Informed Prostate Cancer Support Group Inc.

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Tuesday, May 12, 2020

May 2020 NEWSLETTER

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STREAMING ONLINE LIVE

Volume 13 Issue 05

Due to COVID-19, in person meetings at the **Sanford Burnham Prebys Medical Discovery Institute** auditorium have been postponed until further notice.

Saturday May 16 - Dr. Bhangoo will be presenting via live-streaming starting at10am PST. To watch, go to IPCSG website and click the Watch The Presentation button.

Dr. Bhangoo - American Society of Clinical Oncology (ASCO) Meeting Overview - Dr. Bhangoo will discuss the latest cancer science related to prostate cancer that was presented during the American Society of Clinical Oncology (ASCO) meeting. There were over 250 cancer related presentations with several focused on Prostate Cancer. ASCOs Mission is to conquer cancer through research, education, and promotion of the highest quality patient care.

Dr. Bhangoo is a hematologist and oncologist at the Scripps MD Anderson Cancer Center who treats patients with a variety of cancer diagnoses. He has a specific clinical expertise in the management of cancers involving the genitourinary tract, including prostate cancer, kidney cancer, bladder cancer and testicular cancer.

- **For further Reading: https://ipcsg.blogspot.com/**
- **For Comments, Ideas and Questions,** email to Newsletter@ipcsg.org

April 2020 Informed Prostate Cancer Support Group Online Presentation

Living and Coping with Prostate Cancer

Summary by Bill Lewis

Alan Hsu, MD Associate clinical professor, department of psychiatry, UC San Diego.

Psychiatrist, Moores Cancer center psychiatry and psychosocial services.

Reactions to one's diagnosis of Prostate Cancer are varied, and there is no "one right way" to react. Everyone copes and grieves differently. Common emotions are anger, anxiety/fear, sadness, shock and grief. Most men cope in a similar manner to the way they react to other challenges. Some reactions are considered "Adaptive" (good), and others are "Maladaptive."

Adaptive coping mechanisms include educating oneself (online, through friends, etc.), reaching out to family and friends, engagement in valued activities, and as needed, reaching out to professionals.

Maladaptive coping includes drinking or using "substances," avoiding appointments/treatment etc. in order to not have to think about the diagnosis, or taking otherwise-adaptive coping to an extreme that interferes with daily activities.

Dealing with denial: Not all denial is bad. Some degree of denial may help someone cope. For example, a 66 year old man with widely metastatic prostate cancer begins talking to his family about planning a big 70th birthday celebration. A 57 year old man with newly-diagnosed prostate cancer tells his spouse that it is not a big deal, and that he is sure his cancer will be cured. Denial is maladaptive when it interferes with treatment or leads to disengagement from valued activities.

Helping a patient confront maladaptive denial: It is generally not effective to force someone to "face

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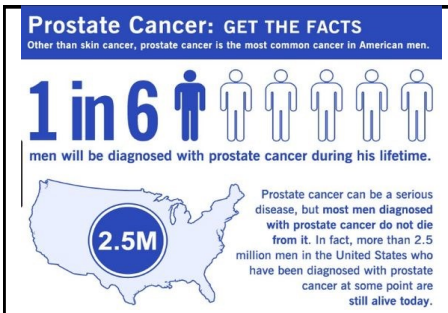

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a 501c3 non-profit organization - all positions are performed gratis

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NEWSLETTER
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PROSTATE CANCER—*2 WORDS, NOT A SENTENCE*

What We Are About

Our Group offers the complete spectrum of information on prevention and treatment. We provide a forum where you can get all your questions answered in one place by men that have lived through the experience. Prostate cancer is very personal. Our goal is to make you more aware of your options before you begin a treatment that has serious side effects that were not properly explained. Impotence, incontinence, and a high rate of recurrence are very common side effects and may be for life. Men who are newly diagnosed with PCa are often overwhelmed by the frightening magnitude of their condition. Networking with our members will help identify what options are best suited for your life style.

Be your own health manager!!

Meeting Video DVD's

DVD's of our meetings are available in our library for $10ea. Refer to the index available in the library. They can also be purchased through our website: http://ipcsg.org Click on the 'Purchase DVDs" tab.

The DVD of each meeting is available by the next meeting date.

