Prostate Insights

The Latest Developments in Prostate Cancer Care

February 2016 // Vol. 19 Is. 1

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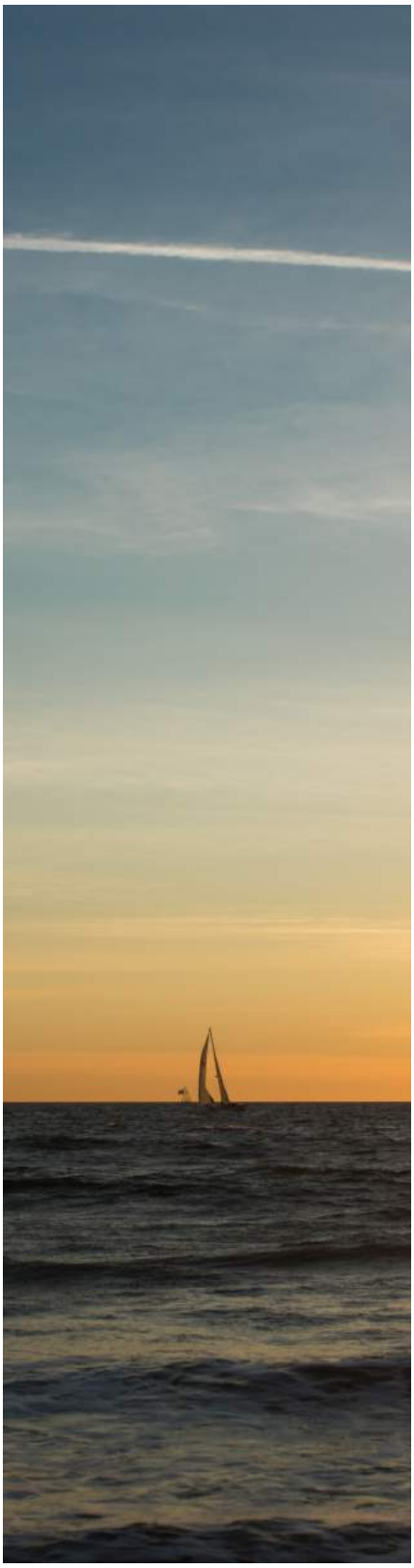

The PCRI Reaches 20 Years of Service

By Peter Scholz // PCRI Creative Director

2016 marks the year that the Prostate Cancer Research Institute is two decades old! Your support has enabled us to help men and caregivers solve problems that they face today, with support, actionable information, and education.

Hello Researcher! We are excited to bring you a new issue of *Prostate Insights.* This year is a milestone in PCRI's history and we are grateful for all of your support which has allowed us to make it this far and to flourish.

When PCRI was founded, Drs. Scholz and Strum worked tirelessly to translate medical information from peer reviewed journals into materials that were usable by patients, to combat widespread lack of accessible medical information. As the prostate cancer landscape has shifted with the advent of new treatments, technology, and the internet, we have evolved to address the problem that the patient community faces today: *Widespread misinformation*. This organization began on the principle that an informed patient receives a better and more wholesome outcome. Our focus has been and always will be the educational needs of the patient and all of our programs and materials exist for this simple goal.

We are grateful for the support you give us that allows us to continue to partner with leading doctors and researchers to bring you the latest relevant prostate cancer information and developments that you can use today. In this coming year, we are excited to announce new and exciting partnerships with celebrities and with sports organizations to help us battle prostate cancer through education.

In this issue, we are announcing an exciting partnership with Emmy Winning Actor Ed Asner who will be performing a one-man comedy play directly following our *2016 Moyad + Scholz Mid-Year Update.* Also, we are detailing an exciting addition to our Board of Directors and our Medical Review Board: Fabio Almeida, MD, from Phoenix Molecular Imaging.

Jonathan Epstein, MD—a leading pathologist, from Johns Hopkins University—answers common questions about the Gleason scoring system and pathology reports. Also, our conference moderator, long time partner of PCRI, and best-selling author, Mark Moyad, MD, shares his expert opinion on 5 important vaccines, and why you should consider taking them. He also covers some unexpected side benefits of being vaccinated and sheds light on the types of vaccines available.

Our second annual Moyad + Scholz Mid-Year Update is just around the corner and we are excited to announce an esteemed speaker lineup. This issue contains details about the event, and registration information. Lastly, our helpline facilitator Bob Each, shares the inspiring story of his own prostate cancer journey.

We are excited to begin this new year and are working tirelessly to bring you the most trustworthy, understandable, informative, and entertaining educational experience that we can offer.

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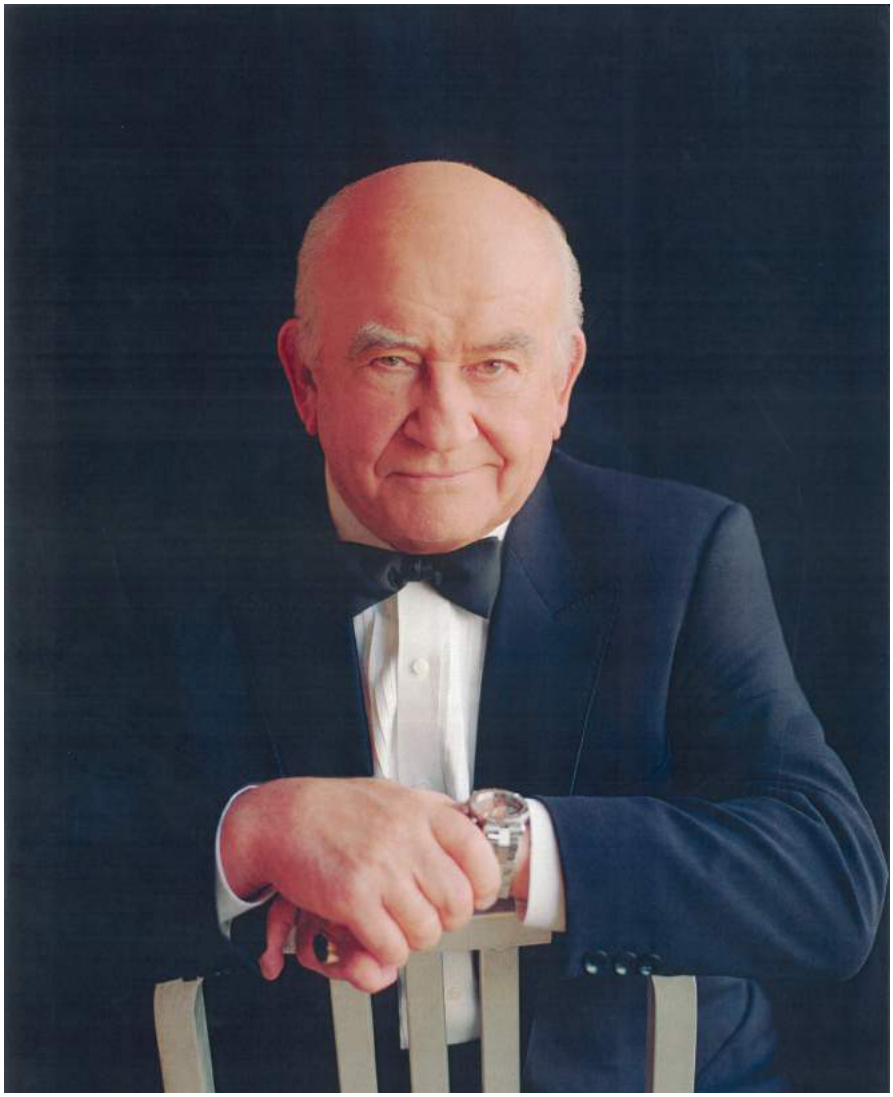


