Real-World Treatment Patterns and Treatment Sequences in the Metastatic Hormone-Sensitive Prostate Cancer Setting Across Europe: a Real-World Survey

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Background

- Prostate cancer (PC) is the second most common cancer in men worldwide [1].
- The standard treatment for metastatic hormone-sensitive PC (mHSPC) has long been androgen deprivation therapy (ADT) alone. However, since the approval of novel hormonal agents (NHA) for mHSPC treatment, NHA in combination with ADT has been found to improve overall survival and delay time to initiation of chemotherapy.[2-4]
- Triplet therapy; ADT + docetaxel (a chemotherapy agent), + abiraterone (an NHA), has been found to be more effective than the doublet; ADT + docetaxel.
  - Triplet therapy has shown improved overall survival and a prolonged hormone-sensitive period compared to ADT + docetaxel, in the clinical trial setting.[5-6]
- As the treatment landscape in the mHSPC setting continue to evolve, there is a need to understand how patients with mHSPC are being treated in the real-world.

Objective

- To explore real-world mHSPC treatment patterns and the reasons for treatment choice.

Methods

Study design

- Data were drawn from the mHSPC arm of the Adelphi Real World PC Disease Specific Programme™ (DSP™).
- Descriptive statistics were used, and statistical comparisons were not conducted.

Data source

- The Adelphi Real World PC DSP is a cross-sectional survey, with elements of retrospective data collection, of physicians and their adult patients with metastatic PC (mPC) in France, Germany, Italy, Spain, and the United Kingdom (UK), from November 2022 – May 2023.
- Data sources used for analysis included electronic patient record forms (PRFs), and the physician attitudinal survey from the mHSPC arm only. Both captured physician-reported data.
- The methodology has been previously described,[7-8] validated,[9] and demonstrated to be representative and consistent over time.[10]

Eligibility

- The DSP recruited physicians who met the following criteria:
  - Specialty in medical oncology or urology;
  - Saw a minimum of four mPC patients per month;
  - Personal responsibility for prescribing decisions for patients with mPC.
- Regarding the mHSPC arm of the DSP, physicians reported data on the next four consecutively consulting patients meeting the eligibility criteria:
  - Age ≥18 years at diagnosis;
  - Physician-confirmed diagnosis of mHSPC;
  - Receiving active drug treatment for mHSPC;
  - Not participating, or ever participated, in a clinical trial at time of data collection.
- Only patients with PC as their only malignancy were included the analysis.

Study variables

- Study variables included patient demographics/clinical characteristics, treatment patterns and reason(s) for treatment choice. Descriptive statistics were used to describe demographics/clinical characteristics, treatment patterns, and physician-cited reasons for treatment choice.

Results

- Overall, 221 physicians (France n=48; Germany n=50; Italy n=42; Spain n=47; UK n=34) reported data on 875 patients with mHSPC.
- Of the physicians surveyed, 84% were medical oncologists and 16% were urologists; 60% worked in an academic setting and 40% worked in a community setting.

Patient demographics and clinical characteristics

- At data collection, median (interquartile range; IQR) patient age was 71.0 (66.0–77.0) years, 59% of patients were diagnosed metastatic at initial diagnosis, 39% had high-volume disease, and 81% of patients had an Eastern Cooperative Oncology Group (ECOG) score 0–1 (Table 1).

Table 1. Patient demographics and clinical characteristics

	All patients (n=875)	France (n=200)	Germany (n=194)	Italy (n=166)	Spain (n=172)	UK (n=143)
Patient demographics						
Age in years, median (IQR)	71.0 (66.0–77.0)	74.0 (68.0–79.0)	69.5 (66.8–73.0)	72.0 (65.0–79.0)	71.0 (67.0–77.0)	72.0 (66.0–77.0)
Days since mHSPC diagnosis (IQR)	187.0 (93.0–354.2)	247.0 (118.0–426.0)	152.5 (72.2–331.5)	196.0 (84.8–349.8)	199.5 (107.8–341.0)	147.0 (82.0–334.0)
Gleason score at initial diagnosis (IQR)	8.0 (7.0–8.0)	8.0 (7.0–8.0)	7.0 (6.0–8.0)	8.0 (7.0–9.0)	8.0 (7.0–9.0)	8.0 (7.0–9.0)
ECOG score at data collection, n (%)						
0 – 1	710 (81)	158 (79)	133 (69)	138 (83)	154 (90)	127 (89)
2 – 4	165 (19)	42 (21)	61 (31)	28 (17)	18 (10)	16 (11)
Disease stage at initial diagnosis, n (%)						
Localized / Locally advanced disease	352 (40)	61 (30)	130 (67)	73 (44)	40 (23)	48 (34)
Metastatic disease	516 (59)	139 (70)	62 (32)	89 (54)	132 (77)	94 (66)
Unknown / Not assessed	7 (1)	0 (0)	2 (1)	3 (2)	0 (0)	1 (1)
Physician-reported high-volume disease, n (%)						
High-volume disease	344 (39)	91 (46)	40 (21)	63 (38)	87 (51)	63 (44)
Not high-volume disease	517 (59)	105 (52)	146 (75)	102 (61)	85 (49)	79 (55)
Don't know	14 (2)	4 (2)	8 (4)	1 (1)	0 (0)	1 (1)
Metastases, n (%)						
Visceral metastases	179 (20)	43 (22)	40 (21)	29 (17)	42 (24)	25 (17)
Non-visceral metastases	696 (80)	157 (78)	154 (79)	137 (83)	130 (76)	118 (83)