From the Editor

Facilities for the meeting are not available due to the COVID-19 epidemic, so it is cancelled until further notice. We will continue to post and distribute the newsletter in the interim. Our speaker this month will be streamed and broadcast via the group web site. Alternate web based meeting approaches such as zoom have been suggested and we will notify you via the newsletter and web site if such becomes available.

Join the IPCSG TEAM

If you consider the IPCSG to be valuable in your cancer journey, realize that we need people to step up and HELP. Call **President** Lyle LaRosh @ 619-892-3888 or Gene Van Vleet @ 619-890-8447.

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facts." They are in denial because they are afraid. It's helpful to try to understand what is important to the person, and what goals he may have for his life. Then, connect treatment with those values. Recognize that change may be gradual.

There are stages of change, typically in this order: precontemplation, contemplation, preparation, action, maintenance, and unfortunately sometimes relapse.

Ways of coping with symptoms:

1. Progressive muscle relaxation, for symptoms of anxiety such as rapid heartbeat or breathing, or chest vs. abdominal breathing, or restlessness, or other muscle tension. The procedure is to tense, then relax each muscle in the body. Start at the feet, work your way up to your head. Take a deep abdominal breath while tensing the muscle. As you exhale, relax it totally. Continue breathing as you relax. A video guided exercise is provided as part of the talk, beginning at about the 13 minute mark, and lasting about 6 minutes. https://www.youtube.com/watch?v=1Lj2_4JMY7A&feature=youtu.be

2. Cognitive Defusion. When we have distressing thoughts, we can feel "fused" with these thoughts. It can be helpful to realize that we do not have to experience the anxiety these thoughts can generate. Instead of engaging with each thought, we just observe them and let them pass through our minds.

This is an alternative to Cognitive Behavioral Therapy, which is a technique in which one addresses or challenges the distressing thoughts -- but which in the short-term can leave us even more worked up.

A video exercise runs from about the 21 to the 24 minute points in the video. We imagine attaching each thought as it occurs, to a leaf floating by in a stream, then letting it go away. Dr. Hsu also recommended searching on YouTube for videos of various relaxation techniques, whether more thought-based or physical ways of relaxing – according to your personal preference. You can look for breathing techniques, mindfulness, meditative exercises, and/or guided imagery. It's good to choose and learn a skill so that it's ready to use when you need it.

Coping with specific symptoms, without medication. Not eliminating the symptom, but reducing its effect on your life.

1. Fatigue: Self-monitoring (looking for patterns). Energy conservation. Scheduling activities during peak energy. Attending to one activity at a time (instead of trying to multitask). Limit naps to 30 minutes or less, to avoid interrupting your evening sleep cycle.

2. Nausea or vomiting: It can be helpful to use progressive muscle relaxation after chemotherapy. Distraction to address "anticipatory" nausea and vomiting, as may occur the night before a treatment, may be of benefit.

3. Pain: You can't actually think your way out of pain, but be aware that pain is amplified by worries/anxiety and distress. Progressive muscle relaxation may help. You can also try mindfulness meditation or cognitive defusion psychotherapies (Acceptance and Commitment therapy, or Cognitive Behavioral Therapy).

4. Insomnia: Practice good sleep hygiene, such as avoiding coffee late in the day, and having a bedtime routine. Sleep restriction: Ideally you are sleeping 80% of the time that you are in bed. If not, the brain and body may associate being tense, anxious and frustrated with being in bed, which of course is not conducive to sleep. Dr. Hsu recommends getting out of bed after 15 minutes, and waiting until you are sleepy to get back into bed again. In this case, short-term pain (possibly for a few weeks) may lead to a long-term gain. Cognitive behavioral therapy for insomnia is available from therapists and also by using programs available online (search "cbt for insomnia," optionally adding "online free."). CBT is now the gold standard for treating insomnia, and is considered to be more effective than medications!

Additional general helps for coping with symptoms.

1. Increasing physical activity: This will usually help reduce depression. There is a 12-week Livestrong Program at the local YMCAs, presumably available again when they reopen after coronavirus restrictions are lifted. There is also Livestrong fitness online at https://www.livestrong.com/cat/fitness/

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2. Increasing the level of social support: In addition to the IPCSG, there are support groups free to the community at Moores Cancer Center, and there are online support groups at cancer.net. Physiological stress increases with social isolation, and decreases with social connectedness.

