WRAMC US TOO, Inc.

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NEWSLETTER

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¨ VIEWING PROSTATE CANCER THROUGH A DIFFERENT LENS ¨
Prostate Cancer and "Photo Therapy"

Philip L. Brach, Ph.D., PE, FNSPE

Have you ever experienced a really nice moment? Did you wish it could last a bit longer? Have you ever experienced a really traumatic moment? Did you wish it had never happened?

Well, I am sure we all have experienced both nice and traumatic moments in our lives, and we have wished the nice could be sustained and the bad had never been, but we all know that neither is going to happen. Instead, we just need to get on with life as best we can.

When I learned I had prostate cancer I was numb, my mind did not know what to think. My body was on automatic pilot. I had been hit by a fastball right in the throat as a kid, and it felt like I could not breathe for an eternity. This is the closest I can come to expressing how I felt upon receiving my diagnosis. I went through all the next steps automatically: first, a urologist for a biopsy, then to an oncologist for radiation options (I was a Gleason 8, too high for a radical prostatectomy). Then, for a reason known only to God, I asked, "Is this all there is?.... isn't there something new, something on the cutting edge?" (No pun intended.) There is! It is research, i.e., the search for a cure, or a better treatment and I found it at the National Cancer Institute (NCI).

As I moved to deal with this cancer, both physically and mentally, I was most fortunate to become part of a vaccine protocol at the NCI. It was and is most comforting to know that what I was going through could, if successful, be helpful to others. But I was still troubled. It was hard to be calm. It was hard not to be angry…to be bitter. **(Continued on page 8)**

¨ *INSIDE THIS ISSUE* ¨

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¨ FROM THE EDITOR'S DESK ¨

Another Personal Account

Readers continue to make my job easy by providing their personal accounts about coping with prostate cancer. In this issue Philip L. Brach recounts his novel approach in confronting the disease. Kodak may not be an FDA-approved drug, but it works for Philip! Don't miss this unique story. Keep those personal accounts coming!

Watchful waiting as a treatment option was the topic for our February meeting. Dr. Arnold M. Kwart, Washington Hospital Center, presented a detailed discussion of the subject as well as related insights into prostate cancer. A summary of his presentation *Watchful Waiting--Who Is It For? When Is It Appropriate?* begins on page 10.

¨ PROGRAM FOR MAY 5, 2004 ¨

Our program for May 5 will have two aspects. First, there will a presentation on **prostate seed brachytherapy** providing the latest information on this primary therapy that is being selected more frequently by newly diagnosed men. The second aspect is a **Question & Answer Session** on the broad topic of radiation oncology. **Do you have a question about any aspect of radiation oncology as it affects your particular situation?** Write it down and bring it along to get the answer. Our speaker is **Dr**. **Paul Song**, a graduate of the University of Chicago and the George Washington School of Medicine. An Attending Physician in the Department of Radiation Oncology and the Center for Prostate Cancer Disease Research at WRAMC, Dr. Song is uniquely qualified by training and experience to provide the insights you need. **Join us at 7 PM on Wednesday, May 5, 2004, in Joel Auditorium at WRAMC**. Plan now to attend and bring your spouse or a friend. They are always welcome.

¨ **Obesity, Race, and Cancer Recurrence after Radical Prostatectomy.** This important study sponsored by the Department of Defense Center for Prostate Disease Research (CPDR) analyzed the impact of obesity, race and pathological outcome on the probability of cancer recurrence after radical prostatectomy. The researchers drew upon the CPDR database for patient data from 1987 to 2002. They used the Body Mass Index (BMI) to categorize patients into three separate groups: obese, overweight, and normal. They found that obese men had a higher grade, more aggressive form of the disease, and higher recurrence rates after surgery. African American men were more likely to have more aggressive tumors and higher recurrence rates, and were more likely to be in the obese category. According to the authors, the study suggests that body mass may have some role in the racial disparity in tumor behavior. (Source: *J Clin Oncol*: February 2004 via CPDR Information Release)

¨ **Of Mice and Men.** A low-fat diet without caloric restriction significantly delays prostate disease progression in mice treated with androgen deprivation. Researchers at UCLA had earlier demonstrated that men on a low-fat diet reduced prostate cancer cell growth *in vitro*. In the recent study, the researchers injected prostate cancer tumor cells into mice. The mice received a high-fat diet until tumors developed. Then the mice were placed in two groups, one group continued the high-fat diet and the other group was placed on a low-fat diet. Tumors began to increase in size at nine weeks for the high-fat mice compared to eighteen weeks for the low-fat mice. The high-fat mice survived for 13 weeks compared to almost 21 weeks for the low-fat group. Recognizing the need for additional research on the effect of fatty acid compositions on disease progression, the researchers said it was reasonable for men with prostate cancer to change to a low-fat diet. (Source: *Cancer Research* 2004 via Reuters Health Information, February 25, 2004)

¨ **Effect of Testosterone and Finasteride on Bone Mineral Density.** Amory, et al., at the University of Washington Medical School studied the effect of the combination of testosterone and finasteride on the bone mineral density (BMD) of seventy men who had low testosterone levels. They found that the combination improved BMD without increasing PSA levels. In fact, the researchers found that testosterone therapy in older men who had low testosterone levels improved BMD either when given alone or in com-bination with finasteride. The concomitant administration of finasteride and testosterone appears to lessen the impact of testosterone on prostate size and PSA level. The researchers acknowledge that concerns still exist about the effect of testosterone therapy on men with prostate cancer. An accompanying editorial by other scientists questions the clinical relevance of the study, saying that such short trials showing modest PSA changes are unsatis- factory to ensure prostate safety and that risk-benefit issues remain. (Source: *J Clin Endocrinol Metab*. 2004; 89:501-510 via Medscape Medical News, February 25, 2004)

¨ **Benign Prostatic Hyperplasia and the Effects of Finasteride and Doxazosin.** Benign prostatic hyperplasia (BPH) is a common condition in men over 50 that can lead to more serious problems. A recent study of 3,047 men with BPH assigned them to receive either a placebo, doxazosin (Cardura), finasteride (Proscar), or a combination of the two. Four years of treatment with either doxazosin or finasteride reduced the risk of disease progression by a third compared to the placebo. The combination of the two drugs reduced the risk by two-thirds. As a caution, it was also noted in a recent major study, the Prostate Cancer Prevention Trial, that finasteride was effective in the control of prostate cancer, but with some increased risk of high-grade prostate cancer. (Source: *The Washington Post*, Health Section page 9, January 6, 2004)

