US TOO® PROSTATE CANCER EDUCATION & SUPPORT

HOTSHEET

SEPTEMBER 2010

SEPTEMBER IS PROSTATE CANCER AWARENESS MONTH

IMMUNOTHERAPY SHOWS BENEFIT IN PROSTATE CA

A cellular immunotherapy appears to prolong survival among men with metastatic, castration-resistant prostate cancer, researchers reported. In a randomized phase III trial, conducted among more than 500 men, treatment with sipuleucel-T (Provenge®) yielded a relative reduction in the risk of death of 22% compared with placebo, according to Philip Kantoff, MD, of the Dana-Farber Cancer Institute in Boston, and colleagues. On the other hand, the treatment did not delay disease progression, Kantoff and colleagues reported in the July 29 issue of the *New England Journal of Medicine* (Vol. 363, pp. 411-22, 2010).

Sipuleucel-T is an active cellular immunotherapy, described by the researchers as "a type of therapeutic cancer vaccine." It was approved in April 2010, largely on the basis of data reported in this study, dubbed IMPACT, standing for Immunotherapy for Prostate Adenocarcinoma Treatment.

Sipuleucel-T consists of the patient's own peripheral-blood mononuclear cells, including antigen-presenting cells that have been activated outside the body using an engineered protein called PA2024. The protein is a fusion of prostatic acid phosphatase, a prostate

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BONE DENSITY MAY PREDICT PROSTATE CANCER IN OLD AGE

Starting at about age 70, men in a long-term prospective cohort study who were diagnosed with high-risk prostate cancers tended to have relatively high levels of bone mineral content (BMC) when measured up to 35 years earlier, reported Stacy Loeb, MD, of Johns Hopkins University, and colleagues. The findings were reported in the July issue of the *British Journal of Urology Internationa*l (Vol. 106, pp. 28-31, 2010).

In the study, Loeb and colleagues looked at data from the Baltimore Longitudinal Study of Aging, in which participants have undergone comprehensive medical exams about every two years since 1958. These exams have included prostate-specific antigen screening since 1991, and BMC in the forearm was measured with single photon absorptiometry from 1973 to 1984.

Of 519 men tracked in the study, 76 were diagnosed with prostate cancer, including 18 with high-risk tumors. The median time from the last bone assessment to diagnosis or censorship was 21.1 years (range 0.2 to 35.0). Median year of diagnosis or censorship was 1997.

A graph of BMC versus age showed different patterns for participants diag-

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DENDREON'S $93,000 DRUG PRICE MUST BE PAID BY US, DOCTORS SAY

Dendreon Inc.'s $93,000 price tag for its Provenge prostate cancer treatment must be covered under the rules of the US Medicare health plan, according to a letter submitted by the American Society of Clinical Oncology.

The Centers for Medicare & Medicaid Services, the government agency that determines which treatments will be reimbursed, is required by the Social Security Act to pay for all cancer drugs approved by US regulators, the cancer society said in a public letter submitted to the agency.

Provenge won marketing rights in the US in April, becoming the first drug designed to train the body's immune system to fight cancer. Medicare, the government's health plan for the elderly and disabled, routinely pays for medicines once they've been approved regardless of price. The agency initiated a yearlong internal review on June 30 to determine whether Provenge should be an exception.

"We are concerned that CMS may have plans to examine the issue of whether to cover this therapy for its FDA-approved

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PSA SCREENING CAN LEAD TO OVERTREATMENT

Many men being treated aggressively for low-grade prostate cancer – particularly if it was detected during PSA screening – are unlikely to benefit from the intervention, a new study suggests. Men with screen-detected cancer and PSA levels below 4 ng/mL were less likely to have these clinical features:

- High-grade tumors, OR 0.67 (95% CI 0.60 to 0.76)
- Disease outside the prostate, OR 0.30 (95% CI 0.20 to 0.47)
- Tumor size larger than 0.5 cm^3, OR 0.75 (95% CI 0.68 to 0.83)

Yet they were 1.49 (95% CI 1.38 to 1.62) times more likely to undergo radical prostatectomy (RP) than men who had prostate cancer that was not detected by screening, and they were 1.39 (95% CI 1.30 to 1.49) times more likely to have radiation therapy (RT). Yu-Hsuan Shao, PhD, of the Cancer Institute of New Jersey in New Brunswick, and colleagues reported their findings in the 26 July 2010 issue of *Archives of Internal Medicine* (Vol. 170, pp. 1256-61, 2010).

