Two Engineers Develop Treatment
By Rafael Davalos and Boris Rubinsky

The system uses an electric pulse that causes the tumor cells to open and does not allow the cells to close. With this technique, the cell will die because it can’t close.

The system is called IRE - Irreversible Electro Poration. Working with great success in labs... next is on people.

A team of biomedical engineers at Virginia Tech and the University of California at Berkeley has developed a new minimally invasive method of treating cancer, and they anticipate clinical trials on individuals with prostate cancer will begin soon.

The process, called irreversible electroporation (IRE), was invented by two engineers, Rafael V. Davalos, a faculty member of the Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences and Boris Rubinsky, a bioengineering professor at the University of California, Berkeley.

Electroporation is a phenomenon known for decades that increases the permeability of a cell from none to a reversible opening to an irreversible opening. With the latter, the cell will die. What Davalos and Rubinsky did was apply this irreversible concept to the targeting of cancer cells.

“IRE removes tumors by irreversibly opening tumor cells through a series of short intense electric pulses from small electrodes placed in or around the body,” Mr. Davalos said. “This application creates permanent openings in the pores in the cells of the undesirable tissue. The openings eventually lead to the death of the cells without the use of potentially harmful chemotherapeutic drugs.”

The researchers successfully ablated tissue using the IRE pulses in the livers of male Sprague-Dawley rats.

“We did not use any drugs, the cells were destroyed, and the vessel architecture was preserved,” Mr. Davalos said.

These in vivo experiments were reported in the June 2006 IEEE Transactions on Biomedical Engineering.

Oncologists already use a variety of methods to destroy tumors using heat or freezing processes, but these current techniques can damage healthy tissue or leave malignant cells. The difference with IRE is that Davalos and Rubinsky were able to adjust the electrical current and reliably kill the targeted cells.

“The reliable killing of a targeted area with cellular scale resolution without affecting surrounding tissue or nearby blood vessels is key,” Mr. Davalos says.

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PCSA Lifeline
A quarterly newsletter addressing issues of prostate cancer
Months Published
January
April
July
October

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DISCLAIMERS
The PCSA of New Mexico gives medical information and support, not medical advice. Please contact your physician for all your medical concerns.

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PC SUPPORT GROUP MEETINGS
Support Meetings are usually held on the first and third Saturday of each month at 12:30 PM. We meet at the Bear Canyon Senior Center, located at 4645 Pitt NE (on Eubank go one block north from Montgomery - Right (East) on Lagrima De Oro - Left (North) on Pitt to Senior Center).
Prostate Cancer News
By Dr. Peter Lindberg

What is new in prostate cancer?? Not as much as you and I would like. I will review results from two large national scientific meetings: the ASCO (American Society of Clinical Oncology) June 07 and the National Urological Society held in May 07.

Dr. Bolla reviewed the EROTC trial from Europe. The trial consisted of 970 men and they were randomized into two groups. Treatment for the first group was radiation plus 6 months of Zoladex (which turns off testosterone production) and Casodex (blocks male hormones from the adrenal gland) and the second group was treated with Zoladex for 3 years. Now we have two tests - 6 months versus 3 years of turning off male hormones. All of these men had very advanced prostate cancer, a t2c or t3c stage and 12% had prostate cancer in the lymph nodes. With 3 years of hormone treatment 78% showed no sign of the cancer returning after 5 years. Whereas with radiation and only 6 months of hormones 60% were cancer free at 5 years. With this far advanced prostate cancer, the 6 months treatment is OK but not as good as 3 years.

But in the USA with PSA screening, we do not see men with this far advanced prostate cancer very often. Trials in the USA, Australia, and New Zealand, using 6 months of Zoladex (also Lupron or Eligard) plus Casodex and radiation show improved survival rates over radiation alone. None of these current trials omit the adrenal blocking agents like Casodex.

It is a big mistake to take only Zoladex and expect to get the same results. In the Harvard D’amico study of 6 months of hormones, his patients were at an increased risk of cancer returning, but not nearly as bad as the European trial. Also, Dr. D’amico has shown that older men clearly do not recover their testosterone levels in a 1½ years time frame whereas in his trial younger men (under age 65) quickly got their testosterone back, but they also had a higher risk of treatment failure.

For those interested in the Leibowitz treatment, Triple Androgen Blockade®, He adds chemo in the higher risk group but, to my knowledge, he is not using radiation as part of the treatment. I have recommended giving triple hormone-type therapy along with radiation for higher risk Gleason scores of 8.10 or 7.0 and a PSA over 10 or t2c cancers or to men whose PSA measures accurately raises more than 2.0 in one year. Since 1998 I have been using Lupron, Casodex, and Proscar in this situation. In this period of time, I know of only one failure out of about 30 men that I treated. To my knowledge, all of the 29 men have a PSA of under 1.0.

Another study at the ASCO in June 07 reported on the benefits of a new oral form of chemotherapy called satraplatin (a cousin of the platinum in razor blades). Giving this drug after failure of previous therapy with Taxotere (the only proven chemo drug in prostate cancer), 8% of patients had shrinkage of tumor and in another 35% the cancer stopped growing and the patients lived longer. This was a big phase 3 trial, however the drug has not yet been FDA approved (FDA believes more study is needed!!!).

