WHAT IS PROSTATE CANCER AND HOW COMMON IS IT?

Prostate cancer is an abnormal growth in the prostate gland. Your prostate gland is about the size of a walnut and sits just under the bladder, in front of the rectum and is part of the male reproductive system. It makes fluid for semen. Growths in the prostate can be benign (not cancer) or malignant (cancer).

Prostate cancer is the leading type of cancer for men in the U.S. today. This cancer is more common in older men, and in African Americans. African Americans are also likely to get this cancer at an earlier age and it may be more aggressive (grows worse more quickly). If you have a family history of this cancer then you are more likely to get the disease.

If your doctor tells you that you have prostate cancer, try not to panic because it is not all bad news. Most men who are diagnosed with prostate cancer live many years and pass away from other causes. This is particularly the case if the cancer is caught before it has spread. In fact, 78 out of 100 men catch their prostate cancer before it spreads outside the prostate.

TESTING FOR PROSTATE CANCER

For a prostate cancer evaluation, your doctor will likely do a prostate-specific antigen (PSA) test (simple blood test), a medical history and a digital rectal exam (DRE). If the results call for it, your doctor may also do a prostate ultrasound and biopsy of your prostate. For a biopsy, your doctor will take a small piece of the prostate and look at the tiny cells to see if there is a cancer. Your doctor may also order a Magnetic Resonance Imaging (MRI) (known as multiparametric) as part of your prostate evaluation.

Testing for prostate cancer has come a long way over the years. Your doctor can do tests on cancer cells to find out how to treat your condition based on the DNA of the cell. This is called genomic testing. You may hear a lot about genomics and genetics both terms are about genes and cell DNA, but they are different.

Genomic testing looks at your genes but can also look closely at cancer genes and their behaviors.

WHAT IS GENOMIC TESTING?

Our genes can tell something about why we get certain diseases. Genomic testing tells us about health problems that can pass down in a family. For example, if you have a family member like a father or brother who has prostate cancer, then you are more likely to get the disease. This trend is even more likely in African Americans compared to Caucasians.

Genomic testing looks at your genes but can also look closely at cancer genes and their behaviors. This helps us see how DNA and genes work within a cell. The doctor can do a biopsy of the cancer cells and use additional genomic tests to tell how they might grow (or not grow). Genomics can suggest a path to better treating your cancer and address other vital questions such as: 1.) Is your cancer more likely to spread? 2.) Will your cancer grow slowly or will it get worse very quickly? 3.) Is it best to watch the cancer growth with regular PSA tests, DREs and periodic biopsies (known as active surveillance) or to treat it?
## Genomic Diagnostic Testing for Prostate Cancer

### Risk Assessment after Negative Biopsy

If you have had a prostate biopsy and the results showed “NO CANCER” but your doctor is wondering if there is still risk for missed or future prostate cancer?

<table>
<thead>
<tr>
<th>GENOMIC TEST NAME</th>
<th>WHAT IS TESTED?</th>
<th>WHAT THE TEST DOES</th>
<th>WHY IS IT USED?</th>
</tr>
</thead>
<tbody>
<tr>
<td>ConfirmMDx</td>
<td>Uses prostate biopsy tissue that was taken but was negative</td>
<td>Confirms previous negative test or finds out if prostate cells will likely change to cancer</td>
<td>Helps avoid repeat biopsies</td>
</tr>
<tr>
<td>Progena</td>
<td>Uses prostate biopsy tissue that was taken but was negative</td>
<td>Confirms previous negative test or finds out if prostate cells will likely change to cancer</td>
<td>Helps avoid repeat biopsies</td>
</tr>
</tbody>
</table>

### Risk Assessment after Positive Biopsy

If you had a prostate biopsy and the results showed “CANCER PRESENT” but your doctor is wondering if this is a serious form of prostate cancer or one that can be safely observed (deferred treatment or active surveillance)?

