journal of Oncology Practice, 13(4), 270–275. 10.1200/jop.2016.018770 [PubMed: 27922796]

Babatunde OA, Eberth JM, Felder T, Moran R, Truman S, Hebert JR, … Adams SA (2020). Social determinants of racial disparities in breast cancer mortality among Black and White women. Journal of Racial and Ethnic Health Disparities, 8(1), 147–156, 10.1007/s40615-020-00766-y [PubMed: 32385849]

Benjamin EJ, Muntner P, Alonso A, Bittencourt MS, Callaway CW, Carson AP, … Virani SS (2019). Heart disease and stroke statistics—2019 update: A report from the American Heart Association. Circulation, 139(10), e56–e528. 10.1161/cir.0000000000000659 [PubMed: 30700139]

Brown SA (2020). Preventive cardio-oncology: The time has come. Frontiers in Cardiovascular Medicine, 6, 187. 10.3389/fcvm.2019.00187 [PubMed: 31998754]

Bryant DC, Hill LM, Melvin C, Powell-Young YM, & Ford ME (2017). The community compass project: A community engagement model targeting African-Americans in the low country of South Carolina. Journal of the National Black Nurses' Association, 28(1), 38–42. [PubMed: 29932566]

Carnethon MR, Pu J, Howard G, Albert MA, Anderson CAM, Bertoni AG, … Yancy CW (2017). Cardiovascular health in African Americans: A scientific statement from the American Heart Association. Circulation, 136(21), e393–e423. 10.1161/cir.0000000000000534 [PubMed: 29061565]

Christian AH, O'Malley D, Barac A, Miller SM, & Hudson SV (2017). Cardiovascular risk and communication among early stage breast cancer survivors. Patient Education and Counseling, 100(7), 1360–1366. 10.1016/j.pec.2017.02.010 [PubMed: 28215826]

Conway-Phillips R, Dagadu H, Motley D, Shawahin L, Janusek LW, Klonowski S, & Saban KL (2020). Qualitative evidence for Resilience, Stress, and Ethnicity (RiSE): A program to address race-based stress among Black women at risk for cardiovascular disease. Complementary Therapies in Medicine, 48, 102277. 10.1016/j.ctim.2019.102277 [PubMed: 31987226]

Coughlin SS (2019). Social determinants of breast cancer risk, stage, and survival. Breast Cancer Research and Treatment, 177(3), 537–548. 10.1007/s10549-019-05340-7 [PubMed: 31270761]

Coughlin SS, Ayyala D, Majeed B, Cortes L, & Kapuku G (2020). Cardiovascular disease among breast cancer survivors. Cardiovascular Disorder and Medicine, 2(1), 10.31487/j.cdm.2020.01.01

Cousin L, Redwine L, Bricker C, Kip K, & Buck H (2020a). Effect of gratitude on cardiovascular health outcomes: A state-of-the-science review. Journal of Positive Psychology, 16(3), 348–355. 10.1080/17439760.2020.1716054

Cousin L, Redwine L, Bricker C, Kip K, & Buck H (2020b). Psychometrics of the Gratitude Questionnaire-6 in African-Americans at risk for cardiovascular disease. Western Journal of Nursing Research, 42(12), 1148–1154. 10.1177/0193945920922777 [PubMed: 32441224]

Fadol A (2021). Cardio-oncology: A continually evolving subspecialty in oncology nursing. Clinical Journal of Oncology Nursing, 25(1), 93–96. 10.1188/21.CJON.93-96 [PubMed: 33480880]

Felix AS, Lehman A, Nolan TS, Sealy-Jefferson S, Breathett K, Hood DB, … Williams KP (2019). Stress, resilience, and cardiovascular disease risk among Black women. Circulation: Cardiovascular Quality and Outcomes, 12(4), e005284. 10.1161/circoutcomes.118.005284 [PubMed: 30909729]

Gallagher EJ, Fei K, Feldman SM, Port E, Friedman NB, Boolbol SK, … Bickell NA (2020). Insulin resistance contributes to racial disparities in breast cancer prognosis in U.S. women. Breast Cancer Research, 22(1), 40. 10.1186/s13058-020-01281-y [PubMed: 32393319]

Gallagher EJ, LeRoith D, Franco R, Antoniou IM, Nayak A, Livaudais-Toman J, & Bickell NA (2016). Metabolic syndrome and pre-diabetes contribute to racial disparities in breast cancer outcomes: Hypothesis and proposed pathways. Diabetes/Metabolism Research and Reviews, 32(7), 745–753. 10.1002/dmrr.2795 [PubMed: 26896340]

Gallicchio L, Calhoun C, Riseberg D, & Helzlsouer K (2017). Cardiovascular health among Black and White breast cancer patients initiating aromatase inhibitor therapy. Breast Journal, 23(2), 206–209. 10.1111/tbj.12709