3. Find sources of meaning: Many people experience a loss of meaning after cancer diagnosis. Usually they have not totally "lost" meaning but have become disconnected, feeling "what's the point?" Meaning centered psychotherapy can help with refinding the meaning, based on the work of Viktor Frankl. Sources of meaning Frankl identified include a) creative – i.e., work, deeds or causes. b) experiential – art, nature, humor, love / relationships, roles. c) attitudinal – the stance one takes towards suffering and existential problems. And d) legacy – past, present, and future.

When to seek professional help: At some point in their cancer journey, 30 to 50% of prostate cancer patients have psychological and social issues in general, based on a 2012 study. A meta-analysis in 2014 showed depression and anxiety rates in the range of 15 to 27% for men in pretreatment, on-treatment and post-treatment. Hormone treatment (ADT) has a direct biological affect causing depression and sometimes anxiety. The incidence in men undergoing ADT increases from about 12% at less than 6 months to 37% if they are treated for more than a year.

Depression leads to more emergency department visits, more medical hospitalizations, more outpatient visits and increased mortality, according to a 2012 study. Another study reported that depressed men are less likely to undergo definitive therapy for cancer. It's also associated with higher rates of erectile dysfunction.

Defining or characterizing clinically significant depression: Feeling sad or depressed most of the time, or being unable to enjoy activities previously enjoyed. Not feeling a connection anymore with the people that you love. Daily functioning is affected. You have no energy. No appetite. Unable to get out of bed. Unable to sleep while ruminating over negative thoughts. There can be a sense of hopelessness, and even suicidal thoughts. Less motivation or interest in getting your treatments.

Anxiety: This is the most common emotion following a prostate cancer diagnosis. It leads to higher rates of moving from active surveillance to active treatment, independent of disease progression. For men treated with radiation, either external beam or brachytherapy, the PSA bounce that can occur 2 to 3 years after treatment can be a source of great anxiety. The bounce is actually associated with improved biochemical disease-free survival, but the anxiety may lead to a desire for more active treatment.

When does anxiety need to be treated? When it's getting in the way of your enjoying your life (your work, family / friend relationships, etc.), and doing the things that you need to do.

Depression and erectile dysfunction: There's a "vicious" cause and effect cycle involving 1) depression 2) lack of intimate contact in a relationship 3) conflict and frustration in the relationship 4) fear of inability to perform sexually 5) withdrawal from sexual activity 6) decreased self-worth / sense of masculinity 7) leading to more depression. The cycle can of course start at any of these points.

Incontinence and depression / anxiety: Fear of urine leaking can lead to avoidance of social contact and isolation, which leads to depression and anxiety. It may help to think how kindly we would behave if the problem were a friend's, rather than our own, and then be kind to ourselves.

Seeking professional help: When it prevents you from normal activities -- the things you want and need to do. Depression or anxiety that impairs your ability to work, enjoy activities and enjoy relationships. Or that causes intense guilt, helplessness or hopelessness. Or that leaves you feeling that you want to die, or to have suicidal thoughts.

The national suicide prevention lifeline is 1-800-273-TALK. The Moores Cancer center psychiatry and psychosocial services has psychotherapy and medication consultations available. Other health systems have services as well. Your oncologist can provide a referral.

Question: what advice do you have for caregiv-

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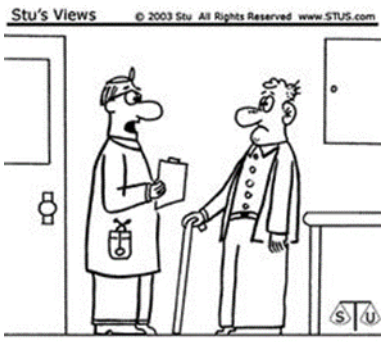
ers? Quite often they are more concerned than the man with the prostate cancer. Try to line up with the patient's (former) interests. Deal with issues like fatigue, rather than "accusing" the patient of being depressed.

Doctor Hsu can be reached at alh068@health.ucsd.edu. However, please make no requests for medical advice via email.