Because little is known about the risk profile of men whose PSA is below 4 ng/mL, Shao and colleagues looked at data from the Surveillance, Epidemiology, and End Results (SEER) database, which includes approximately one-quarter of the US population.

Among 123,934 men who received a diagnosis of prostate cancer from 2004 to 2006, 14% had PSA values below 4 ng/mL, 73.5% were between 4.1 and 20 ng/mL, and 12.5% were above 20 ng/mL. Approximately 54% of patients with PSA levels below 4 ng/mL had low-risk cancers, with risk being determined according to clinical stage, PSA level, and Gleason score, compared with 48% of those whose PSA levels were between 4.1 and 10 ng/mL (P <0.001).

A total of 44% of men whose PSA was lower than 4 ng/mL had a RP, as did 38% of those whose levels were 4.1 to 10 ng/mL and 24% of those whose values were between 10.1 and 20 ng/mL. RT was given to 33%, 40%, and 41.3% of the three groups, respectively. "Despite their lower risk of having clinically significant disease, treatment rates for men with PSA values of 4.0 ng/mL or lower were comparable to those of men presenting with PSA values between 4.0 and 20.0 ng/mL," wrote Shao and colleagues.

In an invited commentary that accompanied the study, Richard M. Hoffman, MD, of the University of New Mexico in Albuquerque and Steven B. Zeliadt, PhD, of the University of Washington in Seattle, argued in favor of active surveillance (AS) for patients at low risk. "Prostate-specific antigen testing has led to an epidemic of prostate cancer, but a substantial proportion of PSA-detected cancers will never be clinically significant, and continuing to aggressively treat most men with low-risk cancers will certainly do more harm than good," Hoffman and Zeliadt wrote. They believe AS is an "acceptable alternative" for men with a PSA level of 10 ng/mL or lower, a Gleason score of six or lower, and clinical stage T1c or T2a.

William J. Catalona, MD, of Northwestern University Medical School in Chicago had a different view. He pointed out several failings in the study, including that information on how rapidly PSA levels were rising (PSA velocity), how large the prostate was in relation to the PSA level (PSA density), the percentage of free PSA (lower with aggressive cancers), or the number of cancer-positive biopsy cores was not available. "All of these are important indicators of tumor aggressiveness and determinants of treatment selection," he wrote in an e-mail to MedPage Today and ABC News. Catalona developed the PSA screening test.

"The authors and the editorial comment strongly advocate AS," Catalona continued. "However, with AS protocols, the 'good news' comes early and the 'bad news' comes late. It has already become clear that 30% to 50% of patients abandon AS for treatment within five years, and for these patients, AS has meant delayed cancer treatment," he said.

"There is no doubt that with AS, some patients will die of prostate cancer unnecessarily. In a sense, widespread adoption of AS in all patients who appear to have low-risk disease would be to say it is okay for some men to die of prostate cancer so that others may avoid treatment – a debatable choice," Catalona warned.

MedPage Today, 26 July 2010

PATIENT ADVOCATE FOUNDATION ANNOUNCES ADDITIONAL SUPPORT FOR CO-PAY RELIEF PROGRAM SERVING PROSTATE CANCER PATIENTS

Co-Pay Relief Program Provides Direct Financial Support for Pharmaceutical Co-Payments to Insured Patients in Medical & Financial Need

Patient Advocate Foundation (PAF) – a national non-profit organization that seeks to safeguard patients through effective mediation assuring access to care, maintenance of employment and preservation of their financial stability relative to their diagnosis of life threatening or debilitating diseases – is pleased to announce that it has received a substantial contribution which will provide additional funding support for prostate cancer patients through its Co-Pay Relief Program (CPR).

