ACTIVE SURVEILLANCE

Compiled by Charles (Chuck) Maack – Prostate Cancer Activist/Mentor

DISCLAIMER: Please recognize that I am not a Medical Doctor. I have been an avid student researching and studying prostate cancer as a survivor and continuing patient since 1992. I have dedicated my retirement years to continued research and study in order to serve as an advocate for prostate cancer awareness, and, from a activist patient's viewpoint, to voluntarily help patients, caregivers, and others interested develop an understanding of prostate cancer, its treatment options, and the treatment of the side effects that often accompany treatment. There is absolutely no charge for my mentoring – I provide this free service as one who has been there and hoping to make your journey one with better understanding and knowledge than was available to me when I was diagnosed so many years ago. Readers of this paper must understand that the comments or recommendations I make are not intended to be the procedure to blindly follow; rather, they are to be reviewed as my opinion, then used for further personal research, study, and subsequent discussion with the medical professional/physician providing your prostate cancer care.

IT IS IMPORTANT TO READ THIS ENTIRE PAPER – THOUGH LENGTHY, IT IS VERY COMPREHENSIVE WITH CONSIDERATIONS THAT ARE IMPORTANT TO EVERY PATIENT CONTEMPLATING ACTIVE SURVEILLANCE

A more recent study (June 9, 2016) reported on The NEW Prostate Cancer InfoLink http://tinyurl.com/ja7znx6 and comments by the Site Master to that report should be reviewed by every patient for guidance if considering, or being advised to consider, Active Surveillance as well as the information below.

As remarked by one of the top Medical Oncologists specializing in the treatment of recurring and advanced/high grade prostate cancer, Charles E. "Snuffy" Myers, Active Surveillance is an option with "curative intent but the intent is to cure those who need to be cured." I would expect he means that more invasive treatment options are for those with already advancing prostate cancer development, for those with Gleason Scores having advanced to 3+4/7 and more than two tissue samples found in biopsy, and higher Gleason Scores who need "earlier" treatment

in the hope for "cure," but not for those with a Gleason Score of 3+3/6 and some with Gleason Score 3+4/7 who meet "key points" criteria explained in the next two paragraphs. When a man posts a request for comments to the online prostate cancer support lists regarding Active Surveillance he is going to get a multitude of replies from other patients among which will be reasonable suggestions and references as well as many that will include little information, and likely none from a physician. When I save information I try to combine it with other information with the intent to provide more than one reason supporting a choice. One man made note that Medical Oncologist Stephen Strum's remarks (another top specialist specifically in research and treatment of recurring and advanced prostate cancer), below in this paper, appear to be merely philosophizing. I rather see his remarks as providing medical expertise to identify tests that patients and most Urologists may not even be aware and thus would not have even considered. In my opinion, he does so as an experienced, caring physician who has been there, done that, having treated thousands of patients with advanced prostate cancer since 1983, so recognizes the value of those tests in the big picture of a patient's health.

Active surveillance appears to be safer management strategy for prostate cancer patients http://tinyurl.com/l38mchr

The following is important to recognize from this paper: http://tinyurl.com/klnjylh

"The idea that not all cancers are deadly is already beginning to transform treatment for prostate cancer. As many as 60% of the tumors detected via screening grow so slowly that they pose little threat in a man's lifetime, experts say, and treating them with surgery or radiation carries a substantial risk of impotence or incontinence. About 15% of patients now opt to monitor them instead—and some experts say more could probably do so safely. Read that important piece of information again: "**AND TREATING WITH SURGERY OR RADIATION CARRIES A SUBSTANTIAL RISK OF IMPOTENCE OR INCONTINENCE."** This recognition for those men who are diagnosed from biopsy with Gleason 3+3/6, stage T1c, and even those with Gleason 3+4/7 and only one or two tissue samples showing evidence of prostate cancer in low percentage development, is important in view of otherwise likely to experience the side effects identified with invasive treatment when their cancer development

could take many months to several years before elevating to the necessity of such treatment.

