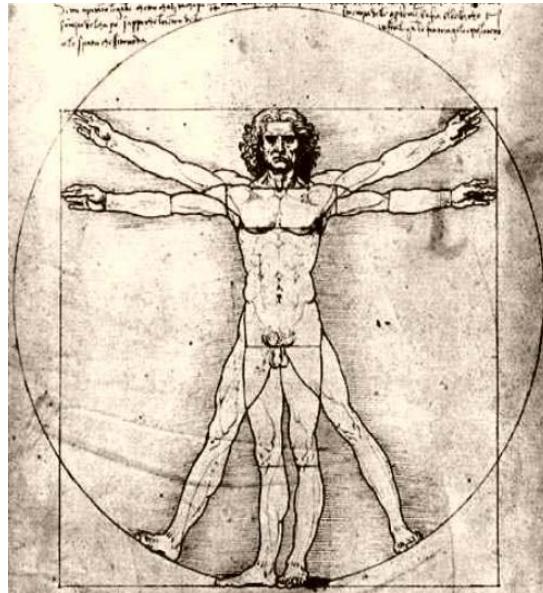


## *PROSTATE CANCER*

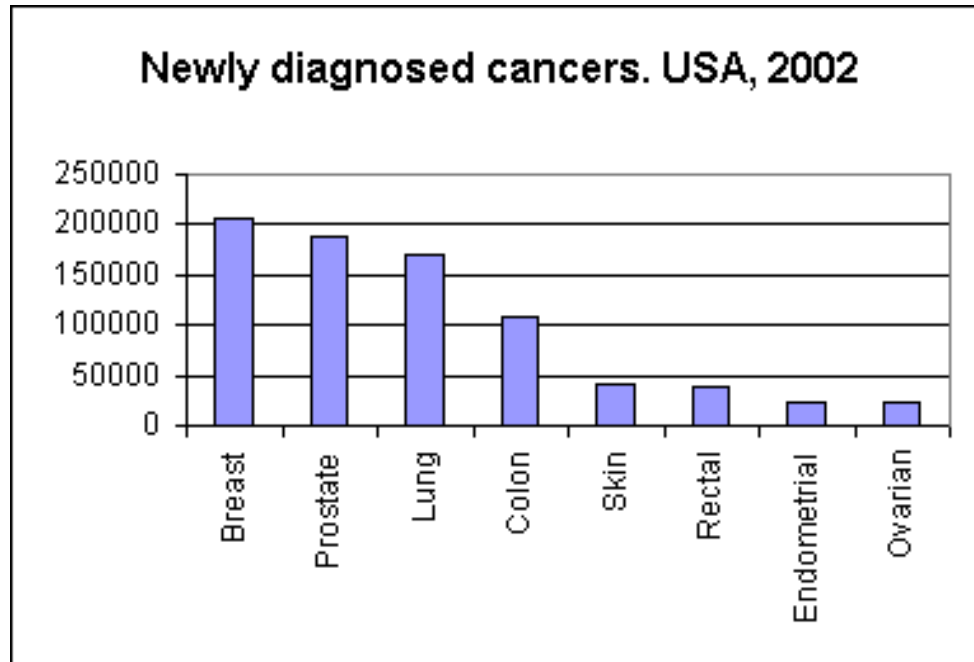


### **THE PROSTATE**

Prostate comes from the Greek meaning to “stand in front of”; this is very different than prostrate which means to “lie down flat”. The prostate is a walnut-sized gland found in men between the bladder and the rectum. Its function is to store, secrete and expel seminal fluid. The gland surrounds a portion of the urethra, the tube from the bladder.