PAF's Co-Pay Relief Program provides direct financial support for pharmaceutical co-payments to insured patients, including Medicare Part D beneficiaries, in 20 disease categories who financially and medically qualify. Since the program's inception in April 2004, CPR has distributed more than $77,650,000.00 million in assistance to over 36,000 patients nationwide who were unable to afford their out of pocket pharmaceutical expenses. In the last year, several internal enhancements have been made to the Co-Pay Relief Program to improve patient access including raising federal poverty (FPL) guidelines from 250% to 500% and creating 24-hour provider application portal.

"We are thrilled to announce additional funding for prostate cancer patients, which will allow us to offer financial assistance to hundreds of additional patients each year. PAF is committed to improving the quality of life of patients facing medical and financial hardship through our professional case management and Co-Pay Relief services," said Nancy Davenport-Ennis, Founder and CEO of PAF. "A cancer diagnosis can be the most overwhelming experience a person may ever face in his or her lifetime. Coupled with high out of pocket costs associated with treatments and therapies, the journey can become significantly more challenging to manage – so we are particularly pleased to be able to offer assistance to so many more patients, which will lead to more thorough management of their disease."

In 2009, over 18 percent of the patients who requested information and assistance from PAF reported pharmaceutical co-pay expenses as their number one access issue. Forty-five percent of the patients seeking help were over the age of 65, a 25% increase from 2008.

Patient Advocate Foundation and its companion organization, the National Patient Advocate Foundation (NPAF), were founded on the principle that health care is a basic human need and shared social responsibility. Annually, PAF receives thousands of contacts requesting information and assistance via their toll-free hotline as well as online.

Complete direct, sustained case management services are provided to patients from all fifty states free of charge. For more information about PAF, visit <www.patientadvocate.org> or call toll free 800-532-5274. For more information about PAF's Co-Pay Relief Program visit <www.copays.org> or call toll free 866-512-3861.

PAF news release, 29 July 2010

PAF Patient Advocate Foundation
Solving Insurance and Healthcare Access Problems | since 1996

PROSTATE NET REGIONAL SYMPOSIUM SERIES

2010 DATES / SITES

Sept 11- Chicago, IL

Oct 2 - New York, NY

Register and see agendas at <http://prostatenet.com/Symposium.html>.

SNEAKERS@WORK DAY

Friday, 17 September 2010

Honor your colleagues who are battling or have survived prostate cancer. Raise awareness where you work. Learn more and register at <www.ustoo.org/sneakers@work>.

SNEAKERS @ WORK

BMC & PROSTATE CANCER

(Continued from page 1)

nosed with high-risk prostate cancer, lesser-risk prostate cancer, and no prostate cancer. Those without prostate cancer showed declines in BMC with age, slowly up to about age 55, then more steeply. In contrast, BMC in those later diagnosed with prostate cancer was about the same up to age 70. Beyond that age, there appeared to be a pronounced difference between those with high-risk versus lesser-risk tumors.

High levels of BMC in these elderly participants were associated with subsequent diagnosis of high-risk prostate cancer, whereas those developing lesser-risk tumors tended to have moderate BMC. A random-effects statistical model showed that the association of BMC with age and prostate cancer was significant (P=0.018). Including body mass index, dietary calcium, vitamin D levels, and smoking status did not change the results, researchers indicated.

Researchers noted that the frequency of bone metastases in prostate cancer patients suggested some biological association between these tumors and bone. They also cited a previous study suggesting a link between higher BMCand prostate cancer incidence, although the connection seemed weak.

"At the local level, bone mineral content may represent a proxy for bone with a greater degree of growth factors," they offered. An alternative is that systemic factors, such as insulin and insulin-like growth factor, mediate the relationship. Loeb and colleagues noted that some studies have found associations between these proteins, as well as body mass index, with both prostate cancer and BMC.

The calcium-parathyroid hormone-vitamin D pathway could also play a role, the researchers indicated. And sex hormones probably contribute, they suggested, insofar as both estrogen and androgen hormones are known to affect both bone density and cancer development and progression.

Although they cited several limitations to their study, Loeb and colleagues concluded "Clearly, additional study is warranted to clarify the factors within bone that enhance prostate cancer."