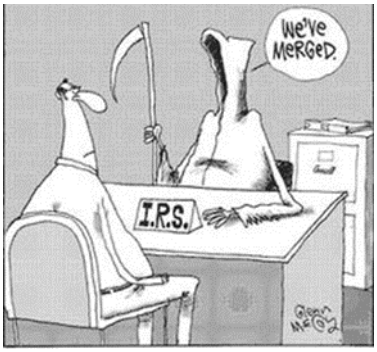
The full presentation by Dr. Hsu is available at the link given in the summary above. It will also soon be available for purchase from the IPCSG website as a dvd.

On the lighter side

"Don't touch the fishing rod."



"I'm stumped. We'll have to wait for the autopsy."



"It's a new anti-depressant—instead of swallowing it, you throw it at anyone who appears to be having a good time."

Articles of Interest

cancernetwork.com

Mathematical Model Predicts Outcomes in Prostate Cancer Therapy

Hannah Slater

May 1, 2020

A study published in *Nature Communications* demonstrated that a mathematical model based on cellular dynamics in prostate cancer can have a highly predictive power in a retrospective data set from patients with biochemically recurrent prostate cancer undergoing intermittent androgen deprivation therapy (IADT).[1]

Particularly, researchers demonstrated that the model can use data from each treatment cycle to estimate intratumor subpopulations and accurately predict the outcomes in each subsequent cycle. Additionally, in patients who are predicted to fail therapy in the next cycle the model could help predict alternative treatments for which a response would be more likely.

"Fully harnessing the potential of intermittent prostate cancer therapy requires identifying ADT resistance mechanisms, predicting individual responses and determining potentially highly patient-specific, clinically actionable triggers for pausing and resuming intermittent-ADT cycles," study lead author Renee Brady, PhD, a postdoctoral fellow in the Department of Integrated Mathematical Oncology at Moffitt, said in a press release.[2]

The researchers simulated prostate-specific antigen (PSA) dynamics with enrichment of prostate cancer stem-like cells (PCaSC) during treatment as a plausible mechanism of resistance evolution. Simulated PCaSC proliferation patterns were then correlated with longitudinal serum PSA measurements in 70 patients with prostate cancer.

By integrating data that becomes available with each additional treatment cycle to adaptively inform tumor population dynamics in a leave-one-out study, the model simulations were able to predict patient-specific evolution of resistance with an overall accuracy of 89% (sensitivity, 73%; specificity, 91%).

"Model simulations based on response dynamics from the first IADT cycle identify patients who would benefit from concurrent docetaxel, demonstrating the feasibility and potential value of adaptive clinical trials guided by patient-specific mathematical models of intratumoral evolutionary dynamics," the authors wrote.

The study analysis produced 4 important clinical findings, according to the researchers, including:

PSA dynamics provide actionable triggers for prostate cancer treatment personalization, vis-à-vis static PSA values with largely debated clinical utility.

IADT outcomes in prior studies might be adversely affected by the long induction periods that accelerate selection for treatment-resistant populations.

Patient-specific PSA treatment threshold relative to pretreatment burden rather than a fixed value for all patients may significantly improve IADT responses.

Early treatment response dynamics during IADT could identify patients that may benefit from concurrent docetaxel treatment and, possibly more importantly, identify patients who are adequately treated with IADT alone.

"Our study demonstrated the value of ongoing model simulations in predicting outcomes from each treatment cycle throughout the course of therapy," the authors wrote. "This ability to learn from early treatment cycles and predict subsequent responses adds an essential degree of personalization and flexibility to a cancer treatment protocol – a game theoretic strategy termed Bellman's Principle of Optimality that greatly increases the physician's advantage."

Notably, model validation demonstrated that with 2 uniform parameters learned from the training cohort, only 63% of the data were accurately captured in the testing cohort. Although this might be perceived as a limitation, the researchers suggest that the primary objective of the study was to develop a predictive model that could be clinically actionable, not to fit data with the highest accuracy.

