

Abstract 5570: 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).

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

METHODS

Patient selection

- 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
• Age at index date	• Long term disease registration
• Cancer stage prior to mCRPC status	• Hospital discharge diagnoses
• Charlson comorbidity index	• Dispensed drugs
• ≥ 1 dispensing of denosumab	• Performed laboratory tests
• ≥ 1 dispensing of antineoplastic agents	• Performed medical procedures
• ≥ 1 urethrosesal fibroscopy	

- 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

Patients

- 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)

hdPS matching

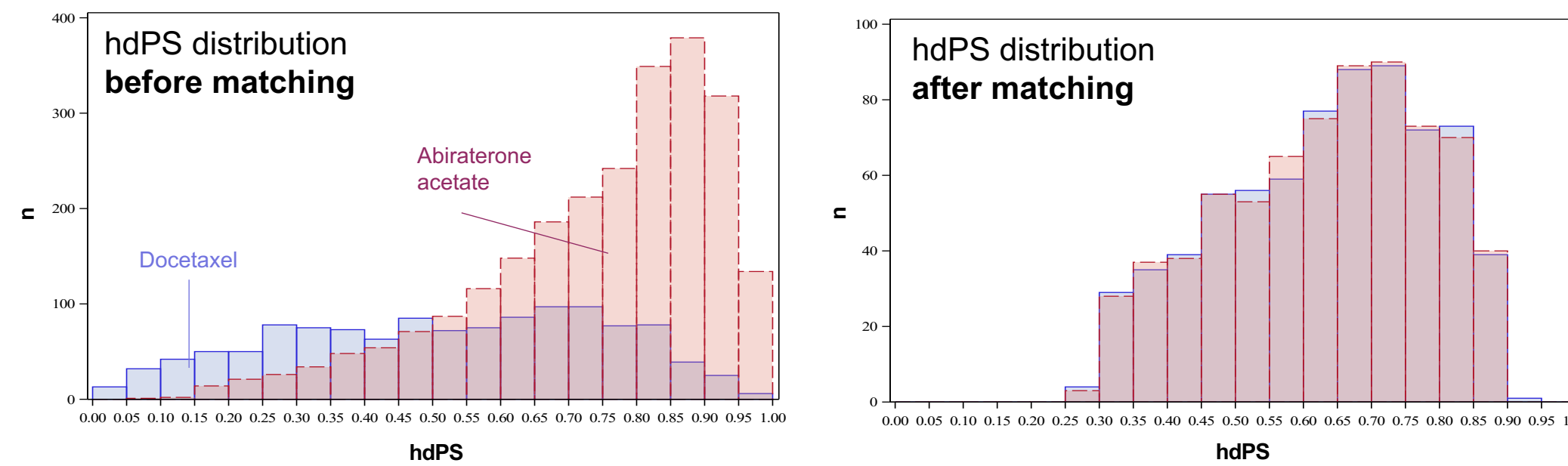


Figure 1. hdPS distribution before and after matching

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	48.0	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

