



**HAL**  
open science

## Oncologic outcome after extraperitoneal laparoscopic radical prostatectomy: midterm follow-up of 1115 procedures.

Alexandre Paul, Guillaume Ploussard, Nathalie Nicolaiew, Evanguelos Xylinas, Norman Gillion, Alexandre de La Taille, Dimitri Vordos, Andras Hoznek, René Yiou, Claude Clément Abbou, et al.

### ► To cite this version:

Alexandre Paul, Guillaume Ploussard, Nathalie Nicolaiew, Evanguelos Xylinas, Norman Gillion, et al.. Oncologic outcome after extraperitoneal laparoscopic radical prostatectomy: midterm follow-up of 1115 procedures.. *European Urology*, 2010, 57 (2), pp.267-72. 10.1016/j.eururo.2009.09.029 . inserm-00447994

**HAL Id: inserm-00447994**

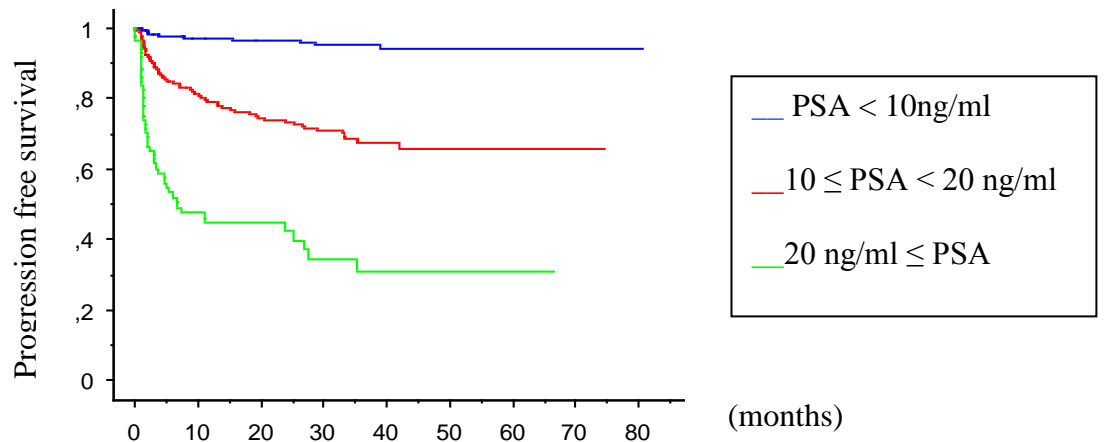
**<https://inserm.hal.science/inserm-00447994>**

Submitted on 18 Jan 2010

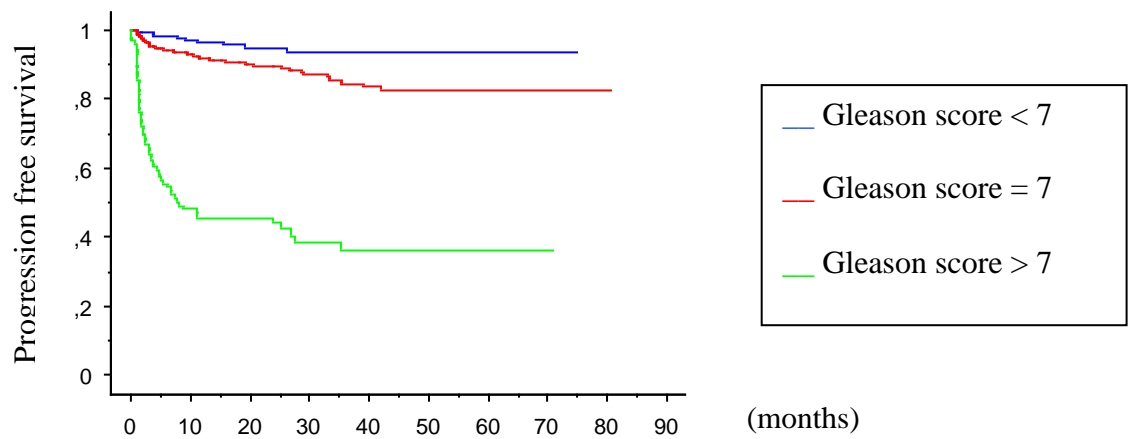
**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