Some urologists even propose calling prostate tumors with a Gleason score of 6 or below "benign lesions"—although others note that that would mean half of the men treated for prostate cancer in the past 20 years didn't have cancer after all."

A December 2014 paper http://www.practiceupdate.com/journalscan/14909 concludes that ""**AA (African American) men with "low risk" prostate cancer, especially those considering active surveillance, should be counseled that their recurrence risks can resemble those of whites in higher risk categories."** Thus, Active Surveillance should likely NOT be considered for these men. This is further confirmed by this paper:
http://www.ncbi.nlm.nih.gov/pubmed/24392353
reporting that African American men diagnosed with prostate cancer, no matter at what level, are at "high risk" for more aggressive disease, they should likely opt for a treatment option to address their diagnosis rather than Active Surveillance.

New data (2015) from Johns Hopkins on outcomes after active surveillance
http://tinyurl.com/qyy67ua
As noted: "***Men with favorable-risk prostate cancer should be informed of the low likelihood of harm from their diagnosis and should be encouraged to consider surveillance rather than curative intervention."***

Active Surveillance is receiving more support as a viable option. Men who meet the criteria for Active Surveillance should be explained at least some of the information provided in this paper.

A recent report http://jurology.com/article/S0022-5347(13)05475-X/fulltext found that despite a Gleason Score of 3+3/6 from biopsy, pathology of the surgically removed prostate gland was found to be of higher score. Their conclusions were that older men, men with higher PSA levels at diagnosis, a PSA density over 0.15ng/ml/cm3 (divide PSA level by gland volume), palpable disease on digital rectal examination (DRE), and extent of cancer over 4mm on biopsy were NOT appropriate candidates for Active Surveillance. PLEASE REMEMBER THESE KEY POINTS! If you are "older," and I would see that as 65 and over (sorry men,

have to face it) or even a few years younger if experiencing other health conditions; if you have higher PSA levels at diagnosis (certainly 10ng/ml or higher); if your PSA density (measured by dividing your PSA level by gland volume/size) is over 0.15ng/ml/cm3; if rectal examination feels a nodule or hardness; and if a tissue/core sample from biopsy with evident prostate cancer is over 4mm; all are key points that would indicate Active Surveillance should NOT be an option. Additionally, the number of tissue samples extracted in biopsy should be a minimum of 10, and some physicians may prefer 12 to 16 extractions. There are a few recent papers wherein a study indicated that biopsy tissue core sampling of 10 is as efficient as extracting 12 or 16 tissue samples. See: http://tinyurl.com/q8vywkg

Some physicians suggest "mapping" or "saturation" biopsy for a better coverage of the prostate gland. If recommended make certain your health insurer will cover the procedure.

"Mapping Biopsy" – See
http://www.sciencedaily.com/releases/2014/02/140204154308.htm

"Saturation Biopsy" – See
http://prostate-cancer.med.nyu.edu/faqs/faqs-screening-biopsy#19

Knowing the location from which tissue samples were extracted in biopsy that showed evidence of prostate cancer presence is also important since from margin areas could indicate the possibility of extension to seminal vesicles or lymph nodes, wherein moving to surgical removal or radiation may be more appropriate.

Those considered more likely to not have adverse Gleason Scores following prostate gland removal and better candidates for Active Surveillance were those who showed no evidence of any of the criteria listed as "key points," above.

One study indicates that patients with Gleason Score 3+3/6 with PSA levels of 10 or over can still be candidates for Active Surveillance if the prostate volume (size) is high; yet, this argues against the safer consideration of using a PSA density over 0.15ng/ml/cm3 (divide PSA level by gland volume) as the cut-off point wherein Active Surveillance would not be appropriate. See: http://tinyurl.com/oyqxqj6

Patients who meet the foregoing criteria as candidates for Active Surveillance but **are considering to rather move on to a more invasive treatment option should**

recognize that with surgical removal of or radiation to the prostate gland, there will be side effects accompanying those treatment options that can include up to a year or more dealing with incontinence as well as erectile dysfunction. These side effects can resolve early on for some men (younger more likely), take months to a few years for others, or never resolve for yet others. In any case, the side effects can be treated to hopefully help the condition experienced, but why choose to go for immediate treatment and these accompanying side effects any earlier than absolutely necessary?

