

Central/Peripheral DXA Outcomes

Central DXA only	Normal 44	Osteopenic 134	Osteoporotic 70
Central DXA + Peripheral DXA	Normal 35	Osteoporotic 125	Osteoporotic 88

Source of Funding: None

825

ZOLEDRONIC ACID IS COST EFFECTIVE FOR THE PREVENTION OF SKELETAL-RELATED EVENTS IN PATIENTS WITH PROSTATE CANCER AND BONE METASTASES IN FRANCE AND GERMANY

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INTRODUCTION AND OBJECTIVE: Zoledronic acid (ZOL) is the only bisphosphonate indicated for the prevention of skeletal-related events (SREs) in patients with bone metastases secondary to prostate cancer. The objective of the current analysis was to assess the cost effectiveness of ZOL for this indication from a French and German healthcare perspective.

METHODS: The incremental cost and quality-adjusted life-years (QALYs) associated with ZOL therapy versus placebo were estimated using a literature-based decision analytic model based on data from a 15-month randomized trial for 4 mg ZOL (n = 214) and placebo-treated (n = 208) patients. The model included assumptions about SREs, mortality, drug and administration costs, SRE costs, reduced quality of life because of SREs and bone pain, and therapy duration. The costs of SREs were estimated on the basis of Diagnosis Related Group (DRG) tariff information supplemented with information from the published literature.

RESULTS: Over 15 months, the cumulative number of SREs projected was 0.83 for ZOL patients versus 1.66 for placebo patients. Excluding drug costs, ZOL reduced the total costs of managing SREs by 2,659 in France and by 3,117 in Germany compared with placebo. Including drug costs, ZOL increased total costs by 1,022 in France and by 330 in Germany compared with placebo. However, ZOL increased quality-adjusted survival by 0.03566 QALY per patient, resulting in an incremental cost per QALY gained of 28,648 in France and 9,252 in Germany compared with placebo. The cost-effectiveness ratio of ZOL remained within the acceptable range (< 50,000 per QALY gained) in most sensitivity analyses.

CONCLUSIONS: In patients with bone metastasis secondary to prostate cancer, ZOL appears to be economically attractive. The cost-effectiveness ratio for ZOL is well below standard cost-effectiveness thresholds observed by most healthcare systems.

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826

LONG TERM FOLLOW UP OF PHASE 2 STUDY OF POMEGRANATE JUICE FOR MEN WITH PROSTATE CANCER SHOWS DURABLE PROLONGATION OF PSA DOUBLING TIME

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INTRODUCTION AND OBJECTIVE: From a clinical trial ongoing for more than 5 years, we sought to determine the long-term effects of pomegranate juice consumption on PSA progression in men with a rising PSA following treatment for localized prostate cancer.

METHODS: A phase II, Simon two-stage clinical trial for men with rising PSA after surgery or radiotherapy was begun in January, 2003. Eligible patients had a detectable PSA greater than 0.2 ng/ml and less than 5 ng/ml, and a Gleason score of 7 or less. Patients were treated with 8 ounces of pomegranate juice daily (Wonderful variety, 570 mg total polyphenol gallic acid equivalents). Interim results were published (Clinical Cancer Research, 2006) and showed a significant increase in mean PSA doubling time following treatment, from 15 months at baseline to 54 months post-treatment (p < 0.001). The study was amended to allow patients to continue treatment and to undergo

evaluation in 3 month intervals until disease progression **RESULTS:** The study was fully accrued to 48 participants in two stages. In the sixth year of treatment, fifteen (31%) active patients remain on study with a median follow up of 30 months post-treatment (maximum 64 months). Including pre-treatment PSA values, median total follow-up is now 56 months. Mean PSA doubling time for the entire cohort continues to show a significant increase following treatment, from a mean of 15.4 at baseline to 60 months post-treatment (p < 0.001), while the median PSA slope decreased 60% from 0.06 to 0.024 (p < 0.001). Patients remaining on study ("active") were compared to those no longer on study ("non-active"). At baseline, mean PSA doubling times were similar between Active and Non-Active patients. However, post-treatment PSA DT prolongation was greater and the decline in median PSA slope was larger in Active compared to Non-Active patients (p < 0.003).

CONCLUSIONS: Long-term follow up of pomegranate juice consumption in men with prostate cancer and a rising PSA following primary therapy demonstrates a durable increase in PSA doubling time. The data suggest that a sub-set of patients may be more sensitive to the effects of pomegranate juice on PSA DT. A multicenter, randomized, phase III study is ongoing to further evaluate the benefits of pomegranate in a placebo-controlled manner.

Source of Funding: Pom Wonderful

827

ANALYSIS OF THE ATHEROGENIC RISK DURING ANDROGEN DEPRIVATION THERAPY IN PROSTATE CANCER PATIENTS

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INTRODUCTION AND OBJECTIVE: Cardiovascular mortality (CVM) is the second leading cause of death in patients with prostate cancer (CaP). This fact has been related to the usage of androgen deprivation therapy (ADT), through the increased prevalence of diabetes and metabolic syndrome. Atherosclerosis is a main risk factor of cardiovascular disease and CVM, however the atherogenic risk (AR) has never been studied in PCa patients subjected to ADT. The objective of this study was to analyze the impact of continuous ADT on the AR. The study has a transversal cohorts design to obtain an evidence level type 3.

METHODS: Serum lipoproteins (total cholesterol, HDL, LDL and triglycerides) were determined in 636 patients. A study group was composed by 297 CaP patients subjected to ADT during a mean period of 41 months (3-251). 67 patients were treated during a period lower than 12 months, 72 between 13 and 24 months, 42 between 25 and 36 months 26 between 37 and 48 months, 24 between 49 and 60 months and 66 during more than 60 months. The modality of ADT was medical, using 3 months depot LHRH agonist, in 177 patients and maximal androgen blockage, by addition of 50 mg/d of bicalutamide in 120 patients. A control group was composed by 339 age matched men subjected to prostate biopsy (212 with CaP and 127 without CaP). The AR was calculated using the ratio total cholesterol/HDL. Statistical analysis was done using the non parametric Krustall-Wallis test, Mann-Whitney U test and linear multivariate logistic regression.

RESULTS: The median of AR in the control group was 4.05 and 4.00 in the group of patients subjected to continuous ADT, p > 0.05. According to the type of ADT we detected a median of AR of 4.17 in patients subjected to castration while it was 3.87 in patients subjected to MAB, p = 0.02. The median of AR ranged between 4.04 and 4.26, according to the length period of ADT, p > 0.05. The multivariate analysis confirms that ADT modality was the only variable influencing on the AR. MAB reduced significantly the AR in relation the one observed in patients subjected to castration alone, p = 0.03.

CONCLUSIONS: This study demonstrates that continuous ADT does not increase the atherogenic risk in patients with prostate cancer as well as the atherogenic risk does not increases over the period under ADT. Patients under MAB had a lower atherogenic risk than those patients not subjected to ADT.

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