"Allowing for more patient-specific parameters substantially increases data fit but compromises the ability to predict cycle-by-cycle dynamics as insufficient data are collected to inform each model parameter on a per-patient basis," the authors wrote. "As additional data become available, the developed framework may be generalizable and able to predict how [patients with prostate cancer] of different stages will respond to IADT with comparable accuracy. Further work in patients with more advanced or metastatic [prostate cancer] is needed."

medpagetoday.com

Clinical Challenges: Nuclear Medicine and Biochemically Recurrent Prostate Cancer

Mike Bassett,

Clinical Challenges > Nuclear Medicine in Cancer

— With the advent of fluciclovine and PSMA, nucle-

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ar medicine has carved out a key role in the visualization of prostate cancer

by Contributing Writer, MedPage Today April 23, 2020

One of the most significant unmet needs in prostate cancer treatment involves those patients with biochemical recurrence -- patients who have undergone definitive therapy such as prostatectomy, yet have rising prostate-specific antigen (PSA) levels.

While nuclear medicine has long had a role in visualizing prostate cancer, up until recently the options have been limited. In many patients, imaging methods such as fluorodeoxyglucose (FDG) positron-emission tomography (PET), or sodium fluoride PET for bone scans, are just not sensitive enough to detect lesions early, when PSA levels first begin to rise, thus indicating that a patient's prostate cancer is returning.

That began to change with the development of choline C-11 injection for PET and fluciclovine F18, said Thomas Hope, MD, director of molecular therapy in the department of radiology and biomedical imaging at the University of California San Francisco.

"Choline C-11 is a weird radionuclide -- it has a 20-minute half-life and you really can't distribute it very far, so you pretty much have to have a cyclotron onsite," Hope told *MedPage Today*. "So it wasn't really widely available or used because of that issue. It is FDA approved, but primarily used at the Mayo Clinic."

Fluciclovine F18 (Axumin) is a nonnaturally occurring amino acid PET radiotracer that was approved by the FDA in 2016 for PET imaging in men with suspected prostate cancer recurrence based on elevated PSA levels following prior treatment and, according to Hope, is currently the standard-of-care imaging modality for detecting the location of the prostate cancer recurrence.

"It is covered by Medicare," he pointed out. "And it is fluorinated and can be distributed and made available by a nationwide network."

Yet, it does have its limitations.

"In the prostate cancer world, we talk about the significance of sensitivity relative to PSA level, relative to imaging," Erik Mittra, MD, PhD, section chief of nuclear medicine at Oregon Health & Science University in Portland, told *MedPage Today*. "In the past, when we just used bone scans, below a PSA level of 10 the sensitivity was very low, but with fluciclovine the results show that even at PSA level of 3, the sensitivity is at 80%."

Studies have shown, however, that below a PSA level of 1, fluciclovine has a detection sensitivity of 40% or less, Mittra said. "Which is not great."

"As your prostate cancer grows and metastasizes, your PSA gets higher," Hope pointed out. "If you image patients with a low PSA, it becomes that much harder, because you have smaller-volume disease. That is why we are always looking for better imaging modalities to localize disease, particularly in the setting of low PSA, where fluciclovine doesn't work very well."

Conversely, that is a setting in which prostate-specific membrane antigen (PSMA), a glycoprotein that sits on the surface of prostate cells and is overexpressed in prostate cancer cells, does work well, explained Mittra. "Early results show that below a PSA level of 1, and even below a level of 0.5, it has pretty good sensitivity."

The compound most widely used is Ga 68 PSMA 11 (in which gallium 68 is the radioactive carrier and PSMA 11 is the small molecule that binds to the receptor), which was developed in Heidelberg, Germany, but never patented.

"And because it wasn't patented, lots of facilities around the world started using PSMA 11," said Hope. "A look at the literature shows there are hundreds of articles studying PSMA 11 because everyone can use it. In Germany, Italy, France, the U.S., we all use the compound because the chemistry is easy, you can make it yourself, and it happens to work really well, particularly in patients with low PSA, where it really matters."

For example, in this study comparing fluciclovine with 68 Ga PSMA 11 PET/CT for localization of biochemical recurrence after prostatectomy (for which Hope was a co-investigator), detection rates of biochemical recurrence with 68 Ga PSMA 11 were two-fold higher than with fluciclovine in patients with PSA levels of 2 or less during a median follow-up of 8 months.

Other PSMA compounds have been developed and are being investigated. Fluorine 18 DCFPyL is a clinical-stage, fluorinated PSMA-targeted PET imaging agent for prostate cancer that was discovered and developed at the Johns Hopkins University School of Medicine, and is currently in a number of phase II/III trials.