A recent report (February 2015) http://tinyurl.com/n47lfzu using patient results from 2008 and 2009 came to this conclusion regarding erectile dysfunction as well as incontinence following surgical removal of the prostate gland and should serve as your forewarning that either may not return as rapidly as you might expect:

Results

- The study showed that before radical prostatectomy, urinary incontinence of various severity grades was reported in 18.8, postoperatively in 63.0% ($p < 0.001$) and erectile dysfunction of various degrees was reported in 39.6 at baseline compared to 80.1% 12 months postoperatively ($p < 0.001$).

With low grade, early developing prostate cancer, a protocol should be developed between physician and patient for close attention to regularly scheduled diagnostic testing and DRE examination so that should the cancer begin to become more aggressive in development, the move to more invasive treatment would still be sufficiently timely to nip that development in the bud.

According to the following paper titled "Black American Men With Very Low Risk Prostate Cancer Have Distinct Foci Distribution," there are well established disparities in prostate cancer outcome between African-American and Caucasian men, however, the precise reasons for these disparities remain largely uncharacterized. This study evaluated pathologic findings at radical prostatectomy in men classified as having very-low-risk disease by NCCN criteria and found that African-American men were more likely to have significant prostate cancer. Interestingly, African-American men were also more likely to harbor anterior zone tumors than were their Caucasian counterparts. These data suggest that anterior zone sampling is indicated in African-American patients undergoing prostate biopsy for either elevated PSA or for prostate cancer on active surveillance. See: http://tinyurl.com/n85mbjk

Urological Oncologist Peter Carroll, UCSF, regarding Active Surveillance: http://tinyurl.com/o3suufe

It would be reasonable to make sure your appearing low grade prostate cancer is non-aggressive; this could be determined by both a TMPRSS2-ERG and PCA3 urine test. Info here, and discuss with your physician:

http://www.ncbi.nlm.nih.gov/pubmed/23515404

More regarding the TMPRSS2-ERG test:

All HGPIN (High-Grade Prostatic Intraepithelial Neoplasia) are not equal.

When learning of a patient being scheduled for a biopsy of his prostate gland, recommend he request that if High-Grade Prostatic Intraepithelial Neoplasia (HGPIN) is present that it be tested for the presence of the protein ERG. A recent study/trial determined that this presence from biopsy found that 53 percent of men whose prostate biopsies showed expression of ERG protein developed invasive prostate cancer, compared to 35 percent of men whose biopsies were ERG-negative. All of the biopsies were classified as having HGPIN, which are lesions that may or may not morph into cancer. The prostate cancer-specific ERG protein overproduction results from the fusion of two genes, leading to a chimeric gene referred to as TMPRSS2-ERG that is present in over half of the 230,000 prostate cancers diagnosed in the United States each year. Investigators found ERG expression in about 11 percent of participants' biopsies, and over time, increasing numbers of these patients developed invasive prostate cancer — about 15 percent within the first year of the three year-trial, 37 percent at year two, and 53 percent at year three.

Please click on the following for a more comprehensive explanation:

http://www.physiciansnews.com/2013/12/04/protein-found-in-biopsies-shows-increased-prostate-cancer-risk/

For those patients showing evidence of HGPIN containing ERG, despite no presence of prostate cancer cell development, it would be prudent for regularly scheduled diagnostics and close attention/monitoring by both patient and physician. For those showing evidence of only low development of prostate cancer, Active Surveillance may not be appropriate in view of the likelihood of their disease being more aggressive as well as invasive if not tended to early on.