MedPage Today, 30 July 2010

DOC MOYAD'S WHAT WORKS & WHAT IS WORTHLESS COLUMN, ALSO KNOWN AS "NO BOGUS SCIENCE" COLUMN

"Why I would NOT get excited about mega-dose folic acid supplements unless you are pregnant! And, why does a banana peel on the sidewalk remind me of music?"

Mark A. Moyad, MD, MPH,
University of Michigan Medical Center, Department of Urology

Editors' note: In the spirit of information sharing, we have invited certain physicians and others to provide comments and opinions for Us TOO's *HotSheet.* It is our desire to enrich the content of the *HotSheet* to empower the reader. This piece contains the opinions and thoughts of its author and is not necessarily those of Us TOO International.

Bottom Line: Un-metabolized Folic Acid (UMFA) from folic acid dietary supplements could be a potential problem. If you are an older man thinking about becoming pregnant or are pregnant you should take a folic acid supplement, but otherwise be very careful about these supplements!

There are several effective drugs used in medicine from cancer to Rheumatoid Arthritis that block the ability of folic acid (vitamin B9) to do its thing in the body. Folic acid helps with DNA replication and repair. Folic acid is a wonderful supplement for pregnant women and younger women thinking about becoming pregnant because it has been proven to reduce the risk of neural tube defects in the fetus.

However, what happens when we get older and so many foods and supplements are loaded with added folic acid? Some think, as I do, that this excessive amount of folic acid (mega-doses) is not beneficial at all or may even encourage tumor growth in some men. Now, let's go to the latest study.

Un-metabolized folic acid (also called "UMFA") is now being measured in some studies as an indicator of over exposure to folic acid mostly from dietary supplements. In the latest US study of men and women 60 years of age or older it was found that approximately 40% of them had detectable levels of UMFA! What does that mean?

They told me in medical school that folic acid was a B vitamin so it is water-soluble, and if you get too many supplements that this is just "expensive urine." This is really inaccurate because a large concentration of these compounds stay in the blood for a while so our blood is expensive I guess. Interestingly, UMFA does not appear in the bloodstream if the folate intake comes from natural food sources – only with the supplements.

What do I tell patients about this potential problem of overexposure to B vitamins? First I tell them that B12 shots are overrated and cost too much, and then I tell them to avoid excess folic acid from dietary supplements (like a B-complex unless your doctor thinks you are special). And, then I tell them how much money they will now save in a year, and then I get a big hug, a polite kiss on the cheek, and then I ask them for that extra money that I saved them and then they laugh at me really, really hard because I guess they think I was joking?

Oh, and from the title at the top of my column as to why a banana peel on the side walk reminds me of music… because you will B-FLAT unless you C-SHARP! That may have seemed like a dumb joke, but it got me a first date in the 5th grade with a girl that I met while sharing my Flintstones Chewable multivitamins with the class, and those pills had folic acid in them (see how everything comes together eventually in a very twisted way in the Moyad column)!

Reference:

Bailey RL, Mills JL, Yetley EA, et al. Unmetabolized serum folic acid and its relation to folic acid intake from diet and supplements in a nationally representative sample of adults aged ≥ 60 years in the United States.
Am J Clin Nutr 92: 383-9, 2010

LONG TERM OUTCOME FOR CLINICALLY LOCALIZED PROSTATE CANCER TREATED WITH PERMANENT INTERSTITIAL BRACHYTHERAPY

Taira AV, Merrick GS, Butler WM, et al

Int J Radiat Oncol Biol Phys
Epub ahead of print; 2 June 2010

The goal of this study is to present the largest series of prostate cancer brachytherapy patients treated with modern brachytherapy techniques and postimplant day 0 dosimetric evaluation.

Between April 1995 and July 2006, 1,656 consecutive patients were treated with permanent interstitial brachytherapy. Risk group stratification was carried out according to the Mt. Sinai guidelines. Median follow-up was 7.0 years. The median day 0 minimum dose covering at least 90% of the target volume was 118.8% of the prescription dose. Cause of death was determined for each deceased patient. Multiple clinical, treatment, and dosimetric parameters were evaluated for impact on the evaluated survival parameters.

