

LETTER TO THE EDITOR

Prostate Cancer and Cardiovascular Risk Factors



We read with interest the paper by Klimis et al¹ on optimizing cardiovascular risk management in the prostate cancer population. Although the data are compelling, we believe that several points warrant additional discussion.

The investigators included patients who had undergone androgen deprivation therapy (ADT) within the last 6 months. However, Table 3 in the paper does not provide any information about whether these patients were also receiving taxane-based chemotherapy; this is not mentioned in other parts of the paper. Some data might suggest that taxane-based chemotherapy has been associated with cardiovascular complications, particularly when used as part of combination therapy.² The investigators may want to consider patients who received ADT in conjunction with taxane-based chemotherapy as a distinct subgroup for analysis, as these individuals may have a higher risk of developing cardiovascular events.

External beam radiation therapy and brachytherapy are currently options for unfavorable intermediate-risk group prostate cancer, with or without ADT.³ When making clinical decisions, various factors, including cardiovascular risk, are considered by treating providers. For patients at higher risk of cardiovascular events, clinicians tend to initiate local therapy to reduce systemic adverse events and may also consider cardiovascular complications. The investigators' rationale for choosing ADT initiation as an inclusion criterion is interesting, given that an individual's baseline condition may influence the patient's treatment.

The European Society of Cardiology emphasized baseline cardiovascular toxicity risk assessment in the 2022 guidelines.⁴ Global longitudinal strain (GLS) is a promising tool for baseline assessment of myocardial function and monitoring for cardiovascular dysfunction after initiating cardiotoxic agents.⁵ However, there is no specific recommendation for patients receiving ADT, second-generation androgen

receptor blockers, or taxane-based chemotherapy. We hypothesize GLS may be beneficial as a screening tool for prostate cancer patients with uncontrolled cardiovascular risk factors. Although this may be a promising area of study, there is currently a lack of randomized controlled trials specifically in the prostate cancer population. We look forward to further research in determining whether there is a role for a GLS-guided approach to mitigate the cardiovascular complications of ADT in men with prostate cancer.

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The authors attest they are in compliance with human studies committees and animal welfare regulations of the authors' institutions and Food and Drug Administration guidelines, including patient consent where appropriate. For more information, visit the [Author Center](#).

REFERENCES

1. Klimis H, Pinthus JH, Aghel N, et al. The burden of uncontrolled cardiovascular risk factors in men with prostate cancer: a RADICAL-PC analysis. *J Am Coll Cardiol CardioOnc*. 2023;5:70-81. <https://doi.org/10.1016/j.jacc.2022.09.008>
2. Wilk M, Waško-Grabowska A, Szmit S. Cardiovascular complications of prostate cancer treatment. *Front Pharmacol*. 2020;11:555475. <https://doi.org/10.3389/fphar.2020.555475>
3. National Comprehensive Cancer Network. NCCN Guidelines Version 1.2023 Prostate Cancer. Accessed March 29, 2023. https://www.nccn.org/professionals/physician_gls/pdf/prostate.pdf
4. Lyon AR, López-Fernández T, Couch LS, et al. 2022 ESC guidelines on cardio-oncology developed in collaboration with the European Hematology Association (EHA), the European Society for Therapeutic Radiology and Oncology (ESTRO) and the International Cardio-Oncology Society (IC-OS). *Eur Heart J*. 2022;43:4229-4361. <https://doi.org/10.1093/eurheartj/ehac244>
5. Araujo-Gutierrez R, Chitturi KR, Xu J, et al. Baseline global longitudinal strain predictive of anthracycline-induced cardiotoxicity. *Cardiooncology*. 2021;7:4. <https://doi.org/10.1186/s40959-021-00090-2>