



Medical News Report Articles on Prostrate Cancer 2016

Guidelines for prostate cancer screening

A. SCREENING FOR CANCER SAVES LIVES, but it can also lead you to unnecessary tests and biopsies. That is why there is controversy. The American Cancer Society's website should be consulted for all the details--- www.cancer.org on prostate and any cancer screening.

To get a PSA test is between you and your doctor. However, if you are to be tested, the ACS recommends you start at 50 years of age and if your test is less than 2.0 ng/dl, you be tested every 2 years unless you notice symptoms. If the test is over 2.0 ng/dl, test every year. If you have a family history, start testing at 45 years of age. Of course, it gets tougher if the test is over 4.0 ng/dl, so consult a urologist for further discussion. You may find different recommendations from other ., but these are the ones I trust

B. I am proud to be one of a 12-man committee dealing with screening guidelines for ACS. This committee is currently reviewing the possibility of using spiral CT scans for certain populations of potentially

high risk for lung cancer. Over time, each cancer will be addressed using evidence based data to create or revise guidelines.

C. As always, the decision about screening is between you and your doctor.

[**For informative images on this subject, please see my report at www.themedicalnewsreport.com \(Report #3\)**](http://www.themedicalnewsreport.com)

Omega 3 and prostate cancer risk

Fish oil has been touted to be absolutely necessary for good cardiovascular health. In fact, it clearly reduces inflammation in the body, now known to be a necessary step in the formation of atherosclerosis, autoimmune diseases, cancer, etc. Many people take far more than they should, because unfortunately, the FDA has no ability to enforce it unless it is a prescription. There is a prescription called Lovaza that is 12 times more pure and more easily digestible, not causing the fish taste and bloating that the OTC brands sell. 4gms a day is the standard dose for those with triglyceride problems.

Now there are new studies that have come out reported that fish oil increases a man's chances of contracting prostate cancer by 70%. Dr. Samadi, Lenox Hospital Department of Urology, NYC, on the TV show "Housecall", has stated that unless a man has resistant triglyceride problems, that no man should take more than 3 grams per day. If you eat an oily fish (recommended twice a week), skip the fish oil that day, and in fact, every other day may be enough. This issue should not make anyone get stupid about just dropping fish oil from the diet. So, talk to your doctor, your chances of developing prostate cancer, and jointly

make a decision about the amount you should take in by diet or supplement. Reference: MedPage

[**For informative images on this subject, please see my report at www.themedicalnewsreport.com \(Report #19\)**](http://www.themedicalnewsreport.com)

The Prostate- A Series-Part1-Anatomy and Physiology

Prostate cancer is the most common cancer in men, and is the second leading cause of death behind lung cancer. To give this subject its due, I must spend several reports to report enough information to give men the feeling that they can understand so that they can be informed when they decide to ask their doctor for a PSA test, to understand other diseases that can masquerade as cancer. Symptoms of “prostatism” certainly do not mean you have cancer. With enough knowledge, a man can be capable of dealing with the challenges of aging and prostate disease. Let me begin by demonstrating the anatomy of the prostate and the reason it is present. You will need to know this information before reading about cancer.

A. Anatomy and Physiology of the Prostate Gland

The prostate is a walnut size organ that is situated at the opening of the bladder as the urethra connects to the bladder and carries urine and semen out of the penis. It can be felt by palpating the area behind the base of the shaft of the penis and the rectum. Direct exposure for prostate surgery goes through this area. There is a urethral sphincter (muscle), which keeps the urine in the bladder from leaking out. The diagram shows these anatomical sites. The epididymis is the tube from the testicles to the prostate that secretes semen into the urethra from the prostate and testicular sperm. If the nerves that innervate the urethral sphincter do not work properly, urine can be retained in the bladder which can lead to infection. If the sphincter is incompetent, leakage of urine will occur.

This goes for women as well. The prostate can also greatly influence the flow of urine. As the prostate enlarges with age, difficulty urinating can occur. Symptoms of prostatism include, hesitancy to start urinating, a weak stream, a sensation of not completely emptying the bladder, dribbling, and getting up at night to urinate. If the prostate gets backed up with secretions, prostatitis can occur, which can be very serious with pain, fever, difficulty urinating, low back pain, which will require antibiotics, hydration, and bedrest. The bladder has a muscle layer as well, and assists emptying. Symptoms of prostatism can also occur with cancer. The bottomline is when a man starts having symptoms then it is time to see your doctor. Usually, palpation of the prostate will give the doctor an idea if the gland is enlarged, infected, normal, or cancer is present.

B. PSA—prostate specific antigen The prostate secretes a protein that can be measured in the blood called the PSA. When the test was first introduced, everyone jumped at the chance to have a blood test that would detect cancer. Over time, it became evident, that there are more causes for an elevated PSA. A mild infection, sex the night before, even a prostate exam could elevate the PSA. The false positives led to unnecessary biopsies, scans, and even surgeries. After many years of unnecessary testing, it was decided by the American Cancer Society and the USPTF (US Preventative Task Force) routine PSAs should be a decision between you and your doctor. I am speaking of someone who is 50 years of age without any symptoms. PSAs were initially recommended for all men 50 years and older, but now it is an informed decision based on the pros and cons you discuss with your doctor. That does not mean your doctor should forgo a prostate exam at 50. Remember palpating the rectum for cancer is part of that exam with a test for stool blood. Just like breast cancer, small cancers will not cause symptoms, can't be felt by the doctor, and could even be difficult to show up on a scan. Few cancers occur before 50, but just like early

breast cancer, these cancers tend to be more aggressive and don't have as high a cure rate. Also at what age do you want to quit testing for the PSA? It is again thought that after 75, there is no need without symptoms. Therein lies the dilemma. Currently, risk factors have to be factored in when deciding whether you decide to have yearly PSAs. A family history of prostate cancer, prostate symptoms, being black, and other factors may make you a good candidate for monitoring the PSA test. Doctors don't want to miss an early prostate cancer, so there may be a bias with your doctor to order the test rather miss an elevated test. That is where your knowledge must come into play as you discuss this with your doctor. Next month, I will discuss your options when the PSA is elevated, and the workup to diagnose prostate cancer.

