

Survival outcome in mCRPC patients according to 1st-line treatment

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BACKGROUND

In 2012, Abiraterone acetate in association with prednisone/prednisolone was introduced as 1st-line treatment for metastatic castration-resistant prostate cancer (mCRPC).

OBJECTIVES

What is the effectiveness of abiraterone acetate used as mCRPC 1st line compared to docetaxel in real life settings ?

METHODS

- mCRPC patients were identified in the **French National Healthcare System database (SNDS)** using a validated algorithm
- SNDS covers the French population from birth to death and includes out and inpatients information (e.g. drug dispensings, hospital discharge summaries, date of death, etc.)
- To be included, patients had
 - To be **aged ≥40** and **covered by the Régime Général** health insurance (86% of the French population)
 - To **have initiated docetaxel or abiraterone acetate as mCRPC 1st-line treatment in 2014**, all drugs presumed to be used according to the Summary of Product Characteristics
 - To have a **3-year follow-up** and **5-year history** with no gap > 1 year

- A **high dimensional propensity score** (hdPS), was calculated for each patients of each cohort: estimation of the probability for a patient to be treated by abiraterone acetate vs. Docetaxel based on forced and empirically selected variables from 5 dimensions:

Forced variables	Dimensions for variable empirical selection
<ul style="list-style-type: none"> Age at index date Cancer stage prior to mCRPC status Charlson comorbidity index ≥ 1 dispensing of denosumab ≥ 1 dispensing of antineoplastic agents ≥ 1 urethrovessical fibroscopy 	<ul style="list-style-type: none"> Long term disease registration Hospital discharge diagnoses Dispensed drugs Performed laboratory tests Performed medical procedures

- Patients were 1:1 matched** on hdPS +/- 0.01, cancer stage prior to mCRPC and date of initial diagnosis +/- 1 year.
- After matching 367 variables were analyzed to check for potential residual confusion bias, and those significantly linked to the outcome were use for adjustment in survival analyses
- Cox proportional hazards risk model were used to compare**
 - The **36-month overall survival**
 - The **36-month discontinuation free survival** (*i.e.* survival time until treatment switch or death)

RESULTS

- 12 951 prevalent mCRPC** in 86% of the French population in 2014
- 1 213 docetaxel** 1st line initiators
- 2 442 abiraterone acetate** 1st line initiators
- After trimming and matching: **716 patients per group** (C-statistic= 0.603)

