



ABSTRACT ID#18-6524: A propensity score matched analysis of the effects of race on the number, location, and size of regions of interests detected by magnetic resonance imaging of the prostate

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BACKGROUND

- Prostate cancer is the most common cancer diagnosis affecting men in the United States with an estimate of 164,690 new cases of prostate cancer that will be diagnosed in 2018, according to American Cancer Society.
- African-American populations are more affected by this disease, therefore different approaches should be in place to deal with this disease amongst population.

STUDY OBJECTIVES

- To evaluate the effects of African-American race on the number, location, size, and PI-RADS score of these regions.

STUDY METHODS

- Institutional retrospective study of 592 patients who received a prostate mpMRI to characterize ROI identified during imaging.
- Number of ROI (1 - 4), their location, dimensions, and P-IRADS score v2 were evaluated in a matched cohort of White and African-American males.
- Propensity score matching was performed using the variables of age, prostate specific antigen (PSA) levels, and prostate volume. Comparisons between groups utilized chi-squared tests and $p < 0.05$ was considered statistically significant.

RESULTS

- 141 African-American patients were matched with an equal number of White men of similar characteristics.
- African-American' mean age was 63 years (\pm SD 9.36), mean PSA 9.45 (\pm SD 9.57), and mean prostate volume 71 g (\pm SD 53.65).
- White males mean age was 63 years (\pm SD 7.92), mean PSA 8.63 (\pm SD 8.39), and prostate volume mean 63 (\pm SD 42.11).
- The number of ROI was 2 or more in 26% of African-American men and 12% of White men ($P=0.0025$), and 3 or more in 10% of African-American and 2% of White men ($P=0.001$).
- There was no significant difference in location, size, or PI-RADS scores of the ROI between the two groups.

CONCLUSIONS

- African-American patients, as compared to their White counterparts, have a higher number of ROI detected on prostate mpMRI. The other characteristics of these regions were similar between the two groups.

TABLE 1:percentage of number of lesions in population

	1 or more lesions	2 or more lesions	3 or more lesions
African American	50%	26%	10%
White	42.5%	12%	2%

Table 2: PIRADS scores.

	Pirads 3	Pirads 4	Pirads 5
African-American	59	25	15
White	50	5	11

COMPARISON OF LESION LOCATION