[**For informative images on this subject, please see my report at www.themedicalnewsreport.com \(Report #32\)**](http://www.themedicalnewsreport.com)

Prostate Disease-Part 2—the PSA test and its value and limitations

Prostate cancer continues to be a serious cancer as the population of men continues to age. In fact, age is the number one risk factor for prostate cancer. 240,000 were diagnosed with PC in 2013, and 30,000 men died. It is found in microscopic amounts at autopsy in a large percentage of men. In other words, many older men die of other causes and the prostatic cancer is incidentally found at autopsy. A boy 6 years of age has a 16% chance of developing PC and a 3% chance of dying from it. The average age at initial diagnosis is 65-70, and the average age a man is likely to die of the disease is 80.

I discussed the risk factors last month, but I wanted to point out that if a man has a first degree relative (father or brother) with PC, it doubles the chance of developing PC. A high fat diet also increases the risk, and it is thought that this may be a bigger factor in black men. Also obesity is becoming more of a factor in increasing the risk of not only a PC, but a larger cancer that is more likely to be more malignant. The tumor's biochemical response in obese people is more aggressive and more likely to recur.

The symptoms of prostate cancer are the same as an enlarged prostate (urgency, urinating at night, frequently urinating, difficulty emptying the bladder completely, etc.). Blood in the urine would be another sign that should alert a man to get to the doctor for evaluation. Even erectile dysfunction can be a symptom of prostate cancer. **CHANGE IN SYMPTOMS** should be a sign for an evaluation. A urinary infection could occur with cancer.

The best way to survive any cancer is to find it before it spreads out of the local tissue or gland. Since early prostate cancer does not cause distinct symptoms (same symptoms as an enlarged prostate), until the PSA test was available in 1986, there was no way to easily detect early very curable cancers. The rectal/prostate exam could easily miss an early cancer too.

The prostate specific antigen test was created to alert the doctor to the possibility of cancer. The PSA is an enzyme that is secreted exclusively by the cells of the prostate. This makes it quite a selective test for detecting prostate cancer (PC). Testing the PSA every year or two virtually guarantees you will have a curable cancer (Johns Hopkins Dept of Urology). The test is a simple blood test. The normal range is less than 4.0 ng/ml (nanogram per milliliter), however the same author states he would be concerned above 2.0ng/ml in men 40-60 and above 3.0 for

men over 60. If a PSA level is rising no matter where the level starts is reason for concern.

Some organizations do not recommend routine testing with the PSA if a man is asymptomatic and without a family history of prostate cancer. Black men are more likely to get PC, and therefore that is a factor in considering this test. Routine testing in the average healthy man is now not recommended. The bottomline..... TALK TO YOUR DOCTOR! Medicare and most private insurance will cover an annual test from 50 years of age.

Because of the PSA, more PC is being diagnosed, and there has been a 40% reduction on death rate since 1993.

The reason for the controversy is the harm of getting a false positive (elevated) PSA test. Biopsies, worry, and complications (bleeding , infection, and pain) from the biopsies (usually 10-12) are factors in deciding. Only 25% of those that are biopsied have cancer. That means there are a lot of biopsies that didn't need to be performed based on an elevated PSA test.

There are other disorders and activities that can raise the PSA. Sex within 72 hours of the test, prostatitis, benign enlargement of the gland, a urinary tract infection, and a digital rectal exam within 72 hours can raise the PSA. Drugs that reduce the size of the prostate gland will reduce the PSA levels (Avodart, Proscar, Flomax and Uroxatrol) falsely by as much as 50%.

A drug (Propecia) to treat baldness has Avodart in the product, and can also can reduce the PSA levels. Talk to your doctor about this when considering a PSA.

A false negative test means the PSA is normal but cancer could be present. Certain prostate cancers do not secrete the antigen in the PSA test. These are fairly rare.

The PSA varies slightly with age, but if it is over 4.0 ng/ml, it should be repeated. If it remains above 4ng/ml, a urological consult is in order.

The PSA test can also be monitored after treatment for PC. After treatment, the value should 0.0ng/ml. I will discuss that in the future.

Transrectal ultrasound, CT, and MRI scans can pick these cancers up too, but are not cost effective tests for the general population for asymptomatic men.

Since men are reluctant to have prostate exams, the blood test is a huge boost in getting the general population of men tested especially for black men. The reason the age (40-45) of beginning testing is earlier in black men is that the disease tends to be more aggressive at the time of diagnosis, and there is a higher incidence of advanced disease and death rates.

When the test was first approved by the FDA to screen the general population, the incidence of cancer appeared to increase, but it was because more were being found. In fact, there are very slow growing cancers that do not necessarily need to be treated. This is called overdiagnosis, and if these are treated this is called overtreatment. So, how do we know which cancers to treat? We will discuss next month.

If the PSA is elevated, the doctor may want to repeat the test one or more times to detect if the PSA is rising over a few months. That along with repeat digital rectal exam will allow your doctor to be able to wait or refer to an urologist. Prostate cancers rarely grow rapidly, therefore

there is time for you and your doctor to be sure you need to proceed to a biopsy.

If a man has a definite elevation or rising PSA, a urological consult is in order. Be sure your doctor is Board Certified by the American Academy of Urology. There are also subspecialty urologists that have had extra training in cancer, who are Fellows of the AUA, and these surgeons are usually found in big medical centers. They tend to have the most experience.

Once a cancer is found, other tests need to be performed to determine the aggressiveness of the cancer. **NO MATTER WHAT, BE SURE TO SEEK SECOND AND THIRD OPINIONS.** Surgeons are likely to recommend surgery (82%) and radiation therapist are likely to recommend radiation of some kind (73% of the time)*. The newer proton therapy will be a second radiation consult. Don't be in a hurry. Discuss, educate yourself, and get more opinions.

Prostate biopsy--10-12 tiny biopsies will be taken at the time of the procedure. There are two approaches to biopsy. First is the transrectal approach. A finger is placed in the rectum to help guide the needle into the prostate. A small core of tissue is taken each time the needle is inserted usually in different locations within the prostate. The second approach is the transperitoneal approach. The needle is inserted through the skin between the scrotum and the anus. Since this approach requires spinal or general anesthesia, the transrectal approach is preferred for the initial biopsy. If tissue is inadequate, the transperitoneal approach might be considered. Most are now being performed with the assistance of ultrasound. The diagram below shows the technique. All areas of the prostate will need to be biopsied if a mass is not palpated. This is an easy test to perform and is usually performed in the office but may need to be performed in an outpatient facility if there are other medical

considerations (heart disease, severe arthritis with difficult positioning, fear, etc.).