At 12 years, biochemical progression-free survival (bPFS), cause-specific survival (CSS), and overall survival (OS) for the entire cohort was 95.6%, 98.2%, and 72.6%, respectively. For low-, intermediate-, and high-risk patients, bPFS was 98.6%, 96.5%, and 90.5%; CSS was 99.8%, 99.3%, and 95.2%; and OS was 77.5%, 71.1%, and 69.2%, respectively. For biochemically controlled patients, the median posttreatment prostate-specific antigen (PSA) concentration was 0.02 ng/ml. bPFS was most closely related to percent positive biopsy specimens and risk group, while Gleason score was the strongest predictor of CSS. OS was best predicted by patient age, hypertension, diabetes, and tobacco use. At 12 years, biochemical failure and cause-specific mortality were 1.8% and 0.2%, 5.1% and 2.1%, and 10.4% and 7.1% for Gleason scores 5 to 6 and 7 and >/=8, respectively.

Excellent long-term outcomes are achievable with high-quality brachytherapy for low-, intermediate-, and high-risk patients. These results compare favorably to alternative treatment modalities including radical prostatectomy.

ASK DOCTOR SNUFFY MYERS

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"My husband has prostate cancer that has spread to his bones. He was treated with Lupron for a while, but then the cancer became resistant. He then went through Taxotere and then mitoxantrone. His oncologist tells us that there are no other treatment options available. Even though his PSA is increasing and the bone scan shows more cancer, he is in no pain and can still work at his job. Please help!"

He still has not had what we call second line hormonal therapy. One drug in this class is ketoconazole, which has been used to treat prostate cancer since the early 1980s. Since it is now generic and inexpensive, we rarely have difficulty with insurance coverage. In published clinical trials, response rates range from 35-50%.We have covered the details of how to use this drug in our hormonal therapy book and in several newsletters.

This drug needs to be given every 8 hours with fruit juice or vitamin C to aid absorption. We usually start with one pill every 8 hours. After two weeks, we gradually increase the dose until the patient experiences mild fatigue. The major problem with ketoconazole is that it lessens the ability of the body to get rid of half of all other prescription drugs. This is a problem with several common drugs like Zocor and Lipitor for cholesterol and the antibiotic, erythromycin.

Estrogen, the female sex hormone is another option. The most common estrogen used to treat prostate cancer would be DES pills. However, we have largely switched to estrogen skin patches. These are widely used to treat menopausal symptoms in women. They seem to be better tolerated than DES and more effective at cancer control. One advantage of estrogens are that they eliminate hot flashes and improve bone density. About 80% of men get breast enlargement and about 20% get leg edema.

Leukine is another option. We became excited about this after a series of papers by Eric Small at UCSF. He reported a 75% response rate with Leukine and ketoconazole combined. In our clinic, we have seen a 78% response rate, so we have been able to confirm Dr. Small's results. Leukine is not FDA-approved for prostate cancer and it can take time to get insurance company approval, but it is currently the most active second line hormonal treatment we have seen.

IMMUNOTHERAPY BENEFITS IN PROSTATE CA *(Continued from page 1)*

antigen, and granulocyte-macrophage colony-stimulating factor (GM-CSF), which activates immune cells. The placebo consisted of peripheral-blood mononuclear cells that were not activated, Kantoff and colleagues reported.

In the study, sponsored by the drug's developer, the researchers randomized 512 men, in a two-to-one ratio, to get either sipuleucel-T or placebo given intravenously three times, once every two weeks. The primary end point was overall survival. The researchers found:

- In Cox regression analysis, the hazard ratio for death among patients getting activated cells, compared with placebo cells, was 0.78 (95% CI 0.61 to 0.98), which was significant at *P*=0.03.
- Median survival was 25.8 months with sipuleucel-T vs. 21.7 months in the placebo arm, a difference that represented a 4.1-month improvement for those getting activated cells.
- 36-month survival probability was 31.7% in the sipuleucel-T group versus 23.0% in the placebo group.
- Median time to objective disease progression – 14.6 weeks with treatment and 14.4 weeks with placebo – was not significantly different.
- Adverse events that were more frequently reported in the sipuleucel-T group than in the placebo group included chills, fever, and headache, but most were mild and the drug was generally well tolerated.

