

PREDICTORS OF TRANSITION TO WATCHFUL WAITING FROM ACTIVE SURVEILLANCE AMONG MEN WITH LOW-RISK PROSTATE CANCER IN A CAUCASIAN COHORT

Maria C Mir, Miguel Ramirez-Backhaus, Alvaro Gomez-Ferrer, Jose Luis Dominguez-Escrig, Immaculada Iborra, Jose Luis Monros, Juan Luis Casanova-Borja, Juan Manuel Mascaros, Jose Rubio-Briones
Department of Urology, Fundacion Instituto Valenciano Oncologia, Valencia, Spain

INTRODUCTION

Active surveillance (AS) is a commonly accepted treatment approach for men with low-risk prostate cancer (PC). As life-expectancy shortens, men on AS protocols are slowly transitioned to watchful waiting (WW) protocols. Due to the diversity on AS protocols and their strict definitions, little is known about the percent of patients switching to WW and their predictors of change.

Objective: To report on percent of change from AS to WW protocols and to identify predictors of transition at AS initiation.

MATERIALS AND METHODS

A prospectively maintained comprehensive prostate cancer database was utilized for the analysis. A total of 3342 patients with PC were included in the database. 773 (23%) belong to the low risk PC and 1107 (33%) to the intermediate risk PC group as per NCCN guidelines. The AS protocol was initiated at our institution on 2010. Briefly, all patients included on AS undergo a transperineal 30 core prostate biopsy and mpMRI prostate (since 2014).

The criteria for transition was age \geq 80yo and/or ADT initiation without evidence of metastatic disease (46). Binary logistic regression for transition to WW were estimated.

RESULTS

- A total of 449 patients were included on AS. 46 (10%) patients were transitioned to WW during their follow-up.

BASELINE CHARACTERISTICS

- Median age at diagnosis was 74.71 yo (IQR 72.17-76.75), median Charlson score was 3.6 (IQR 3.2-4.6), PSA at diagnosis 6.93 ng/mL (IQR 5.2-11.4). All patients were cT1. 42 (91.3%) were diagnosed with Gleason 6 score and 4 (8.7%) were diagnosed with Gleason 7 (3+4). Median PSAD was 0.17 (IQR 0.13-0.29). Median follow up in this cohort was 85.08 mo (IQR 60.7-125.8). (See Table 1 for Baseline Characteristics)

UNIVARIATE ANALYSIS

- Overall, men with low risk PC remained on AS for median of 3.46 years (IQR 2.25-5.33). A total of 15 patients died during follow up, all of them due to other causes.

We identified **negative confirmatory prostate biopsy (OR 0.183 (IC95%: 0.086-0.301) p <0.001)** and **PSAD >0.15 at diagnosis (OR 2.3 (IC95%: 1.25 -4.5) p =0.008)** as predictors of transition to WW in our AS cohort (See Table 2 for Univariate Analysis)

- Gleason score at diagnostic (initial) prostate biopsy and cT were **not significant** at univariate analysis.
- PSA at diagnosis and Age at diagnosis were significant but clinically irrelevant for the current analysis.
- See figure 1 for odds ratio plots on univariate analysis

Table 1. Baseline Characteristics of the overall cohort

BASELINES CHARACTERISTIC			
	AS (n=403)	WW (n=46)	p-value
Age, median (IQR)	64 (6-71)	74 (72-77)	0.001
PSA at diagnosis, median (ng/mL)	5,3 (4-7)	7 (5-11)	0.001
CCI	2,6 (2-3)	4 (3-5)	0.001
PSAD	0,1 (0,1-0,2)	0,2 (0,1-0,3)	0,001
cT			0,662
cT1c	29 (7)	3 (6)	
cT2	374 (93)	43 (94)	
Gleason Score at initial Biopsy			0,866
6	375 (93)	42 (91)	
3+4	28 (7)	4 (9)	
Confirmatory Biopsy			0,001
Negative	42 (10)	16 (35)	
Positive	234 (58)	17 (37)	
Not assessed	127 (31)	13 (28)	
MRI at diagnosis			0,001
No	125 (31)	38 (83)	
Yes	278 (70)	8 (17)	

Table 2. Univariate Logistic Regression for transition to WW

UNIVARIATE LOGISTIC REGRESSION for TRANSITION to WW		
	HR (IC 95%)	P value
Confirmatory biopsy Result (Negative vs Gleason 6 or more)	0,18 (0,08-0,40)	<0,001
PSA at diagnosis (<5 vs >5)	3,59 (1,69-7,64)	<0,001
PSAD (<0.15 vs >0.15)	2,37 (1,25-4,49)	0,008
Gleason at diagnosis (<7 vs >7)	1,27 (0,42-3,81)	0,663
cT at diagnosis (<cT1 vs >cT1c)	1,11 (0,32-3,80)	0,866
Age at diagnosis (64 vs >64)	36,12 (4,93 - 264,60)	<0,001

