EPH253

Retrospective Study of Treatment Patterns and Patient Characteristics of Patients With Prostate Cancer Treatment in Germany According to Castration Resistance and Metastatic Status

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BACKGROUND

Prostate cancer (PCa) is the most common cancer in men in Germany, accounting for about 20% of all new cancer cases in Germany (1, 2). About 65,000 cases of newly diagnosed prostate cancer occur per year. Apart from surgical castration, the testosterone level can also be reduced by systemic therapy. Androgen deprivation therapy (ADT) is the gold standard for the treatment of advanced but hormone-sensitive PCa (HSPC). The spread of metastases is considered to determine whether the HSPC is non-metastatic (nmHSPC) or metastatic (mHSPC). While nmHSPC is often treated with ADT, mHSPC can be additionally treated with second-generation hormone therapy or in triplet combination with docetaxel. When the cancer progresses despite hormone suppression, patients are castration-resistant (CRPC). However, if the cancer has not spread to other parts of the body, patients are non-metastatic CRPC (nmCRPC). Treatment of nmCRPC focuses on lowering hormone levels, such as drug treatment with apalutamide, darolutamide, or enzalutamide in combination with ongoing ADT. Patients that progress further to metastatic CRPC (mCRPC) receive chemotherapy, second-generation hormone therapy (NHT) or treatment with PARPi in addition to the ongoing ADT (3). We aimed to use real-world data to investigate the treatment patterns and patient characteristics of drug-treated PCa patients in Germany.

METHODS

The Oncology Dynamics database (IQVIA™) was used to identify male adult PCa patients with an ongoing drug treatment outside of clinical trials between July 2022 and June 2023 in Germany provided by hospitals and office-based physicians via a standardized web-based questionnaire (4). PCa patients with a documented ICD-10 code C61 were included and further classified into PCa subtypes according to the patients' documented castration resistance status and metastasis status.

The documented cases were extrapolated to the drug-treated prevalence and incidence of PCa patients in Germany. Patients' demographic and clinical characteristics, such as comorbidities and relevant mutation tests, as well as their treatment landscapes stratified by lines of therapy and Eastern Cooperative Oncology Group (ECOG) status were ascertained for all PCa subtypes. Especially, treatment flows from the most recent prior treatment to the ongoing metastatic castration-resistant PCa (mCRPC) treatment was depicted.

RESULTS

The present study found that in Germany the drug-treated 5-year prevalence and 1-year incidence of PCa are 174,842 and 59,318, respectively (**Figure 1**). Metastatic PCa patients are younger and have a lower number of comorbidities than non-metastatic patients. However, metastatic PCa patients are more severely impaired in terms of selfcare ability reflected by the ECOG status (**Figure 2**). Around 30% of mCRPC patients (total: 36,307) were tested for Breast Cancer gene (BRCA) 1/2 mutation, and 6% were tested for other homologous recombination repair (HRR) mutation genes across all mCRPC treatment lines, with most of the patients tested later after diagnosis. Among the tested PCa patients, 19% are BRCA 1/2 mutant and only around 1% have mutations in other HRR genes (**Figure 3**). Among patients tested at diagnosis for mCRPC, in first line 30% of patients were BRCA 1/2 mutant. Chemotherapy is the predominant treatment option for mCRPC (31%), followed by second-generation hormone therapy (NHT) combined with androgen deprivation therapy (ADT) (**Figure 4**). Most mCRPC patents received Docetaxel-based regimens (40%) as first line treatment, followed by ADT-based regimens (33%) (**Figure 5**).

LIMITATIONS AND CONCLUSIONS

Our study is subject to certain limitations that should be acknowledged at this point. The original questionnaire used was not intended for research purposes, resulting in the absence of variables such as behavioral risk factors and socioeconomic status. It is worth noting that the database only includes patients receiving drug treatment and patients included were predominantly treated by oncologists.

Despite the low testing rates in the overall population of PCa patients included in the study, approximately 20 - 30% of PCa patients carry a BRCA1/2 mutation or a mutation in other HRR genes. HRR genes therefore highlight a potential therapeutic target in PCa treatment and HRR testing at time of diagnosis could be critical for targeted treatment decisions.

