

It is an additional tool to help decide if a biopsy is necessary in men suspected of having prostate cancer (PCa), PCA3 is, unlike PSA, prostate cancer-specific. This means that it is only produced by PCa cells and not affected by prostate size. It discriminates better than PSA between PCa and benign/non-cancerous prostate diseases such as benign prostatic hyperplasia (BPH, i.e. prostate enlargement) or prostatitis (infection of the prostate). Therefore, PCA3 gives very useful information, in addition to PSA, in deciding if biopsy is really needed. The interpretation of PCA3 is positive or negative. Values above 35 are considered positive and suggest a biopsy should be performed.

PSA GUIDE LINES



The physicians of Georgia Urology follow the guidelines of the American Urological Association and recommend a yearly PSA blood test and DRE be performed in males starting at age 40.

When interpreting a PSA value, several factors need to be taken into consideration:

- Age adjustment of the PSA
- PSA velocity
- Percent free PSA
- PSA density

Age- Adjusted PSA Guidelines:

AGES	PSA RESULTS
40 - 49	0 - 2.5
50 - 59	0 - 3.5
60 - 69	0 - 4.5
70 Plus	0 - 6.5

PSA Velocity:

For patients whose PSA is less than 2, a velocity of greater than 0.35 ng/mL per year is cause for concern. Patients with a PSA of 4-10 have reasons for concern when the PSA velocity is greater than 0.75 ng/ml. So while a rise in PSA from 1 to 1.5 may be a cause for concern, a rise from 5 to 5.5 may not.

Percent Free PSA (PSA-f)

The percent free PSA (PSA-f) refers to the proportion of "free PSA" to "bound PSA" in the total PSA in the blood sample. The free PSA circulates in the bloodstream not attached to a carrier protein. The higher the percentage of free PSA, the lower the risk of cancer. For instance, a free PSA of 0-10% is associated with a 56% chance of cancer while a free PSA greater than 25% is only associated with an 8% risk of cancer.

PSA Density

PSA density is defined as the PSA divided by the prostate volume. When comparing two patients who have the same elevated PSA and different prostate volumes, the patient who has the smaller prostate is more likely to have prostate cancer. The higher the PSA density, the more likely the patient is to have prostate cancer.

PCA3:

Prostate cancer gene 3 is a gene based assay that is performed on urine after a digital prostate massage. It is not a replacement for prostate specific antigen (PSA).