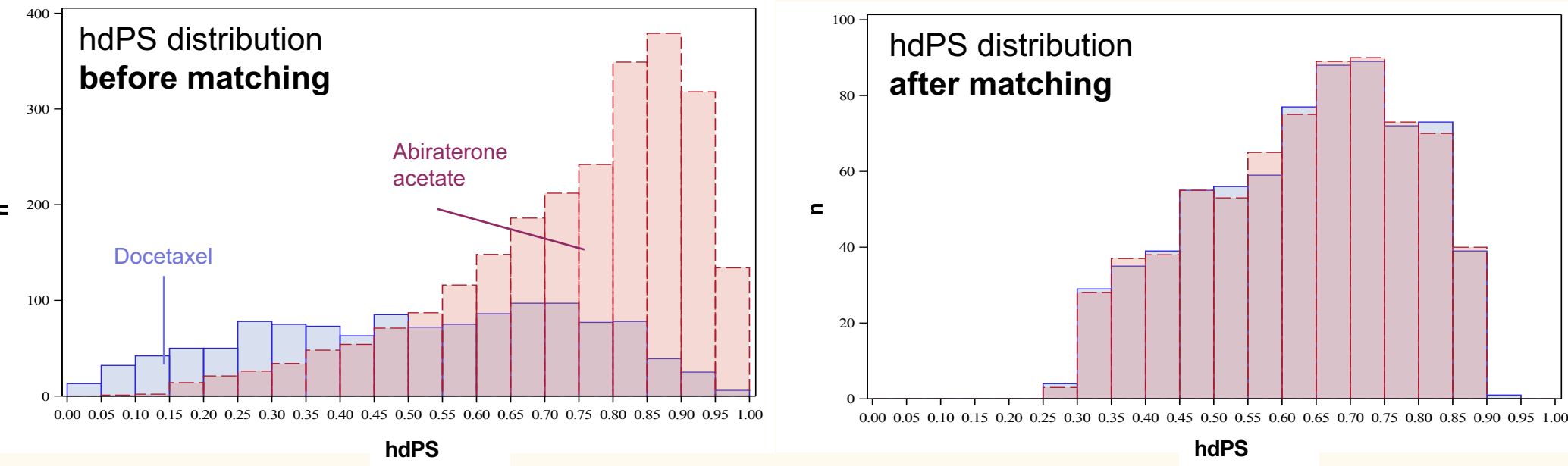


Figure 1. hdPS distribution before and after matching

Table 1. Baseline characteristics at index date before and after matching

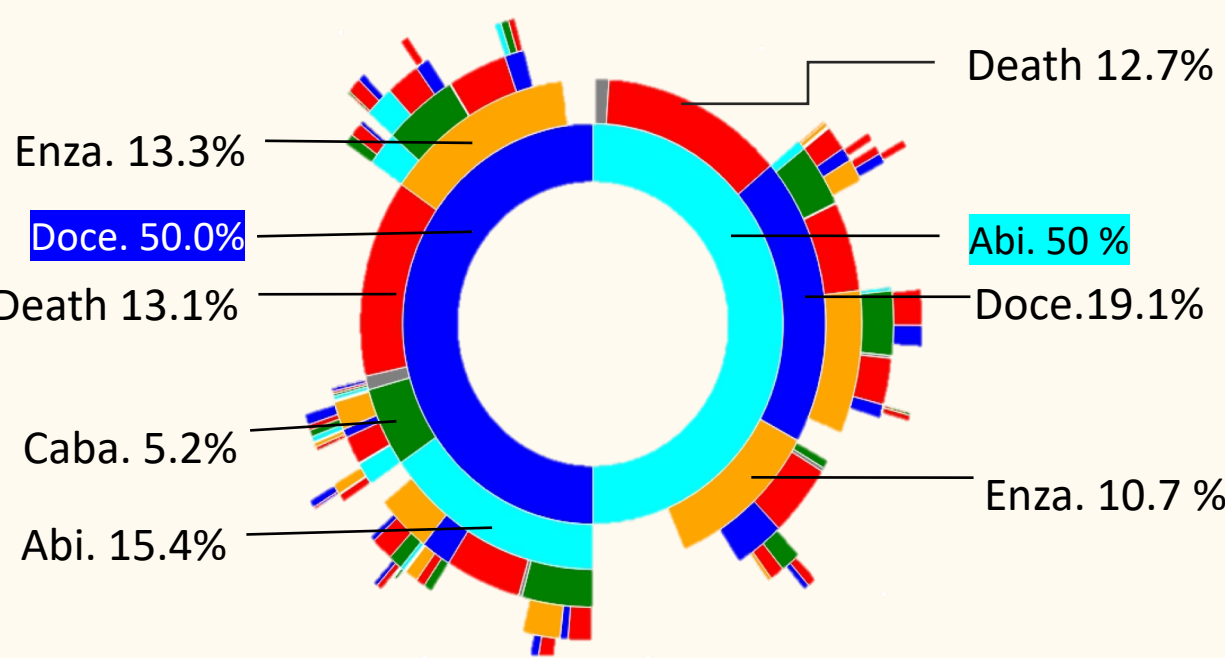
	All patients after trimming		Matched patients after trimming		Standardized difference %		
	Abiraterone acetate n = 1936	Docetaxel n = 939	Abiraterone acetate n = 716	Docetaxel n = 716	Crude	Adjusted	Matched
Median age at index date in years *	77.0	73.0	75.0	74.0	42.8	3.0	5.7
Previous stage of prostate cancer *, %							
mHSPC Ndx	12.2	18.8	18.3	18.3	-18.5	-0.8	0.0
Progressive mHSPC	15.7	15.8	12.3	12.3	-0.3	-0.3	0.0
nmCRPC	18.4	12.6	12.3	12.3	16.1	4.9	0.0
nmHSPC	53.8	52.8	57.1	57.1	1.9	-2.7	0.0
Score de Charlson *							
Median [p25% - p75%]	14.0 [14.0;15.0]	14.0 [13.0;15.0]	14.0 [14.0;15.0]	14.0 [14.0;15.0]	27.8	-0.2	5.0
Time since PC diagnosis > 4 years, %	58.2	47.5	48.0	48.7	21.6	-2.3	-1.4
Region of residence of patient, %							
Paris region	17.1	15.4	18.3	14.9	4.5	3.5	9.0
North-west	21.6	21.7	22.3	22.2	-0.2	-0.7	0.3
North-east	19.3	25.5	17.7	26.0	-14.9	-13.1	-20.0
South-east	25.7	23.7	24.3	23.0	4.5	5.1	3.0
South-west	13.8	11.1	14.4	11.2	8.4	6.8	9.6
Overseas territories	2.1	2.4	2.4	2.5	-	-	-