From another source, the ***14th Annual Meeting of the Society of Urologic Oncology (SUO) "Extraordinary Opportunities for Discovery""***
Christopher Barbieri, MD, PhD, described clinical experience of the combination of both PCA3 and TMPRSS2-ERG (T2-ERG). PCA3 is an FDA-approved test which measures an RNA which can be detected in urine after attentive (attentive DRE meaning somewhat vigorous gland massage) DRE as it is normalized to the amount of mRNA which codes for PSA. TMPRSS2-ERG is a recurrently identified translocation which is found in 50% of all men with prostate cancer. It is also found in 90% of all prostate tumors if multifocality is taken into account. Both of these tests have a significant incremental gain in predictive power of standard clinical nomograms which include PSA, age, and DRE. Although T2-ERG is not FDA-approved, it is available as a sendout test to the University of Michigan. John Wei, MD, MS, then highlighted several other studies corroborating its improvement in predictive value in this setting.

A paper titled "Active Surveillance Compared With Initial Treatment for Men With Low-Risk Prostate Cancer" in presenting a statistical decision analysis for treatment of low-risk prostate cancer (PSA less than 10, Gleason 3+3, 1 to 2 positive cores, less than 50% of a core positive) concluded that, in terms of quality of life and risk of progression, Active Surveillance has the best outcome; although more recent reports see percentages of core positive cancer to be considered for Active Surveillance should be much lower (the 15% maximum mentioned earlier) Second was brachytherapy, followed by external radiation (IMRT), and then radical surgery.

The multi-institution study with 10 co-authors was published in the December 2010 issue of the Journal of the American Medical Association (JAMA). The study was directed at 65 year-old men and, using an extensive review of published studies, developed statistical models of the results on quality of life for the four options. A pdf of the paper is available at:

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3055173/pdf/nihms275322.pdf

Alan W. Partin, M.D., of Johns Hopkins Cancer Center in Baltimore provides their criteria for Active Surveillance:

http://www.practiceupdate.com/Explore/ExpertOpinion/?id=312

For men contemplating Active Surveillance, I believe the information in the following should be reviewed:

http://tinyurl.com/3b327ss

In my opinion, this, too, is important for new patients to read to better understand the challenges patients face with many physicians who have different opinions regarding whether or not Active Surveillance should be considered or even explained to their patient:

What's Impeding Active Surveillance in Prostate Cancer?
'Time and Empathy' Needed

http://www.medscape.com/viewarticle/748782

Here is a more recent paper:

Study: Dutasteride Helps Men Undergoing Active Surveillance for Prostate Cancer
http://tinyurl.com/8ys7fo7

And more in this regard here:
Active Surveillance of Very-low-risk Prostate Cancer in the Setting of Active Treatment of Benign Prostatic Hyperplasia With 5α-reductase Inhibitors
http://www.goldjournal.net/article/PIIS0090429513001714/abstract?rss=yes

"Conclusion
Active surveillance of very-low-risk PCa in the setting of 5-ARI therapy for benign prostatic hyperplasia appears to be a safe therapeutic option, because most (57 of 82; 70%) patients maintained very-low-risk PCa or had negative follow-up biopsies during a 3-year follow-up period. Complementary to the Prostate Cancer Prevention Trial, our results indicate that 5-ARI therapy increases prostate-specific antigen sensitivity and can aid the clinician in appropriately targeting biopsies."

Other links regarding Active Surveillance:

http://tinyurl.com/3jgxgpj

http://tinyurl.com/4qgzx6q

http://www.nccn.org/about/news/newsinfo.asp?NewsID=235

But now read the following, because I find it important the patient review pros and cons, and most in this paper regarding what should be important if deciding to follow the Active Surveillance option:

The paper referred to below certainly causes concern when we see so many papers that are now encouraging Active Surveillance (AS) when a patient's diagnostics indicate reasonably low PSA, only two or three tissue samples from biopsy identified with Prostate Cancer presence of less than 15%, and prostate gland close to normal size; in fact, physicians have been chastised for "over-treating" patients in this category by recommending early intervention with surgical removal or radiation. Take a read:

New Way to Predict Prostate Cancer Severity—Size of Prostate

http://tinyurl.com/6lr24sk

Which states: "Smaller prostates were more likely to evolve into more serious, aggressive disease."