The pathologist will evaluate these biopsies and assess the degree of the malignancy. The CT or MRI scan is used to assess the extent of the tumor, extends to the surface, and is on both sides of the gland. Scans can assess whether a tumor has spread to the lymph nodes in and around the pelvis. The CT scan (on the left below) shows a mass in the right lobe of the prostate to the lining (brown area inside the pink area). (ON the right below), an MRI demonstrates a large prostate cancer completely engulfing the gland with extensions.

Additional tests will include urinalysis, a cystoscopy (looking at the prostatic urethra and bladder), and bone scans if a cancer is found. Prostate cancer can spread to bones of the pelvis and spine early in some men.

Staging of the tumor is determined with these tests and will be discussed next month. The Gleason score will also be discussed and how that plays into the oncologist's decision for recommending treatment.

In summary, there have been major studies to look at how the PSA test would affect the death rate. With thousands of men studied from 50-69, only 0-1 men would be spared death in every 1000 men. 100-120 men will have a false positive test requiring unnecessary biopsy. 110 men will be diagnosed with cancer and about 50 of these men will have a complication from the treatment (29 with erectile dysfunction, 18 with urinary incontinence, and 1 with a serious cardiovascular complication). Research is underway to get more accurate results from a modifying the PSA test. Below is the NCI graph of these studies.

Because of all the controversy over whether men 50 and over should have testing, the advice and recommendations from medical

organizations have become difficult to follow. The American Urological Association (AUA) put out recommendations about who should NOT be screened. After you read it, I hope it will make sense. In the end, you are taking a risk of being worked up for an elevated PSA and either not have cancer or a cancer that is so slow growing that it would probably have never needed to be treated.

Those who don't need testing (AUA) Reference—The ACS

www.cancer.org The NCI www.cancer.gov

Johns Hopkins Prostate disorder manual (\$20) www.urology.jhu.edu

The prostate, lung, and colorectal, and ovarian screening trials from the National Cancer Institute

Call centers for cancer information to speak to a nurse educator 24/7

1-800-ACS-2345 and 1-800-4-CANCER ALWAYS DISCUSS THE ISSUE OF ROUTINE PSA TESTING WITH YOUR DOCTOR!! Know the risks and benefits of testing!!

[**For informative images on this subject, please see my report at \[www.themedicalnewsreport.com\]\(http://www.themedicalnewsreport.com\) \(Report #33\)**](#)

Prostate Cancer-Part 3

Risk Factors and The Gleason Score—how it plays a role in Treatment Summary—This is the third installment on prostate cancer. See medical news reports #32 and #33 I have discussed general information on the prostate and how symptoms of cancer are similar to benign enlargement of the gland. In the future, I will report on the management of BPH at a later date. Last month, I reported on the controversy of the PSA test. In

fact, the feds don't recommend routine screening with the PSA, and just this week the Canadian government came out with the same recommendation. But, these governments still recommend that you discuss this with your doctor. Even the American Cancer Society feels it is the decision between you and your doctor. Remember! Routine screening implies no symptoms. Not ordering a PSA does not mean you don't need a routine digital rectal exam and consideration for a stool specimen for analysis for abnormal DNA and blood for the early detection of colorectal cancer. This month I will review some facts about prostate cancer and the GLEASON SCORE, which helps oncologists decide the aggressiveness of a cancer on transrectal prostate biopsies. Risk factors--Americans could prevent close to 90% of prostate cancers with a proper diet, reports Johns Hopkins (Prostate Health Briefing). One in six men will be diagnosed with prostate cancer and one in thirty six will die from it. This is the most common cancer diagnosed in men. The most potent risk factor is AGE, since the older a man gets, the higher the chance, especially black Americans. Family history plays a key role especially with a father or brothers. A gene HPC1 mutation is the most common gene abnormality, but gene testing is still not readily available. Multiple prostate infections are NOT A RISK FACTOR. 90% of prostate cancers are diagnosed in the local or regional stage (I will discuss this next month with options for treatment). If the cancer is treated at the local or regional stage, the survival rate is close to 100%. If it metastasizes to bone (most common site, and it can be the only clinically apparent disease) and other distant organs, 28% survive 5 years. Most men with prostate cancer die of other causes rather dying of prostate cancer, especially if they over 70. However, the aggressiveness and stage of the disease must be assessed before watchful waiting is an option. The average age of diagnosis is 68.

The factors increasing the risk of prostate cancer below that are controllable:

1. Mostly vegetables and fruits
2. Lean meat, limited charred meats
3. Charring any meat, chicken or fish, and BBQ {all of these cause the formation of nitrosamines and amines which are carcinogenic}
4. Minimum intake of preservatives {especially nitrosamines in processed meats}
5. Low fat intake
6. Low carbs
7. Adequate exercise
8. Normal weight maintenance.
9. Smoking increases the risk.
10. Vasectomy is thought to be a factor, albeit minimal.
11. Taking testosterone is thought not to cause cancer, but if taken by men, it adds fuel to the fire if the cancer is testosterone sensitive.

IT SHOULD BE NOTED THAT OF THE SUPPLEMENTS RECALLED BY THE FDA, 60% CONTAINED UNLAWFUL PRESCRIPTION MEDICINE IN THEM, AND TESTOSTERONE AND ANDROSTEROIDS WERE 2 OF THE MOST COMMON. This could secretly fuel a prostate cancer. 12. Obesity causes 10% of all cancers and is a significant risk factor in prostate cancer. 13. Type 2 diabetes is linked through obesity and insulin resistance. How does a high fat diet and diabetes cause problems? It correlates with an insulin-like growth factor (IGF-1), hormone metabolism, and free radical