ACTOR ED ASNER WILL BE PERFORMING LIVE FOLLOWING THE **2016 MID-YEAR UPDATE**

- *Icon of American Television*
- *7-Time Emmy Award Winner*
- *20 Emmy Nominations*
- *3-Time Golden Globe Winner*
- *Star of Stage, Screen, Film & Voice-Over*
- *Past President of Screen Actors Guild*

ED ASNER

Emmy Award Winning Actor Ed Asner has been an enduring presence in television, film and stage for 60 years. Developing his craft in Chicago and New York, Mr. Asner established himself as a solid and versatile performer, regularly being cast in featured roles on the big screen and in such landmark television roles as *The Outer Limits, Gunsmoke*, *The Wild Wild West*, *Ironside*, and *Mission Impossible*, totalling more than 100 television credits.

In the 70's, his role as Lou Grant in the long-running hit sitcom *The Mary Tyler Moore Show* catapulted him to stardom. He then cemented himself as an "actor's actor" perpetuating his character in the dramatic series *Lou Grant*. Mr. Asner is the only actor to have won an Emmy for the same role in both a comedy and a drama (5 total as Lou Grant). He went on to win two more Emmy Awards for complex roles in the mega-hit miniseries *Roots* and *Rich Man, Poor Man.*

Throughout his career, Mr. Asner has always been in great demand. In addition to his celebrated work in television, he gave unforgettable performances in films such as *JFK*, *Elf*, and *Pacific Edge*. He returned to Broadway, touring the country with his one-man show *FDR* portraying President Franklin Delano Roosevelt. Mr. Asner also served two terms as President of the Screen Actors Guild, and has won many awards including induction into the TV Academy Hall of Fame in 1996, the Ralph Morgan Award, the prestigious Life Achievement Award for career achievement and humanitarian accomplishment, and many more.

We are honored that he is sharing his renowned talent with our organization and helping to spread awareness about the need for education and screening. Asner will be performing the hilarious autobiographical one-man comedy play *A Man and His Prostate* written by Golden Globe and Emmy Award-winning writer Ed. Weinberger, directly after our 2016 Moyad + Scholz Mid-Year Update.

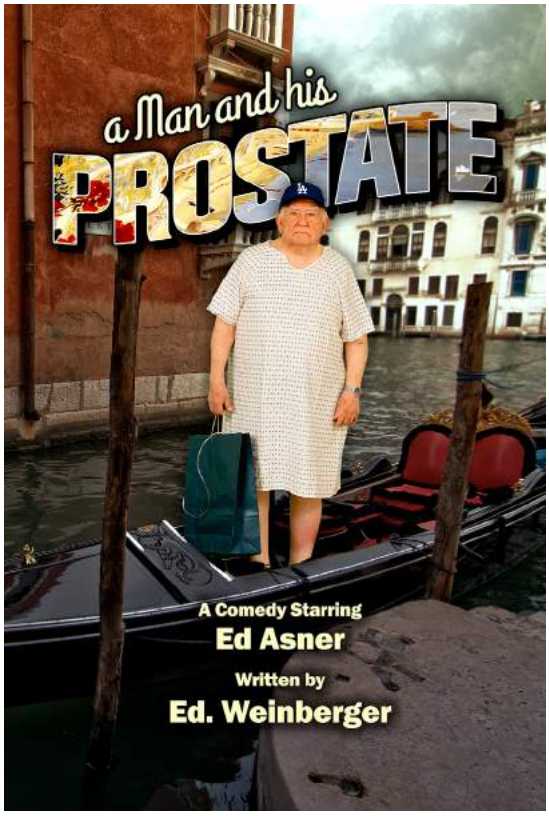
TICKETS ARE ONLY $25 WITH CONFERENCE REGISTRATION!
SEE PAGE 12 FOR MORE DETAILS.

ED WEINBERGER

Born and raised in Philadelphia, Mr. Weinberger began his career after he dropped out of Columbia University, to begin a writing career for stand-up comedians Dick Gregory and Richard Pryor. His first job in television was for the *Tonight Show Starring Johnny Carson*. He then became a contributing writer for Bob Hope, *The Bill Cosby Show* and the *Dean Martin Variety Show*.

Mr. Weinberger went on to create and executively produce several sitcoms, including *Amen*, *Dear John*, *Baby Talk*, and *Sparks*. Weinberger also wrote for the TV series *TAXI*, for which he won an Emmy for Best Outstanding Comedy Series. His writing achievements for the Bill Cosby Show which ran for 8 years, earned him 9 Emmy nominations. In 1984, he wrote and produced the play *Mary & Joseph*, which had a successful national tour of the United States.

He has received 9 Emmy Awards, 3 Golden Globe Awards, a Peabody Award, and a Writers Guild of America Lifetime Achievement Award.



Interpreting A Pathology Report: 15 Biopsy and Gleason Questions Answered by a Leading Pathologist

Jonathan Epstein, MD // Johns Hopkins University

Patients should personally review their pathology report. The report is an expert description of the information obtained from the needle biopsy. Typically, a copy of the report can be provided by the treating physician.

Although a urologist will typically be the person who presents the results of the biopsy to the patient, the official pathology report is generated by a pathologist—such as myself—a specialized physician with many years of training in the study and diagnosis of specimens removed by surgery or by needle biopsy.

The major components communicated in the report are the Gleason grade, which is a measure of how aggressive the tumor looks under the microscope, and the quantity of cancer. The quantity is judged two ways: The number of biopsy cores containing cancer (assuming, as is usually the case, that the biopsy was performed using standard random techniques). For example, if only 2 of 12 cores contain small amounts of cancer, the quantity of cancer (the presumed size of the tumor) would be small. At the other end of the spectrum consider the situation where 10 of the 12 cores contain cancer and each core is more than 50% replaced with cancer. In this case, the presumed size of the tumor would be large. So the quantity of the cancer within the prostate, as judged by the needle biopsy, is based both on how many cores contain cancer and the extent of the cancer replacing normal gland tissue within each single core.