Treating men with an immunotherapy when they have metastatic and castration-resistant disease is "an uphill battle that probably involves barriers that have not yet been defined," according to Dan Longo, MD, of the National Institute on Aging, who wrote an accompanying editorial. Longo said that such therapy is likely to be easier earlier in the disease process, so that the 22% reduction in the risk of death in patients with metastatic disease is "an important step."

But, he cautioned, the data raise some questions, including why survival was prolonged without a measurable effect on disease progression. The lack of an effect raises the concern that an unmeasured variable was "accidentally imbalanced in study-group assignments," he said.

Longo also noted that patients infused with cells that had been exposed to GM-CSF would have been a better control group. "The current design does not allow one to conclude that the tumor antigen is a key component of the therapy," he argued.

MedPage Today, 28 July 2010

STAND UP TO CANCER IS BACK, RAISING MONEY FOR CANCER RESEARCH

The four major broadcast networks and a number of cable channels have agreed to broadcast the second Stand Up To Cancer televised special on Friday evening, 10 September 2010 from a sound stage at SONY Pictures in Los Angeles, CA.

Find out how you can participate at: <www.standup2cancer.org/node/4000>.

FIVE NEW GENETIC VARIATIONS LINKED TO PROSTATE CANCER IN STUDY ON JAPANESE MEN

A genome-wide study on Japanese subjects has identified 5 new genetic variations associated with prostate cancer and revealed differences and similarities between Europeans and Asians in susceptibility to the disease. Reported online ahead of print in *Nature Genetics*, the findings offer a first-ever glimpse of the genetic basis for prostate cancer susceptibility in a non-European population.

Despite having the lowest rates of prostate cancer in the world, Asian countries have experienced a rapid rise in incidence of the disease, which ranks as one of the world's most prevalent forms of cancer. In Japan, Western lifestyles and an aging society have led to surging prostate cancer rates, contributing to growing public interest in understanding associated genetic factors. Genome-wide association studies (GWAS), which involve scanning complete genomes for variations linked to a particular disease, have drawn attention as a powerful means to do this.

In their study, researchers at the RIKEN Center for Genomic Medicine (CGM) and the University of Tokyo compared such variations, known as single nucleotide polymorphisms (SNPs), in a population made up of 4,584 Japanese men with prostate cancer and 8,801 control subjects. Out of 31 SNPs linked to prostate cancer susceptibility in previous studies

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PROVENGE'S $93,000 DRUG PRICE MUST BE PAID

(Continued from page 1)

indications," the Alexandria, Virginia-based cancer society said in a letter posted on a CMS website for public comments. "This would be both counter-productive and ill-advised."

Dendreon's stock price rose 93 cents, or 2.9 percent, to $33.84 at 4 p.m. New York time in NASDAQ Stock Market composite trading. The stock has declined 33 percent since the drug was approved on April 29, 2010.

The American Society of Clinical Oncology represents 28,000 cancer doctors and medical practitioners. The group holds the world's biggest annual meeting devoted to cancer drug research.

Treatment with Provenge costs about $93,000 for three doses administered over the course of a month. The medicine helped patients live about 4.1 months longer than those given a placebo, according to tests used to gain approval.

Before the review was announced, Don McLeod, an agency spokesman, said Provenge would almost certainly be covered by Medicare. He declined to comment today on the review.

The agency doesn't typically make formal determinations on cancer drugs. Instead, it pays claims through the local contractors who administer payments.

"Under any scenario, we urge CMS to provide clear public statements regarding Medicare's current policies governing the coverage of this therapy," ASCO said in the comments to Medicare. "Ambiguity and uncertainty regarding coverage policies can act as an unacceptable barrier to medically necessary care."

Bloomberg, 2 August 2010

Addendum

Shortly after this report, Dendreon announced that its launch of Provenge® is going well, with revenues doubling month over month, to $5.2 million in July from $2.5 million in June. "We see strong demand in the clinics where we are providing Provenge," COO Hans Bishop told analysts on a conference call.

