

Overall, specific, and metastasis-free survival of Afro-Caribbean men with pathological Gleason 6 prostate cancer.

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MP19-06

BACKGROUND

Several studies in the Caucasian population have shown that patients with Gleason 6 prostate cancer, based on surgical specimens, have low or no risk of metastasis.

There is no data available in literature for men of African ancestry.

Guadeloupe is a French archipelago with about 90% of its population is of African descent.

OBJECTIVES

Estimate the overall, specific, and metastasis-free survival of patients with a Gleason 6 score, based on the surgical specimen in an Afro-Caribbean population.

PATIENTS AND METHODS

Monocentric retrospective study
723 consecutive patients Gleason 6 based on the surgical specimen
Between January 2000 and March 2018
32 patients excluded for missing data (4,4%)

Primary outcomes :

- Overall survival
- Specific survival
- Metastasis free survival

Secondary outcomes :

- Estimate biochemical recurrence free survival and salvage treatment free survival
- Determine risk factors associated with biochemical recurrence and salvage treatment

RESULTS

Primary outcome :

Overall survival at 5 and 10 years is respectively 94.2% and 87.1%.
The specific survival and the metastasis free survival are 100% with a median follow-up time of 8.5 years.

Secondary outcome :

The biochemical recurrence rate is 16.5% with a median delay for biochemical recurrence of 5.1 years.
The rate of salvage treatment is 13.0% with a median time to surgery of 7.3 years.

Table 1. Baseline characteristics of all patients

Variables	Total
Number of patients (%)	691 (100%)
	Median (range)
Age at surgery, y	64.1 (45.3-76.8)
PSA at diagnosis (ng/mL)	6.8 (1.0-53.2)
Follow-up, y	8.5 (0.2-19.1)
Time to BCR, y	5.1 (0.3-15.0)
Duration between surgery and salvage treatment, y	7.3 (0.3-18.0)
	Number (%)
Clinical stage	
T1	447 (64.7)
T2	226 (32.7)
Missing data	18 (2.6)
Biopsy ISUP score:	
1 (3-6)	619 (89.6)
2 (3+4)	45 (6.5)
3 (4+3)	14 (2.0)
4 (8)	5 (0.7)
Missing data	8 (1.2)
Prostate specimen:	
Pathological stage:	
pT2	620 (89.7)
pT3-pT4	71 (10.3)
Extracapsular extension (pT3a):	
No	641 (92.8)
Yes	50 (7.2)
Seminal vesicles invasion (pT3b):	
No	672 (97.3)
Yes	19 (2.7)
Positive surgical margins:	
No	549 (79.5)
Yes	142 (20.5)
Lymphadenectomy:	
No	621 (89.9)
Yes	70 (10.1)
Biochemical recurrence	
No	577 (83.5)
Yes	114 (16.5)
Salvage treatment	
No	601 (87.0)
Yes	90 (13.0)
Death	
No	568 (82.2)
Yes	84 (12.2)
Missing data	39 (5.6)
Causes of death	
Cardiovascular diseases	15 (17.8)
Other cancers	26 (31.0)
Other causes	43 (51.2)

Table 2. Univariate analyses of BCR risk factors

Variables	HR	95% CI	P value
Age, y	1.00	0.98-1.03	.76
PSA (ng/mL)	1.06	1.03-1.09	<.0001
Pathological stage			
pT2	1.0	...	...
pT3 (a+b)	2.24	1.41-3.54	.0006
Extracapsular invasion			
No	1.0	...	...
Yes	1.63	0.93-2.85	.09
Seminal vesicles invasion			
No	1.0	...	...
Yes	3.56	1.73-7.31	.0006
Positive margins			
No	1.0	...	...
Yes	2.18	1.47-3.23	.0001
Lymphadenectomy			
No	1.0	...	...
Yes	2.00	1.27-3.16	.003

Table 3. Multivariate analyses of BCR risk factors

Variables	HR	95% CI	P value
PSA (ng/mL)	1.04	1.01-1.08	<.005
Pathological stage			
pT2	1.0	...	...
pT3 (a+b)	1.60	0.98-2.61	.059
Positive margins			
No	1.0	...	...
Yes	1.73	1.14-2.64	.01
Lymphadenectomy			
No	1.0	...	...
Yes	1.40	0.86-2.29	.18

Table 4. Univariate analyses for predictive factors of salvage treatment

Variables	HR	95% CI	P value
Age, y	1.00	0.97-1.04	.83
PSA (ng/mL)	1.06	1.03-1.09	.0004
Pathological stage			
pT2	1.0	...	...
pT3 (a+b)	1.94	1.14-3.30	.014
Extracapsular invasion			
No	1.0	...	...
Yes	1.26	0.63-2.51	.52
Seminal vesicles invasion			
No	1.0	...	...
Yes	3.38	1.56-7.31	.002
Positive margins			
No	1.0	...	...
Yes	2.54	1.65-3.90	<.0001
Lymphadenectomy			
No	1.0	...	...
Yes	1.77	1.04-3.03	.035

Table 5. Multivariate analyses for predictive factors of salvage treatment

Variables	HR	95% CI	P value
PSA (ng/mL)	1.05	1.01-1.09	.013
Pathological stage			
pT2	1.0	...	...
pT3 (a+b)	1.27	0.73-2.24	.40
Positive margins			
No	1.0	...	...
Yes	2.19	1.38-3.48	.0008
Lymphadenectomy			
No	1.0	...	...
Yes	1.24	0.70-2.18	.46

CONCLUSION

No metastasis or disease-specific death were seen in men with Gleason score ≤ 6 prostate cancer at radical prostatectomy in particular in men with African ancestry.

One of the main challenge for the next few years will be to detect for sure men with Gleason 6 prostate cancer, without upgrading on surgical specimens.