The field of prostate pathology is immense and practically impossible to compress into a single article so to convey the basic elements of prostate pathology, the most efficient and concise approach is to address fifteen common questions I frequently encounter:

1. WHAT IS THE "GLEASON GRADE" OR "GLEASON SCORE?" WHAT DO THE NUMBERS IN THE GLEASON SCORE MEAN, FOR EXAMPLE, 3+4=7 OR 3+3=6?

The Gleason grading system assigns a pattern to the cancer cells depending on their appearance under the microscope, using numbers from 1 to 5. However, it is important to realize that in these modern times that patterns 1 and 2 are only used very rarely. Therefore, on a needle biopsy, the pathologist almost always reports the grade as pattern 3, 4 or 5. A higher number is assigned by the pathologist when the appearance of the cancer cells deviates more from visual appearance of normal prostate gland tissue. For example: If the cancerous tissue looks much like normal prostate tissue, it is pattern 1. If the cancer cells and their growth patterns look very abnormal, it is pattern 5. Patterns 2 through 4 have features in between these extremes.

Since prostate cancers in a single patient often have areas with different grades, the first pattern, when assigning a "score," is the most common pattern seen after review of all the biopsy specimens, i.e., the pattern that makes up most of the cancer seen in the biopsy. The 2nd pattern that is assigned is the one showing the next most common pattern. These two different grades are then added together to yield the Gleason score (also called the Gleason grade). For example, if the Gleason score is written as "3+4=7", it means most of the tumor is primarily pattern 3 and to a lesser amount pattern 4. These two numbers are then added together to create a Gleason score of 7. If the tumor has only one pattern throughout the whole tumor, the same pattern is counted twice in order to keep the grade in scale. For example, a biopsy core that is involved by only Gleason pattern 4 would have a Gleason score of 4+4=8.

2. WHAT DOES A GLEASON SCORE OF 6 MEAN?

Gleason scores 2-5 tumors are very rare because they cannot be identified accurately on needle biopsy. So even though it is technically correct to say that the Gleason score can range from 2-10 suggesting that 6 would be "in the middle," in actual practice, the Gleason score only ranges between 6 and 10. Therefore, a Gleason 6 actually represents the lowest grade (the most favorable) possible. Assigning the number 6 can lead to potential misinterpretation by patients. For example, Gleason score 6 cancer is almost always cured (see Table 1). Gleason score 6 cancers are so indolent that many men with these tumors are candidates for active surveillance. For this reason, I have proposed a modification of the Gleason score that more accurately transmits the favorable message about Gleason 6. On the other hand, most men with higher grade tumors will be recommended to undergo some type of treatment. Question #5 below expounds further on this proposal to revamp the way we report Gleason score. Full details of the proposal have been published in the medical journal called European Urology in September 2015.

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> ***The highest Gleason score observed in a particular patient is selected for predicting prognosis and deciding therapy.***

Author Biography

Jonathan I. Epstein, MD, obtained a combined BA-MD degree from Boston University's 6-Year Medical Program (1975–1981). Following his residency in anatomic pathology at The Johns Hopkins Hospital in Baltimore, Maryland and a fellowship in oncologic pathology at Memorial Sloan Kettering Cancer Center in New York, he joined the staff at The Johns Hopkins Hospital and has been there his entire career. At The Johns Hopkins Medical Institutions, he is Professor of Pathology, Urology, and Oncology; the recipient of the Reinhard Chair of Urological Pathology; and Director of Surgical Pathology. He is the past President of the International Society of Urological Pathology. Dr. Epstein has over 800 publications in peer-reviewed literature and has authored 51 book chapters. He is the author or coauthor of 7 books including "Interpretation of Prostate Biopsies" which is in its 5th edition. More recently, he authored or co-authored "The Gleason Grading System: A Complete Guide for Pathologists and Clinicians" and "Differential Diagnoses in Surgical Pathology: Genitourinary System." Dr. Epstein has one of the largest surgical pathology consulting services in the world with approximately 12,000 cases per year, covering the full range of urologic pathology. He has lectured 349 times outside of his institution including 40 different countries.

Table 1: Risk of PSA Relapse 5 Years Following Radical Prostatectomy, Based on Various Biopsy Gleason Scores.

Group 1	Gleason Score 6	5%
Group 2	Gleason Score 3+4=7	17%
Group 3	Gleason Score 4+3=7	35%
Group 4	Gleason Score 4+4=8	37%
Group 5	Gleason Score 9-10	76%

3. WHAT DOES IT MEAN TO HAVE A GLEASON SCORE OF 7?

A Gleason score of 7 can be made up of either 3+4=7 or 4+3=7, depending on whether the pattern 3 or pattern 4 is predominant. There is a big difference between these two grades. Table 1 shows the substantial difference in five-year cure rates. The biggest therapeutic difference between these grades is that more aggressive radiation therapy protocols are often given for Gleason score 4+3=7 and above.

4. WHAT DOES IT MEAN TO HAVE GLEASON SCORES OF 8-10?

Although Gleason score 8 cancers are aggressive, they are not as concerning as Gleason scores 9-10 tumors (Table 1). However, some patients with Gleason scores 9-10 patients can still be cured.

5. WHAT IS THE BEST WAY TO PUT ALL THESE DIFFERENT GLEASON SCORES INTO A CLINICAL CONTEXT?

The best and simplest way to get a sense of what the Gleason score is predicting about the future behavior of the tumor, is by grouping them from 1 to 5 with group 1 having the best outlook and 5 having the worst. For example, Table 1 shows how these Gleason groupings predict cure rates with surgical treatment at a center of excellence. As can be seen, cure rates decline as the group number increases.

6. WHAT DOES IT MEAN WHEN THERE ARE DIFFERENT BIOPSY CORES WITH DIFFERENT GLEASON SCORES?

Different cores may sample different areas of the same tumor, or the cores may sample different tumors in the prostate (it is fairly common for men to have more than one tumor). Because the grade may vary within the same tumor or between different tumors, different cores taken from the prostate may have different Gleason scores. The highest Gleason score observed in a particular patient is selected for predicting prognosis and deciding therapy.

7. CAN THE GLEASON SCORE FROM A RANDOM BIOPSY REALLY TELL WHAT THE CANCER GRADE IS IN THE ENTIRE PROSTATE?

The Gleason score on biopsy usually reflects the cancer's true grade. However, in about 20% of cases, the biopsy underestimates the true grade, resulting in under-grading. This can occur because randomly directed biopsy needles oc-

casionally miss a higher grade (more aggressive) area of the cancer. Under-grading is statistically more likely to occur in men with: 1) larger tumors, 2) higher PSA levels, and 3) smaller prostates.

Somewhat less commonly, the true grade of the tumor is lower than what is seen on the biopsy, resulting in over-grading. For example, studies show that 16% of cases with a Gleason score of 3+4=7 on biopsy, will end up having Gleason score 6 when the surgically removed prostate is examined. Discrepancies between the biopsy Gleason and the final Gleason after surgery may be caused by inaccurate over-grading of the biopsy specimen by an inexperienced pathologist, or because the actual quantity of pattern 4 originally detected in the biopsy core turned out to be so small that it could not be found by the pathologist who examines the surgically removed prostate.