¨ **Painful Biopsy? Help May Be on the Way!** Jones and Zippa, Cleveland Clinic Foundation, have developed a simple sensation test that determines a path to avoid rectal pain fibers when inserting the biopsy needle transrectally into the apex portion of the prostate. The pain associated with apical prostate biopsy has been blamed on the nerves in the prostate itself. Patients continue to dread the procedure even with complete anesthetic blockage of periprostatic nerves. The researchers believe that the residual pain of apical prostate biopsy stems from the piercing of rectal pain fibers during the procedure. These nerves are located above the dentate line, so aiming the biopsy needle above that line lessens pain. After anesthetic blockage of the periprostatic nerves, the biopsy needle is placed lightly against the rectal mucosa while the patient is questioned about the resulting sensation. This sensation test is repeated until the region above the dentate line is identified. By manipulating the ultrasound probe, the surgeon is able to pass the needle above the dentate line into the apex area. Of course, the technique does not compensate for incomplete periprostatic block. (Source: *J Urol*, 2003;170:2316-2318 via Reuters Health Information, December 29, 2003)

¨ **Is the DRE Obsolete?** The American Cancer Society and the American Urological Association recommend that both the PSA test and the digital rectal examination (DRE) be used for prostate cancer screening. But it may be going away if a report involving the Veterans Administration Medical Center in Albany, NY, is an indicator. A study of 588 men who underwent prostate cancer screening there showed that only 47% of the men received a DRE as part of the screening. Surprisingly, the DRE was more likely to be omitted by male physician providers than by nurse practitioners and physician assistant providers. The study leaders see indications that screening guidelines about combining the PSA test and the DRE are often not followed by primary care providers. (Source: *Archives of Internal Medicine* 2004;164;313-316 via Reuters Health Information, February 9, 2004)

¨ **New Treatment for Benign Prostatic Hyperplasia.** The Food and Drug Administration recently approved a new device to treat benign prostatic hyperplasia (BPH). Developed by the Celsion Corporation, Prolieve uses microwave heat to soften prostatic tissues. A balloon catheter filled with warm water is used to open urethral stenosis (constriction) creating a "natural stent." According to the company, clinical trials showed that three-quarters of those treated with the device experienced fewer symptoms after two weeks than those who used alternative treatment. The device requires only topical anesthesia and has minimal side effects and risk. (Source: Reuters Health Information, February 19, 2004)

¨ **New CPDR Nomograms Predict Outcome After Radical Prostatectomy.** Since 1993, urologists have used special tables (Partin Tables) as a diagnostic tool for prostate cancer patients. Using such factors as the patient's clinical stage (e.g., T1, T2, or T3), his PSA, and his Gleason score, urologists consulted the Partin Tables to obtain a value indicating the patient's probability of having cancer outside the prostate. With clinical diagnosis of prostate cancer occurring much earlier , many patients are now categorized at the same clinical stage, e.g., stage T1, so another prognostic factor was needed.

Clinicians at the Center for Prostate Diseases Research (CPDR) recently announced the development of a more effective prognostic model for better staging of patients after radical prostatectomy. The key is to use the number of biopsy cores found to be positive out of the total number cores taken at biopsy. The new data is presented in the March 2003 issue of *Urology*. The CPDR researchers developed nomograms using these factors to predict pathologic stage after radical prostatectomy: the percentage of biopsy cores positive for cancer; pretreatment

PSA; and highest biopsy Gleason sum. These nomograms should be very useful to pathologists and physicians in determining the course of a patient's disease after surgery.

The new tables, soon to be known as "the CPDR Tables," are now available on the Internet at **www.cpdr.org**. Patients can "plug in" their particular information to predict their staging, i.e., how their disease has or has not spread, if they undergo radical prostatectomy. s

Dr. Judd Moul, CPDR director and senior author of the study, is encouraged by this development and its potential to help patients. "This is a breakthrough - a very important finding - that we can now use this new prognostic factor. Patients are now more knowledgeable about the disease and this concept is easy for them to understand." The CPDR plans to print the new tables on wallet-size guides that doctors can easily access in the clinic. The CPDR plans additional studies to validate the research. (Source: CPDR Press Release, March 28, 2004.)

¨ **Salvage Radiation and Recurrent Prostate Cancer.** A rising PSA after radical prostatectomy often means that the cancer has returned, and may even have spread to other parts of the body. Doctors may forego local radiation on the assumption that the disease has spread, relying instead on hormonal therapy which can control the disease but not stop it. Stephenson, et al., Memorial Sloan-Kettering, studied 501 patients who received salvage radiotherapy for detectable and increasing PSA levels after radical prostatectomy. About 64 per cent of patients whose PSA had doubled within 10 months of surgery, and whose initial prostate cancer was considered moderately aggressive, remained cancer-free for four years. The authors say that salvage radiotherapy may prevent metastatic disease progression for those patients at the highest risk. The key is early salvage radiotherapy as soon as an increase in PSA is confirmed. The study produced a predictive model to estimate the likelihood of treatment success for individual patients that will help guide physicians in the selection of patients for salvage radiation. (Source: *The New York Times* National Edition, Wednesday, March 17, 2004, page A17)

¨ **Zinc, Prostate Cancer, and Other Conditions.** A recent article from the Department of Urology at the University of Michigan Medical Center notes that dietary and supplemental zinc is receiving much attention in numerous alternative medicine sources. The articles says there is some limited evidence that zinc may alleviate some mostly rare medical conditions, but cautions that excessive intake of zinc, especially in individual supplements, may actually exacerbate prostate disease. It cites a large study that found a higher risk of advanced prostate cancer in men consuming large amounts of zinc supplements. Large doses of zinc can inhibit the benefits of bisphosphonate, increase testosterone, increase cholesterol, and promote immune dysfunction. The article says more reserach is needed, and in the meantime, persons concerned about prostate disease should discontinue the intake of larger concentrations of zinc until adequate research resolves this controversial issue. (Source*: Urol Nurs* 2004, February; 24(1):49-52 via PubMed)

This WRAMC US TOO Newsletter and back issues are available on line at the web site of the Center for Prostate Disease Research. Log on at www.cpdr.org.

"THE DOCTOR IS IN"

Colonel Judd W. Moul, MD

(Editor's Note: Readers should not act on the responses without prior consultation with their own physicians.)

QUESTION. After surgery commences, what criteria does the surgeon use to refer lymph nodes for pathologic analysis before proceeding with a radical prostatectomy?

ANSWER. Traditionally, radical prostatectomy (RP) was always preceeded by a bilateral pelvic lymph node dissection (PLND). In the days before PSA screening almost one in five men had metastatic prostate cancer hiding in their pelvic lymph nodes. The pelvic lymph nodes that were commonly involved with cancer were on both the right and left side of the prostate in the internal pelvic sidewall area. Because the chance of finding cancer in these lymph nodes was high, doctors always removed the nodes before proceeding with the prostate removal. Also, the conventional wisdom in that era was that if cancer was found in the lymph nodes, then there was no reason to remove the prostate gland and the operation was usually aborted–in other words, "open-and-close."

