



**GEORGIA
CANCER CENTER**
AUGUSTA UNIVERSITY



Prostate Cancer: What All Men Should Know

Cancer Information and Awareness

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What are Risks and Risk Factors for Cancer?

Risks

- Anything that increases chances or risk of getting a disease
- Having a risk factor does not mean you will get a specific disease
- Some risk factors can be changed (modified) others cannot be changed

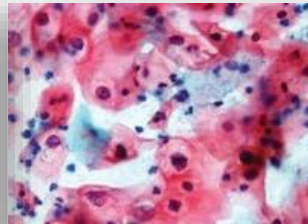
Genes



Environment



Viral and Bacterial infections



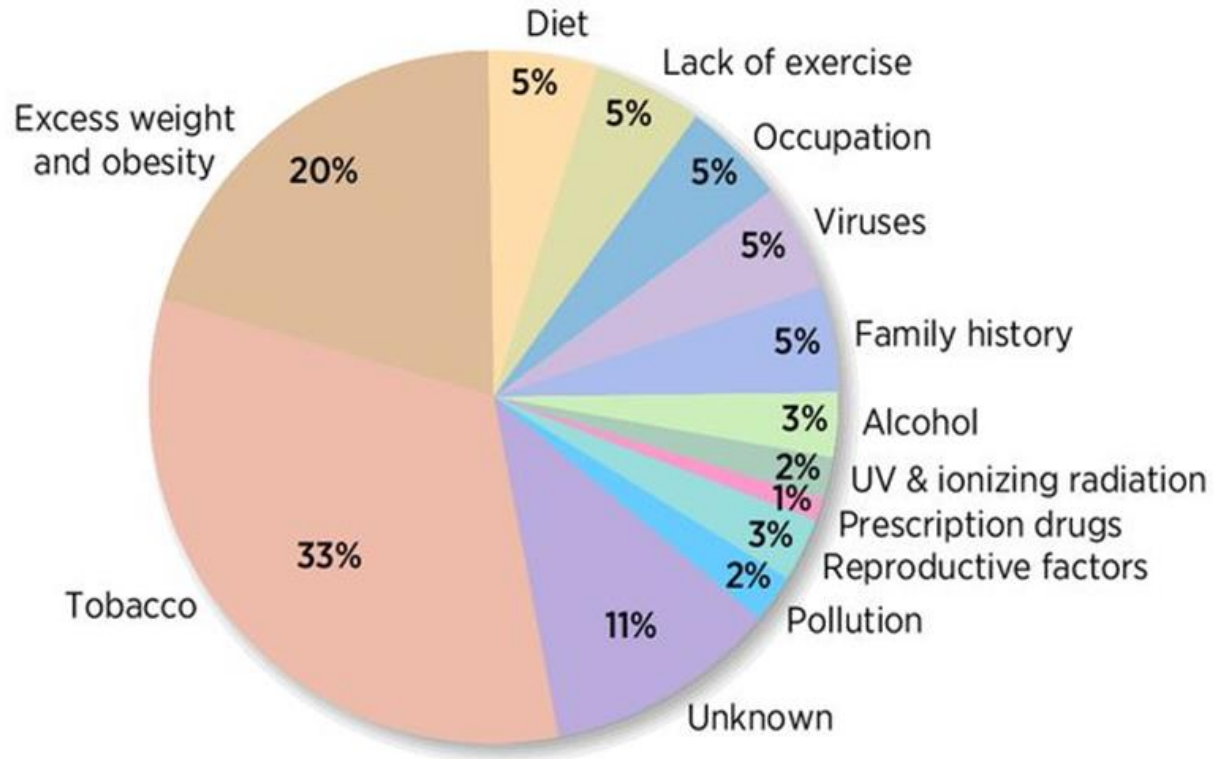
Lifestyle Behavior/Choices



Social & Economic Factors



Causes of Cancer

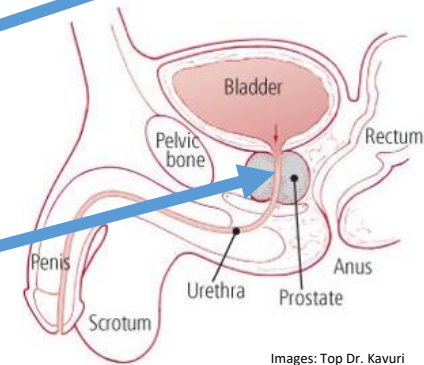
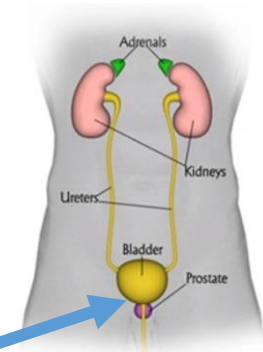


1/3 to 1/2 of cancer deaths in Western populations are linked to risk factors that can be changed. (2018)