8. WHAT DOES IT MEAN IF MY BIOPSY REPORT MENTIONS SPECIAL STUDIES SUCH AS HIGH MOLECULAR WEIGHT CYTOKERATIN (HMWCK), CK903, CK5/6, P63, AMACR (RACEMASE), 34BE12, OR PIN4 COCKTAIL?

These are special tests that the pathologist sometimes uses to help make the diagnosis of prostate cancer. Not all cases need these tests. Whether or not the report mentions these tests, there is no effect on the accuracy of the diagnosis.

9. WHAT DOES IT MEAN IF MY BIOPSY MENTIONS THAT THERE IS "PERINEURAL INVASION"?

"Perineural invasion" means that cancer cells were seen surrounding or tracking along a nerve fiber within the prostate. When this is found on a biopsy, it means that there is a slightly higher chance that the cancer has spread along the nerves outside the prostate. Still, perineural invasion doesn't necessarily mean that the cancer has spread outside the gland. Actually, other factors, such as the Gleason score and amount of cancer in the cores, are better indicators of cancer spread outside the gland. And even when tumor has microscopically spread out of the edge of the prostate, the majority of men are still cured.

10. WHAT DOES IT MEAN IF, IN ADDITION TO CANCER, MY BIOPSY REPORT ALSO SAYS "HIGH-GRADE PROSTATIC INTRAEPITHELIAL NEOPLASIA" OR "HIGH-GRADE PIN"?

"High-grade prostatic intraepithelial neoplasia" (or "high-grade PIN") is a pre-cancer of the prostate. It has no importance whatsoever in someone who already has been diagnosed with cancer. In this case, the word "high-grade" refers to prostatic intraepithelial neoplasia and not the cancer, so it has nothing to do with the Gleason score or how aggressive the cancer is.

11. WHAT DOES IT MEAN IF MY BIOPSY REPORT ALSO SAYS "ATROPHY" OR "ADENOSIS" OR "ATYPICAL ADENOMATOUS HYPERPLASIA" OR "SEMINAL VESICLE?"

All of these terms are things that the pathologist sees under the microscope that are benign (not cancer). They are mentioned merely for completeness in the report because sometimes, to a physician with a less experienced eye, they might be misinterpreted as cancer. They are of no concern for the patient.

12. WHAT DOES IT MEAN IF IN ADDITION TO CANCER MY BIOPSY REPORT ALSO SAYS "ATYPICAL GLANDS" OR "ATYPICAL SMALL ACINAR PROLIFERATION (ASAP)" OR "GLANDULAR ATYPIA" OR "ATYPICAL GLANDULAR PROLIFERATION?"

All these terms mean that the pathologist saw something under the microscope that suggests cancer may be present. However, the actual evidence for cancer is insufficient to be conclusive. Finding any of these is of no relevance to the overall outlook if cancer has already been diagnosed in another part of the biopsy.

13. HOW DO PATHOLOGISTS MEASURE THE AMOUNT OF CANCER IN THE CORE?

There are multiple techniques used to quantify the amount of cancer found on needle biopsy. The most common are: (a) number of positive cores, (b) total millimeters of cancer amongst all cores, (c) percentage of each core occupied by cancer, and (d) total percent of cancer in the entire specimen. All of these different methods of measuring cancer volume on needle biopsy are tightly related with each other, such that it is difficult to demonstrate the superiority of one technique of measuring over the other. In general, a report which has the number of positive cores along with one of the other measurements is sufficient.

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> ***"It is often prudent to have the biopsy material referred for a second opinion for review at a reference center to confirm the accuracy of the initial Gleason score that was assigned.***

14. HOW CAN I BE SURE THAT THE GLEASON GRADE IN THE REPORT IS ACCURATE?

Assigning the correct Gleason score is a skill just like any other that is developed through experience and practice. It is often prudent to have the biopsy material referred for a second opinion at a reference center to confirm the accuracy of the initial Gleason score that was assigned.

15. DOES GENETIC TESTING WITH PROLARIS AND ONCOTYPE PROVIDE ADDITIONAL USEFUL INFORMATION?

Preliminary studies seem to indicate that these tests can provide additional information about a cancer's future behavior in a minority of patients who are tested. It is possible that these tests may also have some value in "cross checking" the accuracy of the Gleason score that has been assigned, though, at this time, testing for this purpose has yet to be evaluated in a clinical trial.

CONCLUDING THOUGHTS

A few years ago, there was a news story about a polar bear attacking a man in Canada. Shockingly, the bystanders did nothing to help the poor man. Upon further review, however, it turned out that the reporter had neglected to report that the "bear" was only a cub, whose reach was lower than the man's knees.

When facing a monstrous behemoth like "cancer," the most important question to ask is "What kind of cancer am I dealing with?" With the currently available medical knowledge and technology, there can be no excuse for not knowing the exact grade of the cancer in order to make an informed treatment (or non-treatment) decision. Men facing a new diagnosis of prostate cancer should carefully scrutinize the pathology report and reflect carefully on its implications before rushing or being urged to make hasty treatment decisions.

The Moyad Side Benefits of 5 Important Adult Vaccines in 2016

Mark Moyad, MD | University of Michigan

You have probably heard every vaccine conspiracy theory or just unsubstantiated vaccine rumor in the book over the last few years. Yes, apparently with so many side effects, why even get them?! Well, not only did all of the conspiracy theories and rumors not hold any H20 (aka water) because they were boneheaded unscientific predictions that caused a lot of damage (okay I like to be honest), but what you never got a chance to hear in all the cacophony was the Moyad SIDE BENEFITS OF ADULT VACCINES. So, let me just mention 5 vaccines but first 5 simple reasons off the cuff (I could provide 30+ reasons but we do not have the time or paper space) why getting these 5 vaccines soon is smart and comes with side benefits.

1. NOT JUST PREVENTION BUT PREVENTING THINGS FROM GETTING WORSE!

Vaccines can protect you from a life threatening disease and even if you get that disease it can reduce the severity of that disease. This gets missed all the time when individuals tell me they got the vaccine but still got the disease! We forget that the disease itself could have been far worse and may have even put you in the hospital or worse, had you not received the vaccine. And, in the future, you at least have memory immune cells, so you have some protection in the future. So, just because you still got the condition you were vaccinated against, that does not mean you still did not directly benefit now or in the future.

2. THE PRICE IS RIGHT BOB BARKER/DREW CAREY AND EVERYONE ELSE!

Cost is cheap to the patient and most insurance companies will cover them under your plan. If you have to pay out of pocket for some reason, then most vaccines are still reasonable in price in terms of what they can provide for you long-term (a better and longer life).

