

Supplemental Tables for:
Clinical Outcomes and Racial Disparities in Metastatic Hormone Sensitive Prostate Cancer in the Era of Novel Treatment Options

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Supplement Table 1. Complete UVA for OS.

Covariate	Level	N	OS - Months from Drug Initiation		
			Hazard Ratio (95% CI)	HR P-value	Type3 P-value
Drug under investigation	Docetaxel	94	0.80 (0.40-1.59)	0.522	0.522
	Abiraterone	74	-	-	
Race	Black	92	1.37 (0.73-2.58)	0.324	0.324
	Non-Black	76	-	-	
Age at diagnosis	>=65	78	0.95 (0.51-1.76)	0.865	0.865
	<65	90	-	-	
Total Gleason score	Unknown	39	3.22 (0.72-14.45)	0.127	0.309
	8-10	106	2.83 (0.67-11.93)	0.156	
	7	23	-	-	
Grade group	Unknown	39	3.22 (0.72-14.45)	0.127	0.502
	5	75	2.86 (0.67-12.31)	0.157	
	4	31	2.76 (0.59-13.02)	0.199	
	2-3	23	-	-	
Baseline diagnosis or recurrence after local disease	Recurrence after local disease	37	1.01 (0.49-2.06)	0.981	0.981
	Baseline Diagnosis	131	-	-	
ECOG at time of starting treatment	2	25	2.21 (1.01-4.84)	0.048	0.039
	1	67	0.79 (0.39-1.60)	0.507	
	0	76	-	-	

Covariate	Level	N	OS - Months from Drug Initiation		
			Hazard Ratio (95% CI)	HR P- value	Type3 P- value
Number of distant metastases	2-4	124	1.46 (0.65-3.30)	0.362	0.362
	0-1	44	-	-	
Bone metastases	Yes	136	1.89 (0.67-5.33)	0.227	0.227
	No	32	-	-	
Liver metastases	Yes	12	3.30 (1.46-7.47)	0.004	0.004
	No	156	-	-	
Brain metastases	Yes	3	1.65 (0.23-12.09)	0.621	0.621
	No	165	-	-	
Lung metastases	Yes	29	1.00 (0.47-2.11)	0.992	0.992
	No	139	-	-	
Disease volume	High	111	2.12 (0.88-5.06)	0.092	0.092
	Low	56	-	-	
Prior treatment for localized disease	Yes	61	0.83 (0.43-1.61)	0.589	0.589
	No	107	-	-	
Prior treatment: Prostatectomy	Yes	25	0.96 (0.43-2.17)	0.925	0.925
	No	143	-	-	
Prior treatment: Radiation	Yes	55	1.06 (0.55-2.06)	0.854	0.854
	No	112	-	-	
Aspirin	Yes	52	0.93 (0.46-1.85)	0.832	0.832
	No	116	-	-	

Covariate	Level	N	OS - Months from Drug Initiation		
			Hazard Ratio (95% CI)	HR P- value	Type3 P- value
Metformin	Yes	18	0.85 (0.26-2.74)	0.779	0.779
	No	150	-	-	
Anti HTN	Yes	101	0.84 (0.46-1.56)	0.584	0.584
	No	67	-	-	
Beta blocker	Yes	34	0.99 (0.46-2.15)	0.982	0.982
	No	134	-	-	
CCB	Yes	64	0.93 (0.49-1.79)	0.839	0.839
	No	104	-	-	
ACEi/ARB	Yes	53	0.82 (0.40-1.67)	0.583	0.583
	No	115	-	-	

Supplement Table 2. Complete UVA for PFS.

Covariate	Level	N	PFS - Months from Drug Initiation		
			Hazard Ratio (95% CI)	HR P- value	Type3 P- value
Drug under investigation	Docetaxel	94	1.70 (1.06-2.75)	0.029	0.029
	Abiraterone	74	-	-	
Race	Black	92	1.33 (0.87-2.05)	0.190	0.190
	Non-Black	76	-	-	
Age at diagnosis	>=65	78	0.77 (0.50-1.19)	0.238	0.238
	<65	90	-	-	
Total Gleason score	Unknown	39	1.97 (0.84-4.64)	0.119	0.285
	8-10	106	1.78 (0.81-3.92)	0.149	
	7	23	-	-	
Grade group	Unknown	39	1.97 (0.84-4.63)	0.121	0.244
	5	75	2.00 (0.90-4.46)	0.090	
	4	31	1.35 (0.54-3.35)	0.517	
	2-3	23	-	-	
Baseline diagnosis or recurrence after local disease	Recurrence after local disease	37	0.95 (0.57-1.58)	0.844	0.844
	Baseline Diagnosis	131	-	-	
ECOG at time of starting treatment	2	25	1.78 (0.96-3.28)	0.067	0.170
	1	67	1.31 (0.82-2.10)	0.257	
	0	76	-	-	
Number of distant metastases	2-4	124	2.07 (1.15-3.75)	0.016	0.016
	0-1	44	-	-	

