MONOTHERAPY OF ANDROGEN DEPRIVATION THERAPY VERSUS RADICAL PROSTATECTOMY AMONG VETERANS WITH LOCALIZED PROSTATE CANCER: A COMPARATIVE EFFECTIVENESS ANALYSIS OF RETROSPECTIVE COHORTS

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OBJECTIVES: There is no consensus regarding the optimal treatment for localized prostate cancer. This study aimed to examine the comparative effectiveness of monotherapy of either primary androgen deprivation therapy (PACT) or radical prostatectomy (RP) in terms of overall survival rate. METHODS: Male patients with localized prostate cancer were identified in the Veterans Affair Veterans Integrated Service Network Service 16 database (January, 2003–June, 2006) with one year baseline and at least 3-year follow-up (total 609 patients). Eligible patients (18–75 years old) who had no other cancer history and used PACT or monotherapy of RP within 6 months after the first diagnosis of prostate cancer. The overall survival from initiation of index treatment was analyzed using Kaplan-Meier method and Cox regression model estimating the rate of overall survival rate following RP among localized prostate cancer patients was significantly higher than that after PACT, controlling for other covariates. More research among a larger population with longer follow-up are warranted to confirm this finding.

ESTIMATED EFFECTS OF THE NATIONAL BREAST AND CERVICAL CANCER EARLY DETECTION PROGRAM ON CERVICAL CANCER MORTALITY

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OBJECTIVES: The National Breast and Cervical Cancer Early Detection Program (NB-CEDP) is the largest organized cancer screening program for low-income, uninsured and under-insured women in the United States. The program’s effectiveness in increasing the life expectancy of participating women has never been measured. We estimated the benefits of NBCCEDP-funded cervical cancer screening (Program) in terms of life-years (LYs) saved compared to No Program and No Screening scenarios.

METHODS: Based on an existing model developed by Myers et al., we constructed a cervical cancer screening model by modifying the age and screening schedule of the cohort to reflect screening frequency for NBCCEDP participants from 1991-2007. We estimated screening habits in the absence of the program based on data from the 1990-2005 National Health Interview Survey. We performed the Markov cohort analysis for each age in the 18-64 range and calculated an overall weighted average using the age distribution at first NBCCEDP Pap test for screening. Weighted averages were produced for three scenarios—women receiving testing from the NBCCEDP (the Program), women receiving testing from alternative sources in the absence of the program (No Program), and women receiving no testing at all (No Screening). We compared LY estimates for 65,100 women detected with human papillomavirus infection, low- and under-insured Americans [8.7% vs. 11.3%]; and more Hispanic patients [6.3% versus 2.5%]; all African Americans [0.9% vs. 0.6%]; and more women of Asian origin [4.0% vs. 3.9%].

RESULTS: At a willingness-to-pay of $150,000 per quality-adjusted life year, ERCC1 and standard care strategies resulted in average net-benefit of $630,500 and $625,200, respectively. The ERCC1 and standard care strategies produced greater net-benefit in 64% and 36% of 10,000 simulations, respectively. The average net-benefit difference was $14,000 in simulations where the standard care was optimal. With an affected population of 231,825, EVPI was $1.2 billion. Preliminary estimates suggest an EVSI of approximately $20 million at plausible sample sizes. CONCLUSIONS: Considerable value could be realized through additional research to reduce uncertainty about the comparative health outcomes of ERCC1 and standard care strategies. The EVPI of $1.2 billion was driven by the large 10-year affected population, probability that ERCC1 testing is not the optimal strategy, and consequences of selecting the non-optimal strategy. Forthcoming results will enable estimation of the expected net-benefit of sampling, which compares the EVSI of various study designs and sample sizes to the cost of conducting such studies. These findings can assist stakeholders in prioritizing funding for ERCC1 research relative to alternative research investments.

PALONOSETRON VERSUS OTHER 5-HDROXYTRYPTAMINE, RECEPTOR ANTAGONISTS FOR PREVENTION OF CHEMOTHERAPY INDUCED NAUSEA AND VOMITING AMONG MEDICARE PATIENTS WITH CANCER

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OBJECTIVES: To assess the rate of uncontrolled chemotherapy induced nausea and vomiting (CINV) associated with palonosetron initiation versus other 5-hydroxytryptamine-3, receptor antagonists (5-HT3-RAs) among Medicare patients with cancer on chemotherapy (CT) treatment in a hospital outpatient setting. METHODS: Medicare patients with a cancer diagnosis initiating CT and anti-emetic prophylaxis with palonosetron (Group 1) and other 5-HT3-RAs (Group 2) for the first time (index date) between April 1, 2007 – March 31, 2009 were identified from the Premier Perspective database. Inclusion criteria were no evidence of nausea and vomiting, CT, and anti-emetic medication in the 6-month pre-index date period and 36-months consecutive of data submission. A negative binomial distribution generalized linear multivariate regression model estimating the rate of CINV events on CT emetogenicity and cycle matched groups in the follow-up period (first of eight CT cycles or six months post-index date) was developed after adjusting for several demographic and clinical variables. RESULTS: Of 47 899 identified patients, 962 initiated palonosetron (Group 2, 20.1%); Group 1 patients were significantly younger (70.4 [SD: 9.3] versus 71.6 [9.0] years; p < 0.0001), comprised more females [52.9% versus 48.6%; p < 0.0001], less African Americans [8.7% vs. 11.3%] and more Hispanic patients [6.3% versus 2.5%]; all p < 0.0001, more highly and moderately emetogenic CT [33.6% versus 20.7% and, 47.3% versus 40.3%, respectively; p < 0.0001], and more lung and breast [30.9% vs. 24.9% and 12.3% vs. 9.6%, respectively; p < 0.0001]. In the follow-up period, the regression model predicted a 11.8% decrease in the CINV events per CT cycle for Group 1 patients versus 40.3%, respectively; p < 0.0001. CONCLUSIONS: In this retrospective hospital outpatient study, matching for CT emetogenicity and cycle and adjusting for other potential confounders, Medicare patients with cancer initiated on palonosetron were more likely to experience a significantly lower rate of CINV events per CT cycle versus those initiating other 5-HT3-RAs.