In the modern "PSA Era" (since the introduction of the PSA test in the late 1980's), there has been a big change. Specifically, there has been a large "stage migration" such that most men are diagnosed much earlier and their chance of having lymph node metastases is very low. As opposed to the 20% rate of lymph node metastases of the past, modern surgical series show a rate of less than 5% and as low as 1-2% in very recent years. As a result, most men undergoing radical prostatectomy no longer require lymph node removal. Physicians now use a risk stratification system to determine the liklihood of a man having lymph node metastases before deciding whether to perform lymph node removal. In general, only men with "high risk" of having lymph node spread undergo the removal operation in this era. High risk is defined generally as men with high PSA level (such as more than 20 ng/ml) or high Gleason grade sum/score (8-10) or high clinical stage such as T2c or T3-4 disease.

QUESTION. Testosterone replacement therapy (TRT) is the new "hot topic" in the popular press. My otherwise successful nerve-sparing radical prostatectomy left me with a much-diminished interest in sex. My primary care physician is reluctant to evaluate my current testosterone level, let alone prescribe TRT.

ANSWER. This is a very timely question! In the last decade, we as urologists have operated on hundreds of thousands of men with early stage prostate cancer, many of whom were less than 60 years of age having a very long additional life expectancy. While 30-40% of these men may eventually have a cancer recurrence and testosterone replacement therapy (TRT) would be inappropriate, the majority of surgery patients are cured and will live a long time! Some of these cured men will experience "andropause," the condition of low testosterone levels and its consequences, as they age. Side effects of andropause include loss of energy, loss of sex drive, poor quality erections, weight gain and mood swings.

At the present time, guidelines from the Institute of Medicine (IOM) state that TRT is not indicated in any man with a history of prostate cancer. If a doctor follows these guidelines, then even these post-radical prostatectomy men with long-term low or undectable PSA levels, i.e., "cured" patients, are not eligible for TRT. In practical terms, many urologists are saying that the IOM guidelines are not correct for these long-term cured patients and so they are approving TRT selectively for symptomatic men with low testosterone levels, also called "hypogonadism"

It must be kept in mind that your "much diminished interest in sex" may be due to multiple factors and not necessarily due to a low testosterone level. In your case, ask your doctor about determining your testosterone level (best done in the morning). If the

testosterone level is low or borderline, the doctor will usually repeat the test to confirm it is low. If it is low, the urologist should discuss the pros and cons of TRT based on the specifics of your case, such as the pathologic stage of your cancer, the Gleason score, and your pretreatment and current PSA levels. The best post-radical prostatectomy candidate for TRT would be the man with organ-confined prostate cancer and a low to intermediate Gleason score (7 or less), and an undectable PSA level (less than 0.1ng/ml) at least 3-5 years after operation. In men who do not have all these pristine features, the best approach is to have a frank discussion with your surgeon.

In a recent publication from our CPDR group, we showed that a low pre-radical prostatectomy testosterone level was associated with worse pathologic stage after radical prostatectomy. Furthermore, testosterone level (high or low) did not influence the recurrence rate of prostate cancer afterwards. This study suggests that is would be fine to do TRT to maintain a normal testosterone level after surgery. Time will tell if the IOM relaxes its policy on TRT in the setting of cured prostate cancer.

ELIGARD STUDY

Dr. David G. McLeod is the principal investigator in a study to describe the changes in serum testosterone and prostate specific antigen (PSA) and time to testosterone recovery after six months of hormonal therapy with Eligard 22.5 mg in patients with PSA recurrence after initial treatment for clinically organ-confined prostate cancer.

Eligibility: Men ages 40-85 years; rising PSA after initial therapy, but with no metastasis; PSA greater than 0.2 ng/ml on two consecutive follow-ups after surgery or three consecutive rises above nadir after radiation.

Ineligible: Men with previous treatment in the form of immunotherapy; patients must not need concomitant therapy throughout the duration of the study; patients must not have used over-the-counter or alternative medical therapies with an estrogenic or anti-androgen effect (e.g., PC-SPES, saw palmetto, urinozinc).

Special Considerations: You should reside in reasonable proximity to the Walter Reed Army Medical Center where the study will be conducted; and you must be a military medical beneficiary to participate.

Eligible and Interested? Contact Stephanie Schaar at the Center for Prostate Disease Research, WRAMC for additional information or with questions (202-782-4000 or stephanie.schaar@na.amedd.army.mil).

(Prostate Cancer and "Photo Therapy" - Continued from page 1)

Oh, how I wished not to have cancer! I tried not to blame anyone or anything. But my mind had its own ideas. Then I saw how considerate those around me were. I saw how concerned they were about me, even when I was not so pleasant about my situation. Then it occurred to me - what if I could capture those special moments? What if I could keep them forever fresh to relish over and over again? Why not? Perhaps those I came in contact with would let me record our encounters. Perhaps they would let me take their pictures. Would they? Would they mind? Wow, what a comforting warm feeling came over me! I would have photos to share with those so generous in their moment of

caring for me - photos I could share with my family and with others going through trials of their own. I could capture a special moment in my life and in their lives as well. This project was good for me. It took my mind off the details of my illness. It took me outside of myself and let me look in as an observer on this battle of mind over matter. I could be a partner in the search for a solution for this devastating thing called prostate cancer. I was no longer a patient, a problem to be solved. I would be part of the solution. That's it - "Photo Therapy"! The capture of the human side of health care, the freezing in time of those moments of stress, the kind word and smile that brought relief, the at times almost imperceptible nudge of kindness that keeps us on track, captured for eternity through the magic of digital photography. A photo! A photo that can be gazed upon, can be looked at and cherished again and again.

That's how it all started. Unfortunately, I don't have pictures of the early participants in this odyssey, the first Urologist and the first Oncologist - I was still in too much of a state of shock. It was when I went to NCI, and after the initial screening to see if my blood characteristics and stage of cancer were compatible with the vaccine protocol, that I started to keep a photo record of the rest of the story.

As bizarre as it sounds (and is), from the beginning of my journey through the vaccination protocol, external beam radiation and the follow-up procedures, my encounter with prostate cancer has been a blessing. Of course, I would much rather have not had cancer at all. But I did (or I do, depending on your perspective) and the ride has had its ups and downs, but always on an increasingly positive curve.