Figure 1. Drug treated 5-year prevalence and 1-year incidence of PCa by subtypes

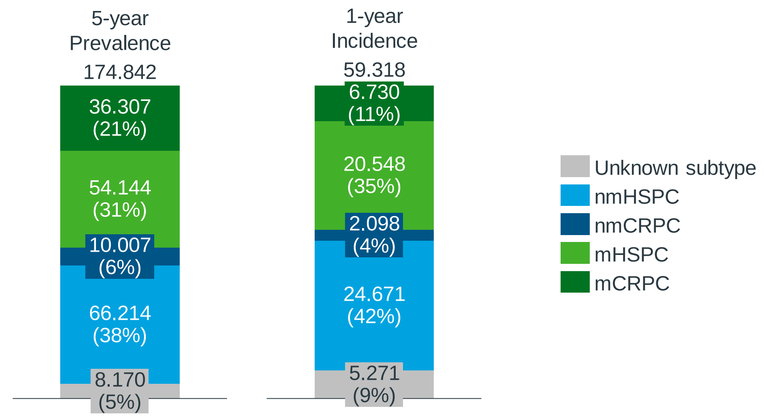


Figure 2. Patient characteristics by PCa subtypes (excerpt)

Patient characteristics	nmHSPC (66,214 pts.)	nmCRPC (10,007 pts.)	mHSPC (54,144 pts.)	mCRPC (36,307 pts.)
Median age group	76-80	76-80	71-75	71-75
Number of comorbidities				
No comorbidity	18% 11,966	22% 2,179	23% 12,602	27% 9,966
1	43% 28,144	48% 4,812	44% 23,731	43% 15,581
2-5	39% 25,816	30% 3,016	31% 16,930	29% 10,652
>5	0% 289		2% 881	<1% 107
ECOG status				
≤ 1	99% 65,629	100% 9,960	87% 46,893	82% 29,615
2	1% 493	<1% 46	12% 6,657	17% 6,263
≥ 3	<1% 92		1% 594	1% 429

Figure 3. BRCA and HRR mutation test rates and number patients with mutant genes for mCRPC patients