Dendreon's manufacturing capacity is something of a bottleneck; the company has said it can only supply 2,000 patients during Provenge's first 12 months on the market, which is about 2 percent of potential demand. Already, docs have written 500 prescriptions for Provenge, leaving 1,500 up for grabs.

CEO Mitchell Gold also pointed out that positive reimbursement opinions are rolling in. As reported in the HotSheet earlier this year, CMS announced that it would be reviewing Provenge and eventually making a national policy decision on reimbursement. In the meantime, however, CMS instructed local Medicare contractors to continue making individual regional decisions and established a 30-day public comment period.

Editor's note:

Over 600 people made comments to CMS during the month of July, including Us TOO CEO Tom Kirk and past Chairman Jim Kiefert. Us TOO also signed on to a letter submitted by the Cancer Leadership Council, joined by 14 other cancer organizations.

Private insurers such as Aetna, Humana and Kaiser have said they will pay for the vaccine, but also have a majority of local Medicare contractors, according to Dendreon.

INFORMATION ABOUT THE READY TRIAL – CA180-227

Prostate cancer is one of the most common types of cancer found in men. That is one reason why READY is now enrolling participants for a clinical research trial aimed at evaluating treatment options for men with metastatic prostate cancer. Many of today's standard treatments for cancer are based on earlier clinical trials. As a participant in a clinical research trial you could gain access to new investigational treatments before they are widely available.

The purpose of the READY trial is to assess whether the addition of dasatinib, a multi-kinase inhibitor, to docetaxel improves the overall survival of men with metastatic prostate cancer. All patients participating in this study will be treated with docetaxel, and half of all patients will also receive dasatinib.

Docetaxel is a chemotherapy that has been approved by many regulatory agencies, including the FDA, for the treatment of metastatic prostate cancer and is not considered an experimental treatment. Other medications normally given to patients taking docetaxel are prednisone and dexamethasone, which are also not considered experimental treatments.

Dasatinib is currently approved by many regulatory agencies, including the FDA, for patients who have chronic, accelerated, myeloid blast and lymphoid blast chronic myeloid leukemia (CML). It is currently being studied in adults who have solid tumor cancer(s), including metastatic prostate cancer, and is considered an "experimental treatment" for metastatic prostate cancer.

You may be eligible for the READY trial if you have:

- Prostate cancer that has spread (metastasized) and progressed
- Undergone surgical castration or are currently receiving hormone therapy
- No previous chemotherapy (except estramustine) to treat the spread of your cancer

Talk to your doctor to learn more about the READY research trial. To find a Clinical Trial Site near you, go to <https://www.readyclinicaltrial.com/find.aspx?s_cid=invite_readytrial_linkout&breadcrumb=23973739>.

DOCTOR CHODAK'S BOTTOM LINE

Editors' note: In the spirit of information sharing, we have invited certain physicians and others to provide comments and opinions for Us TOO's *HotSheet.* Our desire is to enrich the content of the *HotSheet* to empower the reader. Each piece contains the opinions and thoughts of its author and is not necessarily those of Us TOO International.

Permanent brachytherapy has been in use for more than 15 years but few studies have presented long-term survival based on mature results. The study on over 1,600 patients provides 12-year follow-up data that show excellent survival. The authors' conclusion is the results are similar to other treatments. The problem with this report is the same as with so many others; no valid conclusions can be made. It is an uncontrolled study and many reasons could explain the results.

The Bottom Line

Without a proper study, it is not possible to say how brachytherapy compares to other treatments but it is as reasonable an option as anything else. MAYBE one day a proper study will be done.

As an example of the kind of study that is needed, just look at the design of the READY trial. It is recruiting men with advanced prostate cancer who are candidates for chemotherapy. They will receive either standard therapy alone or it will be combined with dasatinib, an agent used in other cancers.

The Bottom Line

Randomized trials are the only real way to find out how to improve the outcome of men with prostate cancer. Anyone who might be eligible should consider enrolling in this study. You might benefit and others might as well.

More information is available about the Provenge study, which is stirring up controversy. By now, everyone knows that Provenge improves survival in men with progressive metastatic prostate cancer. The problem is no one is exactly sure how it works. The results have now been published and some questions have been raised. If the treatment helps the body combat the disease, why didn't PSA respond or why didn't the tumors shrink? The possibility has been raised that something else is affecting these men. For now, the treatment is approved and is being covered by insurance. The problem is the waiting list of patients is very long but hopefully that will change.