PLOTS FOR PREDICTORS OF TRANSITION TO WW

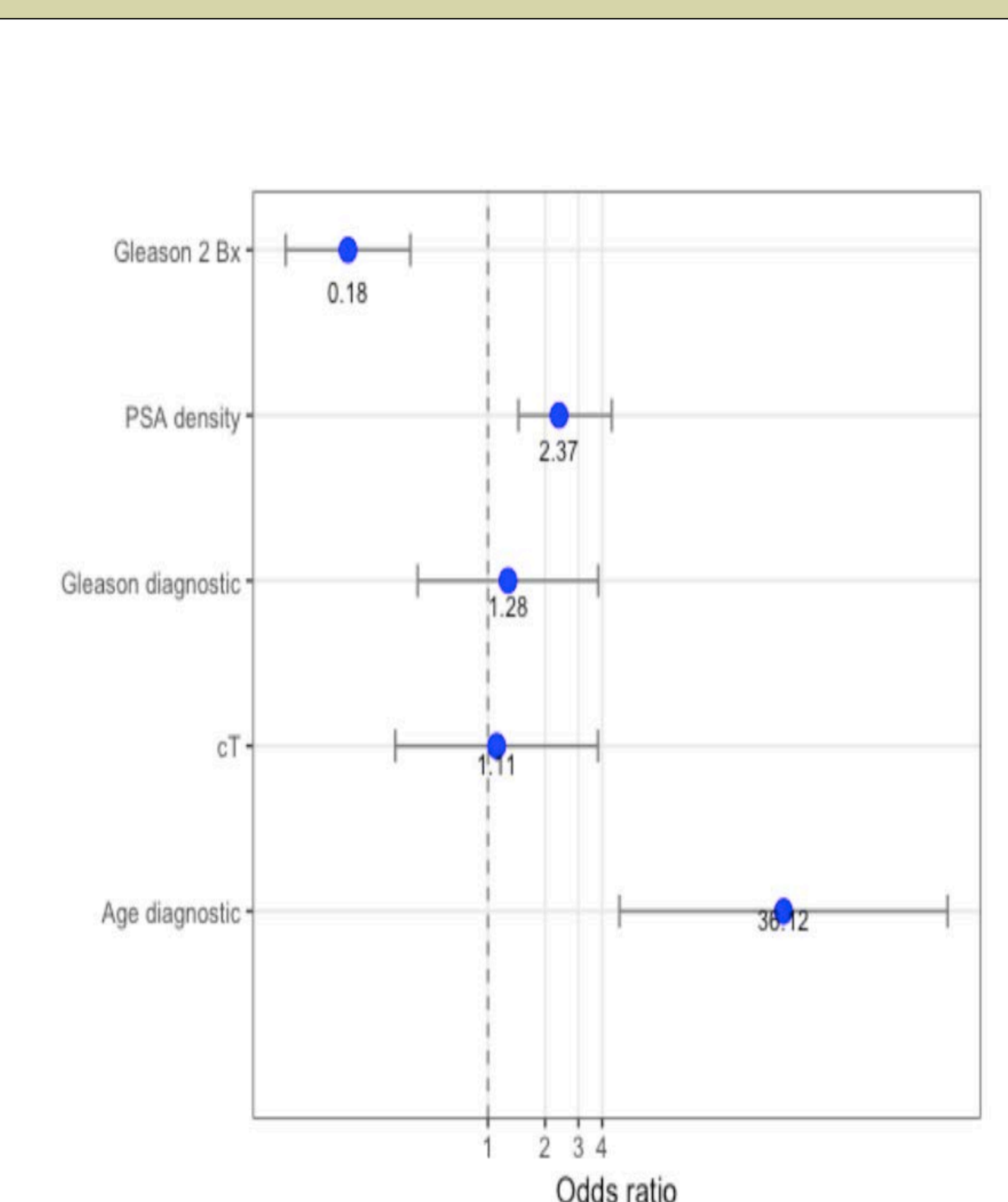


Figure 1

CONCLUSIONS

Changes from AS to WW become common among elderly men with low-risk PC. This potential change to WW should be discussed with men starting on AS. Moreover, negative confirmatory prostate biopsy is predictive of transition to WW within this cohort