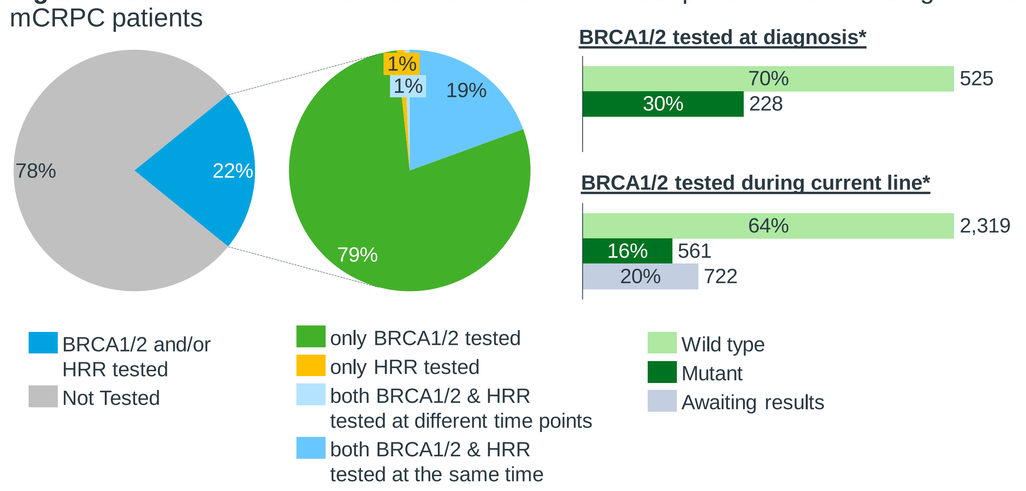


Figure 4. mCRPC patients treatment landscape for prevalent mCRPC patients

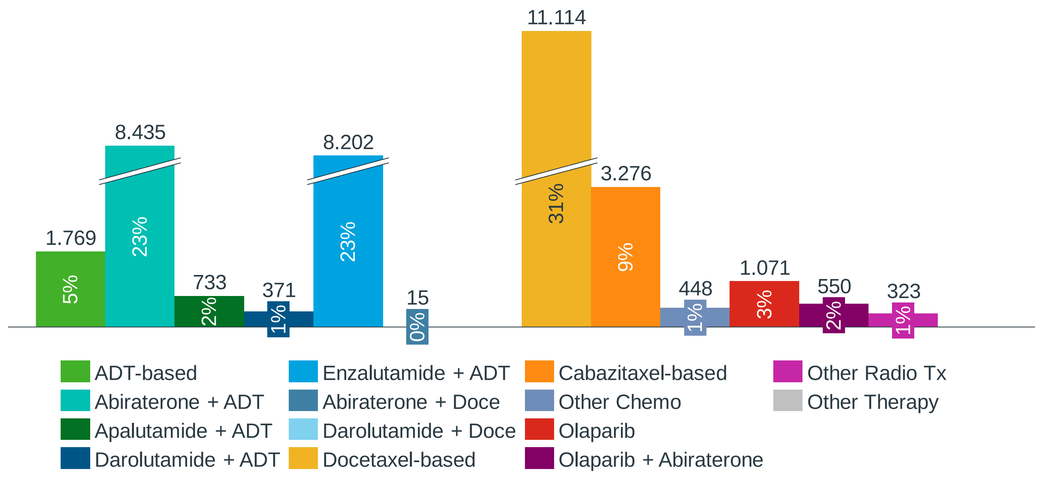
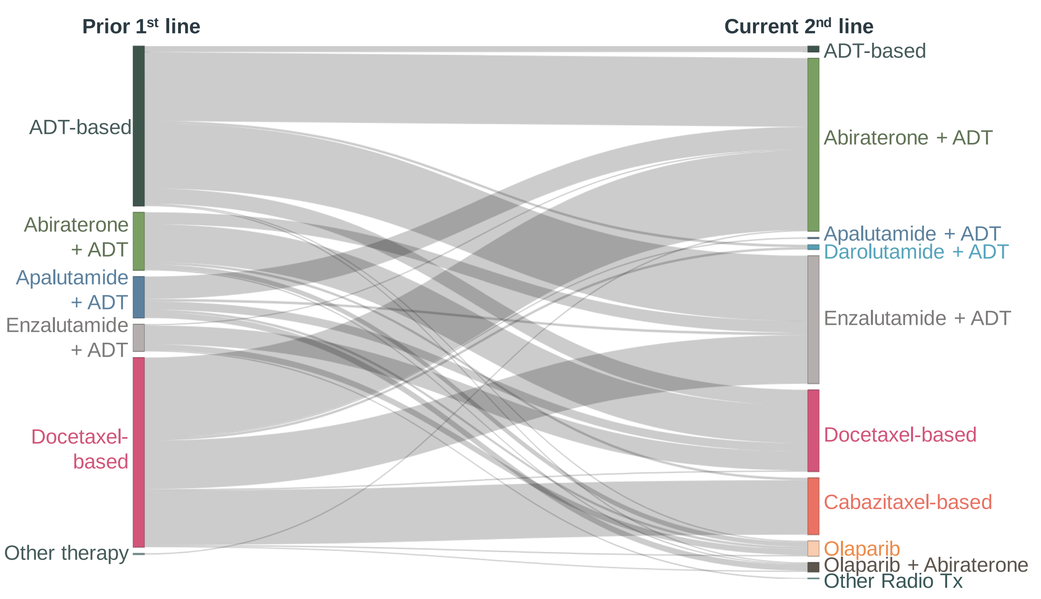


Figure 5. mCRPC patients flow from first line to second line of treatment (N = 403)



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Disclosures
The sponsor of the study is Pfizer Pharma GmbH. Authors 2, 3, 4, 5 and 6 are employed by Pfizer Pharma GmbH. Authors 1 and 7 are employed by IQVIA Germany, which was commissioned and remunerated by Pfizer Pharma GmbH to conduct this study.