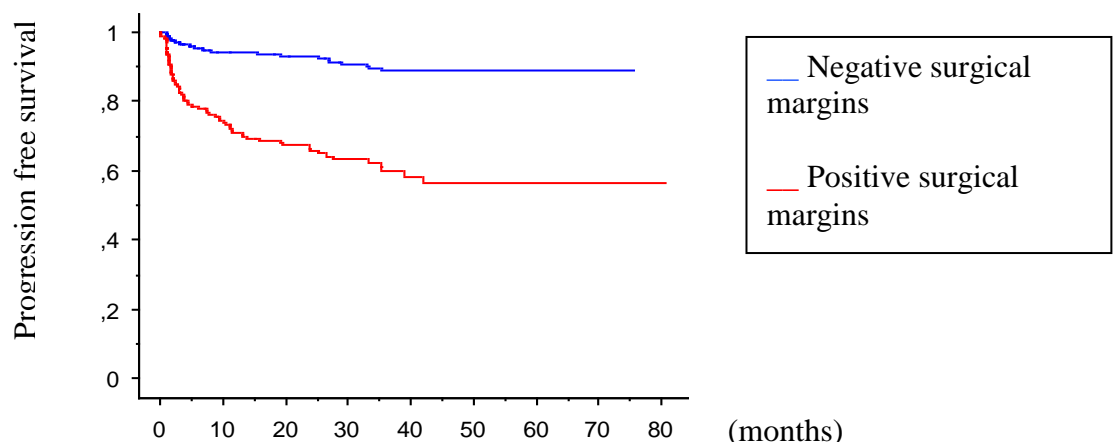
**Fig 1. Biochemical progression-free survival stratified by preoperative PSA**



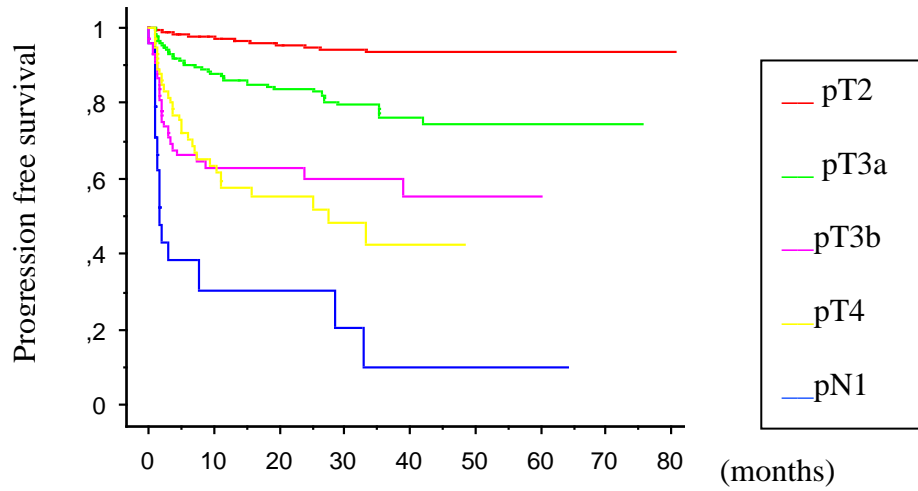
**Fig 2. Biochemical progression-free survival stratified by Gleason score**



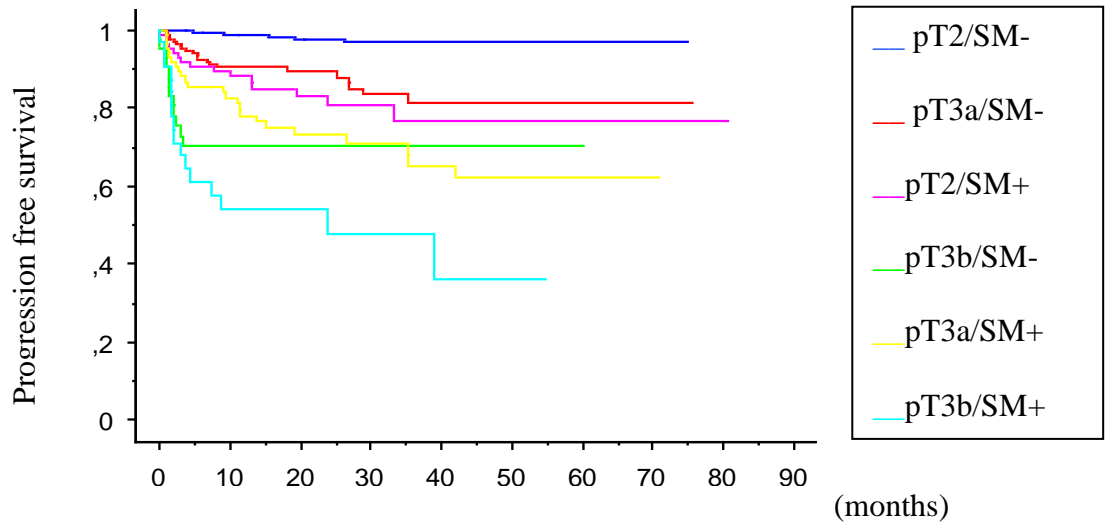
**Fig 3. Biochemical progression-free survival stratified by surgical margins**