formation...all factors in oncogenesis (oncogenescausing cancer). We also know that obesity has caused an epidemic of type 2 diabetes, which is caused by insulin resistance (the insulin does not adequately lower blood sugar and accumulates at a high level). High insulin levels correlate with a higher risk of prostate cancer. Are there any supplements that might lower the risk of prostate cancer? Selenium (not to exceed 200 micrograms per day), vitamin D and E, Omega 3 fatty acids (some studies say it is the ratio of Omega 3 and 6 that is crucial—much more Omega 3) are thought to help. More research is needed to substantiate findings in small studies. There is also a study out that states Omega 3 can help prevent recurrence in prostate cancer. Lycopene (a carotenoid) found in tomato sauce is thought to reduce oxidative stress. I HAVE DISCUSSED ANTIOXIDANTS AND OXIDATIVE STRESS IN A PAST REPORT—see Medical News Report #10. Polyphenols in green tea is known to be an excellent anti-oxidant. Although not specifically stated for prostate cancer, there is increasing evidence that a chemical in turmeric (curcumin) used to make curry is another very potent anti-oxidant and some studies show a decreased risk. The dose needed is not known yet, because the studies have been in the animal model only. I HAVE STATED TIME AND AGAIN THAT THE NATURAL FORMS OF THESE SUPPLEMENTS IS FAR SUPERIOR TO TAKING PILLS, SO BE CAREFUL IN MAKING THE SUPPLEMENT INDUSTRY ANY MORE RICH THAN THEY ALREADY ARE. Plus the contaminants in these pills and capsules may totally counteract the benefit (heavy metals, rat excrement, arsenic, etc.). THE GLEASON SCORE Definition---This is a technique the pathologist uses to grade the degree of how malignant the prostatic biopsies are. A biopsy would not have been performed if the PSA was not elevated (as discussed last month), so biopsies of these patients assume there is a high index of suspicion for cancer. Once the biopsies

(usually 1012 separate biopsies) are examined under a microscope, the grade or score is given based on how malignant the cell is. The higher the number, the higher grade the tumor cells are. Tumors are usually graded as a) differentiated b) moderately differentiated c) poorly differentiated. The more poorly differentiated tumors are the most aggressive. In the 1980s, a doctor named Gleason, came up with this scoring system. The scores-1-5 is considered questionably malignant and correlates with a high percentage of local pre-cancers (with no spread) or very low grade malignancy. Most low grade tumors are extremely slow growing and if these patients are older, they most likely will die of other diseases long before the cancer could kill them. These patients could be considered for watchful waiting and re-biopsied in 3-6 months. These patients and their families are sometimes reluctant to wait, and this is dilemma. Obviously, the age of the patient is a big factor. Where the real controversy begins is with a score of 6. Seeing a score of 6, doctors have to consider waiting and re-biopsing or proceeding with treatment. Second opinions are really necessary in this case. If the score is 7-10, physicians would recommend treatment, assuming patients are in good enough physical shape to undergo treatment.

Studies have shown that about 20% of tumors with a Gleason score of 6 will have more advanced disease than predicted by a Gleason score alone. Even though these scores are guidelines, it requires a knowledgeable patient and a very experienced oncologist(s). There has never been a better place for second and third opinions (surgeon, radiation therapist, and a medical oncologist should all be consulted before a decision is made. Refrain from anyone else influencing you, because many men will be very biased by their particular treatment. In reading a review article in the Journal of Oncology, doctors from Johns Hopkins state that the Gleason score underestimates the magnitude of the cellular malignancy, and that is why other criteria must be factored

in, such as clinical stage, PSA level, and how much of the prostate contains cancer.

In the end, as this same article points out, many patients want treatment for fear of advancing disease. This is a real concern that can't be overlooked and can be increased by a treatment-happy doctor. Even the type of treatment is very difficult to decide on. There are several studies that not surprisingly show that surgeons recommend surgery and radiation oncologists recommend radiation more often. Tumor Boards keep the discussion of a case from specialty bias. I would never have cancer treatment without it. I certainly did when I had my throat cancer. There is a lot to consider when at advanced age a patient is diagnosed with a very slow growing tumor. Most physicians determine treatment acceptability on the basis of a man having at least a 5-10 year life expectancy. One other fact of life is THE LEGAL PROFESSION. Don't think they don't influence overtreatment decisions, especially if the doctor has already been sued. Doctors are human. We need legal reform!!! References: Journal of Oncology 2012, American Cancer Society, New England Journal of Medicine, The Johns Hopkins Department of Urological Oncology

[**For informative images on this subject, please see my report at www.themedicalnewsreport.com \(Report #34\)**](http://www.themedicalnewsreport.com)

3. Prostate Cancer-Part 4—Staging and considerations for Type(s) of Treatment

Staging determines the choice of treatment, the extent of the cancer, and the probable 5 year survival rate. Most prostate cancers do not kill the patient. Other causes frequently are the cause of death. It is for that

reason, one of the choices, especially for more senior patients may be to NOT TREAT THE CANCER. It is a real option after 75 years of age.

I have previously discussed general information, the PSA test, and the Gleason Score in the past 3 reports.

www.themedicalnewsreport.com #32,33, and 34

It is not easy for patients to decide on a treatment plan for this cancer. There are many options when considering therapeutic regimens.

A. FACTORS

The oncologist has many factors to consider:

1. Patient status, co-morbidities (other diseases)
2. Age (healthy enough to tolerate therapy or have a Expected life expectancy of less than 10 years. Older patients might consider not treating a slow growing cancer.
3. Stage of the tumor (I,II,III, and IV)
4. PSA number (LESS THAN 10 or over 10)
5. Gleason score (6 or less vs. greater than 6)
6. Results of imaging studies (CT,MRI, PET, ultrasound)
7. Side effects frequently play a major role in a patient deciding on a choice of treatment. These must be openly discussed.
8. Patient's willingness to drive or be driven to a treatment facility daily for radiation.
9. Patients may need to continue a part or full time job during the treatment.
10. Patient's ability to make co-pays.

B. STAGING

of all tumors is critical to determine the proper treatment(s) and is used to communicate with other doctors (other oncologists and referring doctors). A patient should consider consulting at least a surgeon and radiation oncologist to discuss the option(s) for treatment (urological/surgical, radiation, and medical). I would also recommend talking to a medical oncologist just in case any chemo is contemplated.

The prostate cancer staging system uses the T,N,M rating.

T=tumor N=nodes M=metastases

T=tumor (the size, position in or out of the prostate) T uses a 1-4 rating based on the extent of the tumor, T1-found incidentally during a prostatectomy for BPH (enlarged prostate), T2-found on one side of the prostate,T3-both sides, T4- to the outer capsule or through it involving the seminal vesicles or the immediate surrounding tissue such as the bladder, rectum, and urethral sphincter.

The seminal vesicles (and Cowper's glands) provide the liquid for sperm during orgasm as seen in the drawing above.

