BIOPSY – Importance of Expert Pathology Opinion

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

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 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. 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 prostate cancer care.

We often hear of erroneous pathology readings of biopsy testing. This often results because only one pathologist provided the reading without being confirmed by a second pathologist. Or even if so, neither were experts in recognizing prostate cancer unless significantly present. And it is possible mistakes like this that you regularly see remarks from Medical Oncologists like Stephen Strum and from many of we advocates who have been researching and studying our disease that all biopsies should either be initially reviewed by a known expert in identifying prostate cancer under the microscope (of which there are only a half dozen or so on which we rely), or sent to one of these experts for a "second opinion" to have more certainty of the biopsy result.

Many times we read of men with biopsy results that either indicate no cancer present or only a single tissue sample evidencing no more than Grade 3 and near insignificant percentage present, yet an elevating PSA, so the decision is either opting for an invasive procedure (they are all invasive to some degree) or Active Surveillance/Watchful Waiting because of their uncertainty. A second opinion with the tissue samples sent to an expert pathologist, and even a urine sampling following a vigorous massage of the prostate sent to Bostwick Laboratories for a PCA3Plus test would better ascertain the validity of the initial biopsy of the likelihood of cancer presence. I've been told by a representative from Bostwick Labs that Medicare (therefore likely most insurers, but check with your insurer to be sure) covers this test.

An explanation of the PCA3 test (known as the PCA3Plus test by Bostwick Laboratories) can be reviewed by clicking on the URLs below, and I've followed that with a list of pathologists known to have expertise in reading biopsy tissue samples.

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

http://www.psa-rising.com/wiredbird/bostwick_pca3plus06.html

If the presence of High-Grade Prostatic Intraepithelial Neoplasia (HGPIN) is evident during biopsy, your physician should consider the following testing:

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 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.

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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/availability.php

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

PATHOLOGY:
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Despite the fact that the Gleason score might NOT change after an expert review, the reality is that more often it does. However, the issue is who did the first review. There are talented pathologists who are focused on prostate cancer and also two national labs who are focused on PC as well.

The Gleason score is a critical item; it is used as a variable in virtually every prognostic and treatment algorithm. An accurate GS mandates an expert pathology opinion from a PC pathology expert. The ones that I am most familiar with include:

A second opinion on the microscopic pathology is usually covered by insurance but if not, runs about $500 pending on what is done. A copy of the original pathology report with the actual slides or recuts from the tissue block are sent to the outside reviewer. Your primary care doctor or you can initiate such a 2nd opinion but you need to request this and ask for a specific physician or lab to be used.

Bostwick Laboratories/ Pathologist David Bostwick Virginia - Corporate Headquarters 4355 Innslake Drive, Glen Allen, VA 23060
Phone: 1-800-214-6628
https://www.bostwicklaboratories.com/patientservices/primary.html
Fax: 804-288-6568
(and when samples are sent in, they should be accompanied by a request that ONLY Dr. Bostwick perform the review)

Jon Epstein (Hopkins) 410-955-5043 or 410-955-2162 (Dr. Epstein does not do ploidy analysis)

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