ECOG – Eastern Cooperative Oncology Group; IQR – interquartile range; mHSPC – metastatic hormone-sensitive prostate cancer; UK – United Kingdom

Treatment patterns in the mHSPC setting

- Overall, most patients received an NHA (45%; apalutamide 21%; enzalutamide 13%; abiraterone 11%; Figure 1, Figure 2) ± ADT.
- Treatment regimens received (class level) also included ADT alone (21%), chemotherapy (13%; almost all receiving docetaxel, with n=1 receiving an otherwise unspecified chemotherapy), NHA + chemotherapy + ADT (8%) and others (13%).
  - Usage of NHA + chemotherapy + ADT was the low in Italy (1%; Figure 1).
  - In Spain and Germany, usage of ADT alone was low (8% and 12% respectively; Figure 1).
- Overall, apalutamide was the most common NHA received by patients (21%; Figure 2).
  - In the UK, usage of apalutamide was low (12%; Figure 2).
  - In Italy, usage of abiraterone was low (4%; Figure 2).
- Overall, the most common chemotherapy used was docetaxel (13%, Figure 2).
  - Usage of docetaxel was lowest in France (6%, Figure 2).

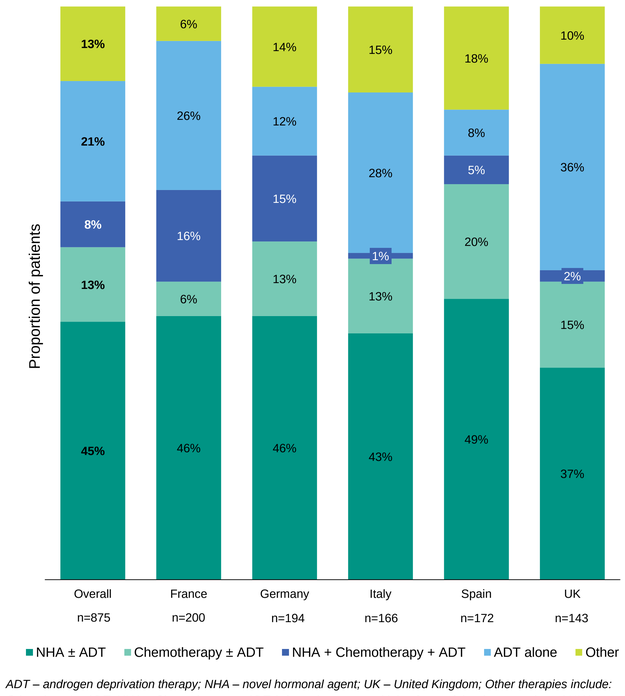
Duration of treatment

- Duration was only available for patients who went on to receive a subsequent mHSPC treatment (i.e., drug switch/drug addition) prior to castration-resistance per the treating physician's opinion. For patients with known start and end dates of mHSPC treatment (n=35), the median (IQR) duration of treatment was 177.0 (90.0−762.0) days.

Reasons for treatment choice (physician stated)

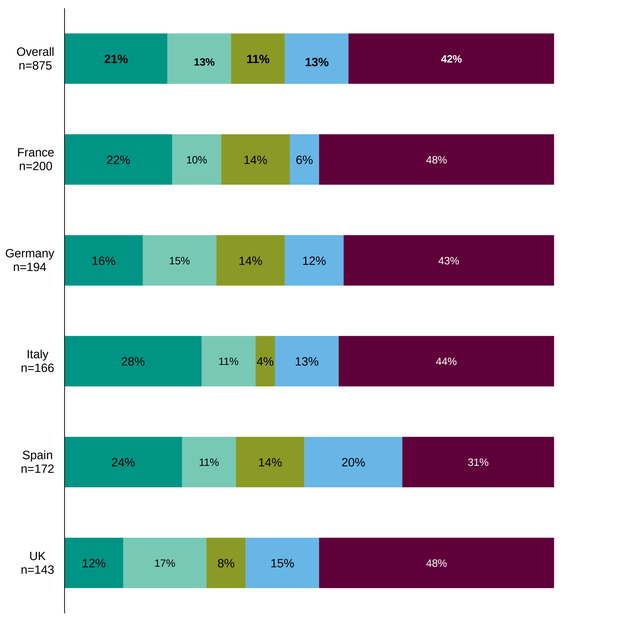
- The most common reasons cited for prescribing an NHA were "overall survival" and "maximal progression free survival" (44% and 39%, respectively; Figure 3).
- For chemotherapy the most common reasons were "high-volume disease" (38%) and "overall survival" (36%; Figure 3).