Prostate Gland

Prostate gland is part of the male reproductive system

- Walnut sized muscular gland; weighs about $\frac{3}{4}$ ounce
- Located below the bladder
- Urethra (urinary tube) passes through the prostate

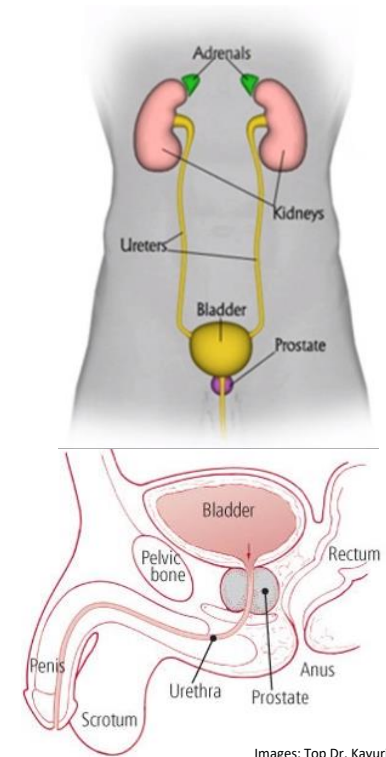


Images: Top Dr. Kavuri
Bottom: Harvard Health

Prostate Gland

Prostate produces fluid

- Component of semen
- Nourishes and transports sperm
- Contains many enzymes such as Prostate Specific Antigen (PSA)



Images: Top Dr. Kavuri
Bottom: Harvard Health

What is Prostate Cancer?



Cancer that forms in the prostate gland

- Most malignant tumors form in the larger outer area called the *peripheral zone*
- Slow growing cancer
- Requires medical diagnosis

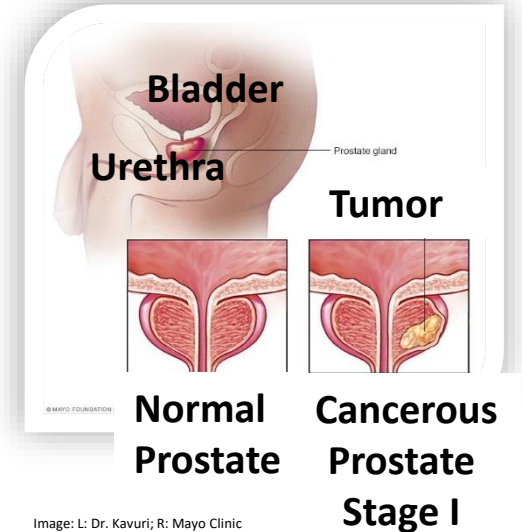
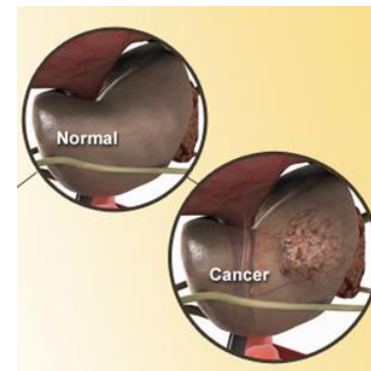


Image: L: Dr. Kavuri; R: Mayo Clinic



Cancerous Prostate Stage II

Types of Prostate Cancer



Adenocarcinoma

- Cancer of prostate gland cells
- Most common type of cancer in the prostate; 95-99%
- Increased PSA levels

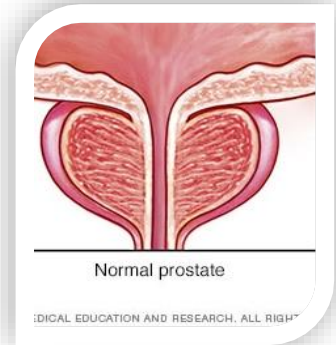
Small Cell Carcinoma

- Rare; aggressive
- Affects nerve cells and cells that produce hormones
- Does not usually change PSA levels

Sarcoma

- Very rare; hard to detect
- Develops in soft tissue like muscles and blood vessels
- Does not usually change PSA levels

Normal Prostate



Cancerous Prostate Stage I



Image: L: Dr. Kavuri; R: Mayo Clinic

Prostate Cancer Signs & Symptoms



No symptoms

Pain in bones:

- Hips
- Back (spine)
- Chest (ribs)