Gaston-Johansson F, Haisfield-Wolfe ME, Reddick B, Goldstein N, & Lawal TA (2013). The relationships among coping strategies, religious coping, and spirituality in African American women with breast cancer receiving chemotherapy. Oncology Nursing Forum, 40(2), 120–131. 10.1188/13.ONF.120-131 [PubMed: 23448737]

Gulati M, & Mulvagh SL (2018). The connection between the breast and heart in a woman: Breast cancer and cardiovascular disease. Clinical Cardiology, 41(2), 253–257. 10.1002/clc.22886 [PubMed: 29446841]

Highland KB, Hurtado-de-Mendoza A, Stanton CA, Dash C, & Sheppard VB (2015). Risk-reduction opportunities in breast cancer survivors: Capitalizing on teachable moments. Supportive Care in Cancer, 23(4), 933–941. 10.1007/s00520-014-2441-7 [PubMed: 25239599]

Lee C, Park S, & Boylan JM (2020). Cardiovascular health at the intersection of race and gender: Identifying life-course processes to reduce health disparities. Journals of Gerontology Series B, 76(6), 1127–1139. 10.1093/geronb/gbaa208

Lin KJ, & Lengacher CA (2019). Anthracycline chemotherapy-induced cardiotoxicity in breast cancer survivors: A systematic review. Oncology Nursing Forum, 46(5), E145–E158. 10.1188/19.ONF.E145-E158 [PubMed: 31424455]

Lyon AR, Dent S, Stanway S, Earl H, Brezden-Masley C, Cohen-Solal A, … Lenihan D (2020). Baseline cardiovascular risk assessment in cancer patients scheduled to receive cardiotoxic cancer therapies: A position statement and new risk assessment tools from the Cardio-Oncology Study Group of the Heart Failure Association of the European Society of Cardiology in collaboration with the International Cardio-Oncology Society. European Journal of Heart Failure, 22(11), 1945–1960. 10.1002/ejhf.1920 [PubMed: 32463967]

Mehta LS, Watson KE, Barac A, Beckie TM, Bittner V, Cruz-Flores S, … Volgman AS (2018). Cardiovascular disease and breast cancer: Where these entities intersect: A scientific statement from the American Heart Association. Circulation, 137(8), e30–e66. 10.1161/cir.0000000000000556 [PubMed: 29437116]

Newman LA, & Kaljee LM (2017). Health disparities and triple-negative breast cancer in African American women: A review. JAMA Surgery, 152(5), 485–493. 10.1001/jamasurg.2017.0005 [PubMed: 28355428]

Odonkor CA, Esparza R, Flores LE, Verduzco-Gutierrez M, Escalon MX, Solinsky R, & Silver JK (2021). Disparities in health care for Black patients in physical medicine and rehabilitation in the United States: A narrative review. PM&R, 13(2), 180–203. 10.1002/pmrj.12509 [PubMed: 33090686]

Okwuosa TM, Morgans A, Rhee JW, Reding K, Maliski S, Plana JC, … Ismail-Khan R (2020). The impact of hormonal therapies for treatment of hormone-dependent cancers (breast and prostate) on the cardiovascular system: Effects and modifications: A scientific statement from the American Heart Association. Circulation, 14(3). 10.1161/hcg.0000000000000082

Parent S, Pituskin E, & Paterson DI (2016). The cardio-oncology program: A multidisciplinary approach to the care of cancer patients with cardiovascular disease. Canadian Journal of Cardiology, 32(7), 847–851. 10.1016/j.cjca.2016.04.014

Peiiom ST Jr., Arnold T, Williams M, Brown VL, & Samuels AD (2020). Examining breast cancer disparities in African Americans with suggestions for policy. Cancer Causes and Control, 31(9), 795–800. 10.1007/s10552-020-01322-z [PubMed: 32524509]

Prasad P, Branch M, Asemota D, Elsayed R, Addison D, & Brown SA (2020). Cardio-oncology preventive care: Racial and ethnic disparities. Current Cardiovascular Risk Reports, 14(10), 18. 10.1007/s12170-020-00650-8

Ruini C, & Vescovelli F (2013). The role of gratitude in breast cancer: Its relationships with post-traumatic growth, psychological well-being and distress. Journal of Happiness Studies, 14(1), 263–274. 10.1007/s10902-012-9330-x

Sánchez-Díaz CT, Strayhorn S, Tejeda S, Vijayasiri G, Rauscher GH, & Molina Y (2021). What mediates the racial/ethnic disparity in psychosocial stress among breast cancer patients? Cancer Causes and Control, 32(4), 357–367. 10.1007/s10552-021-01392-7 [PubMed: 33559770]

Sztachańska J, Krejtz I, & Nezlek JB (2019). Using a gratitude intervention to improve the lives of women with breast cancer: A daily diary study. Frontiers in Psychology, 10, 1365. 10.3389/fpsyg.2019.01365 [PubMed: 31249544]