The PSA number and the Gleason scores are taken into consideration in staging. The cutoff for the PSA is less than 6, 6-10, 10-19, 20 and greater. The Gleason score is separated from 6 or less, 7, 8 or greater. The higher the scores, the more malignant the tumor, the survival rates is reduced. Knowing the tumor is male hormone sensitive or not is important in determining medical therapy.

N=nodes (indicates the lymph node spread, either one or more). The N uses X,0, and 1 (this is easier to follow, since the X means the nodes were not assessed, 0 means no nodes, and 1 means one or more nodes involved).

M=metastasis (spread to other parts of the body, including the lymph nodes, bone, lungs, liver, or brain

M uses 0,1a,1b, and 1c (indicating no spread to other organs, to bone, and to other organs). If you want to see how complicated this system is, but absolutely necessary. See below:

The American Cancer Society explains staging on their website as well.

www.cancer.org/prostatecancer/stages

D. OPTIONS FOR TREATMENT

SURGERY---Surgeons-“a chance to cut is a chance to cure”. Robotic surgeons call their surgery “nerve sparing”, however, the tumor may dictate that a nerve can't be spared. Even if the nerve is spared, it may be injured and temporarily not function. The current studies are difficult to analyze, but in general, robotic surgery has fewer side effects than a radical prostatectomy. If one compares the results of cure and side effects by a VERY EXPERIENCED robotic surgeon to a less experienced surgeon, there can be a big difference in side effects. Robotic surgery can be recommended if the tumor is confined to less of the prostate, thus giving a better chance for sparing the nerves for erection and bladder and bowel control. This is appealing to younger men for obvious reasons. If the tumor is extensive, a more radical procedure will probably be recommended. However, all treatments will have these side effects to some degree.

RADIATION THERAPY-“you don't have to be cut on”. Radiation has about the same percentage of side effects as surgery, except since the rectum is irradiated, there are usually more intestinal side effects.

There are two different isotopes used (photon vs proton). Proton delivers more defined radiation to the gland sparing surrounding tissues, thus appearing to be superior, but follow up 2 years later has not proven that there is any difference in results regarding cure and side effects, temporary or permanent.

How serious side effects are depends on individual patients, therefore, it will be difficult to make the comparison between the two leading techniques for prostate cancer (IMRT vs. PT), but ongoing studies are under way. We must go by the research evidence, not what well-

meaning patients say. The cost for proton therapy is 3 times as expensive as IMRT. The equipment costs millions more than IMRT, and most big cancer institutes are investing in them, but there are other cancers where the proton therapy is definitely better, so it is no surprise they are adding proton therapy. This is big business. Either treatment is covered by Medicare, but I am anticipating seeing a cut in reimbursement for proton therapy (IMRT=\$ 12-15,000 vs PT=\$35-40,000). Robotic surgical equipment and technical costs are not covered more than a radical prostatectomy (the hospitals eat cost), so why would Medicare pay so much more for this technique when it so far has not proven to be significantly better? Who is greasing the palms? With healthcare reform trying to reduce costs, there is no excuse.

Complications and side effects need special consideration. I will discuss this next month.

You need to know the treating physician's personal complication rates, the percentage of side effects in their patients, and what can be done about them.

Very enlarged prostates---Some men have such large prostates, it may be recommended to shrink the gland before any treatment can be performed. This can be achieved by oral medication (5 alpha reductase inhibitors shrink the prostate and keep it from growing, but not the cancer—

Proscar, Avodart, and Jalyn). I will discuss the subject of enlarged prostates (benign) in a future report.

www.webmd.com/men/enlarged-prostate-typesmedications

If the disease is confined to the prostate and does not penetrate the capsule, a curative treatment will be recommended with a greater than

90% (up to 99%) chance of cure regardless of whether surgery or radiation is chosen.

If the disease has spread locally or to the nearby nodes, a more aggressive treatment plan will be recommended.

SURGERY

Radical prostatectomy either with robotic or open surgery is offered. It is beyond the scope of this report to discuss surgical management in detail.

The radical prostatectomy is approached in 2 ways, either through the abdomen or perineal (between the scrotum and the anus), as seen in the drawing below.

www.cancer.gov/cancertopics/pdq/treatment/prostate/Patient/page4#Keypoint16

www.davincisurgery.com

www.mountsinai.org/patient-care/urologicalareasofcare/robotic-prostate-surgery

For a video animation of the procedure for Robotic Da Vinci surgery:

www.miamiroboticprostatectomy.com/davinci.html

There is less trauma to the tissues, less bleeding, and potentially less trauma to the nerves, and it is performed endoscopically through tiny incisions in the abdomen.

RADIATION THERAPY—different options

Radiation treatments vary as well. It is based on the technique and the isotope used. Standard external radiation (convolutional radiation therapy, IMRT (intensity modulated radiation therapy), brachytherapy (radiation needle implants) and other variations using photons are all

being used. IMRT is the most popular although a study from the internet site, Medpage, in 2013 reported no benefit over the standard RT, and felt the difference in cost did not justify the more advanced type of treatment.

Proton Therapy requires less radiation, because of the precision of protons, and the tumor is the only organ receiving radiation (except for some scatter), as opposed to IMRT that does irradiate some of the surrounding tissues slightly. Keep in mind, most of these patients being treated with primary RT are those with earlier less advanced prostate cancers. The cure rates are similar, but are the side effects?

I have read a huge number of articles about the pros and cons of each of these treatments. The best medical journals state there is no advantage of proton over the other techniques of radiation for the treatment of localized prostate cancer regarding cure or side effects, but most compare after 2 years. It may be there are fewer temporary side effects, but there are no reports yet to settle the issue.

There is ongoing research to compare these techniques (IMRT vs PT) in different age groups, stages, and percentage of side effects. In time, one technique may be proven to be better with more cures and less side effects in the next few years.

Dr. Nancy Mendenhall,etal, a recognized authority in radiation oncology at the University of Florida, recently wrote an article (Journal of International Radiation Oncology) reporting on 200 patients (which is a small number) who were treated with proton therapy, and these patients had an excellent response with a low percent of side effects just as efficient as IMRT.

A recent study reported that proton therapy has already added \$350 million to healthcare costs in the US.

I am confident these outstanding doctors would not support proton therapy as another excellent option for several site specific cancers. We just can't say it is any better when it comes to prostate cancer treatment YET.

Being informed is vital to make a good decision.