And: "prostate was assessed among 1,251 prostate cancer patients at the Vanderbilt Medical Center who were initially classified as having low-risk disease based on a biopsy. Of these men, 31% had a more severe form of prostate cancer after a final pathology assessment post surgery."

A study by physicians at Memorial Sloan Kettering Cancer Center in NYC determined that it is important that patients who have begun Active Surveillance based on biopsy results, should have an endorectal MRI six months later, then confirm the results of that MRI with another biopsy. In 20% of 388 patients evaluated, their Gleason Score was upgraded and treatment considerations were in order. See: **http://tinyurl.com/8fm6muu**. If this source is no longer available, the study is in the Journal of Urology in one of the 2012 editions.

Younger men in good health and otherwise eligible for Active Surveillance may rather see surgical removal a preferred option since they are more likely to experience earlier recovery of the incontinence and erectile dysfunction side effects

that accompany this option as well as successful eradication/removal of all cancer cells. Recovery appears more difficult as we age and begin experiencing other health issues. In any event, it is always important to seek out physicians with years of experience and several hundred procedures under their belt and performed on a regular basis.

Now, should you opt for Active Surveillance, study the following closely to be prepared to thoroughly discuss the recommendations with your treating physician and question why he would not concur with these reasonable considerations:

It appears that patients considering Active Surveillance should request that tissue samples from biopsy have immunohistochemical staining with H&E, P63/AMACR and Ki-67, since the Ki-67 biomarker is a proliferation antigen that is detected by this process. When a tumor cell tests positive for Ki- 67, the tumor is actively growing. In a study, when greater than 7.1% of the tumor cells stained for Ki-67, there was a significantly increased risk of distant metastasis and death due to prostate cancer. See: **http://tinyurl.com/p3a6xo** and **http://tinyurl.com/odbf7u.** The foregoing biomarkers can be tested by Bostwick Laboratories, see: http://tinyurl.com/bqllxck

Active Surveillance with delayed treatment appears to also be a safe option for younger men with low-risk prostate cancer, though I believe more so for older men (as noted earlier, younger men in otherwise good health may be better candidates for earlier intervention prior to aging and the health issues that more often rise with that aging). To track progression, PSA was measured every 3 months (I must add here that with the PSA check, it is very important to also include a digital rectal exam/DRE since too often though there is not significant change in PSA there may be progressive development in the gland that will be noted by the DRE), transrectal ultrasound (TRUS) was performed every 6 to 12 months, and repeat prostate needle biopsy was done at 12- to 24-month intervals. (PLEASE NOTE: In men undergoing active surveillance, the anterior region of the prostate as well as the top of the gland should be specifically sampled on repeat biopsies.) Progression was defined as PSA velocity greater than 0.75 ng/mL/yr, a rise in Gleason score, or greater than 50% increase in lesion size on TRUS. (My note: Which would indicate the time when a treatment option would be determined)

http://www.cancernetwork.com/article/showArticle.jhtml?articleId=201300285

You should also be aware of concern with repeated biopsies as explained in this paper:

The Impact of Repeat Biopsies on Infectious Complications in Men with Prostate Cancer on Active Surveillance

http://www.jurology.com/article/S0022-5347(13)05336-6/abstract

In recognizing this concern of possible infection from repeated transrectal biopsies, I researched and compiled this consideration:

"Transperineal template prostate biopsies (TPTPB) in men with raised PSA despite two previous sets of negative TRUS-guided prostate biopsies"

http://www.ncbi.nlm.nih.gov/pubmed/24337167

"CONCLUSION:
TPTPB is associated with a high rate of clinically significant prostate cancer diagnosis (58 %) in men with raised PSA despite two previous sets of negative TRUS biopsies."

