

Title of Research

Individual Patient Level Analysis of Control Arms of Randomized Trials to Assess Impact of Single Agent Daily Prednisone on Outcomes and Toxicities in Metastatic Castration-Resistant Prostate Cancer

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Summary of Research

While brief courses of corticosteroids result in palliative benefits, it is unclear whether long-term daily oral prednisone confers more benefits than risks in men with metastatic castration-resistant prostate cancer. A more comprehensive study to estimate the risk of toxicities and impact on overall survival with the use of daily oral prednisone is warranted.

Daily low dose oral prednisone, a corticosteroid, has often been used in men with metastatic castration-resistant prostate cancer, but the impact of this therapy is unknown. There is some evidence that corticosteroids may have a modest palliative benefit, and also that even at low daily doses, these therapies may be linked to toxicities such as hyperglycemia, bone loss, myopathy, edema, hypertension and infections. They may also potentially counteract the benefits of immunotherapy, and to promote tumor growth. At least one analysis suggests that daily oral prednisone has no significant impact on severe toxicities and overall survival. However, individual patient-level data were not available, so it was not possible to evaluate any differences in the effects of prednisone in those with poorer performance status or in higher risk groups.

This retrospective analysis will pool data from the control arms of recent phase III trials to assess the impact of prednisone on survival and toxicities in men with metastatic, castration-resistant prostate cancer. The researchers will examine the hypothesis that oral daily prednisone has palliative benefits and does not have excessive toxicities but does not extend overall survival.

Study Design

This analysis will include four randomized phase III trials with a control arm including single agent placebo (or no anti-cancer therapy) or single-agent prednisone (with or without placebo). Patients receiving prednisone before trial initiation will be excluded from analysis, as will those receiving prednisone in combination with other agents. Multiple efficacy and toxicity outcomes will be evaluated, focusing particularly on hyperglycemia, hypertension, hypokalemia, skeletal related events and edema.

Study Population

Patients from the control arm of randomized phase III trials carried out either before or after the launch of docetaxel will be pooled.

Funding Source of Research

Not provided

Requested Study

CA184-043 (NCT00861614): A Randomized, Double-Blind, Phase III Trial Comparing Ipilimumab vs. Placebo

Following Radiotherapy in Subjects with Castration Resistant Prostate Cancer That Have Received Prior Treatment With Docetaxel

Statistical Analysis Plan

The researchers plan to apply univariable and multivariable Cox regression analyses, which relate multiple simultaneous risk factors or exposures to survival time. They will examine efficacy outcomes (with a primary endpoint of overall survival and secondary endpoints of progression-free survival, prostate-specific antigen response, pain response and Response Evaluation Criteria In Solid Tumors [RECIST]) and toxicity outcomes.

Publication Citation

Impact of single-agent daily prednisone on outcomes in men with metastatic castration-resistant prostate cancer. Sonpavde G, Pond GR, Templeton AJ, Kwon ED, De Bono JS. [Prostate Cancer Prostatic Dis.](#) 2016 Sep 27. doi: 10.1038/pcan.2016.44