I started my treatment for prostate cancer late in the summer of 2001 with hormone injections to shrink the prostate and cut off the lifeline feeding the cancer, testosterone. The vaccination protocol began in late August. By now I was taking photos of everyone. Virtually everyone said OK; less than 1% were reluctant to have his or her picture taken. At the time I had no way of knowing just how important these seemingly insignificant pictures would really be to me. Then on September 11, 2001, my wife and I were on our way home from the National Naval Medical Center (NNMC) where I would go for my vaccinations. I will never forget the day or the time. We would arrive early, by 7 a.m., and would be finished with the protocol by about 9 a.m. We were in the car heading south on Rock Creek Parkway and almost to the District line, when we heard on the news that a plane had struck the World Trade Center. At first we were sad, what a tragic accident. As a young boy I remember when a plane struck the Empire State Building. My dad was a city engineer for New York City and was one of the first to survey the building to assess the damage, so I recalled the many stories he had about that event. I dropped my wife off at her work and I went on to my work at the University of the District of Columbia. I was chatting with the department secretary and observing the news coverage of the trade towers when the second plane struck. This was no accident! In rapid succession, the Pentagon was struck, government began to close down, and we received word that the university was closing. This was my

introduction to being a participant in a clinical research trial. How insignificant my personal concerns became in those horrific moments of 9/11.

Prostate cancer, hormone therapy, vaccinations, additional self-administered injections at home, hot flashes, mood swings, 9/11–I needed some-thing, I needed someone. Yes, my wife was there for me as were my six children and so many friends and colleagues. But there were many others, all with personal struggles of their own in addition to helping me with my struggle.

The visits to NNMC were now complicated by the urgent need for security. Approaching the gate,
I was apprehensive. Certainly the security persons were anxious. Now I started taking photos of others besides the health care professionals I encountered. I took pictures of the guards at the gate and the parking attendants. They all smiled. I think it took the edge off what otherwise was a difficult situation.

I expanded my "Photo Therapy" to include virtually everything I did - the security persons at the

Georgetown Mall, the attendants at the airport, nurses, doctors, technicians, clerks - they all appeared in my camera lens. This is a panorama of the soul of our society as seen through my eyes, recorded for posterity. I was experiencing adversity (my prostate cancer), but then again everyone was experiencing a national adversity. I captured both theirs and mine in photos.

There is more to a picture than just the photo itself. The photo is a trigger, so to speak. It brings back memories, feelings—some good, some not so good. But for a reason I cannot explain, good or bad, the face in the picture says to me, "OK, things will get better." And I believe it! Perhaps it is a relationship that only I have with the photo, perhaps one has to be attached emotionally to the time and place of the picture to experience what I have. But whatever it is, it's priceless.

I shared a particular photo with one of the many folks that I encountered during my journey and he replied upon seeing it, "Eh! Just a picture." It was at that moment that I realized, sure, it may be just a picture to the rest of the world, but to me it was much more. Here is how I responded to the "Eh."

Eh!
You can see a person's soul through their eyes.
Their inner beauty flows down their face,
And forms a well around their mouth, which we call a smile.
Look again, and see the sparkle in the eyes.
Look again, and see the blush upon the cheeks.
Look again, and see what I see.
Look again, and see the love that is inside, flowing out.
Look again and see what I see.
Eh!

The journey that has been opened for me with my encounter with prostate cancer has also opened a wonderful window on human nature - a window that I have been privileged to capture with my digital camera. The many moments when I was anxious over how things were going, a friendly face would appear and bring me the confidence I could not muster on my own. I was able to preserve that moment, I was able to catch it like a butterfly in my net. What otherwise would have been just a fleeting moment became a treasure, a gem to be filed away, to be enjoyed again on another day.

I began recording the "Faces of Prostate Cancer" after the tragedy of September 11, 2001. I continued through eight months of vaccinations, thirty-eight days of radiation, and almost two years of follow-up visits. My PSA remains undetectable. I have experienced some radiation proctitis (no big problem). And I have been sharing my experience with support groups at Walter Reed Army Medical Center and NNMC. My photo collection is in the hundreds and growing. I still ask virtually everyone I have contact with if I might take their photo—99% say yes. This has been a wonderful way for me to relieve the stress of this trial, and it has placed in perspective what is really important in life–people, the very people we encounter daily as we meet life's challenges.

I thank one and all for the many opportunities I had to record my meetings with so many wonderful people. The expertise of the health professionals has made my body well. The smiles and friendly words of virtually all I have encountered have put my mind at ease. If I could only have only one, the choice would be simple– Smile, you're on Brach's Candid Camera!

WRAMC US TOO wishes to acknowledge a grant from Merck & Company that will enable us to expand our programs, particularly the broader distribution of our quarterly newsletter.

Prostate Cancer: To Treat or Not to Treat?

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(A summary of a presentation to WRAMC US TOO on February 4, 2004)

INTRODUCTION

No doubt you are familiar with the nerve-sparing technique developed by Dr. Patrick Walsh at Johns Hopkins. Having trained at Hopkins, I had the opportunity to seek out Dr. Walsh very early in the development of that technique. In 1985 I probably performed the first radical prostatectomy in the city using the Walsh technique. The nerve-sparing radical prostatectomy is likely the most common procedure that I do. Nevertheless, I have a large cohort of patients that I haven't touched with a scalpel. It is my opinion that we operate on many men with prostate cancer who don't need surgery. The only problem is that we can't be sure beforehand who really needs it.

Prostate cancer—to treat or not to treat—that is the question, and my topic for tonight. Let's talk about watchful waiting. Watchful waiting or expectant management of prostate cancer isn't "watchful ignoring." It involves close observation of the patient. During the observation process I am essentially an advisor. If his condition changes, I would offer him the appropriate
treatment consistent with his overall health, age, medical condition, and personal preferences. In effect, watchful waiting is a means of deferring treatment.

My objective tonight is to help you understand the implications of watchful waiting by discussing which men are candidates; what is the so-called "natural" history of prostate cancer; and what is used most frequently to determine the aggressiveness of prostate cancer. Any cancer that occurs in us is a result of a genetic change—the cells are no longer normal. The interaction of that genetic change within the host can vary considerably. To put it another way, your prostate cancer is yours! Within your support group, you may spend a lot of time comparing PSAs, but you should not go around comparing your specific situation with somebody else's because your problems are yours alone. The interaction of the cancer—whether you have it or not, whether it is in remission or not—is a function of your biology and its interaction with this cancer.

CLINICAL EXAMPLES

Willet Whitmore, a renowned urological oncologist, succinctly framed the issue when he asked — "Is cure necessary in those in whom it may be possible, and is cure possible in whom it may be necessary?" For example, if an African American male in his forties is diagnosed with prostate cancer, he has a high probability of dying from that disease. Prostate cancer can be so aggressive that it's hard to believe it's prostate cancer. On the other hand, some men have the disease and it never progresses.