Discomfort in legs or feet: *from cancer pressing on spinal cord*

- Weakness
- Numbness

Shortness of Breath

Tired

Fast heartbeat

Dizzy

Pale skin

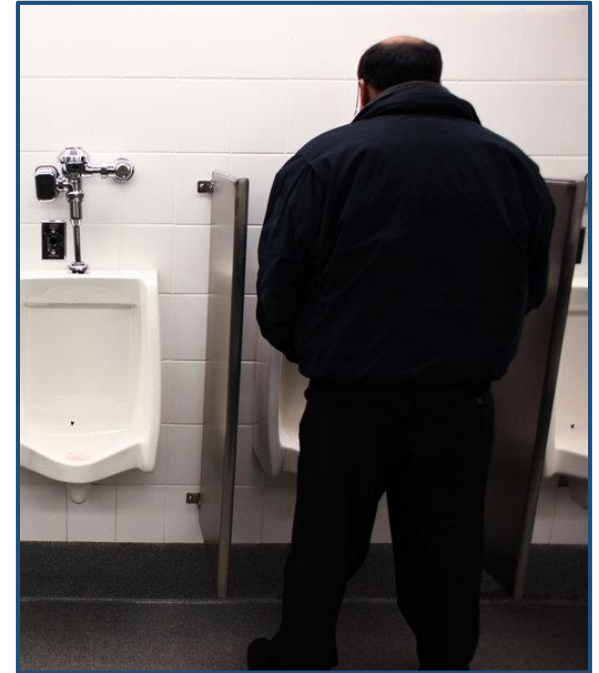
(from anemia, low iron in blood)

Prostate Cancer Signs & Symptoms



Urination:

- Sudden urge
- Difficulty urinating
- Starting or maintaining urine flow
- Weak urinary flow (“stop-and-go”)
- Dribbling
- Leaking
- Frequent urination – especially at night
- Pain when urinating
- Blood in urine
- Loss of bladder or bowel control



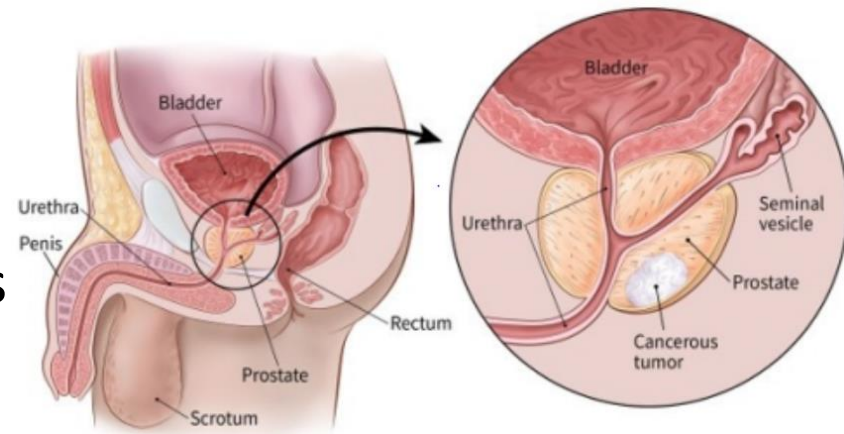
Prostate Cancer Diagnosis



Is cancer present? Has it spread?

Physical Exam

- **Digital Rectal Exam (DRE)**
 - Doctor feels for lumps or nodules
 - Assess if prostate size is enlarged



Prostate Cancer Diagnosis

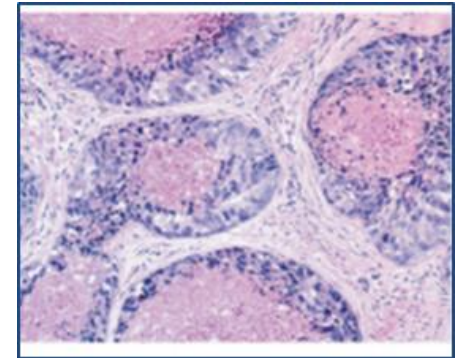


Is cancer present? Has it spread?

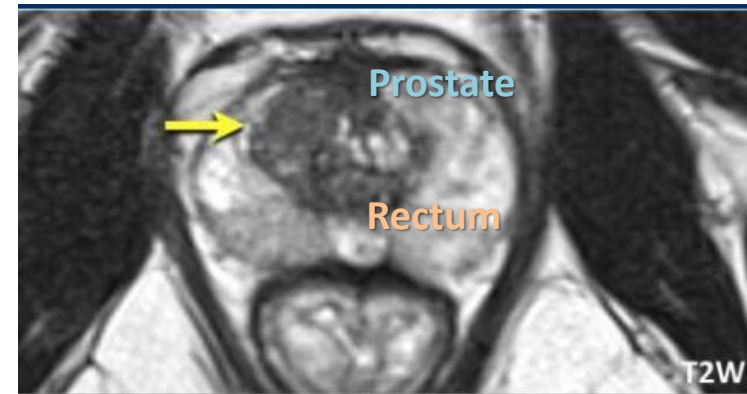
Tests

- **Prostate Specific Antigen (PSA)** level
- **Genetic** – Identify inherited gene mutations in cells; look at gene expression inside tumor tissue
- **Biopsy**
 - Gleason Score
 - Grade Group System
- **Imaging**
 - MRI – Magnetic Resonance Imaging
 - Example MRI – lesion in transition zone of prostate (yellow arrow)*
 - Ultrasound

Microscopic Slide of Prostate Cancer Cells



MRI of Prostate



Prostate Cancer Staging

Two Types



1. Clinical stage

Doctor's estimate of disease based on:

- Physical exam, including digital rectal exam (DRE)
- Lab tests
- Prostate tissue biopsy
- Imaging tests (examples: X-Rays, CT/MRI scans, ultrasound)

2. Pathologic stage

- Surgery
- Examination of removed tissue by pathologist using microscope



Prostate Cancer Stages

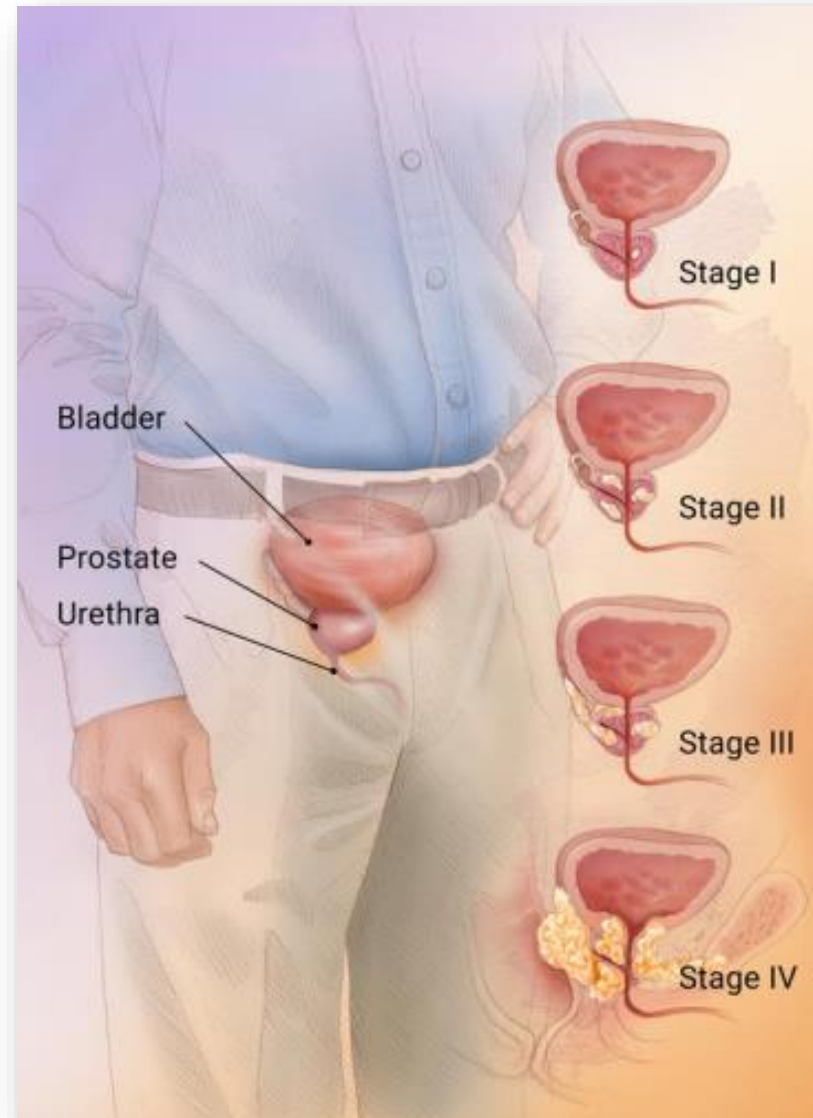
Staging assesses how far a cancer has spread

Stage I – Localized (no spread); slow growing; PSA low

Stage II – Tumor inside prostate; PSA levels low or medium; one or more lobe affected

Stage III – Spread outside prostate to nearby tissues, lymph nodes affected; PSA levels high, or high cancer grade, tumor growing

Stage IV – Distant spread from site of origin; spread to lymph nodes, other parts of body or to bones



Who Gets Prostate Cancer?



Our Grandfathers, Fathers, Uncles, Brothers, Sons

- Older age
- Family history of Prostate Cancer
- Smokers
- Obese and Overweight



In 2022, the American Cancer Society's estimates for **prostate cancer**:

In the United States are

268,490 New Cases

34,500 Deaths

In Georgia

8,550 New Cases

1,030 Deaths

African Americans are most affected

- More likely to get prostate cancer
- Twice as likely to die from prostate cancer than men of any group

Prostate Cancer Risks



Increasing age – 65+ years (60% new cases)

African American men

Caribbean men of African ancestry

Family history of Prostate Cancer – father, brother

- Doubles the risk
- Multiple relatives affected
- Especially if person was young when cancer occurred

Family history of other cancers

- Breast, colon or pancreas linked to gene mutations in BRCA1 or BRCA2



Know Your Family's Health History & Cancer History



Cancer.Net

Collecting Your Cancer Family History

- ▶ Hereditary Cancer is Cancer That Runs in the Family
- ▶ About 5% to 10% of Cancers Are Hereditary

How Do I Know if Cancer Runs in my Family?

