Androgen deprivation therapy and the risk of death from prostate cancer among men with favorable or unfavorable intermediate-risk disease.

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Abstract

BACKGROUND: Radiotherapy (RT), short-course androgen deprivation therapy (ADT), and brachytherapy in various combinations are treatment options for patients with intermediate-risk prostate cancer (PC), but the question of which combination if any is necessary to minimize PC-specific mortality (PCSM) risk in patients with favorable or unfavorable intermediate-risk PC is unknown. The authors assessed PCSM risk after commonly used treatments.

METHODS: The cohort consisted of 2510 men with favorable (1902 men; 75.78%) or unfavorable (608 men; 24.22%) intermediate-risk PC who were treated from 1997 to 2013. Treatment included brachytherapy with or without neoadjuvant ADT among men with favorable disease and brachytherapy with neoadjuvant RT or ADT among men with unfavorable disease. Fine and Gray's competing-risks regression model was used to assess whether ADT among men with favorable disease or RT or ADT among men with unfavorable disease decreased PCSM risk after adjusting for treatment propensity score, year of brachytherapy, and PC prognostic factors.

RESULTS: After a median follow-up of 7.78 years, 366 deaths (14.58%) were observed, 29 of which (7.92%) were from PC. There was a significant reduction in PCSM risk in men with unfavorable disease who were treated with ADT versus RT (adjusted hazard ratio, 0.34; 95% confidence interval, 0.13-0.91 [P = .03]), but no significant difference in PCSM risk in men with favorable disease who received ADT and brachytherapy versus brachytherapy (adjusted hazard ratio, 0.67; 95% confidence interval, 0.18-2.57 [P =.56]).

CONCLUSIONS: Neoadjuvant ADT does not appear to reduce PCSM risk in men undergoing brachytherapy for favorable intermediate-risk PC and should not be considered a standard; however, it appears superior to neoadjuvant RT in men with unfavorable intermediate-risk PC undergoing brachytherapy, making neoadjuvant ADT and brachytherapy a preferred option in these men. Cancer 2015. © 2015 American Cancer Society.

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KEYWORDS: androgen deprivation therapy; brachytherapy; external-beam radiotherapy; favorable intermediate-risk prostate cancer; intermediate-risk prostate cancer; prostate cancer; unfavorable intermediate-risk prostate cancer

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