

## **Inflammation in benign prostatic hyperplasia: a 282 patients' immunohistochemical analysis.**

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► **To cite this version:**

Grégoire Robert, Aurélien Descazeaud, Nathalie Nicolaïew, Stéphane Terry, Nanor Sirab, et al.. Inflammation in benign prostatic hyperplasia: a 282 patients' immunohistochemical analysis.: BPH and inflammation. *The Prostate / Prostate Suppl*, 2009, 69 (16), pp.1774-80. <10.1002/pros.21027>. <inserm-00440934>

**HAL Id: inserm-00440934**

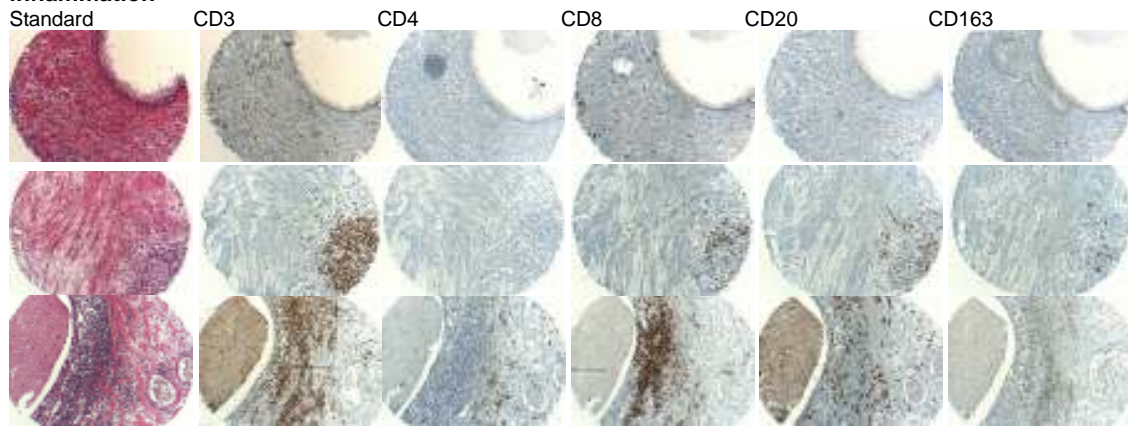
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Submitted on 14 Dec 2009

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**Figure 1 : Standard coloration and immunostaining with CD3, CD4, CD8, CD20 and CD163 antibodies on different BPH samples from 3 surgery-derived BPH specimens: from low to high grade inflammation**



**Table 1: Description of the inflammatory infiltrate in 275 patients using cytological or IHC grading**

Cytological inflammation grading			IHC inflammation grading		
	Grade	n		Grade	N
lymphocyte	0	63	<b>CD3</b>	0	59
	1	128		1	117
	2	84		2	101
macrophage	0	154	<b>CD4</b>	0	169
	1	121		1	96
polynuclear	0	260	<b>CD8</b>	2	12
	1	15		0	54
atrophy	0	215		1	135
	1	60		2	89
destruction	0	254	<b>CD20</b>	0	133
	1	21		1	85
fibrosis	0	233	<b>CD163</b>	2	57
	1	42		0	51
				1	154
				2	72

IHC : immunohistochemistry

**Table 2: Inflammation scores in 275 patients**

Cytological inflammation score		IHC inflammation score	
Grade	n	Grade	n
0	47	0	14
1	70	1	16
2	102	2	31
3	45	3	40
4	13	4	41
5	2	5	39
		6	27
		7	32
		8	19
		9	11
		10	5

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IHC : immunohistochemistry

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**Table 3: Frequencies of inflammatory phenotypes expressed by 275 patients on IHC**

CD4	CD8	CD20	CD163	n (%)
+	+	+	+	61 (22.2)
-	+	+	-	57 (20.7)
-	+	-	-	42 (15.3)
+	+	-	+	28 (10.2)
-	-	-	+	23 (8.4)
-	-	-	-	14 (5.1)
-	+	-	-	14 (5.1)
-	-	+	+	9 (3.3)
-	+	+	+	8 (2.9)
+	+	-	-	7 (2.5)
+	+	+	-	5 (1.8)
+	-	-	+	3 (1.1)
+	-	-	-	2 (0.7)
+	-	+	+	2 (0.7)

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IHC : immunohistochemistry; (-): absence of expression; (+): presence of expression

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**Table 4: Comparison of clinical parameters between patients with low and high grade inflammation**

	All patients	Cytological score			IHC score		<i>p</i>
	n=275	Low n=215	High n=60	<i>p</i>	Low n=142	High n=133	
<i>Quantitative parameter (Student T-test): mean</i>							
Age (year)	70	70	71	0.16	70	70	0.9
PSA (ng/ml)	10.1	9.9	11.4	0.6	9.8	10.6	0.7
Prostate volume (cc)	69	65	85	<b>0.001</b>	64	75	<b>0.02</b>
IPSS	14	13	15	0.8	12	21	<b>0.02</b>
<i>Qualitative parameters (Chi-square test): n (%)</i>							
Open Prostatectomy	105 (38.2)	73 (34.0)	32 (53.3)	<b>0.010</b>	42 (29.6)	63 (47.4)	<b>0.003</b>
Second TURP	22 (8.0)	19 (8.8)	3 (5.0)	0.4	14 (9.9)	8 (6.0)	0.3
No LUTS	31 (11.3)	21 (9.8)	10 (16.7)	0.2	16 (11.3)	15 (11.3)	1.0
Associated PCa	12 (4.4)	7 (3.3)	5 (8.3)	0.1	7 (4.9)	5 (3.8)	0.8
History of biopsies	84 (30.5)	66 (30.7)	18 (30.0)	1.0	34 (23.9)	50 (37.6)	<b>0.018</b>
History of AUR	87 (31.6)	70 (32.6)	17 (28.3)	0.6	49 (34.5)	38 (28.6)	0.3
Phytotherapy	10 (3.6)	8 (3.7)	2 (3.3)	1.0	7 (4.9)	3 (2.3)	0.3
5-ARI	19 (6.9)	13 (6.0)	6 (10.0)	0.3	12 (8.5)	7 (5.3)	0.3
α-blocker therapy	67 (24.4)	54 (25.1)	13 (21.7)	0.7	32 (22.5)	35 (26.3)	0.5
IHC : immunohistochemistry; TURP: trans urethral resection of the prostate ; PCa: prostate cancer; LUTS: lower urinary tract symptoms; AUR: acute urinary retention; 5-ARI: 5 alpha reductase inhibitor							