### **SYMPTOMS OF A PROBLEM**

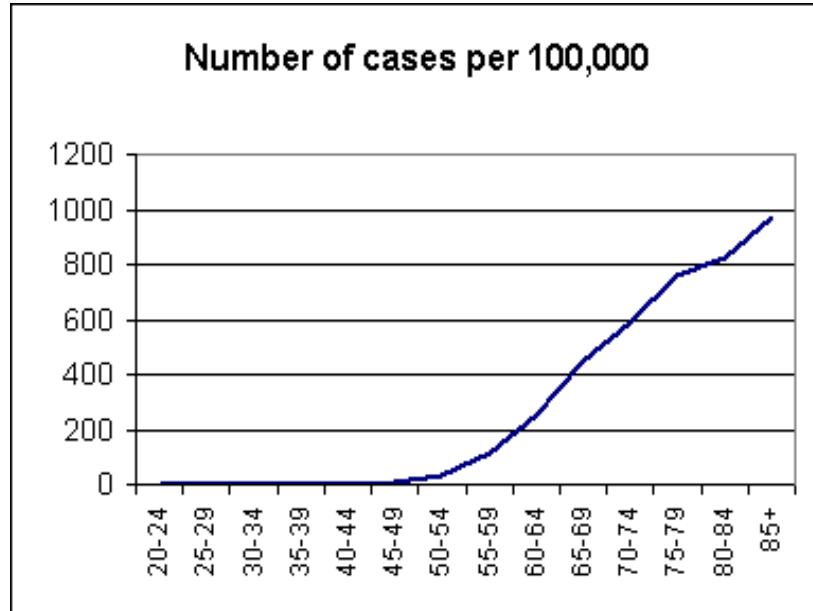
Generally until men reach their 40’s or 50’s the prostate does not cause any problems. At that time though, there may be urinary urgency, nocturia, frequency, and hesitancy, which translates to an urge to go now, frequent trips at night and during the day, and difficulty starting a stream. These symptoms usually are a sign of Benign Prostatic Hypertrophy (BPH) or an enlarging gland, a condition that occurs in almost all men, as they get older. Prostate cancer rarely shows these symptoms early on. Additional symptoms that can occur, but less frequently, are erectile dysfunction (ED), blood in the urine or semen, and bone pain. It should be noted that prostate cancer is usually asymptomatic when it is discovered, most commonly by a PSA (Prostate Specific Antigen) blood test.



## PROSTATE CANCER IS COMMON

Prostate Cancer is the most common cancer in men, with the exception of skin cancers. An estimated 200,000 men will be diagnosed with prostate cancer in the United States each year, and about 30,000 men will die this year.

Although the five (5) year cure rate for the disease approaches 100%, the incidence and mortality rate among black men is twice that of white men. Age plays a major role also, your chances of acquiring the disease before age 40 are 1 in 10,000 but then the rate climbs. The rate for men over 40 is about 1 in 39, and 1 in 14 over 60. Over 70, the incidence is 60% or greater. Most men are much more likely to die with prostate cancer than from it.



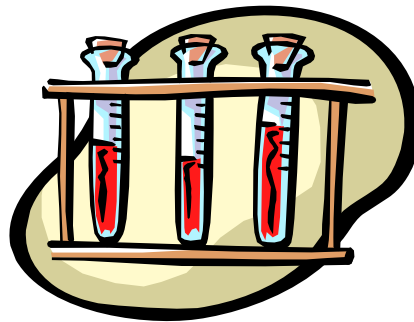
## RISK FACTORS

A quick look at all the many thoughts on risk factors for prostate cancer:

a.	Male	100%
b.	Age	Definitely
c.	Ethnicity	African American
d.	Genetics	Double for father/brother
e.	BRCA 1 and/or 2	Maybe
f.	Animal Fat/Red Meat/Dairy	Possibly
g.	Calcium	Possibly
h.	Vegetables (Lycopenes), primarily tomatoes	Protect
i.	Omega Fatty Acids	Protect
j.	Selenium	Potential protection
k.	Vitamin E	Inconsistent
l.	Zinc	May increase risk
m.	Soy	Modest protection
n.	NSAID	Unclear
o.	Aspirin	Modest protection
p.	Statins	Unclear
q.	Vasectomy	Not a risk factor
r.	Ejaculatory frequency	Controversial
s.	Hormone levels	High Testosterone- may be a risk factor
t.	Obesity	Conflicting data
u.	Physical activity	Uncertain
v.	UV light exposure	Possibly protective
w.	Agent Orange	Conflicting data