Another fluorinated PSMA-targeted PET imaging agent is F18-PSMA-1007, which is also in clinical trials. And there are a number of other compounds under investigation, as well.

"My vision of what prostate cancer imaging is going to look like in 5 years is that I think everyone will get a PSMA PET," said Hope. "There will be no more bone scans, no more CTs, no more MRIs, none of all these multiple imaging studies. There will be one imaging study

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and it will be PSMA PET. And I think there will be very little role for C-11 choline or fluciclovine. So then the question becomes which PSMA PET radiopharmaceutical is the one that will win."

Gallium-labeled PSMA compounds have both benefits and drawbacks, said Hope, who pointed out that while the chemistry is easier with gallium than with fluorine, the latter has a 2-hour half-life, compared with gallium's 68-minute half-life.

"If you are ever going to be able to get PSMA around the country to all the patients who need it, it is going to be really hard to meet that clinical need with gallium, whereas it is definitely feasible to do it with an F18-labeled compound," Hope explained. "It is unclear right now, and it will depend a lot on the markets. It won't depend as much on whether A is better than B, and more on access and reimbursement. And access and reimbursement are complicated discussions."

sciencedaily.com

Interim scan during prostate cancer therapy helps guide treatment

Ajit Karakbelkar, MD,

New prostate cancer research shows that adding an interim scan during therapy can help guide a patient's treatment. Prostate-specific membrane antigen (PSMA) positron emission tomography (PET) imaging of patients with metastatic castration-resistant prostate cancer after two cycles of lutetium-177 (177Lu)-PSMA radioligand therapy has shown a significant predictive value for patient survival. The research was presented at the 2019 Annual Meeting of the Society of Nuclear Medicine and Molecular Imaging (SNMMI).

According to the National Cancer Institute, currently the five-year survival rate for men with metastatic prostate cancer is 30.5 percent. Early assessment of treatment effectiveness is essential to providing optimal care.

In phase 2 trials, 177Lu-PSMA therapy has shown promising results in treating patients with metastatic castration-resistant prostate cancer. The therapy typically involves a preliminary PSMA PET scan to identify patients who are eligible for the treatment. While interim PET scans have shown high predictive value for lymphoma patients, this concept has not been previously explored in prostate cancer patients undergoing 177Lu-PSMA therapy.

The retrospective analysis was conducted at Klinikum rechts der Isar hospital, Technical University Munich, Germany including patients who underwent gallium-68 (68Ga)-PSMA11 PET/CT at baseline and after two cycles of 177Lu-PSMA RLT under a compassionate use program.

Instead of standardized uptake value, which is the parameter generally used in such analyses, researchers used qPSMA, an in-house developed software, to evaluate the whole-body tumor burden. "Tumor response was assessed by the changes in PSMA-avid tumor volume from baseline to the second PSMA PET using three classification methods," explained Andrei Gafita, MD. "Subsequently, we found that tumor response assessed on interim PSMA PET after two RLT cycles was associated with overall survival."

Gafita stated, "Our results therefore show that interim PSMA PET can be used for therapeutic response assessment in patients undergoing 177Lu-PSMA RLT. Furthermore, occurrence of new lesions in PSMA PET is a prognostic factor for disease progression and could be included in defining tumor response based on PSMA PET imaging."

"While further analyses involving clinical parameters are warranted," Gafita adds, "this analysis paves the way for use of interim PSMA PET in a prospective setting during 177Lu-PSMA radioligand therapy."

Story Source:

Materials provided by **Society of Nuclear Medicine and Molecular Imaging**. *Note: Content may be edited for style and length.*

cancernetwork.com

Patients of Metastatic Prostate Cancer Could Benefit from Immunotherapy Treatment

Matthew Fowler

A subset of patients with metastatic prostate cancer who showed evidence of pretreatment of active T-cell responses in tumors experienced prolonged survival data as a result of treatment with ipilimumab, according to a study published in *Science Translational Medicine*.[1]

The phase II trial found that a group of patients with metastatic castration-resistant prostate cancer, which typically has a limited response to immunotherapy, could benefit from immune checkpoint inhibitors and provide future biomarkers to identify this subgroup.

