

**P078** Comparing the detection rates of prostate cancer with variable PSA density cut off on transperineal template biopsies of prostate regardless of mpMRI findings

EUR Urol Suppl 2019;18(11):e3504

Awan M.T., Ashraf M. , Bhojwani A.

Sherwood Forest NHS Foundation Trust. Kings Mill Hospital, Dept. of Urology, Sutton in Ashfield, United Kingdom

**Introduction & Objectives:** Aim of study is to detect rate of prostate cancer with different PSAD value on transperineal template biopsies not considering MRI findings. Different PSAD cut off values have been recommended in literature to detect more significant prostate cancer. We tried to find out cancer detection rates (CDR) with different PSAD cutoff values. We also look at the variations of prostate cancer Gleason scoring with PSAD value. We tried to find out the best optimal value of PSAD cutoff to increase prostatic cancer detection rates. In addition we also compare our data with PSAD cut off of 0.15 which is quite often found in some literature.

**Materials & Methods:** Transperineal template biopsies results of our first 104 were reviewed. Mean age 64.5 years, mean PSA 12.29 ng/mL, mean PSAD 0.264, mean MRI prostate volume 58.17 mLs and mean number of cores 42. Where MRI not carried out, TRUS prostate volume was calculated. 97 patients had mpMRI of prostate and among these 31, 32 and 34 patients had positive MRI findings in right lobe, left lobe and both lobes, respectively.

**Results:** Overall cancer detection rate was 72.1% (75 patients), only 29 individuals showed benign histology. 53 patients had bilateral cancer, 34 had more than one over all Gleason Score (GS) in both lobes and 32 had more than one over all GS in one lobe on histology. Overall following histology was seen: 3+3 (8%); 3+4 (45.3%); 4+3 (28%); 4+4 (14.66%); 4+5 (2.66%); 5+4 (1.33%).

70 patients had positive histology if PSAD >0.08, hence cancer detection rate was 67.3%; PPV-74.4%, NPV- 50%, where as only in 5 patients (6.6 %) histology resulted as cancer if PSAD was <0.08. Among patients with PSAD <0.08, histology revealed the following Gleason Score: GS 3+3 (1), GS 3+4 (2), GS 4+3 (2) with PSAD range from 0.03 to 0.067 in these patients. In contrast to PSAD of >0.08, if PSAD is >0.15, cancer detection rate was 51.9% (54 patients) with PPV of 81.8% and NPV of 44.7% (p < 0.05).

PSAD	<0.08	>0.08-0.109	0.11-0.149	0.15-0.159	0.16-0.209	0.21-0.309	0.31-0.409	0.41-0.49	>0.5
Hx (Cancer)	5	10	6	2	11	21	4	7	9
CDR %	72.1	67.3	57.7	51.9	50	39.4	19.2	15.4	8.6
% Cancer	100	93.3	80	72	69.3	54.66	26.7	21.3	12
PSAD (mean)	0.04	0.09	0.12	0.15	0.18	0.25	0.35	0.44	0.94
3+3	1	0	1	1	2	-	1	-	-
3+4	2	7	1	1	4	13	3	3	-
4+3	2	1	3	-	4	5	-	3	3
4+4	-	2	1	-	-	2	-	1	5
4+5	-	-	-	-	1	0	-	-	1
5+4	-	-	-	-	-	1	-	-	-

**Conclusions:** It is seen that by decreasing PSAD cut off to 0.08, additional 18.2% (n=19) of cancer with GS >7 can be picked up on biopsies, which is almost the 25.3% of all the cancers detected. No cancer with the GS of >8 is seen if PSAD is less than 0.08. We may suggest that decreasing PASD cutoff allow us to detect more prostate cancer on transperineal template biopsies of prostate with intermediate or high risk without considering the mpMRI PI-RADS score.