ANTI-HORMONAL THERAPY

Many patients will be placed on lifelong anti-testosterone hormone therapy to help prevent recurrence. Most of these tumors are testosterone sensitive, meaning the tumor can be accelerated by male hormone. It is not thought, however, to cause prostate cancer. Side effects of this hormonal treatment will cause some breast tissue growth and tenderness, loss of some body hair, and other feminizing side effects.

CONSIDERATION FOR NO TREATMENT

This is a real consideration for both the doctor and patient especially if the tumor is less malignant, deemed to be slow growing, and the age of the patient is 75 or older. The overall health of the patient is a very serious consideration. These tumors likely will not be the cause of death. Why put up with side effects from treatment especially incontinence. The family must understand this is a legitimate choice.

[**For informative images on this subject, please see my report at www.themedicalnewsreport.com \(Report #35\)**](http://www.themedicalnewsreport.com)

Prostate Cancer—Part 5—Medical Therapy for advanced and metastatic disease.

I have spent a great deal of time on prostate cancer, because it is the most common cancer in men and the #2 cancer killer of men. The death

rates are only because men delay diagnosis and treatment. The best news is that if this cancer is detected early, the cure rates are well over 90% no matter what treatment a person chooses. Most of these cancers are detected in a local stage, but the Gleason score, PSA level, and # of positive biopsies determine how curable the cancer is.

However, it is known that 50% of patients with localized very treatable disease will recur usually in the first 8 years. Therefore, close follow up is very important.

Another issue must be discussed. When a doctor tells a patient that their cancer is low risk, what does that mean? There is an excellent booklet put out by Johns Hopkins on prostate disorders that has a great discussion on prostate cancer. It can be purchased for \$20 from:

www.johnshopkinshealthalerts.com/bookstore

For purposes of this discussion, there are many tests that can be performed on the biopsy, blood, and urine samples to determine whether a cancer is low risk, intermediate, or high. This includes special proteins in the urine, genetic marker testing, looking for damaged DNA in the cancer cells, how rapidly the cells are dividing, and testing the cancer cells for 17 genes and how they interact with each other. Some of these tests are investigational.

In the end, a man and his doctor will choose to carefully watch a cancer, definitely not have treatment, have surgery, radiation (multiple options), with or without hormonal therapy, and other medical adjuvant therapies. This will be based on age, general health status, cancer risk category, and personal preferences. If you read the Hopkins bulletin, it is stated that about 80% need definitive treatment and the other could have a nontreatment option.

Non-treatment options with newly diagnosed patients

The NCCN (National Comprehensive Cancer Network) recommends 2 non-treatment options in very specific cases. Today, this includes 8-12% of cases, however, the latest thinking, it should be closer to 40%. This implies over-treatment, which is being discussed heavily these days in the face of Obamacare and healthcare reform. It is a controversial subject for sure, but does have merit. Considering the side effects of the treatment (regardless of type of therapy) especially bladder, bowel, and impotence issues, there are clearly many men who would be much better off with one of these 2 non-treatment options: active surveillance and watchful waiting:

Active surveillance is defined by monitoring the PSA levels every 3 months and repeat prostate biopsies 12-24 months. This is a very good choice if there is a low risk of progression of disease, T-1 or 2a stage, a Gleason score of 2-6, and a PSA of less than 10ng/mg. If there are clinically significant rises in the PSA, initiation of therapy may be recommended (theoretically the PSA should be zero). Repeat biopsies are recommended every 12-24 months with DRE (digital rectal exam) every 12-24 months. It has been emphasized that to adequately assess the risk category of a prostate cancer, there needs to be 12-14 separate core biopsies of the entire prostate gland.

Active surveillance would not probably be indicated for patients 75 or older or if life expectancy is less than 10 years.

The NCCN also endorsed a —very low risk|| patient, who has a T1a stage (the least amount of cancer by stage), is 57 years of age with a life expectancy of 20 years.

The key to active surveillance is catching a cancer before it progresses (if it does) and having radiation or surgery. A study is ongoing comparing surveillance with treatment.

The other option is Watchful waiting is defined as a patient with other life limiting disease or less than a life expectancy of 10 years. These patients are usually older and in poorer medical condition. Quality of life is the important issue, and treatment could create more trouble than not being treated.

A study in 2009 cited that the 10 year survival rate with watchful waiting was 94% with an average age of 78 at the time of diagnosis.

With advanced local or metastatic disease, watchful waiting is still an option. Advanced disease, however, may require surgery or radiation (plus hormonal therapy).

Failures of primary treatment regardless of method will occur either because of undetectable micro-metastatic disease or failure of the primary treatment. But, it is important to remember that regardless of the treatment type, the survival and death rates are the same!!

If the prostate cancer is androgen sensitive (the tumor cells will grow in the presence of male hormone), which most are, the chances of preventing recurrence is increased by taking hormones and anti-androgen meds for an extended period of time after the primary treatment has been completed. This is true for advanced and metastatic disease as well.

If there is an aggressive more advanced cancer, certain cancer drugs may be recommended. Black men are more likely to have more aggressive tumors, and therefore should consider more aggressive therapy.

Options for treatment:

1. Active Surveillance
2. Watchful Waiting
3. Surgery—radical (open, laparoscopic, robotic, with or without nerve sparing depending on the extent of cancer)
4. Radiation therapy-external beam (standard, 3D, IMRT, brachytherapy, proton)
5. Hormonal Therapy---Male sex hormone (androgens), especially testosterone, is required to maintain the size and function of the prostate. Intermediate and high risk cancers are best treated with the addition of drugs that interfere with androgens, by blocking receptors that testosterone attach to. Hormonal therapy used to be reserved for metastatic disease, but more recently it is given to those patients who have a significant risk of their cancer spreading. For metastatic disease, the goal is to prolong life and relieve symptoms such as bone pain or urinary problems.
6. immunotherapy-vaccine

Survival data for metastatic disease—75% live less than 5 years, 15% live 5-10, and 10% live more than 10. PSA levels help predict survival in these men. A rising PSA after hormonal therapy indicates a poorer response, and a rising PSA during hormonal treatment indicates the disease is progressing (called castration-resistant disease).

There is controversy on the timing for hormonal therapy, because these meds have significant side effects (loss of libido, breast enlargement, weight gain, loss of muscle mass, osteoporosis, fatigue, liver abnormalities, a decline of cognitive function, and hot flashes. It also increases cardiovascular risks, and type 2 diabetes).