- There are multiple relatives with cancer on the same side of the family
- People in your family were diagnosed with cancer at a younger age
- A family member has multiple tumors

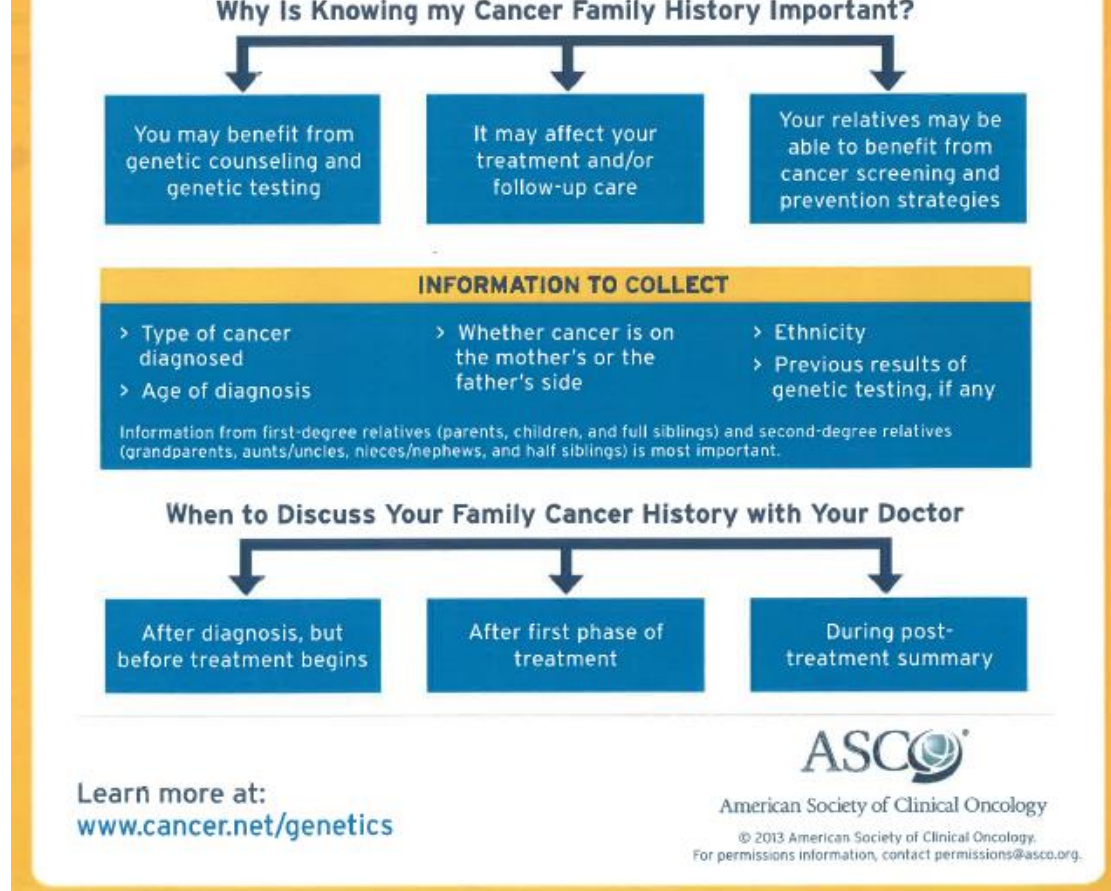
Why Is Knowing my Cancer Family History Important?

- You may benefit from genetic counseling and genetic testing
- It may affect your treatment and/or follow-up care
- Your relatives may be able to benefit from cancer screening and prevention strategies

INFORMATION TO COLLECT

> Type of cancer diagnosed	> Whether cancer is on the mother's or the father's side	> Ethnicity
> Age of diagnosis		> Previous results of genetic testing, if any

Information from first-degree relatives (parents, children, and full siblings) and second-degree relatives (grandparents, aunts/uncles, nieces/nephews, and half siblings) is most important.



Be informed

Know what kind of information to collect

**Keep a record
Write it down**

Prostate Cancer Risks You Can Change



Obesity – abdominal/waist

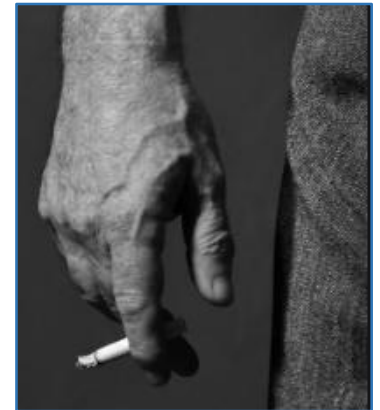
- Aggressive prostate cancer
- Doubles the risk
- Worse prognosis
- Increases the chances of cancer returning



Smoking – modest positive association

Reduce the Risk

- **Active Lifestyle** – benefits overall and prostate health
- **Diet** – plant-based, low fat, reduce red meat and fat

