

AGE-ADJUSTED PSA IS LIKELY TO MISS A SIGNIFICANT NUMBER OF MEN 60-79 YEARS OLD WITH PROSTATE CANCER. Gerard O'Dowd, Roberto

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Background: Reference serum prostate-specific antigen (PSA) values are derived from studies of healthy volunteers. Due to the high prevalence of prostate cancer (PCa) in older men, healthy volunteers may include individuals with asymptomatic but clinically significant PCa. The goal of this work was to assess the possible impact of adopting PSA ranges of 0.0-4.5 and 0.0-6.5 ng/ml as guidelines to biopsy 60-69 and 70-79 yr. old men.

Design: A retrospective study of prostate biopsies (pbxs) submitted by office-based urologists from April 95 to March 97 was performed. The selection criteria were: a) age 60 to 79 years, b) normal DRE, c) pre-biopsy PSA 4.01 to 6.50 ng/ml, and d) no history of previous pbx. Percent of involvement = % of bx length infiltrated by tumor. DNA was determined using a CAS-200 system. Abnormal DNA = non-diploid result.

Results: 1768 patients (mean age = 68.1 yr.), 1102 in the 60-69 and 666 in the 70-79 yr. old groups were studied. Using 4.5 and 6.5 as the upper PSA limits for not biopsying 60-69 and 70-79 age groups, 819 patients would not have been biopsied, while 949 would have been biopsied. Below are the findings on cancers that would have been missed (A) and would have been detected (B).

<i>Groups</i>	<i>No. PCa</i>	<i>% cases Gleason ≥ 7</i>	<i>\bar{m} % bx involv.</i>	<i>% cases abn. DNA</i>
A (n=819)	273 (33)	28 = 77/27	9.1	44 = 88/198
B (n=949)	262 (28)	29 = 75/262	9.7	40 = 86/214
		p= 0.91	p= 0.58	p= 0.37

Conclusions: Approximately half of patients 60 to 79 yr. old with PCa that are detected by using the cutoff of 4 ng/ml of PSA would have been missed if age-specific ranges had been applied. There were no statistically significant differences between the cancers in groups A and B regarding the % of cases with Gleason score ≥ 7 , the mean % involvement of biopsy core length, or the % of cases with abnormal DNA.