Options for hormonal treatment

1. Surgical castration (removal of the testicles)-much less commonly used in the US, because the newer meds can accomplish the same thing. Still, it prevents the major expense of medications.
2. Medical castration-this requires understanding how the pituitary works (I refer you back to that discussion in:

www.themedicalnewsreport.com/#31

The hypothalamus of the brain secretes the hormone releasing gonadotropin/luteinizing hormone, which stimulates the pituitary gland to produce the gonadotropin/luteinizing hormone LH and FSH which stimulate the testes (Leydig cells) to secrete testosterone. FSH stimulates sperm production in the testicle. A small amount of testosterone is produced by the adrenal gland

(I will discuss in a future report). The hormonal drugs inhibit the sequence of this chain reaction.

Subtypes of anti-testosterone drugs:

A. LHRH agonists—also known as gonadotropin-releasing hormone (GnRH) agonists. These synthetic drugs actually increase the production of testosterone, but after a short period, they block the luteinizing hormone reducing testosterone. They can delay progression of cancer and prolong life.

B. LHRH antagonists (GnRH)—these target and block the luteinizing hormone receptors in the pituitary, which shuts off the production of testosterone in the testes. These are injections.

C. Anti-androgens—these occupy the receptors in the testicular cells that testosterone has to bind with. It does not block the production of testosterone. It may not be as effective as surgical or medical castration.

D. Total androgen blockade—the adrenal glands also produce some androgens, including testosterone. These medications may be added to a medical castration. The combination is called total androgen blockade. This combo does not work any better than the medical castration medications in my reading.

E. Cycling of these drugs is recommended by some oncologists to prevent resistance of the cancer cells to these medications.

7. Chemotherapy—initiated when the above drugs stop working (castration-resistant). Chemotherapy is used to help relieve pain and other symptoms. Docetaxel (Taxotere) plus prednisone does prolong life.

8. Other types of medical treatment-Immunotherapy— sipuleucel-T (Provenge) is a vaccine made by using the T- cell lymphocytes of the patient to target prostatic acid phosphatase, an antigen expressed by most prostate cancers.

Metastatic disease can possibly be controlled with a variety of agents: hormones, radiation, radiation pharmaceuticals, chemo, and surgery depending on the symptoms. Pain, neurological conditions, etc. are the main reason for palliative treatments. Surgical decompression of spine fractures to prevent spinal cord damage is an example of surgical management. A TURP (trans-urethral prostatectomy) may be required if bladder obstructive symptoms occur from the tumor. These regimens are more about treating the symptoms rather than disease.

9. Clinical Trials and the latest research

Clinical trials are ongoing, testing new drugs (targeted immunotherapy); (Prolia) denosumab, a monoclonal antibody, is showing a good response to prevent metastatic disease and/or prevent fractures in bone metastases. I wish there was as much research being performed on other cancers, but the more common cancers get all the funding.

In 2011, the FDA approved Abiraterone (Zytiga), a oral medication indicated for failure of treatment in castrationresistant cancer, as it delayed progression of cancer by 16.5 months. The FDA approved in 2013 the radioactive isotope that goes directly to the bone via the blood stream, Xofigo(radium Ra223), which shows control with bone metastases, living 3 more months. This may seem a small amount of time, unless you are in that situation. Enzalutamide (Xtandi), another medication was approved in 2012, that blocks testosterone receptors, and has become the strongest inhibitor of testosterone.

If the prostate cancer is more advanced or metastatic, there is still a good chance that the progression can be controlled, so it is no time to give up. Making cancer more of a chronic disease is now a reality.

There are good options for these tumors. Chemotherapy is considered a last resort after hormonal and androgen deprivation therapy fails.

The medical treatment of prostate disease is very complicated. There are 2 groups of drugs that interfere (one way or the other) with testosterone production in the prostate, adrenal gland, and testes. Stopping growth of these tumors, whether local, advanced, or metastatic, prolongs survival. Chemo is used if these meds begin to fail, and chemo may be added to the hormonal therapies.

I want to advise you to pick your doctors wisely, because the options are so numerous, you will not be able to comprehend all that is said to you, opinions from friends, or the internet.

So many factors are in play, and it will be necessary for you to trust your doctors to choose the right therapy for you. There are not many cancers in the body that have so many options, and research is ongoing at a feverish pace. I hope I have given enough information for what goes into diagnosing and treating prostate cancer. There are very good references from the American Cancer Society and the National Cancer Institute.

www.cancer.org/prostatecancer

www.cancer.gov/prostatecancer/learn

www.johnhopkins/healthtopics.com/alerts_index/prostate

[**For informative images on this subject, please see my report at
www.themedicalnewsreport.com \(Report #36\)**](http://www.themedicalnewsreport.com)

Prostate Cancer-Part 6--The management of side effects of prostate cancer treatment; Are there major differences between different types of treatment? Late breaking News—does testosterone cause cancer?

I have touched on the side effects of prostate cancer treatment before in several previous reports:

www.themedicalnewsreport.com/32/33/34/35/36

This is the sixth and final installment. Often times, patients tend to lean toward a type of treatment because it purported to have less side effects. Let us examine this by first defining the main side effects of treatment.

The side effects first and foremost depend on the extent of the cancer. Fortunately, most men are diagnosed while the tumor is still confined to the gland so that a curative therapy can be used. The side effects come

from the primary treatment but also from the medical treatments. Many men will need medication to suppress any testosterone from being produced by their body (testosterone is felt to be able to fuel the tumor to grow). These have side effects as well.

The side effects that most men are concerned with are and can occur from any treatment option:

1. impotence-temporary or permanent, partial or complete.
2. Urinary symptoms—incontinence, obstruction, stricture.
3. Bowel symptoms—incontinence, stenosis, ulceration.
4. Feminization effects from anti-androgen medications.

These issues can occur early and or late (after a year). The age of the patient plays an obvious role in this situation. There may be distinct differences of how important impotence is between a 50 and 75 year old man (not that it is ever NOT important).

Even fertility could play a role if a younger man is in a position if having a child is an issue. No one wants bladder or bowel symptoms, but they are frequently present for part of the first year, but hopefully will abate with time.

With a prostatectomy that does not spare the nerves for an erection, there will be impotence. If the tumor requires a radical surgery, that is going to be a side effect. On the other hand, if radiation is chosen, there could be a chance that the nerves might make it through the therapy, but if the tumor is too large, the chances of recurrence are too high, and surgery would be the logical choice.