3. VACCINES=UNSUNG HEROES OF MEDICINE AND SHOULD HAVE MORE NOBEL PRIZES THAN MICHAEL PHELPS (HE ATTENDED THE UNIVERSITY OF MICHIGAN BY THE WAY-SHAMELESS AND SHAMEFUL PLUG) & MARK "AT LEAST HE HAS A GREAT FIRST NAME" SPITZ (BUT NOT SO ATTRACTIVE SURNAME-BUT COULD BE WORSE AND HIS LAST NAME COULD HAVE BEEN LIPSPITZ OR SOMETHING) COMBINED HAVE OLYMPIC MEDALS!

Vaccines are perhaps one of the greatest medical success stories in terms of simply saving lives and allowing many individuals to live out a full life expectancy. The problem is that researchers lost count after it had saved millions of lives, so it is kind of like McDonalds advertising and the amount of hamburgers served and after a while people lost count, and we now assume and know millions of lives have been saved or made better with vaccines (but that kind of boring advertising gets missed-we become desensitized just like with the McDonalds advertising and number of people and burgers served).

Extra Credit: Your chances of winning are greater the sooner you play!

4. HERD WHAT? HERD IMMUNITY! BE SELFISH AND SELFLESS-IT IS OKAY!

Vaccines can provide "HERD IMMUNITY", which can save the lives of individuals of all ages especially the most immunologically vulnerable such as the very young and the very old and those with severe immune suppressive diseases. Herd immunity occurs when enough individuals in a community get vaccinated so that there is little chance that a virus can be transmitted to the most vulnerable individuals of the herd (aka community). For example, one reason I get the flu vaccine is because it reduces the risk of transmitting the virus to my nephews or other young children or my father and mother that could result in a life-threatening flu and pneumonia! In other words, getting vaccinated is not just a wonderful selfish act, but it is also a wonderful "SELFLESS ACT" because of herd immunity.

5. PROVIDES PROTECTION EVEN AGAINST MAJOR DISEASES NOT ADVERTISED ON THE LABEL (AKA: THE REAL ANTI-INFLAMMATORY MIRACLE).

There is new research to suggest that adult vaccines also reduce the risk of getting or dying from multiple diseases that do not appear to be related to the vaccine itself! For example, there is new data to suggest vaccines could reduce the risk of cardiovascular disease by controlling short- and long-term inflammation. There is even new research to suggest some adult vaccines could enhance the effects of some cancer treatments (google tetanus shot and glioblastoma or brain cancer immune therapy) and you get a ton of this *http://www.nbcnews.com/health/cancer/tetanus-vaccine-boosts-cancer-therapy-n321596* and other accurate and boring past stories...YES! SIDE BENEFITS RULE!!!)! The sooner you get the vaccine when it becomes available to you the better the potential result for you and those around you! It is because all vaccines take time to generate a response. It takes time to recruit new and old members of your Army, Navy, Air Force and Marines and then it takes more time to deploy those immune soldiers near or at the site of battle (man-I love military analogies!) so the longer you wait the less chance you have of getting the full military benefits! CONTINUED ON PAGE 14→

3.26.2016 | LOS ANGELES AIRPORT MARRIOTT

AN IN-DEPTH LOOK AT ACTIVE SURVEILLANCE + SEXUAL SIDE EFFECTS IN PROSTATE CANCER

The Mid-Year Conference features presentations from leading doctors, and Q+A sessions moderated by **Mark Moyad, MD**. Sexual side effects are always a consideration when discussing prostate cancer treatments. In addition, there has been a recent buzz concerning the use of testosterone for men with prostate cancer. We are bringing in **Mohit Khera, MD**, a leading expert from Baylor College of Medicine, to provide clarity to the controversy surrounding the use of testosterone & managing sexual side effects. Similarly, active surveillance, as a treatment is becoming more widespread, and we are bringing in **Laurence Klotz, MD,** the father of active surveillance. Dr. Klotz is a widely published uro-oncologist with over 300 publications and 4 books. His main research interest has been active surveillance in prostate cancer. Prostate cancer technology is advancing, in response, our Executive Director, **Mark Scholz, MD** will be presenting Five Important Prostate Cancer Breakthroughs in 2015.

Registration Is Only $25 + Space Is Limited.
Reserve Your Seat Today!
www.pcri.org/2016-mid-year-update

Presentations startin

- *Laurence Klotz, M*
- *Mohit Khera, MD: managing sexual*
- *Mark Moyad, MD: Conference Mode*
- *Mark Scholz, MD: Important Breakth*
- *Ed Asner: A speci Award-winning ac play: "A Man and*

g at 10:00 PM followed by extended Q+A:

MD: Preeminent expert on active surveillance

Preeminent expert on testosterone and side effects

Preeminent expert on Diet & Nutrition & erator

PCRI's Executive Director, Discussing nroughs in 2015

al event at 6:00 PM! Emmy and Golden Globe ctor Ed Asner, starring in the one-man comedy His Prostate"w

2016 MOYAD + SCHOLZ MID-YEAR UPDATE CONFERENCE

VACCINES, CONTINUED FROM PAGE 11

DO I WANT A LIVE ATTENUATED VACCINE (LAV) OR INACTIVATED VACCINE?

Before choosing a vaccine, it is important to know that it may come as a live and weakened vaccine (also known as LAV or "live attenuated vaccine"-we like to use big words and big abbreviations in medicine because it boosts our/my big egos-most of us med geeks were not great athletes so we need something to sustain us) option or "inactivated vaccine" where it is not live at all. LAV vaccines such as MMR (measles, mumps, rubella), Flu-Nasal, Shingles, yellow fever...get flack for being a LAV and folks worry that they might cause the disease that they are trying to prevent, but this is inaccurate (aka "false"-once in a blue moon it could cause some illness). In a perfect world we would all LOVE TO GET LAV because a LAV causes both major arms ("cellular" or immune cells and "humoral" or antibodies) of our immune system to work better. Inactivated vaccines improve only one part of our immune system (humoral) primarily but not as much the other (cellular). So, would you rather have 2 major competent armies fighting an enemy or just one!? Okay, I would love to have 2 very different and big friends next time I am dealing with a bully on the playground versus one (I like my odds better with two). Now, since some of our immune systems are weakened by some diseases and aging, it is possible for a LAV to cause problems in extremely vulnerable populations or even in those that it has not been adequately tested on, so this is why they cannot be given to everyone. Many conditions do not have a LAV invented so we have to stick with the inactivated vaccine (regardless-take what you qualify for and you can win big).

So, lets review some of the important adult vaccines for 2016 that I get asked questions about and some quick facts about each of them to inspire you to be up-to-date! Let's just focus on 5 vaccines you should be thinking about now: 2 types of pneumonia vaccines, 1 flu shot, 1 shingles shot, and 1 tetanus booster.

