

Supplementary data

Pattern of clinical progression until metastatic castration resistant prostate cancer: an epidemiological study from the European Prostate Cancer Registry

Running title: Pattern of clinical progression until metastatic castration resistant prostate cancer

Authors

Camille Verry^{1*}, Sébastien Vincendeau², Marc Massetti³, Martin Blachier³, Alexandre Vimont³, Marie-Laure Bazil⁴, Pauline Bernardini⁴, Ségolène Pettré⁴, Marc-Olivier Timsit⁵

Affiliations

¹ Department of Radiotherapy, Grenoble Alpes University Hospital, Grenoble, France

² Department of Urology, Saint-Grégoire Private Hospital, Saint-Grégoire, France

³ Public Health Expertise, Paris, France

⁴ Janssen-Cilag, Issy les Moulineaux, France

⁵ Department of Urology, Hôpital Européen Georges Pompidou, Université de Paris, Paris, France

*Corresponding author contact information

Dr Camille Verry MD, PhD

+ 336 84 73 50 42

+ 334 76 76 54 35

cverry@chu-grenoble.fr

ORCID 0000-0002-9362-7624

Additional authors information

- Camille VERRY, M.D., Ph.D., CVerry@chu-grenoble.fr
- Sébastien VINCENDEAU M.D., svincendeau@vivalto-sante.com
- Marc MASSETTI, PharmD, MSc, marc.massetti@ph-expertise.com
- Martin BLACHIER, M.D., martin.blachier@ph-expertise.com
- Alexandre VIMONT, MSc, alexandre.vimont@ph-expertise.com
- Marie-Laure BAZIL, PharmD., Ph.D., mbazil@its.jnj.com
- Pauline BERNARDINI, PharmD., pbernar2@its.jnj.com
- Ségolène PETTRÉ, Ph.D, spettre@its.jnj.com
- Marc-Olivier Timsit, M.D., Ph.D., marc-olivier.timsit@aphp.fr

Table S1 Year of mCRPC diagnosis and country of origin

	K-nmCRPC-mCRPC	K-mHSPC-mCRPC	K-mCRPC	mHSPC-mCRPC	Total
Year of mCRPC diagnosis					
< 2010	6 (2.0%)	22 (2.2%)	22 (2.9%)	23 (2.9%)	73 (2.6%)
2010	15 (5.1%)	21 (2.1%)	15 (2.0%)	18 (2.3%)	69 (2.4%)
2011	16 (5.4%)	49 (4.9%)	32 (4.2%)	23 (2.9%)	120 (4.2%)
2012	30 (10.1%)	89 (8.9%)	70 (9.1%)	80 (10.0%)	269 (9.4%)
2013	71 (24.0%)	234 (23.5%)	150 (19.6%)	172 (21.5%)	627 (21.9%)
2014	100 (33.8%)	316 (31.7%)	261 (34.1%)	259 (32.4%)	936 (32.7%)
2015	57 (19.3%)	264 (26.5%)	216 (28.2%)	220 (27.5%)	757 (26.5%)
2016	1 (0.3%)	2 (0.2%)	0	5 (0.6%)	8 (0.3%)
Country of Origin					
AUT	4 (1%)	16 (2%)	21 (3%)	9 (1%)	50 (2%)
BEL	25 (8%)	85 (9%)	52 (7%)	56 (7%)	218 (8%)
CHE	1 (0%)	12 (1%)	7 (1%)	6 (1%)	26 (1%)
DEU	86 (29%)	68 (7%)	87 (11%)	131 (16%)	372 (13%)
ESP	34 (11%)	70 (7%)	47 (6%)	33 (4%)	184 (6%)
FRA	37 (13%)	109 (11%)	127 (17%)	80 (10%)	353 (12%)
GBR	43 (15%)	118 (12%)	98 (13%)	151 (19%)	410 (14%)
ISR	7 (2%)	12 (1%)	13 (2%)	17 (2%)	49 (2%)
ITA	20 (7%)	210 (21%)	121 (16%)	99 (12%)	450 (16%)
LUX	0	6 (1%)	7 (1%)	1 (0%)	14 (0%)
POL	5 (2%)	89 (9%)	46 (6%)	54 (7%)	194 (7%)
PRT	11 (4%)	34 (3%)	36 (5%)	28 (4%)	109 (4%)
RUS	4 (1%)	50 (5%)	27 (4%)	37 (5%)	118 (4%)
SVN	0	16 (2%)	10 (1%)	5 (1%)	31 (1%)
SWE	16 (5%)	73 (7%)	46 (6%)	48 (6%)	183 (6%)
TUR	3 (1%)	29 (3%)	21 (3%)	45 (6%)	98 (3%)

Table S2 Overall Survival: Multivariate analysis adjusted on diagnosis sequence, period and clinical meaningful variables at diagnosis