## FINDING PROSTATE CANCER

Early detection is the secret to cure. The problem is that the two tests available, Digital Rectal Examination (DRE) and the Prostate Specific Antigen (PSA) blood test both have issues with sensitivity and specificity, that is they may miss too many cancers or they may say cancer is present when it is not. With that in mind, there is disagreement among medical groups regarding screening, but several groups do recommend screening beginning at age 50, or at age 40 for blacks or those with a family history. Screening is not painful, it may be uncomfortable but it is not painful. The concern is that biopsies and procedures that follow a positive test may cause serious side effects or complications and in some cases may not have been necessary.



## THE PSA

The diagnosis of prostate cancer is most often suspected after finding an elevated PSA; less commonly the diagnosis is suspected after the DRE or when someone has symptoms. It should be noted that prostate cancer is not the sole cause of an elevated PSA.

Enlargement of the prostate with age, inflammation, and infection of the prostate can all elevate the PSA.

- a. PSA 4 or less – This level is generally considered normal, however in three separate studies, over 40% of men over 50 with normal PSA's had prostate cancer.
- b. PSA 4 to 10 - This level is a gray area; the false positive rate is fairly high and many men get biopsies unnecessarily. However, biopsy is usually advised in the hope of finding organ-confined disease. Refinements to the PSA have been introduced to try to increase the sensitivity and specificity (PSA velocity, age-specific ranges, free vs. bound PSA etc.) but these techniques to date have not resulted in better outcomes.
- c. PSA over 10 – Biopsy is recommended since the chance of finding prostate cancer is over 50%. Unfortunately at this level the disease is frequently not organ confined.

## THE DRE

The chances of actually feeling a nodule, lump or hardened area of the prostate that is cancer is very low, however as in breast cancer, if an abnormality is palpated it is generally wise to consider biopsy. One study found 18% of men with an abnormal DRE and prostate cancer had a normal PSA.

## THE BIOPSY

This is an imperfect test; frequently it is done “blindly”, that is taking samples from six (6) or more areas of the prostate randomly. A transrectal ultrasound may help in guiding the doctor in performing the biopsies.

## THE GLEASON GRADE

Once a diagnosis of prostate cancer is made, it is given a grade based on how aggressive the tumor appears to be, one (1) being the least aggressive and five (5) being the most. Since different sections of the tumor will show different characteristics, the second most common type is also determined and then the two grades are added to give a combined Gleason score. Scores of four (4) or less usually represent low-grade cancers whereas scores above eight (8) represent high-grade cancers. Treatment and prognosis are both related to the Gleason score. Additionally bone scans, CT Scans, or MRI's may be done to determine if the cancer has spread.



## TREATMENT

1. Prostatectomy – This is removal of the prostate gland entirely. It is done when the cancer is confined to the gland and when the patient is healthy enough to undergo major surgery.
2. Radiation – Either external radiation or internal radiation can be used to kill cancer cells.
3. Interstitial Brachytherapy (Seed implantation) – Radioactive pellets, or “seeds” are implanted in the prostate.
4. Cryotherapy - Freezing the gland at temperatures lethal to the cancer.
5. Hormone Therapy – Altering the bodies hormone balance to prevent the cancer from growing; this can be done with drugs or with surgery.

6. Chemotherapy – Drugs that kill cancer cells.
7. Vaccine – Pending FDA approval.
8. Watchful Waiting - In elderly or ill patients, frequent observation may be all that is needed.

## **SUMMARY**

In short, if you are a male, talk to your doctor and see if you should be checked.