

Gonzalez De Gor Garcia Herrera V.¹, Aragón Chamizo J¹, Herranz Del Amo F.¹, Barbas Bernardos G.², Sanchez Ochoa M.A.¹, Caño Velasco J.¹, Mayor De Castro J.¹, Hernández Fernández C.¹

¹Hospital General Universitario Gregorio Marañón, Dept. of Urology, Madrid, Spain, ²Hospital Clínica Universidad de Navarra, Dept. of Urology, Madrid, Spain

Introduction & Objectives: Evaluate the effectiveness of performing a prostate rebiopsy in patients with a previous negative biopsy and MRI, establishing a relationship between PIRADS and PSAD (PSA density) as well as identifying predictors of positive biopsy in PIRADS3 lesions.

Materials & Methods: Retrospective study of 340 biopsies from patients with a negative TR-negative prostate biopsy and an MRI after the biopsy. A univariate and multivariate analysis (logistic regression) was performed in order to identify variables related to the presence of tumor in biopsy in PIRADS 3 lesions.

Results: The median age was 67 years (IQR: 61-72), the median PSA level was 8.2 ng/dL (IQR: 6.2-11.7). In 36 patients (10.6%) no PIRADS lesions were found or PIRADS 1 or 2 were found. In 78 patients (22.9%) a PIRADS3 nodule was detected and in 226 (66.5%) a PIRADS 4/5 nodule was detected. 87 patients (25.6%) presented a PSAD<0.10, 81 (23.8%) a PSAD between 0.11 and 0.15, 57 (16.8%) between 0.16 and 0.20 and 115 (33.8%) had a PSAD >0.20. PC was diagnosed in 130 patients (38.2%), of which, it was clinically significant (CS) (ISUP≥ 2) in 65 patients (19.1%). The positive biopsy percentage in PIRADS 3 lesions was 16.9% (13 of 77) and in PIRADS4/PIRADS 5 it was 50% (120 of 226). Multivariate analysis showed that in our series there are no independent predictors of positive biopsy in patients with PIRADS 3. Next, we detail the relationship between PIRADS and PSAD in patients with clinically significant prostate cancer (ISUP >2).

Relationship between CP CS ISUP ≥ 2) – PSAD – PIRADS:

	≤ 0,10	0,11-0,15	0,16-0,20	>0,20
Pirads 0-2	0% (0/9)	0% (0/8)	0% (0/8)	9,1% (1/11)
Pirads 3	0% (0/21)	4,8% (1/21)	7,7% (1/13)	8,7% (2/23)
Pirads 4-5	7% (4/57)	26,9% (14/52)	22,2% (8/36)	42% (34/81)
Total	4,6% (4/87)	18,5% (15/81)	15,8% (9/57)	32,2% (37/115)

Taking 5% as the cut-off point, we can make a biopsy recommendation in all patients with PIRADS 4-5, in PIRADS 3 with PSAD>0.15 and PIRADS 0-2 with PSAD>0.20.

	≤ 0,10	0,11-0,15	0,16-0,20	>0,20

Pirads 0-2	No biopsy	No biopsy	No biopsy	Perform biopsy
Pirads 3	No biopsy	No biopsy	Perform biopsy	Perform biopsy
Pirads 4-5	Perform biopsy	Perform biopsy	Perform biopsy	Perform biopsy

Conclusions: In our series, we have not found any independent predictive factor for prostate cancer in PIRADS3 lesions. At the expense of expanding the series in order to have more consistent data, we suggest the recommendation of repeat biopsy in this type of case.