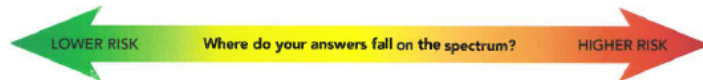


Prostate Cancer Resources

To Access this educational material, click [here](#)



PROSTATE CANCER RISKS



- Your age**

30s	40s	50s	60s	70s	80s
-----	-----	-----	-----	-----	-----
- Smoke cigarettes or use other forms of tobacco**

NO	-----	YES
----	-------	-----
- Overweight or obese**

NO	-----	YES
NO	-----	YES
- Lifestyle and other factors**

NO	-----	YES
NO	-----	YES
YES	-----	NO
- Family history and possible inherited risk**

NO	-----	YES
NO	-----	YES
NO	-----	YES
NO	-----	YES
NO	-----	YES
NO	-----	YES
- Personal health history**

NO	-----	YES
NO	-----	YES
YES	-----	NO
- Prostate cancer symptoms**

NO	-----	YES
NO	-----	YES
NO	-----	YES
NO	-----	YES
NO	-----	YES
NO	-----	YES
NO	-----	YES
NO	-----	YES

This list of prostate cancer risk factors and symptoms is based on information from the National Cancer Institute (NCI), the American Cancer Society (ACS), CancerNet, and the U.S. Preventive Services Task Force (USPSTF). Some of the symptoms may also come from other illnesses or conditions. Talk with your doctor to better estimate your prostate cancer risk and to make a screening plan that works for you.

For more information about prostate cancer, turn this page over and visit:

augusta.edu/cancer/community



TYPES OF PROSTATE CANCER

- Adenocarcinoma**
- Most common type - 95-99%
 - 9 out of 10 are acina adenocarcinoma
 - Acina cells make fluid that becomes semen
 - Increases PSA (prostate-specific antigen) levels

- Small Cell Carcinoma**
- Rare; less than 0.1% of prostate cancers
 - Affects nerve cells and cells that produce hormones
 - Aggressive
 - Does not usually change PSA levels

- Sarcomas**
- Rare; less than 0.1% of prostate cancers
 - Develop in soft tissue like muscles and nerves
 - Hard to detect
 - Does not usually change PSA levels

REFERENCES & RESOURCES

- National Cancer Institute (NCI) www.cancer.gov
- Cancer.Net www.cancer.net
- American Urology Association (AUA) www.auanet.org
- American Cancer Society (ACS) www.cancer.org
- Georgia Prostate Cancer Coalition www.georgiapccc.org
- CancerCare www.cancercares.org

WHAT TO LOOK FOR IN AN APP

Consider these tips if selecting an app.

- Consistent information based on latest evidence
- Language is culturally sensitive
- Any images of men are diverse
- Promotes informed decision-making about screening
- Shows pros and cons of screening
- Interactive

GEORGIA CANCER CENTER

A multidisciplinary Genitourinary Oncology Team of medical, surgical, and radiation oncologists, urologists, nurse navigators, and support services staff provides treatment for prostate and genitourinary cancers. www.augustahealth.org

US TOO – PROSTATE CANCER SUPPORT GROUP

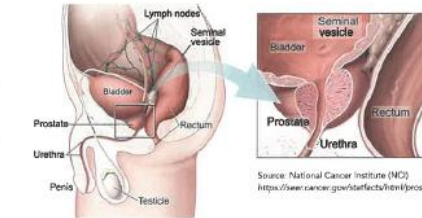
2nd Tuesday, 7:00 - 8:00PM, Georgia Cancer Center Outpatient Clinic, 1411 Laney-Walker Blvd, Augusta, GA. For information, call AU Health at 706-721-0472. Contact Mr. Terry Leiden at 706-724-8548. Email: leiden@leidenandleiden.com

FOR MORE INFORMATION

augusta.edu/cancer

Georgia Cancer Center
Cancer Information and Awareness
1410 Laney-Walker Blvd, CN-1179 D
Augusta, GA 30912

MALE REPRODUCTIVE AND URINARY SYSTEMS



Picture shows the prostate gland located below the bladder and in front of the rectum. Insert shows a cross section of organs. The tube that empties urine from the bladder (urethra) passes through the prostate.

GET THE FACTS ABOUT PROSTATE CANCER IN THE U.S.

Prostate cancer is usually a slow growing cancer of the prostate gland. The prostate produces seminal fluid to nourish and transport sperm. Prostate cancer is the second most common cancer in men. It is the second leading cause of cancer deaths in men.

- 1 in 9 men are diagnosed with prostate cancer
- African-American men and Caribbean men of African ancestry are most affected
- Average age at diagnosis is 66 years
- 191,930 new cases of prostate cancer are expected in 2020
- About 33,330 prostate cancer deaths are expected in 2020
- 5-year survival is 98%

LOWER YOUR CHANCES OF PROSTATE CANCER

- Do not smoke
- Keep physically active
- Maintain a healthy weight for your height
- Limit dairy products and calcium
- Limit or do not drink alcohol

SCREENING

Cancer screening and early detection saves lives. When found early, most cancers can be treated. This increases the chances of survival.