Figure 1. Treatment regimens (class level) received by patients in the mHSPC setting



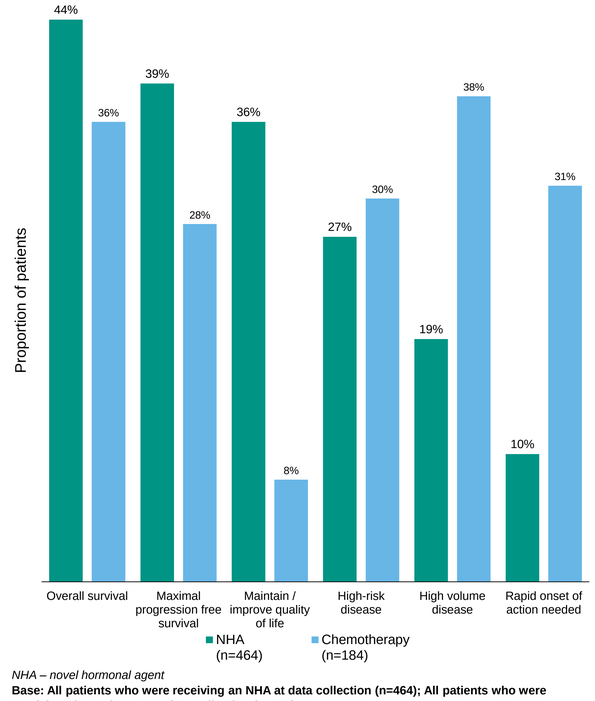
ADT – androgen deprivation therapy; NHA – novel hormonal agent; UK – United Kingdom; Other therapies include: Other drugs ± ADT; NHA + Chemotherapy + ADT (where there are multiple of one of the drug types); and NHA + Chemotherapy + ADT + other drugs*. *Other drug list: bicalutamide, flutamide, nilutamide, ketoconazole, cyproterone, abarelix, buserelin acetate, sipuleucel-T, pembrolizumab, strontium-89.*

Figure 2. Most commonly used NHA and chemotherapy agents in the mHSPC setting



NHA – novel hormonal agent; UK – United Kingdom; Other therapies include: ADT alone; NHA + chemotherapy + ADT; Other NHA ± ADT; Other chemotherapy ± ADT; Other drugs (see list) ± ADT; NHA + Chemotherapy + ADT (where there are multiple of one of the drug types); and NHA + Chemotherapy + ADT + other drugs (see list). Other drug list: bicalutamide, flutamide, nilutamide, ketoconazole, cyproterone, abarelix, buserelin acetate, sipuleucel-T, pembrolizumab, strontium-89.

Figure 3. Physician-stated reasons for NHA and chemotherapy treatment choice



NHA – novel hormonal agent
Base: All patients who were receiving an NHA at data collection (n=464); All patients who were receiving chemotherapy at data collection (n=184).

Conclusions

- In this real-world analysis of mHSPC treatment patterns:
  - NHA was the most common treatment, with reason for usage driven by overall survival and progression-free survival goals.
  - Usage of chemotherapy was driven by reasons such as high-volume disease and overall survival.
- Despite recent approvals in the mHSPC setting, the use of ADT alone was still prevalent.
- Further research needs to be conducted to fully assess the treatment patterns in the mHSPC setting, as the treatment landscape continues to evolve.

Limitations

- Participating patients may not reflect the general mHSPC population since the DSP only includes patients who are consulting with their physician. This means that patients who consult more frequently have a higher likelihood of being included. Recall bias, a common limitation of surveys, might also have affected responses of both physicians and patients. However, physicians did have the ability to refer to the patients' records while completing the PRF, thus minimizing the possibility of recall bias.

Disclosures

- Data collection was undertaken by Adelphi Real World as part of an independent survey, entitled the Adelphi Real World Prostate Cancer V DSP. Merck & Co., Inc., Rahway, NJ, USA. did not influence the original survey through either contribution to the design of questionnaires or data collection. The analysis described here used data from the Adelphi Real World Prostate Cancer V DSP. The DSP is a wholly owned Adelphi Real World product. Merck & Co., Inc., Rahway, NJ, USA. is one of multiple subscribers to the DSP. Publication of survey results was not contingent on the subscriber's approval or censorship of the publication.
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