Covariate	Level	N	PFS - Months from Drug Initiation		
			Hazard Ratio (95% CI)	HR P- value	Type3 P- value
Bone metastases	Yes	136	1.81 (0.93-3.51)	0.079	0.079
	No	32	-	-	
Liver metastases	Yes	12	2.47 (1.25-4.85)	0.009	0.009
	No	156	-	-	
Brain metastases	Yes	3	2.06 (0.50-8.46)	0.314	0.314
	No	165	-	-	
Lung metastases	Yes	29	0.81 (0.46-1.43)	0.463	0.463
	No	139	-	-	
Disease volume	High	111	2.75 (1.55-4.89)	<.001	<.001
	Low	56	-	-	
Prior treatment for localized disease	Yes	61	0.74 (0.47-1.17)	0.197	0.197
	No	107	-	-	
Prior treatment: Prostatectomy	Yes	25	0.60 (0.32-1.13)	0.114	0.114
	No	143	-	-	
Prior treatment: Radiation	Yes	55	0.90 (0.56-1.44)	0.649	0.649
	No	112	-	-	
Aspirin	Yes	52	0.74 (0.45-1.19)	0.214	0.214
	No	116	-	-	
Metformin	Yes	18	1.16 (0.56-2.40)	0.695	0.695
	No	150	-	-	

Covariate	Level	N	PFS - Months from Drug Initiation		
			Hazard Ratio (95% CI)	HR P- value	Type3 P- value
Anti HTN	Yes	101	0.76 (0.50-1.17)	0.219	0.219
	No	67	-	-	
Beta blocker	Yes	34	0.89 (0.52-1.52)	0.675	0.675
	No	134	-	-	
CCB	Yes	64	0.89 (0.57-1.39)	0.604	0.604
	No	104	-	-	
ACEi/ARB	Yes	53	0.61 (0.37-1.00)	0.051	0.051
	No	115	-	-	

Supplement Table 3. Complete UVA for PSA CR.

Covariate	Level	N	Complete Response from Drug Initiation=Yes		
			Odds Ratio (95% CI)	OR P-value	Type3 P-value
Drug under investigation	Docetaxel	94	0.47 (0.25-0.89)	0.020	0.020
	Abiraterone	74	-	-	
Race	Black	92	0.22 (0.11-0.42)	<.001	<.001
	Non-Black	76	-	-	
Age at diagnosis	>=65	78	1.80 (0.96-3.38)	0.066	0.066
	<65	90	-	-	
Total Gleason score	Unknown	39	0.17 (0.05-0.52)	0.002	0.008
	8-10	106	0.44 (0.17-1.10)	0.080	
	7	23	-	-	
Grade group	Unknown	39	0.17 (0.05-0.52)	0.002	0.018
	5	75	0.41 (0.16-1.06)	0.065	
	4	31	0.53 (0.18-1.58)	0.255	
	2-3	23	-	-	
Baseline diagnosis or recurrence after local disease	Recurrence after local disease	37	1.69 (0.81-3.54)	0.161	0.161
	Baseline Diagnosis	131	-	-	
ECOG at time of starting treatment	2	25	0.27 (0.10-0.75)	0.012	0.001
	1	67	0.31 (0.16-0.63)	0.001	
	0	76	-	-	
Number of distant metastases	2-4	124	0.32 (0.16-0.65)	0.002	0.002
	0-1	44	-	-	