Let me give you some examples. When I first saw this patient, he was a 58-year-old lawyer. Now he's a 68-year-old lawyer. At the outset, he had a PSA of 9 ng/ml and a confirmed microfocus of Gleason 6 adenocarcinoma of the prostate. This means his prostate was sampled, and in one area there was minute bit of prostate cancer. The pathology report was confirmed by a world class pathologist at Johns Hopkins. (As an aside, let me say here that nowadays we urologists don't see prostate cancer, nor do we feel it like we used to when we largely relied on the ultrasound and the DRE for diagnosis. The advent of PSA testing has caused a gigantic stage migration. We are diagnosing prostate cancer so much earlier. I probably see a couple of hundred new patients a year with prostate cancer, and I can think of only one or two cases where there was something I could see or feel.) Back to the patient. I followed

him for several years with regular PSA tests and biopsies. He had four biopsies over the course of four years. He said his prostate was starting to feel like a pincushion! In the meantime, his PSA had fluctuated. By July 1998 his PSA rose slightly to 8.8 ng/ml and a biopsy was suggestive of prostate cancer, but not diagnostic—a so-called atypicality. Then he developed blood in his urine. My evaluation found bladder stones and a large growth over the prostate which I expected to be benign, but which was obstructing his urinary outflow. I removed it and it was benign as anticipated.

In October of 2003 his PSA was 10.5 ng/ml. I believed he had a low grade infection within his prostate giving rise to a false positive PSA. I treated him with antibiotics, but his PSA went down only about .8 of a point. Another biopsy in December, 2003, revealed a microfocus of Gleason 6 adenocarcinoma and a prostate that was over 100 grams. So after ten years I had done nothing to this fellow. His PSA hasn't doubled in the ten years, and he's alive, well, and sexually functional. I couldn't have beaten that with a radical prostatectomy. There was no reason to have treated this patient for prostate cancer—none at all. He comes in regularly, and basically he understands that he is at risk. But according to autopsy studies, approximately 15 to 40% of men in their fifties will have prostate cancer in their gland. So there is a big disparity between what we see in autopsy and what we see clinically. The dilemma is trying to decide who should and who should not be treated.

I now give you the opposite case. A 49-year-old gentleman who works in the State Department presented with a history of prostatitis and an elevated PSA. After treatment with antibiotics, his PSA decreased from 7.1 to 5.3 ng/ml. He underwent a transrectal ultrasound and biopsy of his prostate which was enlarged to 51 grams. His PSAD, obtained by taking the PSA and dividing it by the prostatic volume, was normal, and he had a microfocus carcinoma of the prostate and inflammation. He elected expectant management. However, after I gave him antibiotics, his PSA rose to 7.2 ng/ml. I advised him to undergo a radical prostatectomy after informing him that in the presence of a microfocus of prostate cancer, there was about a 50% possibility that he would have less than a tenth of a cc of prostate cancer in his gland with the further possibility that he might not have any at all.

After the surgery, the pathology report showed no cancer. All that could be found was an area of atypical gland. So I had operated on a fellow who didn't need the operation. This happens, so there are certain circumstances in which it is my obligation to tell patients, "Listen, I know you want to be rid of the cancer, but you may not need this operation." Clearly this fellow did not need the operation. Fortunately, he remains potent and continent, thank goodness!

THE NATURAL HISTORY OF PROSTATE CANCER

Let's turn to the natural history of the disease. As you probably know, about 230,000 cases of prostate cancer will be diagnosed this year and 29,000 men will die from the disease. Approximately 17 per cent of all men over 50 years of age may have prostate cancer. It is the most common solid tumor diagnosed. There are probably two to four million men in the United States walking around with clinical prostate cancer. It's second, perhaps third, in cancer mortality now. If someone is unfortunate to be diagnosed with metastatic disease at presentation, that person is probably going to live between 4 and 5 years. If a patient undergoes a transurethral resection of the prostate gland that reveals a minute amount of cancer, he will probably live 17 years afterward. If an individual undergoes a radical prostatectomy followed by a rising PSA, he is likely to live 13 years. As you can see, prostate cancer is a slow-growing cancer and we are diagnosing it much earlier than we ever have, thanks to the PSA test. The PSA is the most reliable tumor marker, that is, if you have prostate cancer, PSA is an indication of what's happening to your disease.

Many more men live with the disease than die of it. The objectives of treatment are cure or control. Certainly we would like to cure a young man with, say, 20 or 30 years of life expectancy. In many men, perhaps the majority, disease control is as good as cure, especially for older men who likely will live with the disease and die of another cause.

Is it possible to distinguish those men who will benefit from treatment from those who will not? Or, more appropriately, is it possible to distinguish those men who do not need treatment, even without absolute certainty? Presently there is no clear answer.

I know you are aware of the treatment options available for dealing with prostate cancer. They are watchful waiting, radical prostatectomy, external beam radiation, interstitial seeding, cryotherapy, and hormonal therapy. There are additional options within the primary therapies. In my opinion, it has never been, nor will it ever be, possible to make direct comparisons among the therapies. It's like comparing apples with oranges.

Before the advent of the PSA test, 30% of untreated patients in the 50-59 year-old age category with a Gleason 7 had a 15-year prostate cancer specific survival rate. Ninety percent of untreated patients in this same age category with a Gleason 5 had a 15-year survival rate. This demonstrates that the Gleason score can be a surrogate for how well a patient is going to do. In the pre-PSA era, Caucasian men used to be diagnosed with prostate cancer at approximately 72-74 years of age. Nowadays, the diagnosis is likely to occur when these men are in their early sixties. So the PSA has changed the whole ballgame.

PROSTATE CANCER SCREENING

The American Cancer Society recommends that a digital rectal exam (DRE) and a PSA be offered annually to men over fifty provided they have ten years life expectancy. Alternatively, the U.S. Preventive Task Force addressed the issue of routine screening for prostate cancer in 2002. It said the net benefit of screening could not be determined because there was inconclusive evidence that early detection improved health outcomes. As noted earlier, most men are able to live with the disease. The Task Force emphasized that patients should make informed individual decisions regarding screening. The benefit of screening is obviously early cancer detection. The main drawback is the incidence false positive results—the old joke is that PSA stands for "Patient Stress and Anxiety." Unnecessary procedures such as biopsy may be performed and therapies applied that may drastically affect quality of life. There is no therapy that I can offer that doesn't have downside consequences.

Who should be offered PSA screening? It is a Caucasian man over 50 years of age with 10 to 15 years of life expectancy; an African-American man 40 years or older; and the first-degree male relatives (a father or brother) of men with prostate cancer. Prior to screening, the physician should relate the potential benefits of early diagnosis as well as the potential harm of screening, diagnosis, and treatment.