* included in hdPS ; PC = Prostate cancer

Table 2. Description of the 1st and 2nd mCRPC treatment lines

	Abiraterone acetate n = 716	Docetaxel n = 716
1st mCRPC treatment line, %	100.0	100.0
Median duration of 1 st treatment line in months, [p25% - p75%] *	9.1 [4.7;17.6]	7.3 [4.5;10.7]
2nd mCRPC treatment line, %	61.7	69.7
Docetaxel**	61.8	0.0
Enzalutamide**	34.6	38.1
Cabazitaxel**	0.5	15.0
Abiraterone acetate**	0.0	44.3
Combination**	3.1	2.6

*time between first and last infusion for docetaxel and period covered by the dispensed drug for abiraterone **among patients concerned



Sequences concerned by less than 0.1% of the total population are not represented

Figure 2. Sequence of mCRPC treatment lines in matched population in 2014

Survival probabilities

Table 3. Adjusted discontinuation-free survival and overall free survival probability according to 1st mCRPC treatment line after trimming matching (Cox model)

	Docetaxel n=716	Abiraterone acetate n=716	p-value
Overall Survival			
36-month survival probability, % [95%CI]	27.9 [25.0 – 31.2]	34.6 [31.5 – 38.1]	<0.003
Median survival, months [95%CI]	18.5 [17.1 – 20.7]	25.5 [23.0 – 27.3]	
Discontinuation-Free Survival			
36-month survival probability, % [95%CI]	2.9 [2.1 – 4.1]	13.8 [11.7 – 16.4]	<0.001
Median survival, months [95%CI]	7.4 [7.0 – 8.0]	10.8 [10.1 – 11.7]	

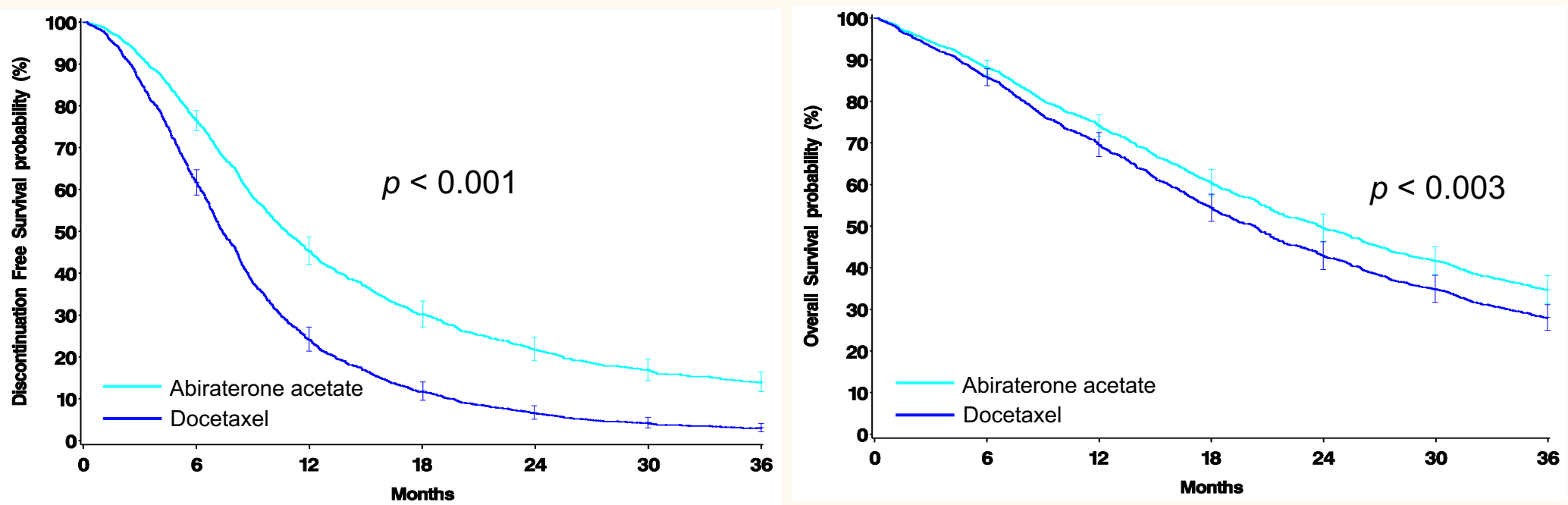


Figure 2. Adjusted discontinuation-survivalfree (left) and overall free survival (right) probability according to 1st mCRPC treatment line after trimming matching (Cox model)

Conclusion

This study based on medico-administrative data showed that in real-life setting, first-line treatment with abiraterone acetate in mCRPC patients results in a better 36-month overall survival and discontinuation-free survival compared to docetaxel.

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The CAMERRA study is carried out by the Bordeaux PharmacoeEpi platform in collaboration with Janssen® company and supervised by a Scientific Committee