**Fig 4. Biochemical progression-free survival stratified by pathological stage**



**Fig 5. Biochemical progression-free survival stratified by pathological stage and surgical margins**



**Table 1 : Preoperative patient characteristics**

No. pts	1115
Mean age (range)	62.5 (42-81)
Clinical stage (%)	
T1a-b	18 (1.6)
T1c	894 (80.2)
T2	193 (17.3)
T3	10 (0.9)
Mean PSA (ng/ml)	9.8 (0.8-99)
Gleason score (%)	
<7	739 (66)
=7	326 (29)
>7	50 (5)

**Table 2 : Postoperative patients characteristics**

Stage	pN	Total	Positive margin (%)	Gleason score (%)		
				<7	=7	>7
pT2a	pN0/pNx	126 (11.2%)	7 (5.5)	76 (6.7)	47 (4.2)	3 (0.3)
pT2b	pN0/pNx	30 (2.7%)	3 (10)	10 (1)	19 (1.6)	1 (0.1)
pT2c	pN0/pNx	508 (45.6%)	97 (19.1)	175 (15.6)	323 (29)	10 (1)
pT2c	pN1	3 (0.2%)	0	0	3 (0.2)	0
pT3a	pN0/pNx	250 (22.4%)	82 (32.8)	20 (2)	197 (17.6)	33 (2.8)
pT3a	pN1	5 (0.5%)	2 (40)	0	2 (0.2)	3 (0.3)
pT3b	pN0/pNx	100 (9%)	41 (41)	3 (0.3)	56 (5)	41 (3.7)
pT3b	pN1	10 (1%)	3 (30)	0	7 (0.7)	3 (0.3)
pT4	pN0/pNx	77 (6.9%)	57 (74)	4 (0.3)	45 (4)	18 (2.6)
pT4	pN1	6 (0.5%)	4 (66.6)	0	2 (0.2)	4 (0.3)

**Table 3: Multivariate Cox proportional hazard model for different variables for prediction of biochemical recurrence risk**

	Risk Ratio	95% CI	P value
PSA < 10 ng/ml	1		
PSA 10-20 ng/ml	1,243	0,795-1,943	0,339
PSA ≥ 20 ng/ml	2,920	1,743-4,894	<0,0001
Gleason score < 7	1		
Gleason score = 7	1,280	0,583-2,809	0,538
Gleason score > 7	4,447	1,868-10,584	0,001
pT2	1		
pT3a	2,759	1,640-4,643	<0,0001
pT3b	3,682	1,928-7,032	<0,0001
Negative lymph nodes	1		
Positive lymph nodes	5,606	2,904-10,825	<0,0001
Negative surgical margin	1		
Positive surgical margin	2,717	1,817-4,063	<0,0001

(95% CI: 95% confidence interval, PSA: prostate-specific antigen)

**Table 4 : Oncological results of open, TLRP and ELRP prostatectomy**

References	N° Pts	% Surgical margins		Progression-free survival (%)			
				3-year		5-year	
				pT2	pT3	pT2	pT3
<b>Open prostatectomy</b>							
<i>Catalona and Smith</i> <sup>[19]</sup>	1778	20.9		92.5	78.7	90	68.7
<i>Han et al</i> <sup>[17]</sup>	2494	-	26.4	85	75	75	60
<i>Hul et al</i> <sup>[21]</sup>	1000	12.8		95.6	85.3	94.9	75.3
<b>TLRP</b>							
<i>Guillonnet al</i> <sup>[9]</sup>	1000	15.5	31.1	89	67	-	-
<i>Rassweiler et al</i> <sup>[10]</sup>	500	7.4	31.8	95.2	71.6	89.5	68.2
<i>Lein et al</i> <sup>[23]</sup>	1000	13.6	51.5	95.4	78.6	-	-
<i>Hara I</i> <sup>[24]</sup>	136	27.5	68	91.8	51	-	-
<i>Pavlovich et al</i> <sup>[18]</sup>	528	6.2	39.3	98.2	78.5	-	-
<i>la te rejiuo</i> <sup>[16]</sup>	1564	-	-	-	-	83	69
<b>ELRP</b>							
<i>Rozet et al</i> <sup>[14]</sup>	600	14.6	25.6	-	-	-	-
<i>Stolzenburg et al</i> <sup>[15]</sup>	1300	9.8	34.3	-	-	-	-
<i>Present series</i>	1115	16	34.8	93.4	72.5	93.4	70.2