For men ages 55-69 years, the decision to get prostate screening should be an informed decision. Learn about the screening benefits and risks or possible harms. Consider your prostate cancer risk factors, whether you have other medical conditions, and your overall health. Discuss the pros and cons of screening, any concerns, and what you prefer with your healthcare provider. The American Cancer Society (ACS) recommends starting the screening discussion at:

- **Age 50** - for men who are at average risk of prostate cancer and are expected to live at least 10 more years
- **Age 45** - for men at high risk of developing prostate cancer. This includes African Americans and men with a close blood relative (father or brother) diagnosed with prostate cancer when they were younger than 65 years.
- **Age 40** - for men at even higher risk with more than one close blood relative who had prostate cancer at an early age.

Screening options to discuss:

- A Prostate-Specific Antigen (PSA) blood test. The 'borderline range' is a PSA level between 4-10. As the PSA level goes up, the chance of having prostate cancer goes up.
- Digital rectal exam (DRE)

Prostate Cancer Screening Recommendations



Talk with your healthcare provider

Screening – PSA (Prostate-Specific Antigen Test) & DRE (Digital Rectal Exam)

Take into account

- Race / Ethnicity
- Family History
- Health Status – other chronic diseases
- Harms / Benefits of tests
- Treatment outcomes



Prostate Cancer Screening Recommendations



Prostate Specific Antigen Test

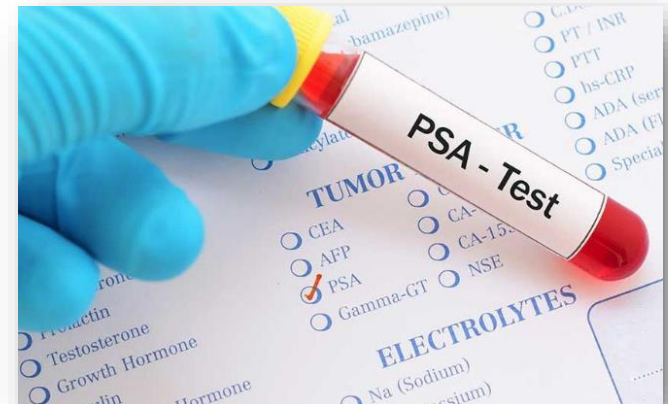
Discuss with Health Care Provider

Benefits:

- Reduce chance of death from prostate cancer

Harms:

- **False-Positive** – suggests cancer present when it is not
 - Requires more testing and possible biopsy
- **Over diagnosis & Over treatment**
- **Treatment complications**
 - Incontinence
 - Erectile dysfunction



Prostate Cancer Screening Guidelines Vary



55-69 years

- Assess benefits/harms and talk with health care provider
- Consider personal preference and values
- Individual decision about prostate-specific antigen (PSA) test
- Screening interval every 2 years or more
- Counseling, baseline PSA and DRE (*Am. Urological Assoc.*)
- Continue screening if lifespan >10-15 years (*Am. Urological Assoc.*)



70 years and older

- **No routine PSA screening** (*Preventive Services Task Force, 2018*)

Prostate Cancer Screening Guidelines Vary



50 years & 10+ yr. life expected

Begin conversation with provider to make informed decision

PSA *with /without* Digital Rectal Exam (DRE)

45 years – for Black men, + family history (fa, bro, son) Talk to provider

40 years – higher risk (*> one 1st degree relative with Prostate C. at early age*)



Prostate Cancer Resources

HEALTH TIPS for men about prostate cancer: *What you can do*

Most prostate cancers grow slowly and don't cause any health problems in men who have them.

If you decide not to get screened, you can always change your mind later. If you decide to get screened, it does not mean you have to go to the next step. You should discuss each step with your doctor.

Most prostate cancers found by screening are small and slow growing and may not be fatal. Some men may have a faster growing prostate cancer and will benefit from early treatment.

Older men, African-American men, and men who have a family history of prostate cancer have a greater risk for developing prostate cancer. If you are concerned that you may have a greater risk for prostate cancer, talk to your doctor about screening.

////// Screening for Prostate Cancer //////////////////////////////////////

One screening test for prostate cancer is a blood test, which can be abnormal (not normal) for several reasons besides prostate cancer.

The only way to know if an abnormal test is due to cancer is to do a biopsy.

A biopsy is a minor surgery to get small pieces of the prostate to look at under a microscope.

If the biopsy shows there are cancer cells, then your doctor will discuss treatment options.

Treatment of prostate cancer may include:

- ▶ Close monitoring and follow-up visits
- ▶ Radiation
- ▶ Surgery to remove the prostate

Side effects from radiation or surgery may include:

- ▶ Impotence
- ▶ Loss of bladder control
- ▶ Problems with your rectum

Medical groups do not agree on screening recommendations.