> ***"Pneumonia is now one of the top 5 or 6 causes of death in U.S., and both vaccines are now recommended if you are age 65 years and older.***

Author Biography

Mark Moyad, MD, MPH, is the Jenkins/Pokempner Director of Preventative and Alternative Medicine at the University of Michigan Medical Center, Department of Urology. He is the primary author of over 100 medical articles and many best-selling books on diet and supplements, and alternative medicine. He is the Moderator of our bi-annual Conferences

FLU VACCINE (SEASONAL INFLUENZA-MANY TYPES NOW, BUT JUST PICK ONE)

One of the most common causes of pneumonia is this dang virus, which is one of the top causes of hospitalization and death in the U.S. It also has great impact on the very young and old.

Influenza is the "most frequent cause of death from a vaccine-preventable disease in the U.S." YIKES!!! One vaccine type covers 3-strains of flu virus and a newer one covers 4-strains (Quadrivalent/Fluarix for example=one I got this year folks from GSK and they gave me a tootsie roll right after the pharmacist injected me—talk about side benefits!!!). The nasal spray flu vaccine (LAV) provides protection against 4 flu viruses and it is approved for those ages 2 through age 49 years. Individuals with egg allergy should not receive this vaccine. It rarely can make someone ill (I would get this in a second but unfortunately, I became 50 last year and no longer qualify).

Primary Non-Obvious Side Benefit: Potentially reduce your risk of a cardiovascular event by controlling long-term inflammation.

PNEUMONIA VACCINES (2 TYPES)

Pneumonia is now one of the top 5 or 6 causes of death in U.S., and both vaccines are now recommended if you are age 65 years and older. Also, both vaccines are non-live or "inactivated" vaccines.

1. PCV13=13-Valent Pneumococcal Conjugate Vaccine=Prevnar 13® (from Pfizer-the ones that brought you the overly—and now ridiculously—high-priced "little blue pill" aka Viagra®-it can eliminate your erection right after you see how much you paid for it). Actually the FDA licensed the use of it for adults 50 and older.

2. PPSV23=23-Valent Pneumococcal Polysaccharide Vaccine=Pneumovax® (from Merck-the ones that originally brought you Miralax®-before Bayer bought it-so no one can get too full of themselves). Recommended for all adults 65 years or older and for people 2 to 64 years who are at high risk for pneumonia. If a 65 years or older adult with a normal functioning immune system ("immune-competent") has NEVER received Pneumovax in the past, then get the Prevnar vaccine

once and then get PPSV23 at least 1-year afterward. If a 65 years or older adult with a normal function immune system (immune-competent) HAS ALREADY received the Pneumovax in the past (before age 65 years) then get Prevnar once at least 1-year after the PPSV23, and then get PPSV23 at least 1-year after PCV13 (if 65 years or older remember).

I am often asked why it is best to get the Prevnar pneumonia vaccine first and then get the Pneumovax second a year or so later... compared to why not the other way around (Pneumovax first and then Prevnar second) and the reason is that there was a study that showed a better immunological response if the sequence was to first get Prevnar and then later get Pneumovax versus vice versa. It is still just fine if you were given Pneumovax first but I just wanted to present the ideal scenario.

Primary Non-Obvious Side Benefit: May reduce the risk of hospitalizations and is currently being investigated for its ability to reduce the risk of cardiovascular events (heart attack, stroke, etc..) by controlling inflammation long-term after infection.

SHINGLES (1 TYPE, AND IT IS A GOOD ONE NOW BUT A NEW AND POTENTIALLY AMAZING SHINGLES VACCINE COULD BE AVAILABLE SOON)

This is a LAV or live attenuated vaccine from Merck also known as "varicella-zoster" vaccine. All individuals 60 and over qualify...one injection (but many folks get it at age 50 years and older. I am waiting at age 51 because I think a new and better shingles vaccine will be available soon). Vaccine is less effective in those that are 70 and above (but still effective). Yes, you should even get it after you have had shingles because once you've had shingles you and I both know that you want to do everything possible from never seeing that movie sequel come out!!! There is also a chickenpox vaccine (also known as just "varicella" vaccine) now and the Shingles vaccine is a much stronger dose than chickenpox vaccine but if you are not old enough to qualify for the Shingles vaccine and you never had chickenpox then ask your doctor about the chickenpox vaccine. I had chickenpox and I remember it like yesterday because my kindergarten girlfriend broke up with me after she saw me with it! Man, sometimes a guy can't get a break even in kindergarten.

There is a potentially new shingles vaccine from GSK pharmaceuticals that could hit the market where 1 dose is given and approximately 2 months later another dose is given and it could be well over 95% effective at all age groups 50 years and older!!! This would be amazing!! KEEP BOTH EYES OUT FOR THIS ONE!

> ***"Preliminary research suggests shingles can increase the risk of stroke because this virus also appears to get into and around blood vessels and the vaccine is being studied as a way to prevent a stroke.***

Primary Non-Obvious Side Benefit: Preliminary research suggests shingles can increase the risk of stroke because this virus also appears to get into and around blood vessels. The vaccine is being studied as a way to prevent a stroke. And, new research is looking into whether less cold sores/fever blisters occur after being vaccinated because the cold sore virus is in the same family as chickenpox/shingles.

TETANUS, DIPHTHERIA & PERTUSSIS

Td booster single injection every 10 years for all adults (just 1 per 10 years)

Primary Non-Obvious Side Benefit: Already showed some preliminary research at Duke University that it might help boost the effects of some cancer treatments. This is exciting!

CONCLUSIONS

I hope you enjoyed *Part 1* of *Moyad Vaccine Side Benefits* and now I will return you to your regularly scheduled program where some bone headed pseudo internet expert will try and convince you that all vaccines are evil and are responsible for everything wrong in society including global warming. And, they will also tell you that living in a technologically advanced world has been the bane of our existence at the same time they use a microwave and espresso machine, get on an airplane, buy a new car, and use the fancy toilet in their house that is connected to all those pipes...yeah...technology is terrible I agree now I need to walk my dog so I will just send this article to PCRI by email instead of the pony express like I usually use (that is called sarcasm).

INTRODUCING
FABIO ALMEIDA, MD

PCRI is proud to welcome Dr. Almeida to our Board of Directors and our Medical Review Board. He is a pioneer and leader in the development of PET/CT imaging for prostate cancer. He is the Medical Director of Phoenix Molecular Imaging, and Southwest PET/CT Institute.

A Brief Biography

Dr. Almeida graduated top of his class and with honors from The Chicago Medical School in 1991. He completed a residency and fellowship in Nuclear Medicine at the University of San Francisco, is certified by the American Board of Nuclear Medicine and the Certification Board of Nuclear Cardiology. He was in academic practice at the University of California San Francisco and private practice until 2005.

Dr. Almeida is one of the pioneers in the development and implementation of cross modality fusion for cancer imaging (SPECT, PET, CT and MRI) and PET/CT. He also worked for the Centers for Disease Control after 9/11 for several years as a physician and informatics specialist consultant.

