Prostate Cancer Mortality based on diagnostics while on ADT (aka TIP – Testosterone Inactivating Pharmaceuticals)

Scholz M, Lam R, Strum S, et al: Prostate cancer-specific survival and clinical progression-free survival in men with prostate cancer treated intermittently with testosterone inactivating pharmaceuticals. Urology 70:506-510, 2007. 17905106.

OBJECTIVES: More than 85% of men with prostate cancer die of other causes. An effective method is needed to distinguish fatal forms of prostate cancer from benign variants. METHODS: We performed a retrospective chart review from a medical oncology practice specializing in prostate cancer. All men with negative bone scans, prostate-specific antigen (PSA) level less than 100 ng/mL, adequate records for review, and who started taking testosterone inactivating pharmaceutical (TIP) agents before January 2000 were included in the study. Six factors were evaluated as potential predictors of prostate cancer-specific mortality: PSA nadir greater than 0.05 ng/mL while taking TIP, PSA doubling time of less than 12 months, Gleason score, stage, baseline PSA level greater than 20 ng/mL, and age.

RESULTS: The study criteria were met by 160 men. The median follow-up was 10 years. The median age, PSA level, PSA nadir, and PSA doubling time was 65.6 years, 9.6 ng/mL, 0.03 ng/mL, and 10 months, respectively. Of the 160 men, 39 died of prostate cancer. Death from prostate cancer was far more common (78% versus 11%) and accelerated (median of 4 years versus 7 years) for men with a PSA nadir greater than 0.05 ng/mL than for those with a lower nadir.

Multivariate Cox regression analysis indicated that the hazard ratio for prostate cancer-specific mortality in men with a PSA nadir greater than 0.05 ng/mL was 11.6 ($P < 0.0001$). The hazard ratio for men with a PSA doubling time of less than 12 months was 2.9 ($P = 0.04$). Gleason score, stage, baseline PSA level greater than 20 ng/mL, and age were not statistically significant.

CONCLUSIONS: Of the factors studied, the PSA nadir while taking a TIP was the best predictor of prostate cancer-specific mortality.