The Bottom Line

Immunotherapy appears to be a new approach to treating prostate cancer but questions still remain and more studies will be needed.

To treat or not to treat that is the question raised by a study of men diagnosed over 65 with localized prostate cancer. The authors suggest that a large percentage of men may be getting overtreated for their disease. This controversy will continue unless a proper study is done but another study supports this concern. A randomized Swedish study published a few years ago compared immediate surgery to watchful waiting. Surgery helped about one of every 15 men avoid getting metastatic prostate cancer in 12 years. The average PSA was almost 13 ng/mL and the cancers were not detected by screening. What could we expect if that study was done in men that are diagnosed by screening? Would the benefit be higher or lower? Most experts would agree that the odds of benefiting would be lower than those numbers if the study was done in the US.

The Bottom Line

Screening continues to be a two-edged sword with an increasing risk of men getting over treated. One solution is for more of them to consider active surveillance. The challenge is to safely decide when treatment is needed. Despite these results, few men are willing to gamble and try active surveillance. New information desperately is needed to separate the life-threatening from the non-life threatening cancers.

An interesting study involving bone mineral content suggests that maintaining higher levels as men get older may lead to getting more aggressive cancers. What a curious result. Does that mean we should all hope to develop osteoporosis as we get older? That way we might be less likely to have a bad prostate cancer.

The Bottom Line

The problem with studies like these is they do not prove cause and effect and they do not tell us what would be the right thing to do. They do, however, raise interesting questions for further studies.

RESEARCHERS DISCOVER THE UNEXPECTED CELL THAT CAUSES PROSTATE CANCER

UCLA researchers reported Thursday that they have discovered the identity of the prostate cell that goes awry to produce cancer, a finding that could lead to new approaches to prevention and treatment of this common plague of men. Most researchers had previously believed that prostate tumors originated in the so-called luminal cells because tumor cells look like luminal cells.

But immunologist Owen N. Witte of UCLA's Jonsson Comprehensive Cancer Center and his colleagues have found that it actually arises in basal cells, a more stem cell-like component of the gland.

The prostate is filled with a network of small tubules. The insides of these tubules are lined with luminal cells, which produce fluids and proteins that aid reproduction. Basal cells form the outside core of the tubules. Owen and his team had originally developed a series of surface markers that allowed them to readily distinguish basal cells from luminal cells. They then showed that, in mice, it is the basal cells that produce tumors.

They reported that the same is true for humans in the journal *Science*. The team isolated basal and luminal cells from healthy human prostate tissue then treated them with a genetically engineered virus containing three genes known to trigger cancer. Finally, the cells were implanted in mice with no immune systems.

The basal cells went through three distinct stages, first growing into prostate-like tubules, then transforming into damaged pre-cancerous cells and finally turning malignant. The luminal cells did not change. Tellingly, when the tumors were examined by a pathologist, they appeared identical to those found in men, said Andrew Goldstein, a PhD student in Witte's lab who is the lead author of the paper.

The findings add to the growing body of evidence that tissue-specific stem cells found in various organs often grow out of control to form cancers, Witte said. And now that scientists know which cells cause prostate tumors and the pathway they take to get there, it may be possible to devise new drugs to treat them and even medications to prevent transformation at an early stage.

Los Angeles Times, 30 July 2010

NEW GENETIC VARIATIONS IN JAPANESE MEN

(Continued from page 6)

on European subjects, they found that 19 were also associated with susceptibility in the Japanese population. The remaining 12 SNPs showed no association, while five new genomic regions were identified as associated with prostate cancer which had not been reported in early studies on European populations.

While deepening our understanding of the genetic basis of prostate carcinogenesis, these findings, the first ever genome-wide data on prostate cancer in a non-European population, highlight variation in susceptibility among ethnic populations. A better understanding of such variation promises more accurate risk assessment, improvements in screening protocols and more effective clinical treatment.

ScienceDaily, 2 August 2010

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