I suspect the lion-share of controversy lies in the nerve sparing prostatectomy (usually robotic) vs. type of radiation therapy for earlier

less large and less aggressive tumors. Remember, size is not everything, since the PSA and the Gleason score can help predict how malignant the tumor is and will dictate how aggressive the therapy needs to be.

I have already defined the different types of radiation in previous reports, and at this time, it appears most patients are opting for more targeted therapy (IMRT or proton). But there is still no good study that can state one or the other is better or has fewer side effects. Until further research has proven superiority, I have to state the facts...there is no significant differences in these modalities regarding side effects, except that bowel side effects are more common with radiation.

How can impotence from a primary treatment (radiation or surgery) be treated? It is treated just like any impotence (drugs, pumps, injections, implants, rings, etc.) and I have reported on these in the 24th medical news report. www.themedicalnewsreport.com/24

How successful these modalities will be depends on many factors including age and pre-cancer status. If one does not work, consider another.

Libido is another issue. Anti-androgen medication will diminish a man's sex drive. So will depression worrying about it. Counseling may be helpful in these cases. An understanding wife will be necessary for maximum performance always.

Urinary symptoms---the radiation can narrow the urethra from the bladder causing a poor urinary stream. So can obstruction from a large prostate, and may require a transurethral resection (TURP) of scar or prostate tissue to relieve the problem, just like in a benign enlarged prostate.

Incontinence will require adult Depends for a period of time, as leakage is fairly common for various periods of time. If it continues, there are exercises (Kegel) and standard surgical procedures for incontinence. I have addressed this type of surgery in report #20, 21

www.themedicalnewsreport.com/20,21

Kegel exercises are very important to strengthen the pelvic floor and are necessary for erections and controlling urinary flow. It is recommended 5-6 times a day with 20 repetitions (just try to tighten the anus and you get the drift. Hold the position for 5 seconds). Click on:

www.mayoclinic.org/healthy-living/menshealth/indepth/kegel-exercises-for-men

These procedures can be done to change the angle of the urethra with the bladder, just like in benign cases (usually in women who have had pelvic relaxation from pregnancies). Start before treatment begins and continue right through treatment if possible. Of course, check with your doctor about this. After treatment, it will take 6-8 weeks to re-strengthen the pelvic floor muscles.

Infections may occur and need antibiotic therapy. If the bladder can't empty well, infection can be a result.

Rectal and anal problems are more common with radiation, as the prostate is too intimately anatomically positioned with the rectum. Burns, ulcerations, recurrent inflammation can all cause diarrhea and significant discomfort. Anal problems from stenosis or pre-existing hemorrhoids or fissures will need close attention. Fecal incontinence can be a problem as well, and may need a procedure to tighten the anal sphincter. Topical medications are necessary in most cases.

Feminization issues(loss of male hormone) will create menopausal symptoms well known to women, but breast enlargement can be painful and cosmetically unappealing. Treating the symptoms of menopause (mood swings, hot flashes, etc.) in men is difficult, because they can't have testosterone, but other supplements and anti-depressants may help. Do not take any supplement without your oncologist knowing.

These side effects are usually temporary and occur long term in only 6-7% of patients, depending on the age and general health of the individual. Remember, no cancer treatment is still a good choice in many men, whether it is close surveillance or skillful neglect. Some studies state that as many as 40% of men should strongly consider this.

Final Comments: I have probably posed as many questions as answers reporting on this cancer. Early diagnosis is always better, but if the grade and stage of a cancer is very early, and the man has fewer than 10 years expected to live, there is a real possibility that active surveillance is a good choice. Overtreatment in this category is shamefully high especially in older men with other medical issues. The NCCN Journal studied 3001 men in this category, and found that 67% were probably unnecessarily treated. Of course, doctors are going to provide patients with options, but bias does play a role.

The average cost in treating complications from the treatment averaged \$18, 827 over 5 years, and the cumulative cost is estimated to be \$58 million. Avoiding just 80% of those patients from being treated would save \$1.3 billion per year nationally. Overtreatment is real. Be sure you get multiple opinions before agreeing to treatment if you are in this category. That means most over 70 years of age.

Finally, if you have treatment, be sure to educate yourself and always keep asking questions. Even if the disease is metastatic, chances are

pretty good a man will die of something else. As always, it is between you and your doctors. Even deciding to check a PSA later in life is controversial, so be informed. I hope these reports have helped. I encourage comments. Contact me at samlamonte@yahoo.com

This concludes 6 parts on prostate cancer. If you want more information, the Johns Hopkins booklet is a good one. I used it as one of my references.

www.healthafter50.com/bulletins/prostate_bulletin_5/main_landing.html?EPH_141119_001&st=email

LATE BREAKING NEWS!

Does testosterone cause prostate cancer? A study in the Jan, 2015, Journal of Urology, studied 1000 men for 5 years and did not find a significantly higher number in the group receiving male hormone for erectile dysfunction, etc. to develop prostate cancer. What happens at 10 and 15 years has yet to be reported. It is always a serious discussion when using testosterone. If this is so, why do they recommend taking anti-androgen medications after prostate cancer primary therapy?

Because prostate cancers can grow faster with testosterone! But if there is no cancer present, it does not appear to CAUSE THE CANCER. If by accident, one is on testosterone, and independently develops a prostate cancer, the testosterone must be stopped. Being followed closely while on testosterone seems to be a must. The series ends but questions continue.....

Now, for an update on amazing research that has just been reported at the American Society of Clinical Oncology. What if you could tell a man with metastatic prostate cancer that with new research he can live at least an average of a year longer if he starts treatment with ADT (androgen deprivation therapy) plus docetaxel, a new chemotherapy

agent. The combination prolongs resistance to drugs that suppress testosterone and gives the average patient an additional 57 months of survival compared to 44 months with just one or the other treatment. This is historic, because many clinical trials are declared great success with prolongation of survival by just a few months. Folks, it is this kind of research that we have to give a standing ovation!!!

To end the series on prostate cancer, it is fitting to report on the American Cancer Society's guidelines for following these cancer patients over the years. These survivorship guidelines are the very ones I have been working on for the past 4 years. Breast and head and neck cancer are coming in the next few months. The article appears in *Cancer* journal published by the American Cancer Society.

[**For informative images on this subject, please see my report at www.themedicalnewsreport.com \(Report #38\)**](http://www.themedicalnewsreport.com)