Interestingly, we rarely see the use of TPTPB performed as a biopsy procedure to determine the presence of developing prostate cancer, yet this is a more sanitary procedure that avoids the possibility of infection that has been known to occur with TRUS biopsies.

In this regard, I compiled the following information regarding TPTPB:

As Dr. Chodak explained in his video presentation http://www.medscape.com/viewarticle/803599 wherein a study from California investigators used rectal swabs prior to prostate biopsy, and if the swabs demonstrated that patients had bacteria resistant to the quinolones, they received targeted antibiotic prophylaxis that greatly reduced the infection rate and a reasonable added cost that would likely be covered by Medicare and other health insurers, this could be considered to hopefully avoid infection that can occur via rectal biopsy.

A biopsy procedure available to those men adamantly anti-biopsy via the rectum or fearful of side effects that are known to occur by this method, is the perineal approach via the perineum but I am not certain that Medicare or other health insurers cover the cost of the procedure because it is more involved and costly compared to the "usual" biopsy approach. As noted in this paper,

http://tinyurl.com/nj5pk4o, this "technique has many advantages, the first of which is its increased ability to identify occult or "hiding cancers". Our research and the research of others have clearly demonstrated that the transrectal biopsy does miss a significant percentage of cancers that occur in the anterior or front portion of the prostate. Our data in over 2,200 patients suggests that as high as 40% of patients are thought not to have malignancy, but indeed do have malignancy. Our group has previously published this information in Urology and the Journal of Urology. (and please note) The second advantage to having a prostate biopsy using the perineal approach is that the infection rate is essentially 0%. This is simply because the rectal wall or rectum in general is not penetrated by the biopsy needle." Certainly a preferable procedure by many to be discussed with one's Urologist as well as determine if one's health insurance will cover this alternate but obviously safer biopsy procedure since the equipment and Urologist time involved likely makes this procedure more expensive.

Prostate Calculator to have some idea of your status based on your diagnostics:

http://www.prostatecalculator.org

And here is another regarding the recommended PCA3 test for those considering the Active Surveillance approach:

May 12, 2008 — The urine test for the PCA3 gene, already marketed for use in diagnosing prostate cancer, could also be useful in prognostication. It might have clinical application in selecting men with low-grade and low-volume tumors who would be suitable candidates for active surveillance, say researchers writing in the May issue of the *Journal of Urology*.

Full article:

http://www.medscape.com:80/viewarticle/574379

One of the foremost pathologists in the nation regarding prostate cancer, David Bostwick of Bostwick Laboratories, provides the PCA3 test – marketed as PCA3Plus. May I suggest that you review the URL below to learn more about this innovative test and consider this addition to your testing if considering Active Surveillance. You can then arrange with your local physician to do the required DRE massage of your prostate gland followed by a urine sample to then be sent to Bostwick Laboratories,. I have been advised by a representative of Bostwick

Laboratories that the PCA3Plus test is covered by Medicare. For patients without insurance or whose insurance may not cover the cost of this test, the test costs approximately $150.00. Here is info re PCA3Plus to identify the presence of prostate cancer and you can contact Bostwick Laboratories if you want to learn more: http://tinyurl.com/cwx634m

Bostwick Laboratories/ Pathologist David Bostwick
Virginia - Corporate Headquarters
4355 Innslake Drive
Glen Allen, VA 23060
Phone: 1-800-214-6628
https://www.bostwicklaboratories.com
Fax: 804-288-6568

Active Surveillance may spare two-thirds of men with early prostate cancer the side-effects of treatment, without compromising their survival. Continuing studies seek to identify the optimum schedule of PSA testing and repeat biopsies, the appropriate indications for intervention, the long-term efficacy of surveillance in comparison with immediate radical treatment. Active surveillance provides excellent opportunities to identify markers of prostate cancer behavior, and to test novel therapeutic strategies. Active Surveillance may prove to be the start of a paradigm-shift in the management of early prostate cancer. (As concluded in: http://www.prostatecancerwatchfulwaiting.co.za/ActiveSurveillance.pdf)