Covariate	Level	N	Complete Response from Drug Initiation=Yes		
			Odds Ratio (95% CI)	OR P-value	Type3 P-value
Bone metastases	Yes	136	0.17 (0.07-0.41)	<.001	<.001
	No	32	-	-	
Liver metastases	Yes	12	0.00 (0.00-1)	0.969	0.969
	No	156	-	-	
Brain metastases	Yes	3	0.00 (0.00-1)	0.985	0.985
	No	165	-	-	
Lung metastases	Yes	29	0.14 (0.04-0.50)	0.002	0.002
	No	139	-	-	
Disease volume	High	111	0.10 (0.05-0.20)	<.001	<.001
	Low	56	-	-	
Prior treatment for prostate cancer other than ADT	Yes	61	3.09 (1.60-5.95)	<.001	<.001
	No	107	-	-	
Prior treatment: Prostatectomy	Yes	25	2.79 (1.17-6.66)	0.021	0.021
	No	143	-	-	
Prior treatment: Radiation	Yes	55	1.24 (0.64-2.41)	0.515	0.515
	No	112	-	-	
Aspirin	Yes	52	1.11 (0.57-2.16)	0.763	0.763
	No	116	-	-	
Metformin	Yes	18	1.01 (0.37-2.75)	0.985	0.985
	No	150	-	-	

Covariate	Level	N	Complete Response from Drug Initiation=Yes		
			Odds Ratio (95% CI)	OR P-value	Type3 P-value
Anti HTN	Yes	101	1.52 (0.80-2.89)	0.206	0.206
	No	67	-	-	
Beta blocker	Yes	34	1.54 (0.72-3.30)	0.264	0.264
	No	134	-	-	
CCB	Yes	64	0.74 (0.39-1.42)	0.368	0.368
	No	104	-	-	
ACEi/ARB	Yes	53	1.67 (0.86-3.25)	0.127	0.127
	No	115	-	-	
Age at diagnosis		168	1.04 (1.00-1.08)	0.049	0.049

Supplement Table 4. Cox Proportional Hazard Models Comparing Clinical Outcomes Based on Race and Upfront Therapy. A) OS, B) PFS, D) PSA CR.

Supplement Table 4a. MVA Cox proportional hazard model for OS - interaction with race

Race	Drug	N	OS - Months from Drug Initiation		
			Hazard Ratio (95% CI)	HR P- value	Type3 P- value
			-	-	0.605
Black	Docetaxel vs. Abiraterone	47 vs. 44	0.86 (0.34-2.15)	0.740	-
Non-Black	Docetaxel vs. Abiraterone	46 vs. 30	0.58 (0.17-1.96)	0.380	-

* Number of observations in the original data set = 168. Number of observations used = 167.

** The estimated stratified treatment effect was controlled by: Age at diagnosis, Disease volume, ECOG at time of starting treatment, Total Gleason score.

*** The effect of upfront treatment in the subgroups was estimated by MVA model with interaction term between the treatment group and stratified variables.

Supplement Table 4b. MVA Cox proportional hazard model for PFS - interaction with race

Race	Drug	N	PFS - Months from Drug Initiation		
			Hazard Ratio (95% CI)	HR P- value	Type3 P- value
			-	-	0.130
Black	Docetaxel vs. Abiraterone	47 vs. 44	2.27 (1.16-4.42)	0.016	-
Non-Black	Docetaxel vs. Abiraterone	46 vs. 30	1.02 (0.46-2.26)	0.962	-

* Number of observations in the original data set = 168. Number of observations used = 167.

** The estimated stratified treatment effect was controlled by: Age at diagnosis, Disease volume, ECOG at time of starting treatment, Total Gleason score

*** The effect of upfront treatment in the subgroups was estimated by MVA model with interaction term between the treatment group and stratified variables.

Supplement Table 4c. MVA Logistic Regression for PSA Complete Response - interaction with race

Race	Drug	N	Complete Response from Drug Initiation=Yes		
			Odds Ratio (95% CI)	OR P- value	Type3 P- value
Black	Docetaxel vs. Abiraterone	47 vs. 44	0.20 (0.05-0.79)	0.021	-
Non-Black	Docetaxel vs. Abiraterone	46 vs. 30	0.75 (0.24-2.37)	0.622	-

* Number of observations in the original data set = 168. Number of observations used = 167.

** The estimated stratified treatment effect was controlled by: Age at diagnosis, Disease volume, ECOG at time of starting treatment, Total Gleason score.

*** The effect of upfront treatment in the subgroups was estimated by MVA model with interaction term between the treatment group and stratified variables.