Torres E, Dixon C, & Richman AR (2016). Understanding the breast cancer experience of survivors: A qualitative study of African American women in rural Eastern North Carolina. Journal of Cancer Education, 31(1), 198–206. 10.1007/s13187-015-0833-0 [PubMed: 25877467]

Williams DR, Mohammed SA, & Shields AE (2016). Understanding and effectively addressing breast cancer in African American women: Unpacking the social context. Cancer, 122(14), 2138–2149. 10.1002/cncr.29935 [PubMed: 26930024]

Williams MS, Beech BM, Griffith DM, & Roland JT Jr. (2020). The association between hypertension and race/ethnicity among breast cancer survivors. Journal of Racial and Ethnic Health Disparities, 7(6), 1172–1177. 10.1007/s40615-020-00741-7 [PubMed: 32185742]

Zavala VA, Bracci PM, Carethers JM, Carvajal-Carmona L, Coggins NB, Cruz-Correa MR, … Fejerman L (2020). Cancer health disparities in racial/ethnic minorities in the United States. British Journal of Cancer, 124(2), 315–332. 10.1038/s41416-020-01038-6 [PubMed: 32901135]

IMPLICATIONS FOR PRACTICE

- Recognize significant disparities associated with cardio-oncology that are unique to Black breast cancer survivors, particularly social determinants of health, psychosocial stressors, and increased risk of metabolic syndrome.
- Consider community resources and cardio-oncology clinics to provide preventive health services, exercise, and nutrition programs to reduce cardiovascular disease and cancer risk.
- Explore positive psychological interventions (e.g., gratitude, spirituality, support networks) to help reduce chronic stress, lower the risk for cardiovascular disease, and improve overall health-related quality of life during cancer survivorship for Black women.

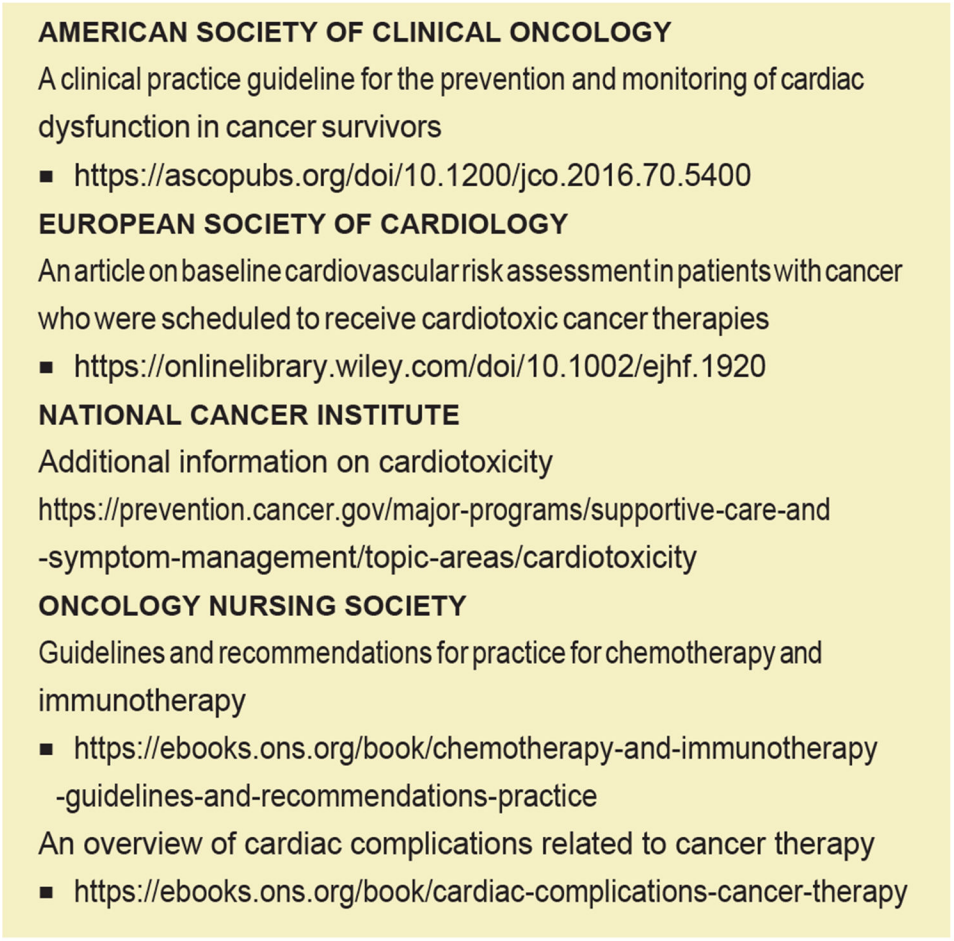

FIGURE 1.
CARDIO-ONCOLOGY GUIDELINES AND RESOURCES