Periodic review to determine any unusual blood flow activity in the prostate gland – which could indicate tumor development – would be reasonable with Color Doppler Ultrasound of the prostate gland. Best Color Doppler Ultrasound Radiation Oncologists to determine Prostate Cancer activity in the prostate gland:

http://www.alternative-health-group.org/power-color-doppler.html

The following are excerpts of remarks made by Medical Oncologist Stephen B. Strum to a patient considering "watchful waiting:" "GS 6, apparently normal DRE, core tissue involvement not mentioned….. My comments here would be that validation of the Gleason score by an expert reader in PC should always be done. There is great variability in the skills of homo sapiens & physicians are no different. There is an old joke that goes like this: What do you call a person who graduates medical school first in his class? Doctor. What do you call a person who graduates medical school last in his class? Doctor. This is not a criticism but

a reality that human talent follows a bell-shaped curve. As someone who was trained in hematopathology—the pathology of lymph nodes, bone marrow & spleen--I have seen gigantic variations in the skill levels of pathologists submitting tissue for second opinion at a major university in which I trained. Secondly, watch & wait is a stupid concept since we have a finding (a diagnosis of a malignant disease) that should be signaling us that the system has a defect in it. It is a red flag that should tell us that attention needs to be given to avoid a greater injury. Therefore, the term watchful waiting (WW) or even the term I coined to supersede WW, AOS (Active Objectified Surveillance) should be abandoned, in my opinion. The term I would like to see used is Pro-Active Integrative Care (PIC). Maybe this should even be altered to PIM--Pro-active Integrative Management. What does this mean? The condition we think of as health depends on the health of interconnected units, similar to the circuitry of an electronic device with a host of connectors, transitors, resistors, capacitors & the like. It is a Swiss watch with interconnecting gears, both small & large, but requiring the integrity of all to have the watch healthy & deliver accurate time. In the setting of a new diagnosis of PC, I routinely assess as many of these different "gears" or functions to make sure that none are out of balance. Almost invariably there are some findings that need fixing. For example: Bone integrity as measured by QCT bone density, Deoxypyridinoline (DPD) along with the history of use of exercise or not. Lipid status in the form of a NRM LipoProfile (newest & best test) or VAP cholesterol (excellent test for lipid status now superceded by the NRM LipoProfile) or at least a basic lipid panel consisting of cholesterol, LDL, HDL, & TG (triglyceride) levels. Vit D status as measured by at least 25-OH D3 levels which are abnormally low in 80-90% of all men with PC that have consulted with me. Omega 3 fatty acid & omega-6 fatty acid status which affects production of prostaglandins & leucotrienes which can stimulate PC growth. The best test for this is done via Mayo Medical Labs and is called an EFA (essential fatty acid profile) (12-14 hour fast and no alcohol for 24 hours before blood draw).

Other factors which affect health & interact with PC include thyroid status as measured by usTSH (ultra-sensitive thyroid stimulating hormone), Free T4 & T3 & RT3; homocysteine (HCY) & hsCRP (hypersensitive C-reactive protein) as well as sensitive tests of renal function which are almost always ignored which include random urine ratio of albumin to creatinine or the most sensitive test of renal function called Cystatin C. When we do not ignore these issues, even decades before a diagnosis of PC is made, we fine tune the health of the patient and avert problems later on. The above approach is real & significant in light of articles we see where the impact of total health is related to our treatment of PC. DRE (digital rectal examination). TRUSP (transrectal ultrasound of the prostate) at intervals

perhaps of every year to 2-3 years pending stability. Endorectal MRI with or without spectroscopy if item above not done or if you wish further imaging input. PAP (Prostatic Acid Phosphatase) every 2 years to make sure that a PC confined to the prostate is not approaching a critical PAP threshold of 3.0 or higher which confers a poorer prognosis in the face of RP, or any form of RT." (My note: Point being, despite opting to delay treatment, it is important to look into other diagnostics to correct what may be other health deficiencies as well as continue close attention with diagnostics to be aware should one's PC suddenly show aggressive development.)