Demographics and treatment lines

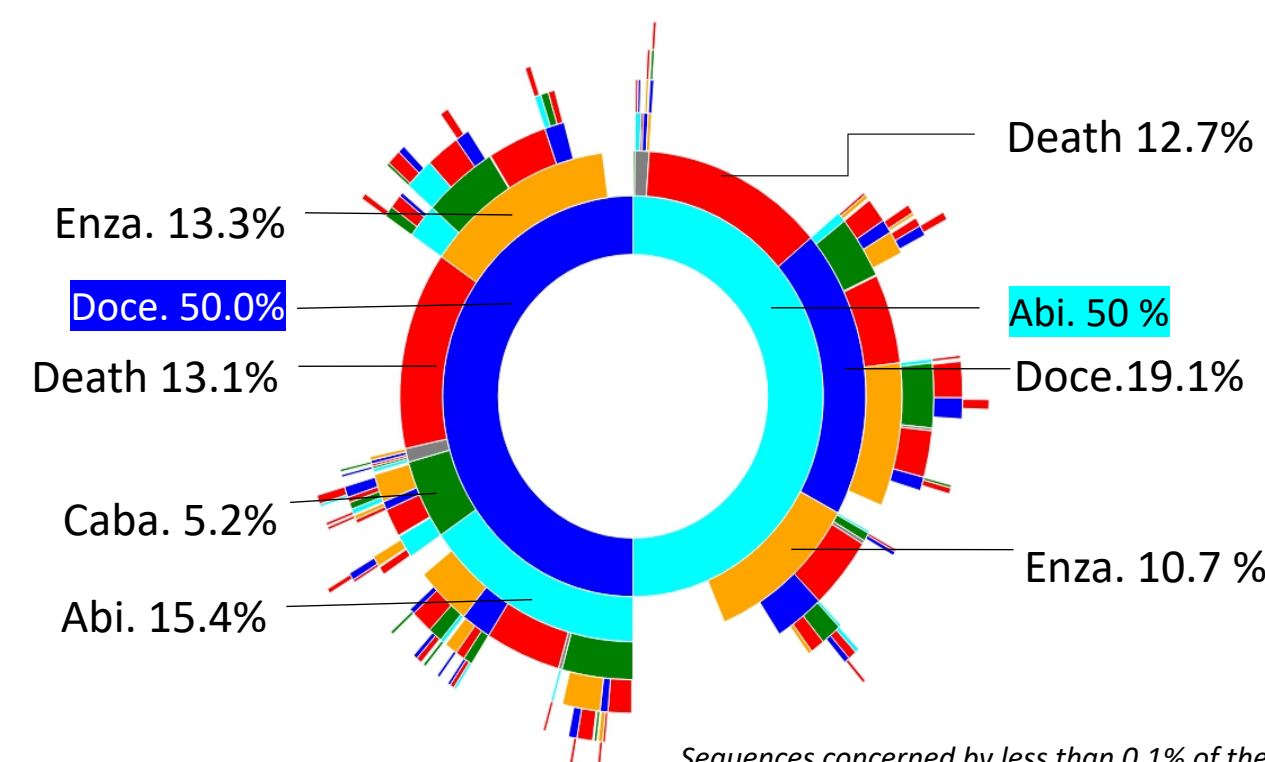


Figure 2. Sequence of mCRPC treatment lines in matched population in 2014

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]	20.3 [18.4 – 21.6]	23.8 [21.5 – 26.0]	
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]	

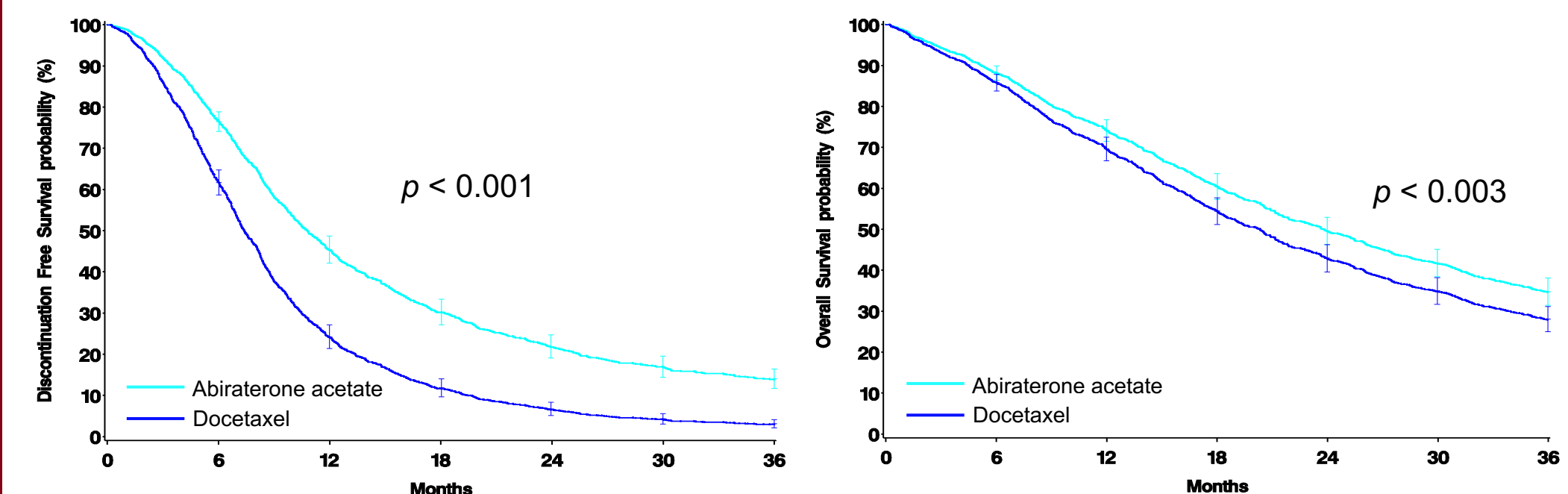


Figure 2. Adjusted discontinuation-free survival (left) and overall free survival (right) probability according to 1st mCRPC treatment line after trimming matching (Cox model)

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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