THE PROSTATE BIOPSY

Most prostatic biopsies are done because of PSA elevation, a change in PSA, or a reduced free PSA. Most men with an elevated PSA do not have prostate cancer. Low volume cancers are often detected when there is another reason for the PSA elevation. For example, when a man has prostatitis and his PSA doesn't go down, he is given a biopsy which reveals a teeny weeny bit of prostate cancer.

This is the Gleason Scoring System simply stated: If the cancer looks like the organ of origin, that is good; if the cancer does not look like the organ of origin and is composed of individual cells as opposed to a structure such as a gland, it has the potential for being bad. Histological assessment of the cancer can predict those men with excellent prognosis if their Gleason score is less than 5. They are few in number. Histological assessment can also predict the small number of men with a very poor prognosis. These are men with a Gleason score of 8, 9, and 10. They have real problems. Again, they are very few in number. Most men diagnosed with prostate cancer today have a Gleason 6 or Gleason 7. So the treatment dilemma is that most men are in the middle range.

I have already referred to stage migration—prostate cancer is being diagnosed at an earlier stage. Seventy per cent of cancers are found localized in the prostate, yet in those same prostates the DRE is perfectly normal. In 85% of these, the cancer has not spread to surrounding tissues. There is no question that over the last 5 or

6 years there has been a 25% reduction in the mortality of prostate cancer. Is this related to earlier detection? Is it related to better treatment? I think it's probably related to both.

What is an "insignificant" prostate cancer, that is, a cancer that may not kill the patient? The PSA density has to be normal, that is, less than 0.1 (PSA divided by prostate volume). There has to be a lack of adverse findings on biopsy. Adverse findings would be a Gleason score greater than 6, more than two biopsy cores with cancer, and any single core with more than 50% cancer. At Johns Hopkins Hospital, 25% of radical prostatectomies have a small volume of cancer (less than 0.5cc). If you have a solitary core with a micro- focus of Gleason 6 or less, you have a 50% chance of having less than 0.1cc of cancer, and probably a 4% chance of having no cancer at all. This is called the "vanishing cancer phenomenon."

If an individual has a minute bit of prostate cancer upon biopsy, can we predict with certainty the amount of cancer that will be found after his radical prostatectomy? The answer is no, not at this time. We do know that multiple positive cores or high grade cancer indicate a high risk of extracapsular extension. At Johns Hopkins Hospital, 54 patients met the criteria of what is considered a minute cancer (<0.5cc). Two-thirds of these patients had clinically insignificant tumors. When a PSA density of 0.15cc was considered, 83% had clinically insignificant cancers. Yes, the patient population was small, but you can see that there is clearly a sub-population of patients that surely do not need to be treated. Prior to surgery, we cannot distinguish for certain who will or will not have significant cancer. Patients must understand that.

WHAT IS A "NORMAL" PSA LEVEL?

PSA value increases with increasing tumor volume. If an individual has a PSA greater than 100, that individual probably has bone metastases (cancer spread to the bones). Also, if an individual has a PSA equal to or less than 10, he probably has disease confined to the prostate gland or the tissue immediately around it. The value of PSA is clearer after local therapy, especially after radical prostatectomy. Why? If I remove the prostate gland and the cancer is confined to the prostate gland, the patient's PSA should be zero. With radiation therapy, the situation is a little different–you want the PSA to go down, hopefully to less than 1, and remain flat. In brachytherapy, there is a phenomenon known as "PSA bounce." After about two-and-one-half years, for reasons unknown, the PSA rises and then goes right back down.

It's amazing how many treatment decisions are based on a single PSA. This is wrong. With the prostate intact, an untreated PSA change can be due to age. As we get older, the normal value for PSA goes higher. In an individual 75 years old, the normal PSA is 6.5 ng/ml. The PSA of a young man of 50 years should be equal to or less than 2.5. If he has a big prostate or has prostatitis, then his PSA can be elevated. Then there is prostatic infarction. Yes, your prostate dies, too. That's why an individual with a large prostate gland could be emptying his bladder perfectly well, and then he goes into urinary retention. What happened is he's had a prostate infarction, meaning that part of his prostate has died, and, as a result, there is swelling and inflammation that cuts off the channel and he can't urinate. If his PSA was taken at that time, I can guarantee you it would be sky high.

What is meant by a "free PSA"? PSA, like cholesterol, can be good or it can be bad. The normal PSA circulates alone, unattached to another chemical. A free PSA value of less than 15% is associated with a more aggressive tumor and free PSA<25% is associated with prostate cancer in general.

What are the characteristics of a normal PSA? Using advanced statistical techniques, a recent study revealed that a large number of men with prostate cancer found on biopsy were missed using the standard 4.0 ng/ml as a cut point– 82% of cancers in men less than 60 years old and 65% of the cancers in men over 60. We have known about this for years. When an individual sees me and has a PSA test, I look to see his prior PSA values. I also try to correlate, as best I can with my index finger, the relationship between that PSA and the man's prostate size. The larger the prostate, the

higher the PSA; the smaller the prostate, the lower the PSA. The cited study evaluated 6,691 men using various PSA cut points. When the researchers lowered the customary 4.0 ng/ml cut point, the actual number of tumors that had been diagnosed went way up. The question is raised, "Are these clinically insignificant tumors?" After all, the more men biopsied, the more prostate cancer likely to be detected. Gleason scores and percent core involvement were not reported, and there was the potential for markedly increasing the number of biopsies and over-treatment. (I personally believe that anywhere from 15 to 25% of diagnosed men that are treated probably don't need to be.). When this study first appeared, the media reacted with, "Gee, the PSA is such a poor test for prostate cancer." But beforehand, with just the index finger, we probably cured very few people. So the media had it all wrong in this case. The study was simply an attempt by the researchers to refine the appropriate use of the PSA test.

WATCHFUL WAITING

Now we're going to focus on watchful waiting as a treatment option. No treatment is given at the time of diagnosis. The patient is followed—I want to underline the word "followed." The patient is not ignored. Treatment is offered if there is progression of the disease as indicated by a rising PSA, a change in examination or test results, a change in biopsy results, and/or development of symptomatic disease. What happens if an individual seen by me elects watchful waiting and his PSA does not change? I arbitrarily biopsy him once a year because there is no correlation between PSA and the amount of cancer in a given prostate gland.

Early studies of patients with low grade and low stage disease had a selection bias. Definitions of progression were based on an examination to determine local growth. If I saw you today and detected a prostatic nodule and I saw you a year later, my finger may not be able to detect a difference, if any. An ultrasound may be able to tell the difference, but my finger probably is not going to do so. Furthermore, the patients studied were in Scandinavia where the population is homogeneous as opposed to the population in the United States where the population is heterogeneous. And, of course, the PSA was not available at that time.