"Our results indicate that immune checkpoint blockade can instigate T-cell responses to tumor neoantigens despite a low tumor mutational burden in prostate cancer," said lead author Sumit Subudhi, MD, PhD, in a press release.[2] "We found specific markers among a subset of patients with the greatest benefit, such as T-cell density and interferon-γ signaling, that may help improve

(Continued from page 8)

our ability to select patients for treatment with checkpoint blockade."

The researchers identified 2 separate cohorts by survival and progression time for patients: favorable and unfavorable. The favorable group saw "high intratumoral CD8 T cell density and IFN- γ response gene signature and/or antigen-specific T cell responses." Even more, 6 of the 9 patients included in the favorable group were still alive at the time of analysis, with survival after treatment length ranging from 33 to 54 months. All 10 patients in the unfavorable cohort died of their diseases, with survival data ranging from 0.6 to 10.3 months.

The clinical trial was conducted with 30 patients of metastatic castration-resistant prostate cancer receiving ipilimumab with the hopes of determining if antigen-specific T-cell responses can be elicited after treatment with immune checkpoint blockade in cancers that have a low tumor with high mutational function.

"We were encouraged to see that prostate cancers with a low mutational burden do in fact express neoantigens that elicit T-cell responses that lead to favorable clinical outcomes," said co-lead corresponding author Padmanee Sharma, MD, PhD, in the release. "Our findings indicate that anti-CTLA-4 immune checkpoint therapy warrants additional studies in order to develop treatment strategies that may improve survival of patients with metastatic prostate cancer."

Among the entire population of patients, the median progression-free survival was 3 months, and median overall survival was 24.3 months. A total of 8 patients (28%) experienced grade 3 toxicities, with dermatitis and diarrhea among the most common.

Compared to other forms of cancer like melanoma and lung cancer, which tend to respond to immune checkpoint inhibitors strongly, prostate cancer has relatively low mutation levels and fewer neoantigens present. Higher levels of underlying gene mutations lead to the higher production of neoantigens, which that are recognized as abnormal by the immune system.

Moving forward, the researchers plan to pursue more multi-institutional trials in the hopes of validating the data collected in this phase II trial.

"Our results suggest that a particular subset of patients may benefit from (immune checkpoint blockade), despite having a relatively low (tumors with high mutational burden)," wrote the researchers. "In summary, our clinical study provides data to support further testing of immunotherapy strategies in patients with metastatic prostate cancer."

Medicine and Society

Reconsidering Prostate Cancer Mortality — The Future of PSA Screening

List of authors.

H. Gilbert Welch, M.D., M.P.H.,
and Peter C. Albertsen, M.D.

From its peak in the early 1990s, U.S. mortality due to prostate cancer has decreased from 39 per 100,000 men to 19 per 100,000 men — essentially by half. Although everyone agrees that this reduction is good news, there is considerable disagreement about why it happened. The controversy has profound implications for the future of prostate-specific antigen (PSA) screening.

