The risk of death from high-risk prostate cancer in men undergoing EBRT and brachytherapy

According to the National Comprehensive Cancer Network (NCCN) guidelines, treatment with long-course (28–36 months) androgen deprivation therapy (ADT), in addition to brachytherapy (where radioactive seeds are implanted inside the prostate to kill cancer cells) and external beam radiation therapy (EBRT) is a standard option. While this trimodality therapy yields excellent outcomes, the NCCN recommendations were based on randomized trials comparing long-course vs. short-course (4-6 months) ADT in patients undergoing EBRT without brachytherapy. It remains unknown whether long-course ADT is better than short-course ADT in the setting of high-risk PC and treatment with EBRT plus brachytherapy. ADT for prostate cancer cause side effects and is associated with an increased risk of diabetes and cardiovascular events. Therefore, minimizing the duration of their use would be desirable.

In our study, we assessed the risks of prostate cancer–specific mortality (PCSM) and all-cause mortality in men with high-risk PC who underwent EBRT and brachytherapy with short-course ADT as compared with men with more favorable-risk PC undergoing standard of care. The study consisted of more than 6,500 men who were treated with brachytherapy at the Prostate Cancer Foundation of Chicago. We found that that in the setting of high-dose radiation consisting of EBRT and brachytherapy, men with high-risk PC have low absolute estimates of PCSM (approximately 6%) during the first decade after treatment despite receiving only short-course ADT. Given the known toxicities of long-term ADT, whether long-term ADT can lower PCSM and improve survival for men with high-risk PC undergoing EBRT and a brachytherapy boost deserves additional study in the setting of a randomized trial.

Publication

Short-course androgen deprivation therapy and the risk of death from high-risk prostate cancer in men undergoing external beam radiation therapy and brachytherapy.
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