In a watchful waiting series, prostate cancer caused or contributed to death in 34-62% of patients; that is, the patients didn't get treatment with hormones until the end. Obviously, more patients with low grade, low stage disease will die of prostate cancer if they live long enough. We are all going to die of something! The relationship between age and disease-specific mortality is not clear. What percentage of patients eventually get treatment after they selected watchful waiting? At 5 years on watchful waiting, 20-60% may get treated. At 10 years, 57-70% of such patients have been treated. Clearly, a substantial number of patients who have been observed will eventually require treatment.

What patients are most commonly followed under watchful waiting? They are the men who are too old or too ill to benefit. If a 90-year-old man comes into my office with a hard prostate gland—and I see such men not infrequently—just relying on my clinical judgment, I might sneak a PSA, but then I might not. You can fault me for this, but I'm not going to tell him he has prostate cancer. I might tell him he has to be evaluated, and I would do the appropriate studies at the right time. In the meantime, I don't need to depress a man who probably will not die of prostate cancer even though his prostate is firm. Some of the most commonly followed patients exhibit asymptomatic disease and small cancers that are not likely to progress in their lifetimes.

Let's consider pathologic Stage T1A for a moment. An individual undergoes a "roto-rooter procedure", also called TURP, to facilitate urination. Prior to the availability of the PSA test, prostate cancer was found in approximately 10% of men who underwent this procedure. We used to divide these men into those with a little bit of cancer and those with a lot and with a high grade, i.e., at least a Gleason score greater than 6. So Stage T1A is an incidental cancer that is found in less than 5% of tissue and with a Gleason score of less than 7. Such a cancer has traditionally been followed rather than treated immediately. Dr. Walsh, in the early 1990s at Johns Hopkins, operated on a group

of these men. No cancer was found in a radical prostatectomy specimen of 20% of these men. Simply put, they didn't need treatment. Only a minimal amount of cancer was found in 40% of the men. Only the remaining 40% had substantial residual disease, and, basically, the amount of cancer had been underestimated. So you can see that the majority of men who undergo a TURP procedure and are found to have only a bit of prostate cancer don't need to be treated. We now follow such men with regular PSA testing.

As I explained earlier, expectant management generally requires repeat biopsies. I see some of you wincing. In performing biopsies now, I actually anesthetize the prostate gland. I can take forty cores of tissue from your prostate gland right in my office with you awake. If small volume cancers are detected, they are closely followed with PSA and free PSA testing, and the digital rectal exam. If progression occurs, we intervene with curative intent. In one study of 70 men, 13% had a change in grade to Gleason 7 or greater. Almost all of the stage change was detected by repeat biopsy within fifteen months of the initial biopsy. There was no correlation with PSA, free PSA, change in PSA, or PSA density or velocity. I believe that most of these tumors were there initially, but simply missed on the first biopsy.

Just what is the scope of watchful waiting in the United States? Frankly, it is infrequently recommended. Physicians usually recommend the treatment they provide. In general, your urologist is inclined to remove your prostate; your radiation oncologist favors radiation. This is no indictment. After all, their recommendations are going to reflect their training. Also, many patients are unwilling to accept the anxieties associated with observation. Nevertheless, watchful waiting certainly is a viable option under the appropriate circumstances.

CLINICAL TRIALS AND STUDIES

There was a recent *Washington Post* article on randomized clinical trials and their lack of efficacy in terms of treatment. I am a big advocate of randomized clinical trials because without them there would be no advance in medicine at all. If you have a randomized clinical trial which is appropriately constructed and it shows you a negative answer, that is actually a positive finding which doesn't need to be repeated hundreds and hundreds of times. There are clinical trials, particularly with the use of Gleevec in the treatment of gastrointestinal stroma tumors and chronic myelogenous leukemia, where patients literally on their deathbeds got up and walked out of the hospital. That is why clinical trials are so important. They result in publications, the publications result in education, and education results in better science, better medicine. Clinical trials are needed to answer persistent questions regarding prevention screening and treatment options.

The media made much of the recently completed Prostate Cancer Prevention Trial involving finasteride and its ability to decrease the incidence of prostate cancer. The study was terminated early because its objective had been met and it was unlikely that continuing the study would influence the results. Over 80% of the men completed seven years of the study. What was the thinking behind the study? Androgens (testosterone) are implicated in the development of prostate cancer. Finasteride (Proscar) blocks the intracellular conversion of testosterone to its active compound, dihydrotestosterone. Cancer was detected in 24.4% of the placebo group−that's a very high number! (I can tell you that in a prostate cancer screening here at Walter Reed and the Washington Hospital Center, we normally find at most 8%.) So this was an enormous finding. There has to be some bias there. If cancer is present, there should have been a higher diagnostic rate in the finasteride group. Just the opposite was found; there was a higher percentage in the control group. There was a 25% decrease in the amount of cancer found in those people treated with finasteride as opposed to those who were not. The only problem was that the data also showed a 25% increase in more aggressive cancer. Again, it's question of a patient balance. Finasteride was found to reduce prostate cancer risk, but with the potential risk of more aggressive cancer.

On-going clinical trials may change prostate cancer incidence. The SELECT trial is investigating the

use of selenium and Vitamin E to reduce the incidence of prostate cancer. The Prostate Intervention Versus Observation Trial (PIVOT) involves 700 men at VA hospitals. It seeks to answer the question: Does watchful waiting or radical prostatectomy provide superior length and quality of life in men with localized prostate cancer?

The CAPSURE data base is a huge data base similar to that in your Center for Prostate Disease Research. About 4,500 men with varying degrees of prostate cancer were studied by a large network of urologists. About 450 of these patients selected watchful waiting. They were followed for at least three years. Their average age was slightly over 74 years; their average PSA was 12.29; 44% of those diagnosed were T-1; 52% were T-2, and the remaining 4% were either T-3 or T-4. So the patients choosing watchful waiting were older, had lower PSAs, had organ-confined disease, and Gleason scores of 7 or less. Fifty-two percent had a likelihood of secondary treatment. Treatment is often asked for by the patient because of the "let's get rid of it" mentality. Obviously, patients are more likely to be treated if they are younger, have a high PSA, or if there is noteworthy change in PSA. The most common treatment for these patients after watchful waiting was hormonal therapy.