Parameter	DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio	95% Likelihood	HR CL
Sequence	K-nmCRPC-mCRPC	Ref.	0.10080	0.5254	0.4685	0.930	0.765	1.136
	K-mCRPC	-0.07307	0.09894	5.6587	0.0174	0.790	0.653	0.962
	K-mHSPC-mCRPC	-0.23536	0.10660	5.2372	0.0221	0.784	0.637	0.968
	mHSPC-mCRPC	-0.24396	0.10660	5.2372	0.0221	0.784	0.637	0.968
year_2014	>2014	0.15384	0.06945	4.9066	0.0268	1.166	1.017	1.335
ECOG	0	Ref.	0.06182	7.5349	0.0061	1.185	1.050	1.338
	1	0.16969	0.10407	15.2861	<.0001	1.502	1.221	1.836
	2	0.40687	0.22012	29.6234	<.0001	3.314	2.095	4.985
	3	1.19805	0.22012	29.6234	<.0001	3.314	2.095	4.985
AGE	65-69	Ref.	0.09659	0.2936	0.5879	0.949	0.785	1.147
	< 65	-0.05234	0.09664	5.2668	0.0217	0.801	0.663	0.969
	70-74	-0.22179	0.09664	5.2668	0.0217	0.801	0.663	0.969
	>=75	0.09397	0.08429	1.2427	0.2649	1.099	0.933	1.298
Gleason	9+	Ref.	1.00718	0.0601	0.8063	0.781	0.044	3.524
	2	-0.24701	0.31599	1.7305	0.1884	0.660	0.335	1.169
	3	-0.41567	0.33630	0.0353	0.8509	1.065	0.520	1.962
	4	0.06321	0.26784	0.0002	0.9891	1.004	0.568	1.636
	5	0.00367	0.10784	0.5030	0.4782	0.926	0.748	1.141
	6	-0.07648	0.07406	18.2382	<.0001	0.729	0.631	0.843
	7	-0.31630	0.08385	10.6361	0.0011	0.761	0.645	0.896
	8	-0.27347	0.08385	10.6361	0.0011	0.761	0.645	0.896
Bone lesions	0 lesion	Ref.	0.13708	0.1560	0.6929	1.056	0.807	1.381
	1 lesion	0.05414	0.14888	7.2784	0.0070	1.494	1.114	1.999
	2 lesions	0.40167	0.13151	1.4565	0.2275	1.172	0.906	1.519
	3-4 lesions	0.15872	0.12315	11.2145	0.0008	1.510	1.189	1.928
	5-9 lesions	0.41240	0.12714	15.6708	<.0001	1.654	1.291	2.127
	10-20 lesions	0.50331	0.12834	21.7129	<.0001	1.819	1.416	2.344
	>20 lesions	0.59801	0.42780	8.6797	0.0032	3.527	1.398	7.633
	Not Evaluable	1.26037	0.11545	16.8716	<.0001	1.607	1.285	2.022
	Present, nb unknown	0.47419	0.11545	16.8716	<.0001	1.607	1.285	2.022
	Number of Previous mCRPC trt	0	Ref.	0.07422	21.6519	<.0001	1.413	1.220
1		0.34538	0.10603	33.7685	<.0001	1.852	1.498	2.271
2		0.61614	0.15557	32.3997	<.0001	2.424	1.765	3.252
3		0.88554	0.31624	19.1699	<.0001	3.993	2.024	7.077
4		1.38460	1.01059	0.1185	0.7307	1.416	0.080	6.461
5		0.34789	1.01059	0.1185	0.7307	1.416	0.080	6.461

Table S3 Progression-Free Survival: Multivariate analysis adjusted on diagnosis sequence, period and clinical meaningful variables at diagnosis

Parameter		DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio	95% Likelihood CL	HR
Sequence	K-nmCRPC-mCRPC		Ref.						
	K-mCRPC	1	-0.11318	0.10087	1.2588	0.2619	0.893	0.735	1.091
	K-mHSPC-mCRPC	1	-0.17280	0.09860	3.0712	0.0797	0.841	0.695	1.024
	mHSPC-mCRPC	1	-0.23189	0.10640	4.7501	0.0293	0.793	0.645	0.979
AGE	65-69		Ref.						
	< 65	1	-0.11941	0.09582	1.5529	0.2127	0.887	0.736	1.071
	70-74	1	-0.36531	0.09526	14.7055	0.0001	0.694	0.576	0.837
	>=75	1	-0.12606	0.08427	2.2377	0.1347	0.882	0.749	1.042
Bone lesions	0 lesion		Ref.						
	1 lesion	1	0.05108	0.14120	0.1309	0.7175	1.052	0.798	1.388
	2 lesions	1	0.27150	0.15086	3.2388	0.0719	1.312	0.974	1.761
	3-4 lesions	1	0.22550	0.13434	2.8177	0.0932	1.253	0.963	1.632
	5-9 lesions	1	0.31656	0.12440	6.4757	0.0109	1.372	1.078	1.756
	10-20 lesions	1	0.53123	0.12862	17.0588	<.0001	1.701	1.324	2.193
	>20 lesions	1	0.46560	0.13121	12.5912	0.0004	1.593	1.234	2.064
	Not Evaluable	1	1.17657	0.39620	8.8190	0.0030	3.243	1.355	6.558
	Present, nb unknown	1	0.48660	0.11822	16.9423	<.0001	1.627	1.294	2.058
Number of Previous mCRPC trt	0	1	Ref.						
	1	1	0.39215	0.07072	30.7479	<.0001	1.480	1.287	1.698
	2	1	0.62446	0.10188	37.5662	<.0001	1.867	1.522	2.271
	3	1	0.58743	0.15392	14.5649	0.0001	1.799	1.314	2.405
	4	1	0.98855	0.30640	10.4095	0.0013	2.687	1.385	4.656
	5	1	0.63284	1.00609	0.3957	0.5293	1.883	0.107	8.463