<table>
<thead>
<tr>
<th>GENOMIC TEST NAME</th>
<th>WHAT IS TESTED?</th>
<th>WHAT THE TEST DOES</th>
<th>WHY IS IT USED?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prolaris</td>
<td>Uses prostate biopsy tissue that was taken and showed cancer</td>
<td>Tells how fast cancer might grow or travel to other parts of your body (metastasis)</td>
<td>Can help decide on active surveillance or treatment options, such as consolidative radiation</td>
</tr>
<tr>
<td>Oncotype Dx</td>
<td>Uses prostate biopsy tissue that was taken and showed cancer</td>
<td>Tells how fast cancer might grow or travel to other parts of your body (metastasis)</td>
<td>Can help decide on active surveillance or treatment options, such as consolidative radiation</td>
</tr>
<tr>
<td>ProstaVysion</td>
<td>Uses prostate biopsy tissue that was taken and showed cancer</td>
<td>Tells how fast cancer might grow or travel to other parts of your body (metastasis)</td>
<td>Can help decide on active surveillance or treatment options</td>
</tr>
</tbody>
</table>
Genomic Diagnostic Testing for Prostate Cancer

Risk Assessment after Radical Prostatectomy
If you had your prostate cancer removed (radical prostatectomy) and are trying to decide if added treatment is needed because the cancer was close to the edge (margin) of the prostate? Radiation or hormonal therapy could be used as a follow-up treatment after surgery.

<table>
<thead>
<tr>
<th>GENOMIC TEST NAME</th>
<th>WHAT IS TESTED?</th>
<th>WHAT THE TEST DOES</th>
<th>WHY IS IT USED?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prolaris</td>
<td>Uses prostate tissue that was removed at the time of surgery</td>
<td>Tells how fast cancer might grow or travel to other parts of your body (metastasis)</td>
<td>Tells how fast cancer might return or travel to other parts of your body after surgery and may help decide further treatment options</td>
</tr>
<tr>
<td>Decipher</td>
<td>Uses prostate tissue that was removed at the time of surgery</td>
<td>Tells how fast cancer might grow or travel to other parts of your body (metastasis)</td>
<td>Tells how fast cancer might return or travel to other parts of your body after surgery and may help decide further treatment options</td>
</tr>
<tr>
<td>PORTOS</td>
<td>Uses prostate tissue that was removed at the time of surgery</td>
<td>Suggests how you might respond to added radiation and looks at possible spreading to other parts of your body (metastasis)</td>
<td>Helps decide whether radiation therapy is a good choice for you</td>
</tr>
</tbody>
</table>

MAKING INFORMED CHOICES ABOUT MY TREATMENTS

Treatment for prostate cancer can have side effects such as erectile dysfunction (ED) and harm to your urinary and bowel systems. Genomic tests can help balance the risks of treatment vs. close observation (active surveillance).

There are several types of genomic tests that are used to better understand prostate cancer and its risks. Which tests to use are determined by the questions you and your doctor have about your specific condition. Here is a list of some of the genomic tests available now and how they are used to answer a question that you and your doctor are trying to answer:

OTHER QUESTIONS ASKED ABOUT GENOMIC TESTING

HOW CAN GENOMICS TESTS HELP ME?
Genomics can better risk stratify your situation and can help you and your doctor make vital clinical choices like whether to do a rebiopsy, whether to move forward with treatment, or whether to have more radiation treatment after a prostate is removed.

WHY DO I NEED TO HAVE A BIOPSY OF MY TUMOR?
Your doctor will take a biopsy of your tumor to look at the cells under a microscope in the lab. Biopsy of the tissue will help to see if the tumor is benign or cancerous. Most times genomics tests use biopsy tissue. Most often a biopsy helps guide choices about treatment.
Genomic Diagnostic Testing for Prostate Cancer

ABOUT THE UROLOGY CARE FOUNDATION

The Urology Care Foundation is the world’s leading urologic foundation – and the official foundation of the American Urological Association. We provide information for those actively managing their urologic health and those ready to make health changes. Our information is based on the American Urological Association resources and is reviewed by medical experts.

To learn more, visit the Urology Care Foundation’s website, UrologyHealth.org/UrologicConditions or go to UrologyHealth.org/FindAUrologist to find a doctor near you.

DISCLAIMER:

This information is not a tool for self-diagnosis or a substitute for professional medical advice. It is not to be used or relied on for that purpose. Please talk to your urologists or health care provider about your health concerns. Always consult a health care provider before you start or stop any treatments, including medications.

For copies of printed materials about Prostate Cancer and other urologic conditions, visit UrologyHealth.org/Order or call 800-828-7866.

CONTACT:

Urology Care Foundation™
1000 Corporate Blvd.
Linthicum, MD 21090
1-800-828-7866
UrologyHealth.org

Resource made possible through the support of Genomic Health.