A study by Zeitman, et al., at Sloan Kettering addressed watchful waiting and subsequent treatment. The researchers followed 199 men over 70 years of age who had organ-confined prostate cancer and PSAs of less than 20. They were followed for about 3.5 years. They had good Gleason scores. A PSA change would lead to treatment; 57% were treated at 5 years and 74% at 7 years. Of these, 76% received definitive therapy (either surgery or radiation therapy), and 24% got hormonal therapy.

A study of Scandinavian men was published in the *New England Journal of Medicine* a little over a year ago. Basically, it was a comparison between those individuals who were randomized into either radical prostatectomy or watchful waiting. The overall survival was the same. The men with surgery had a lower risk of distant metastasis of prostate cancer. Those who were watched had more local progression, that is, they had more difficulty urinating as their cancer worsened. This is the first study to show that people who underwent treatment, with radical prostatectomy at least, fared better with respect to their disease, although not necessarily with respect to survival. As you'll see, there is a trade-off.

In a related study, but with a different cohort of patients, 376 men were randomized to radical prostatectomy and watchful waiting. The RP group averaged about 64 years of age; the men who were watched averaged 65 years of age. Potency preservation was not an issue in the study. The results showed that the RP group had decreased potency compared to the observed group which had a higher incidence of urinary obstruction. Quality of life assessments were the same for both groups. I don't want to see any man leaking. On the other hand, if an individual is followed and he ages, he's going to have problems urinating. So there's the trade-off. There were some technical problems with this study. The patients had a higher stage disease. Some of them entered before the PSA era and had an increased incidence of palpable disease. Also, the attempt to preserve potency was not documented, and the follow-up was too short for a relatively slow-growing cancer.

I returned to Johns Hopkins last year when Ballantine Carter presented his study of people who had undergone watchful waiting. He had 250 patients all about 65 years of age and thought most of them had small tumors. Others were followed because they had other comorbidities such as heart disease and other medical problems that might preclude treatment for their prostate cancer. The men were followed by PSA and DREs twice a year, and if there was no change in PSA, they underwent prostatic biopsy annually. This study began in 1995, and confirmation (repeat) biopsies were started three years later. Disease progression was defined as a change in DRE or change in biopsy results. He found that 75% of the people he selected through his clinical judgment—no different from the clinical judgment that urologists use daily in their practices— had no disease progression. This is truly amazing! Three-quarters of the men he selected are doing well with prostate cancer and not being treated. Twenty-five percent experience progression, and 80% of them (20 out of 25 men) were cured by the surgery.

What is the patient's choice? If his objective is to maximize survival and minimize pain and suffering, the patient will seek aggressive therapy. If the hazards of treatment are too great or an individual wants to maximize quality of life at the expense of length of life, then the patient will choose watchful waiting.

CONCLUSIONS

These are my personal conclusions after careful consideration of long clinical experience. (1) I feel that watchful waiting is certainly worthy of full consideration as an option. (2) I can tell you that 90% of men diagnosed with prostate cancer in this day and age have time to decide on their form of therapy and time to seek out other opinions. (3) Prostate cancer is probably being over-treated with too many radical prostatectomies and radiation treatments given with intensity-modulated radiation therapy. This is done at a high social and economic cost. I believe we are at the point in medicine where we are capable of doing a lot that we can't afford to do (4) At present, we cannot distinguish who has a really clinically insignificant prostate cancer. (5) In addition to the Gleason score, we need a histochemical, genetic, biological marker to distinguish an aggressive from a nonaggressive cancer.

(**Editor's Note**: The CPDR group published results of watchful waiting among military medical beneficiaries by Wu et al., in the March 2003 issue of the *Journal of Urology.)*

I am ready to answer any questions that you might have.

Q: I have a question about the case of the 58-year-old lawyer whom you followed for ten years of watchful waiting. ? If he continues with good numbers and good results, is there some point where you don't need to do this anymore?

A: It's hard to know. Let's take another case as an example. A man underwent a radical prostatectomy by yours truly. His PSA was undetectable for six years. That puts him in a good category, doesn't it? But last December his PSA was 13, and now it is 26. I will tell you that this individual is going to die of prostate cancer. So one cannot offer any guarantees whatever the therapy. That's why you have to keep following. Soon we will have our first chemotherapeutic agent to treat prostate cancer. It is called Taxotere. Prostate cancer by virtue of its slow growth is a very complex cancer. There isn't necessarily one metabolic process going on as in chronic myelogenous leukemia. But in that disease, research was able to identify a specific enzymatic pathway that caused disease growth. Then along comes Gleevec—bam! The blood and bone marrow both are rid of leukemic cells. This is targeted chemotherapy. Science eventually will do that for prostate cancer as well. We just are not there yet.

Q: Do you advise your patients to take supplements? Does diet influence PSA?

A: I believe many of them take supplements. I do advise against lycopene because there is still no reliable data about its effect on PSA reduction. On the other hand, I often treat elderly prostate cancer patients with lycopene. I think they're going to die of something else. If patients say they want to avoid prostate cancer, I tell them to take selenium (200 micrograms a day) and Vitamin E (400-800 international units a day). And if they have a first degree relative with prostate cancer, I might put them on Proscar. Proscar reduces the PSA by 50%. Then if their PSA goes up at all, I would biopsy. When I was in medical school at Duke a long time ago, I remember my psychiatry professor saying, "Patients want to know three things: What have I got, how are you going to get rid of it, and how much is it going to cost me?" As for lifestyle changes, at 60 or so years of age, what is the probability of you changing your lifestyle? Very low. Does diet influence PSA? Yes, Dean Ornish, the popular cardiologist, publishes extensively on the vegan diet. I have patients who have converted to a vegan diet. These vegan diets are high in phytoestrogens. So those patients may be treating their prostate cancer. But who knows?

Q: What about the increasing use of hormone therapy in combination with radical prostatectomy?

A: No way! I know some urologists are doing it, but they are very wrong. Number One: If you have prostate cancer and it's outside the gland, the prostate is not going to suck up the cancer outside the gland and bring it back into the gland. Number Two: There is evidence that, if you look at PSAs,

the time to a rising PSA is unchanged in those people that received pre-operative hormonal therapy. Number Three: Prostate cancer is hard to interpret after the use of hormones. Number Four: Technically, it's harder to remove a prostate gland in an individual who has undergone hormonal therapy. I've done it often, but I would rather not. I don't use it. I know it is done commonly, even by some of my colleagues. If I give someone 60 or 70 years of age a four-month shot of Lupron, how long do you think that shot will last? Do you think it will stop working in four months? No way! Lupron can remain active. I can think of four men whose one shot of Lupron remained active for the rest of their lives.

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Department of Radiation Oncology and the Center for Prostate Disease Research
Walter Reed Army Medical Center

¨ TOPIC ¨

“Prostate Seed Brachytherapy and Radiation Oncology - Questions and Answers”