In 2005, Dr. Almeida joined the University of Arizona, where he was Assistant Professor of Radiology & Radiation Oncology, and subsequently served as the Director of Nuclear Medicine for the University of Arizona Medical Center in Tucson until 2010. While at the University of Arizona, Dr. Almeida led the creation of the first combined PET/CT imaging program in southern Arizona and established the routine integration of PET/CT imaging into radiation oncology planning. He expanded the program through advanced telemedicine PACs systems to other Arizona and California cities. He has authored and participated in several publications in radiology, oncology and information science.

Now, as Medical Director of Phoenix Molecular Imaging and Southwest PET/CT Institute in Yuma, AZ, Dr. Almeida oversees clinics in Phoenix, Yuma, and Tucson, providing his extensive clinical expertise in PET/CT imaging. He continues his research, focused on applied medical informatics with emphasis on imaging and networking systems, optimization of fusion technology, and volumetric tumor assessment for radiation therapy planning. He actively participates in several oncology and neurologic clinical trials and is the principal investigator for a novel Carbon-11 PET agent for prostate cancer imaging.

Dr. Almeida speaking at our 2015 Moyad + Scholz Mid Year Update

Thoughts from Dr. Almeida

I have had the pleasure of working with the PCRI since 2012, participating in the annual conference and contributing to the Insights Newsletter with periodic educational articles. Over the past few years, I have come to know Dr. Mark Scholz and the PCRI team and have a deep appreciation for the work the PCRI is doing. This year, I am honored and delighted to join the PCRI Board of Directors/Medical Board.

The last few years have seen unparalleled innovations in the diagnosis and treatment of prostate cancer. Advanced imaging with tools such as multi-parametric MRI (mpMRI) and molecular PET/CT are providing new insights and answers to questions that no previous techniques could address. MpMRI, for example, may bring on a paradigm shift away from random biopsy toward imaged guided active surveillance for low-grade prostate cancer and targeted MRI guided biopsy. PET/CT imaging with agents such as C11-Acetate, C11-Choline, as well as various emerging prostate specific membrane antigen (PSMA), and amino acid imaging agents are now able to detect recurrence of prostate cancer and metastatic disease much, much earlier, thereby offering more effective, targeted treatments.

One would hope that these new technological advances would be immediately adopted in prostate cancer management, but that is not necessarily the case. Many doctors simply do not know what is now available and how to access these techniques. Those that are aware are often unfamiliar with the full extent of their capabilities (and limitations). Adherence to standards needs to be addressed to ensure that these techniques are performed in a uniform manner with the utmost quality and precision. And finally, even the fully informed doctors may be reluctant to venture outside their comfort zone and embrace mpMRI as a substitute/adjunct for doing a random biopsy, or advanced PET/CT techniques to evaluate for early cancer recurrence.

Every effort needs be made to raise general awareness among patients and doctors alike about the advantages of these and other emerging advanced imaging techniques. In joining the Board, my goal is to promote the mission of the PCRI toward education and patient empowerment in prostate cancer, and to leverage my background to work with the PCRI team to help men, their families, and doctors navigate through the ever-evolving and expanding array of advanced diagnostic tools and treatment options.


GIVE IN

MY STORY

By Bob Each // PCRI Helpline Facilitator

Call the PCRI Helpline at 800.641.7274

Nineteen ninety five started out to be another great year. I had just started my fifty-first year on the planet and life was good. My two girls were in college. My wife had a good job as an intensive care nurse at a local hospital. I was nearing a thirty-year career with the IBM Corporation. We both had a decent income and were investing in real estate and stocks in anticipation of a long and comfortable retirement. Traveling the world and flying small airplanes was going to be high on the list of activities we would be indulging in, when that retirement arrived.

I felt my health was excellent. I skied in the winter months, jogged two or three miles most days, did my forty or fifty pushups, a dozen pull ups, and forty or so sit ups, every day. I always had a slight high blood pressure problem and to offset that, tried to eat a reasonably heart healthy diet as I understood heart healthy diets. Little red meat, no butter, skim milk, lean animal protein, fruit, and vegetables, was the normal diet. I even did the Pritikin Diet, invented by Nathan Pritikin, to keep the old arteries clear. At 5 feet 11 inches, I was a lean 170 pounds and felt wonderful.

As the 1995 months progressed, I noticed a slight change in my trips to the bathroom. Instead of emptying my bladder every 4 or 5 hours, I seemed to be going every 3 or 4 hours. I wasn't too concerned. I had few friends that were already dealing with BPH (benign prostatic hyperplasia). I felt I was too young to be dealing with any real health problems. In the past, if I had any type of health problem, I went to the doctor, and he helped fix it, or it just healed on its own. My family history showed a mostly long lived bunch with no real cancer or heart problems until they hit the seventy's or eighty's.

In early October, I went to see the friendly urologist. He did the usual "finger wave" and blood draw and told me I would be called in the next week with the results. As a week past, I became a bit concerned and called the doctor. A very pleasant lady told me the doctor wasn't in and she couldn't tell me the results. After I learned she had the results in her hand, I became "pushy and overbearing."

Finally, she relented and quietly told me my PSA was over 100. After I nearly dropped the phone, I regained my composure and thanked her for the information. Pat Walsh's book, *Surviving Prostate Cancer,* was purchased immediately and read cover to cover twice in the next few days. A week later, I'm in the hospital watching a big white eye pass back and forth over my body and trying to make deals with GOD. Please don't send me to x-ray. I knew if I went to x-ray things were bad. Ok, the tech said, "you're finished with the bone scan, but, you have to go to x-ray, we need to check several areas of your body." Several areas! Good grief, this can't be happening! To summarize; eight to ten bone mets, a PSA of over 100, and a PAP of fifty plus. An hour later I'm headed back to the doctor's office, in a total daze.

"We have a miracle for you Mr. Each", said the good doctor. An injection was given and a piece of paper was handed to me. A half hour later I'm back at my home and proceeded to indulge in a total meltdown. The rage and depression welled up in me to a level I still can't believe. After an hour, I called my boss and told her the cheery news. She listened quietly and told me to take the rest of the week off to do what I had to do. I felt she had written me off and later learned she had lost her father nine months after he had been diagnosed with the same disease.

The next month was a blur of doctor's appointments and dealing with massive depression. The more I studied this disease, and the more doctors I talked to, the deeper my depression became. The best longevity guess that a doctor could come up with was; "six months to three years, get your affairs in order." I'm a happy guy, but this really did me in.

Nobody mentioned I would have any side effects from the drugs. Well, I enjoyed a bunch of them. The Lupron flare, joint aches, extreme fatigue, hot flashes, depression, etc., etc.

In mid-December, I attended my first support group meeting at the Cancer Community Center in Westlake Village. At best I had mixed feelings about the whole process. I was the youngest guy there and the most messed up. I felt like I was talking to my friendly uncles and they really didn't understand my situation. They were discussing erectile and continence issues and I was thinking at a more basic "lizard" level. My twisted brain was fixated on never seeing my girls graduate from college, never meeting my future sons-in-laws, and never having to deal with those pesky grandchildren. One positive thing that came out of that meeting was a referral to the Los Angeles Prostate Cancer Support Group in Culver City. That was the first of several turning points in this nightmare odyssey.