Talk with your doctor or nurse to decide together if prostate cancer screening is right for you.



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

CS264123

www.cdc.gov/cancer

Here are some questions you can ask your doctor about prostate cancer screening:

▶ *Am I at a greater risk for prostate cancer?*

▶ *At what age should I start to think about screening for prostate cancer?*

▶ *If I get my blood test, and it is not normal, what other things could I have besides prostate cancer?*

▶ *What is a biopsy, and how is it done?*

▶ *What are the side effects or risks of a biopsy?*

▶ *If my biopsy shows some cancer cells, what does that mean?*

Ask about all treatment options: close monitoring and follow-up visits, radiation, or surgery to remove the prostate.

▶ *What are the side effects or risks of each treatment?*

Prostate Cancer Resources

- **Information and Education**
Patient Resources guides; care resources including finding a doctor, treatment centers; financial resources
- **Clinical Trials information**
- **Caregivers**
- **Living with Prostate Cancer**
- **Science & Impact** – funding for prostate cancer research; scientific events
- **Information and Education**
- **Patient & Family Support** – support groups
- **Free Health Screenings** – PSA, COVID-19, Blood Pressure and Nutritional/Mental Health
- **Clinical Trials information**



Lower Your Risk of Prostate Cancer

Do NOT smoke



Limit or No alcohol

Maintain a healthy weight



Be physically active



30 minutes day or 2.5 hours week moderate activity

Diet – Think Color! Plant-based diet.

2 ½ cups of fruits and vegetables daily

- Tomatoes, cabbage, broccoli, cauliflower, soy beans, other beans
- Fish; lean meats



You Can Lower Your Risk & Prevent Cancer

Avoid tobacco, including secondhand smoke or e-cigarette vapor (aerosol)

If you smoke tobacco, including e-cigarettes or spit tobacco:

It's never too late to quit!



You Can Lower Your Risk & Prevent Cancer

Avoid tobacco



Protect your skin from the sun



Prevent infections (*such as* HIV/AIDS, HPV, Hepatitis B, and Hepatitis C)

Avoid or limit alcohol use



Follow Cancer Screening Guidelines

Promoting Health, Preventing Cancer

Maintain a healthy weight



Eat well balanced meals
(fresh fruits, vegetables
& whole grains)

Stay physically active

- Exercise regularly – 4 hrs. week
- 2.5 hours moderate exercise weekly
or
- 1.25 hours vigorous exercise a week



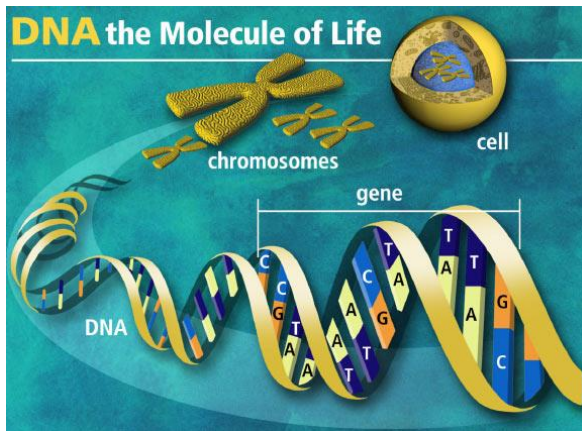
Promoting Health, Preventing Cancer



Sleep 8 hours

Know Your Family's Health History

Cancer risks vary;
May be related to inherited genes



Genetic Counseling

Assess risk of carrying a gene mutation or
developing a particular disease

Cancer Information & Sources

- National Cancer Institute [cancer.gov](https://www.cancer.gov)
- NCI SEER (Surveillance Epidemiology and End Results) database
Cancer Stat Facts: Prostate Cancer
<https://seer.cancer.gov/statfacts/html/prost.html>
- American Society of Clinical Oncology (ASCO) [Cancer.net](https://www.cancer.net)
- American Cancer Society [cancer.org](https://www.cancer.org)
- American Institute for Cancer Research [aicr.org](https://www.aicr.org)
- Mayo Clinic [mayoclinic.org/diseases-conditions](https://www.mayoclinic.org/diseases-conditions)
- Medline Plus U.S. National Library of Medicine National Institutes of Health
medlineplus.gov/prostatecancer.html
- Prostate Cancer Foundation [pcf.org](https://www.pcf.org)
- Georgia Cancer Center – [augusta.edu/cancer/community](https://www.augusta.edu/cancer/community)
- The Cancer Atlas canceratlas.cancer.org
- World Health Organization [who.int/health-topics/cancer#tab=tab_1](https://www.who.int/health-topics/cancer#tab=tab_1)
- WHO Country Cancer Profiles [who.int/cancer/country-profiles/en/](https://www.who.int/cancer/country-profiles/en/)



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