

Prostate Cancer *Who's at Risk?*

Did you know...

According to the American Cancer Society

- 186,320 new cases of prostate cancer were diagnosed in the United States in 2008
- About 1 man in 6 will be diagnosed with prostate cancer during his lifetime
- 28,660 men in the United States died of prostate cancer in 2008.
- Only 1 man in 35 will die of prostate cancer.
- Prostate cancer accounts for about 10% of cancer-related deaths in men.



One out of every two men in the U.S. will get cancer during his lifetime. The most common cancer in men is prostate cancer (29%) followed by lung cancer (13%) and colon cancer (10%).

Prostate cancer is caused by changes in the genes that control cell growth. Genes are like recipes. They tell the cells in the body what to make, how to grow and how to function.

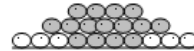
If a gene that controls cell growth in the prostate is altered, it may lead to changes in other genes that control cell growth and function. If enough changes occur, a tumor will form. If these tumor cells develop the ability to invade the tissue around the prostate, the cancer will spread.



Initiation—first gene change



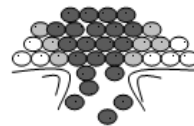
Promotion—cells replicate quickly



Early Progression—tumor forms



Late Progression—tumor becomes cancerous



Metastatic Cancer—cancer cells invade surrounding tissue.

Hereditary Prostate Cancer (HPC)

Researchers have found that changes in certain genes that are passed down from parent to child may cause 5% of all prostate cancer. One way to tell if you may have HPC is to collect your family's health history.

According to experts at Johns Hopkins, men at risk for HPC have one of the following:

- 1) Three or more affected first-degree relatives (e.g. father, brother, son)

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Prostate Cancer (continued)

2) Three generations of men with prostate cancer on either their mother's or father's side of the family, and/or

3) At least two relatives affected before the age of 56 years.



Familial Prostate Cancer

About 20% of men with prostate cancer have one or two affected relatives. In these families, it is likely that there are changes in a number of genes. However, each change only increases the risk by a small amount. In these cases, it is the mixture of gene changes and exposure to other risk factors that most likely causes prostate cancer.

Other Risk Factors

Family history of prostate cancer is only one risk factor that increases a man's chances of getting prostate cancer. Other risk factors include:

Age: After age 50, a man's risk of prostate cancer begins to increase.

Race or Ethnicity: African American men are more likely than white men to get prostate cancer.

Diet: A high-fat diet and obesity increases the risk for prostate cancer.

High Testosterone Levels:

Testosterone causes the prostate gland to grow. Therefore, men who use testosterone therapy are more likely to get prostate cancer.

What Can You Do?

If you have questions about your chance of getting prostate cancer, collect your family's health history and share it with your doctor. Find out if you should start screening for prostate cancer at age 40.

Research Opportunities

If you have prostate cancer consider taking part in a research study. To find out what studies are being done in your area go to the National Cancer Institute's website and click on the tab labeled "Clinical Trials".

<http://www.cancer.gov/>



The Genomedical Connection...

This is a joint project between Moses Cone Health System, Duke University and UNCG. The goal is to create a model system that doctors can use to identify patients who are more likely to get diseases like breast cancer, colon cancer and blood clots. Once these patients are found, doctors can develop personalized medical management plans to reduce their risk for disease, or diagnose the disease early, when more treatment options are available.

For more information about our program go to
www.genomedical.com