The following are important methods of insuring that the anterior as well as the top of the prostate gland are appropriately biopsied, particularly when a biopsy fails to identify prostate cancer despite DRE findings or elevated PSA.

Hidden tumours located on the top and anterior of the prostate evade traditional diagnostic procedures, including ultrasound guided needle biopsy.

The following regards the anterior of the prostate:

http://www.ncbi.nlm.nih.gov/pubmed/21341573?s_cid=pubmed

More in this regard: http://www.ncbi.nlm.nih.gov/pubmed/12508755

Following, regarding "Hidden Prostate Cancer Tumours Evade Treatment," is found in this URL: **http://tinyurl.com/ykyqjgt**

Canadian researchers have found that some hidden prostate cancer tumours cannot be diagnosed with the current procedures. Researchers at Toronto University say their findings explain why some men with elevated prostate specific antigen (PSA) levels who are carefully monitored and undergo repeated negative biopsies still develop aggressive prostate cancer. They say these hidden tumours located on the top of the prostate evade traditional diagnostic procedures, including ultrasound guided needle biopsy. In their research, published Thursday in the British Journal of Urology International, the Canadians say that magnetic resonance imaging (MRI) is the best tool to reveal such tumours. As part of their research, a team of urologists, surgeons, radiologists and pathologists studied 31 patients who had positive biopsy results and tumours on top of their prostate as shown on MRI. They found that MRI was able to help diagnose hidden prostate tumours 87 percent of the time. "Our findings identify a specific high-risk group who tumours are difficult to diagnose because of location. These men benefit from MRI which

guides the biopsy procedure with a high degree of accuracy," said study author Nathan Lawrentschuk, urologic oncology fellow at the university. "The research team call the clinical presentation of elevated PSA and repeated negative biopsy results 'prostate evasive anterior tumour syndrome' (PEATS)," he added. Lead researcher Neil Fleshner said: "Knowing about PEATS may also be important for men already on 'active surveillance' – patients with slow-growing prostate cancer who are being regularly monitored through PSA and biopsy. "Every man does not need an MRI, but knowing about PEATS will help identify those who do."

A similar MRI procedure, VividLook, provides a very similar improvement of imaging the prostate gland to identify tumor location for more appropriate targeting of needles during biopsy. See:
http://www.icadmed.com/products/prostate/documents/VividLookCaseStudy.pdf
or try http://tinyurl.com/3jq7svp

INVIVO's DynaTRIM is yet another form of biopsy needle targeting with MRI. See:

http://www.invivocorp.com/education/whattoexpect.php

and the following lists physicians, their comments, and locations where this procedure is administered:

http://www.invivocorp.com/clinical/doctestimonials.php

From the foregoing, close attention to testing and monitoring diagnostics is of absolute importance by both the physician as well as by the patient. The importance to the patient is insuring that his physician is paying close attention by scheduling necessary testing and monitoring. And for those men whose PSA is elevating despite usual biopsy procedures failing to identify the presence of tumor development, it would be prudent to seek out a physician and facility that provides one of the procedures identified in the previous few paragraphs.

This paper from Johns Hopkins Medical Center in Baltimore, if still available online, supports, but in much less detail, all the foregoing:
http://tinyurl.com/ab3h2hy

Here is a paper claiming that brisk walking can curtail prostate cancer growth in men with low grade (more so Gleason 3+3/6), early developing prostate cancer,

and certainly worth considering not only for prostate cancer but for cardiovascular health as well: **http://tinyurl.com/3qwd4go**

(For patient perspectives having opted for Active Surveillance, go to Terry Herbert's website http://www.yananow.net/Experiences.html)