

EDITORIAL



Clinical

Too hot or too cold? Finding the Goldilocks scenario for prostate cancer patients suffering from hot flashes

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We commend the authors for their work to combat the negative impacts of symptomatic hot flashes triggered by androgen deprivation therapy (ADT) for advanced prostate cancer [1]. This research addresses a critical, yet often overlooked, aspect of prostate cancer treatment. Prostate cancer, one of the most common cancers in men, often necessitates treatments, including ADT, that while effective, often lead to side effects that significantly impact quality-of-life [2]. Ensuring patients maintain their course of treatment depends largely on the effect therapies have following the adage that: “the cure should not be worse than the disease,” or patients will not continue oncologically proven treatments. It is well-known that patients undergoing ADT may experience numerous adverse effects, including but not limited to: hot flashes, decreased libido, changes in mood, impotence, sleep disturbances, fatigue, depression, and diminished cognition [3–5]. Hot flashes, specifically, may be associated with sleep disturbances, diminished cognitive function, and overall lower quality-of-life in this patient population [5, 6]. Additionally, ADT is coupled with primary definitive treatments for localized or regional prostate cancers; ADT use has extended as a recommendation beyond patients with advanced stage disease, increasing the number of men impacted by resultant bothersome side effects.

A major part of cancer treatment is managing treatment side effects and working towards improved cancer survivorship, which are both critical elements that Peeke and colleagues have aimed to achieve by mitigating a major side effect felt by many patients managed with ADT. They investigate the use of a novel thermal device for managing symptomatic hot flashes as a promising step towards enhancing patient comfort and, consequently, treatment adherence. Hot flashes, traditionally associated with women undergoing natural hormonal changes during menopause, have not been largely addressed in male populations, particularly in those undergoing ADT for advanced prostate cancer. This gap in research and management strategies has been a barrier to holistic cancer care in this patient population. The investigation by Peeke et al. not only acknowledges this gap but also proposes a practical solution in the form of a wearable thermal device. Their methodology is comparable to previous research in women, notably that by Composto et al., which explored the use of cooling devices in women suffering from hot flashes during peri- and post-menopause. In the study of peri-menopausal women, participants wore a device for a 4-week period and patient reported outcomes and measurement questionnaires were recorded to determine the overall effect of a cooling device on hot flashes and sleep disturbance. This study of women suffering from hot flashes resulted in improvement of the Insomnia Severity

Index, Patient Reported Outcomes Measurement Information System Sleep Disturbance (PROMIS SD) and Sleep Related Impairment (PROMIS SRI) scales, and the Epworth Sleepiness Scale (ESS) [7]. The same validated scores were used by Peeke et al. to study the use of a wrist-worn cooling device (Embr Wave®, Emby Labs, Boston, MA) in men with prostate cancer who have been managed with ADT. In this prospective, single-arm study, Peeke et al. sought to determine the clinical utility of the Embr Wave in management of hot flashes for patients with prostate cancer by following Hot Flash Related Daily Interference Scale (HFRDIS) scores as well as PROMIS SD, PROMIS SRI, and ESS scores in 39 men with a history of prostate cancer treatment with ADT, hormone therapy, or orchiectomy who experienced bothersome hot flashes, defined as at least 28 episodes per week. The device had the potential to provide heating or cooling with activation; however, patients in this study only used the cooling option an average of 7.6 sessions per week over the 4-week study period [1].

The authors provide strong initial insight for aiding in the management of hot flashes for patients with prostate cancer needing ADT. Overall, the 4-week study provided several notable findings. Patients reported an improvement in hot flash interference, sleep, quality-of-life, concentration, and enjoyment of life based on patient reported outcome measures. Additionally, the device was well tolerated as 66% of participants rated the device as effective and 77% reported satisfaction with the device. While the study presents compelling evidence supporting the device’s effectiveness, it also brings to light areas requiring further exploration. One notable observation was that Epworth Sleepiness Scale scores were normal at baseline and unaltered after wearing the device. The authors suggest that additional research to obtain objective sleep measures may be important to capture sleep disturbances and changes in this population. Additionally, the study reported a change in HFRDIS of 1.1. Given that minimal important difference (MID) for HFRDIS total in midlife women is 1.7, [8] this finding supports the recommendation for future research. Peeke and colleagues suggest a randomized controlled design with a control group to measure the differential impact of the device beyond mere feasibility and tolerability, which we support.

This study provides unique insight into a device that may be useful for aiding in the management of hot flashes for prostate cancer survivors managed with ADT. Overall, the authors should be commended for their work exploring therapies aimed at improving cancer survivorship for patients suffering from side effects recognized to be a direct effect of their prostate cancer treatments. The implications of this study and its future directions may extend beyond the immediate benefits of managing hot flashes. By improving the tolerability of ADT, such interventions could lead to better treatment adherence, potentially impacting survival rates and long-term outcomes for prostate cancer

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patients. However, one must be cautious to ensure access to such innovation and technology does not further widen the existing disparities in cancer-related care pathways and ultimately oncologic outcomes [9]. Furthermore, the research adds to a growing body of evidence advocating for patient-centered care approaches in oncology, where the management of treatment side effects is as important as the oncologic treatment effectiveness. This study is a testament to the evolving landscape of cancer care, where patient well-being is paramount, and holistic treatment strategies are integral to the overall success of cancer management.

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AUTHOR CONTRIBUTIONS

KRP and CEW provided primary authorship, critical review, and revisions for this manuscript. SRB provided conceptualization, critical review, and revisions for this manuscript.

COMPETING INTERESTS

The authors declare no competing interests.