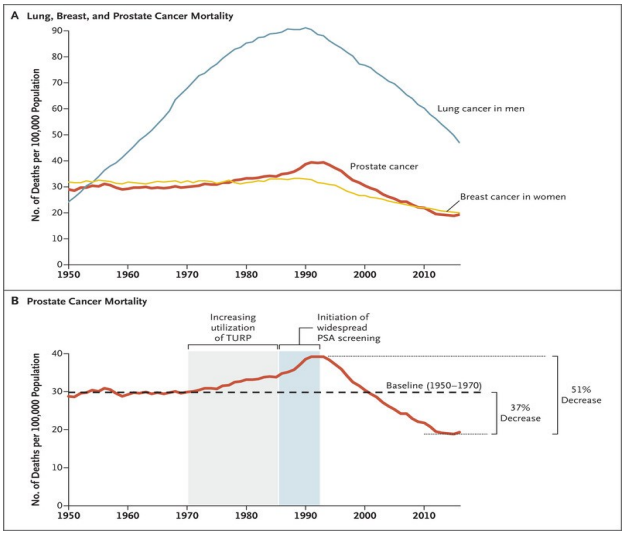


Figure 1. Prostate Cancer Mortality in the United States, 1950–2016

A long-term perspective on trends in cancer-specific mortality among patients with three common causes of cancer-related deaths since 1950 is provided in Figure 1A. The substantial rise and fall in the largest component of cancer-related mortality, lung cancer mortality, reflects the rise and fall in rates of cigarette smoking decades earlier. In contrast, breast cancer mortality was remarkably stable until 1990 and then began to fall. Prostate cancer mortality was similarly stable until 1970 and also began to decrease in the early 1990s. During the intervening years, however, prostate cancer mortality rose.
A likely cause of this rise is illustrated in Figure 1B. During the 1970s and early 1980s, urologists performed increasing numbers of transurethral resections of the prostate (TURP) to treat benign prostate enlargement in older men. As more resected prostate specimens were sent for pathological examination, more prostate cancer was incidentally detected — and the incidence of (recognized) prostate cancer gradually rose. By 1986, half

NETWORKING

Please help us in our outreach efforts. Our speakers bureau consisting of Lyle LaRosh, and Gene Van Vleet are available to speak to organizations of which you might be a member. Contact Gene 619-890-8447 or gene@ipcsg.org to coordinate.

Member and Director, John Tassi is the webmaster of our website and welcomes any suggestions to make our website simple and easy to navigate. Check out the Personal Experiences page and send us your story. Go to: https://ipcsg.org/personal-experience

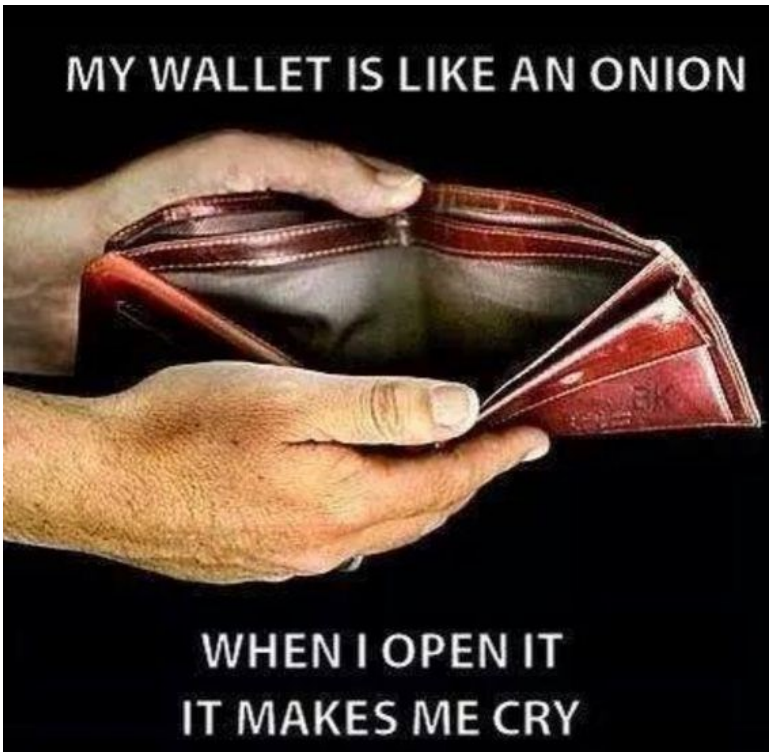
Our brochure provides the group philosophy and explains our goals. Copies may be obtained by mail or email on request. Please pass them along to friends and contacts.

Ads about our Group are in the Union Tribune the week prior to a meeting. Watch for them.

FINANCES

We want to thank those of you who have made special donations to IPCSG. Remember that your gifts are tax deductible because we are a 501(c)(3) non-profit organization.

We again are reminding our members and friends to consider giving a large financial contribution to the IPCSG. This can include estate giving as well as giving in memory of a loved one. You can also have a distribution from your IRA made to our account. We need your support. We will, in turn, make contributions from our group to Prostate Cancer researchers and other groups as appropriate for a non-profit organization. Our group ID number is 54-2141691. Corporate donors are welcome!



While our monthly meetings are suspended, we still have continuing needs, but no monthly collection. If you have the internet you can contribute easily by going to our website, http://ipcsg.org and clicking on "Donate" Follow the instructions on that page. OR just mail a check to: IPCSG, P. O. Box 420142, San Diego CA 92142