INTRODUCTION

Research on the cost-effectiveness of treatments for prostate cancer patients is limited. Although older studies (1-4) have compared the costs of abiraterone (4) and enzalutamide (4,5), these studies focused primarily on medical costs and did not consider real-world effectiveness.

The United States Food and Drug Administration (US FDA) has approved enzalutamide (14) and abiraterone (15) for the treatment of castration-resistant prostate cancer (CRPC). However, the randomized clinical trial setting captures only a portion of real-world patients, including those with specific comorbidities. To date, real-world evidence is needed to better understand the costs and effectiveness of new treatments for prostate cancer patients.

OBJECTIVE

To compare costs and resource use between patients treated with enzalutamide and abiraterone in a real-world setting.

METHODS

Study population and design

The study included patients 18 years of age and older who were enrolled in either an HMO or a PPO commercial insurance claims database in the United States from 2008 to 2014.

Patients with prostate cancer were selected based on the Medicare Beneficiary Identifiers of 64,449 men with at least one diagnosis of prostate cancer and at least two claims for chemotherapy. Within this cohort, patients were stratified into post-chemotherapy and chemotherapy-naïve groups. Patients were included in the chemotherapy-naïve group if they had no claims for chemotherapy during the index period and no claims for enzalutamide or abiraterone on/after September 1, 2012. Patients were included in the post-chemotherapy group if they had a chemotherapy claim on/after September 1, 2012.†

Patients who first initiated enzalutamide (index drug) or abiraterone after the index date were excluded. To ensure that patients were treated with the same drug for at least 3 months, patients were required to have claims for enzalutamide and/or abiraterone on/after September 1, 2012. The first initiation date for enzalutamide and/or abiraterone was defined as the index date.

The study period was the period from the index date until the end of data availability (with a minimum follow-up of 3 months after the index date) in patients treated with enzalutamide and/or abiraterone on/after September 1, 2012.‡ Patients were censored at the date of death, the date of disenrollment from the insurance claims database, or the end of data availability.

The study population included 6728 male adult patients identified with at least one diagnosis of prostate cancer and at least one claim for a hormone synthesis inhibitor during the baseline period.

RESULTS

Patient characteristics

Among chemotherapy-naïve patients, enzalutamide-treated patients had fewer all-cause inpatient and outpatient visits during the baseline period, which were adjusted for the following baseline covariates: which were selected as statistically significant based on a previous study and/or were clinically relevant (CCI score, diabetes, cardiovascular disease, and corticosteroid-sensitive comorbidities.

All analyses were conducted separately for chemotherapy-naïve and post-chemotherapy patients.

CONCLUSIONS

Despite the higher drug acquisition cost of enzalutamide compared with abiraterone, the lower medical costs of enzalutamide-treated patients offset the incremental pharmaceutical cost among these patients.

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