> ***"The best longevity guess that a doctor could come up with was "six months to three years, get your affairs in order."***

The L.A.P.C. support group was the largest and oldest P.C. support group in Southern California. Normal attendance was around one hundred people with a sub-group of around twenty men who had very serious disease. That first meeting (January, 1996) I joined the "very serious disease" or "D" group. This group was still much older than I, but, at least, had similar disease and could relate to each other. Additionally, the next big milestone was a presentation by Dr. Stephen Strum (it was a two for one night). At the time, he was the only doctor who seemed to know anything about this disease and how to treat it. And, he was willing to share and teach. Wow!!!

The next morning an appointment was made for the next empty slot on the good doctor schedule. A week later my wife and I are sitting in his office with a couple other doctors and a pharmacist. For the next two hours, every blood test, x-ray, bone scan, and opinion was reviewed and comments made. Additional drugs were added to the Casodex and Lupron cocktail I was on; Fosamax for the bone and calcitriol, a vitamin D analog, which might slow the mutation ability of the cancer cells. At the end of the meeting, Dr. Strum shows me a graph that indicated

a five-year survival rate of 23% with someone as advanced as I was. Twenty-three percent!!! WOW!!! That's 23% more than I imagined!!! I thought it was zero percent. I decided I could do 100% of 23%.

The months are passing. The PSA is dropping. Communication with other men, with this disease, is expanding. Several men have become my mentors. Harry Pinchot becomes my primary "go to guy". He spent three months in the UCLA Medical Library learning everything he could about the disease soon after he was diagnosed and ultimately, became one of the most informed laymen on the planet. We're doing dinners before support group meetings, lunches after support group meetings, computer fairs, hikes in the hills. I'm the exercise freak and he's the genius trying to stuff knowledge into my brain. By now, Dr. Strum has upgraded my drug program to include Aredia, a drug similar to Fosamax, but much more powerful. My PSA is dropping, but the descent had slowed considerably. Month 8 through 12 is a mere 10% decline and the absolute PSA number is still over four. Not a good situation.

> ***"One positive thing that came out of that meeting was a referral to the Los Angeles Prostate Cancer Support Group in Culver City. That was the first of several turning points in this nightmare odyssey.***

Then the miracle arrives. It's a quiet Saturday morning in October of 1996 and my friend Harry calls. "I have heard of an herbal compound that some people think works well against P.C. Thinking about driving down to Orange County to check it out." "Wanna go?" "Sure."

Ninety minutes later we're sitting in front of a sales type guy and discussing an alternative herbal product. I had spent too much time and money on alternative therapies to believe in these types of things. BUT, this man showed us real data; in vitro, in vivo, and testimonials from the few men who had tried it—men, I could, and did, talk with about their results. A few hours later and $700.00

each, we left with a promise to see the product delivered to our home by the following Tuesday. Standard dosage was two pills, three times a day.

A month after starting on this product, the blood draw comes back with a PSA of 3.0, a full 25% drop. WOW!!!! More drop than the previous four months combined. Increasing the dosage to three capsules three times a day, another month later and the PSA came back at 1.8. Over a 50% drop in two months!!!

Now, I'm going to try really hard to compress time. For the last 15 years, we have kept the PSA below 0.1. I deal with all the side effects from long-term hormone deprivation, but I'm still here. I've watched those daughters graduate from college. In addition, one with a law degree and the other with a teaching credential. I've welcomed two fine young men into the family as my sons (in-law). Twelve plus years ago those grand children started showing up. Now I have three girls and three boys, totally beautiful and brilliant. Ok, ok- one of them is an adult. We mutually adopted one another and I adore her and they all have about thirty IQ points on me.

The bucket list is long and growing but check marks are increasing also. I made it back into the air a couple of years ago. Almost forty years after I stopped flying, my patient, gutsy, Certified Flight Instructor, signed me off to fly in my own little airplane. It and I are really old and slow but we are in the air together several times a month.

Luckily I have been able to travel the world. Drove sixty miles north of the Arctic Circle. Years later went to the Antarctic, let penguins stomp on my toes, learned territorial rights of 700lb sea lions-I can really exit fast, and will never be a Antarctic explorer. Too cold. Tried to climb Aconcagua (22,838 feet) in Argentina. Crashed and burned at 16,500 feet and had to walk back down, shucks. Visited Iguazu Falls and learned about "moon bows"- night time rainbows. Visited Africa three times. I will never forget the warm, wonderful people, the land and animals. Having a teenage elephant charge your vehicle really ups the heart rate. Looking a lion in the eye from a few feet is beyond scary. Having a monkey steal your lunch in Kenya is not something you see in old L.A.

SCUBA'd the Great Barrier Reef and was awed by the brilliant colors of a King Parrot in Australia. Stalked KEA birds (a large parrot) in New Zealand. If I had a brain, I would have brought a bagel and the silly bird would climb up my pant leg. I looked foolish and would have saved my knees.

Did some dumb things. Challenged a mother moose on a narrow trail in Alaska. Those things are huge and they will not back down when they have their baby close. I became much smarter in record time. It helped to have a dense forest nearby. Tried to play with small Lemon Sharks in Bora Bora. They don't play but they were nicer than the octopi. Octopi have no sense of humor. Sting Rays are nice. Never chase a barracuda. They chase back.

Explored castles in Europe. The Eiffel Tower at night is beyond belief. And you French folks were all nice. Where did you get that reputation for being not so nice? The KGB in Budapest was not nice. Cost me twenty bucks because we went one stop too far on my metro pass. Still have to visit Southeast Asia and the Amazon, maybe Italy and about a million other things.

> ***"For all you prostate cancer survivors; keep moving, keep hoping, keep planning, and keep researching."***

I have a bunch of wonderful friends, great doctors, and I love them all. I have lost too many friends to Prostate Cancer. I worry about my grandsons because this disease could be inherited.

For all you prostate cancer survivors; keep moving, keep hoping, keep planning, and keep researching. For you guys that don't know how to use the internet, shame on you. It's the greatest library on earth. You can become a mini-expert in minutes. An eight-year old youngster can teach you. Just buy and share some ice cream with them. Get out of the house. Do the best you can. Follow your passion. Join a club! Be around people who don't have prostate cancer. They are cheaper than a "shrink." The airport and the sky are my refuge. There is no disease in either place. It "ain't" easy sometimes. Trust me I know. Some days I just want to totally "veg" and after 6pm my brain and body do everything they can to forget the world. It's still out there and it's an incredible place. Go visit it!

Prostatepedia[1]

[1]expert insight + advice

Conversations with Prostate Cancer Experts

For more information visit: www.prostatepedia.net

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