A third paper reports a trial of 1000 patients treated with hormones for recurrent cancer where surgery or radiation had failed. Half of the group were put on Lupron plus Casodex for life, the other 500 were given rest periods with 40% of the time spent off hormone therapy and allowing testosterone to recover. I have used this approach for years; now we have proof that this intermittent treatment is as good as continuous. NOTE This was done with the combination of Lupron plus Casodex, not Lupron alone. I use triple therapy in this situation and have many men with >50% time off treatment using Avodart or Proscar to prolong the off time. Avodart has few side effects. Many men can still have an active sex life on either Avodart or Proscar alone!!
PSA’s History
By Liz Savage

PSA was first identified in 1966 and quickly proved useful for identifying semen in criminal cases of sexual assault. Further studies in the 1980s suggested its utility as a prostate cancer screening tool, but physicians were skeptical of a test with such low sensitivity and specificity. Prostate cancer causes elevated PSA levels, but so do benign conditions like prostate enlargement or inflammation. Even though PSA wasn’t a marker of cancer, it was associated with the risk of cancer. In 1994, the U.S. Food and Drug Administration approved PSA screening for the early detection of prostate cancer. PSA has withstood years of skepticism from critics who blame it for the overdiagnosis and overtreatment of millions of men since it became the favorite prostate cancer screening test in the early 1990s.

Another way that the PSA can be used is in combination with other known risk factors - such as age, family history, or race - to calculate a man’s prostate cancer risk. Dr. Ian Thompson, professor and chair of urology at the University of Texas Health Science Center in San Antonio, and his colleagues developed the risk calculator (http://www.compass.fhcrc.org/edrnnci/bin/calculator/main.asp) based on data from more than 5,500 men in the placebo group of the Prostate Cancer Prevention Trial. The calculator helps to put the PSA number in perspective.

The PSA is the best marker we have at this time and it’s not going away for some time.

Progress in Tumor-Associated Antigen-Based Immunotherapy
By R.J. Amato

Both the expression and biology of the tumor-associated antigen (TAA) 5T4 suggest that it is an effective target for cancer immunotherapy. This paper reviews the development of a novel immunotherapeutic vaccine comprising the highly attenuated modified vaccinia ankara virus encoding 5T4 (MVA-5T4, aka Tro Vax). Preclinical studies have demonstrated that MVA-5T4 is safe and highly effective in both the prophylactic and active treatment of syngeneic murine tumor models. More importantly, >700 doses of MVA-5T4 have been administered to >200 patients to date. Reported results from clinical trials in metastatic colorectal, metastatic renal and hormone-refractory prostate cancer patients demonstrate that MVA-5T4 is safe and highly immunogenic, both as a monotherapy and in combination with standard-of-care therapies including irinotecan, oxaliplatin, IFN-alpha and IL-2. These studies demonstrate that MVA-5T4 induces potent and sustained immune responses in approximately 95% of tested patients. In addition, post-hoc analyses of these studies have noted a correlation between anti-5T4 immune responses and indicators of clinical benefit. With its minimal side effects and demonstrated ability to produce strong immune responses in patient populations, MVA-5T4 is a promising addition to the cancer therapy arsenal.

High Blood Pressure: The Silent Killer
By Janet Chambers, RN

High blood pressure, also known as hypertension, often has no symptoms or warning signs. The only way to find out if your BP is too high is to have it checked, which your provider can easily do. Controlling it will reduce your risk for stroke, heart attack, heart failure and kidney disease. To control high blood pressure:

- Maintain a healthy weight. If you’re overweight, losing as little as 10 pounds can reduce your blood pressure.
- Eat a healthy diet. The DASH diet (Dietary Approach to Stop Hypertension), has been shown to lower BP. It includes eating more fruits, vegetables, low-fat or fat-free dairy products, and decreasing the amount of cholesterol, saturated fat and sodium or salt in your diet.
- Get physically active. Aim for 30 minutes of activity most days of the week. Check with your provider before starting any exercise program.

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High Blood Pressure  (Continued from page 5)

• Limit alcohol. Men should have no more than two drinks per day and women no more than one.

• Take your BP medicines! Know their names, take as directed, and keep them refilled. Don’t stop taking your medicines unless you’re told to.

Generally, “normal” BP should be equal to or less than 140/90, but varies for different people. Have your provider check it.

Learn more about blood pressure and record your BP numbers by logging on to the MyHealtheVet web site http://www.myhealth.va.gov.

Prostate Cancer Therapy Linked to Increased Risk of Heart Disease Death
By Liz Savage, Andrea Widener

The use of androgen deprivation therapy to treat localized prostate cancer is associated with an increased risk of death from heart disease, according to a study published online October 9 in the Journal of the National Cancer Institute.

Henry Tsai, M.D., of Harvard Medical School in Boston and colleagues investigated whether androgen deprivation therapy increases the risk of death from heart disease in patients treated for localized prostate cancer. They collected data on 3,262 patients treated by surgical removal of the prostate and 1,630 patients treated with certain radiation therapies or cryotherapy (in which the tumor tissue is frozen to kill the cells). Of these patients, about 1,000 were treated with androgen deprivation therapy.

After a median follow-up of nearly 4 years, 131 patient died of heart disease. Both androgen deprivation therapy and older age were associated with an increase risk of death from heart disease. Among men 65 years and older who had their prostates removed, the 5-year incidence of heart disease-related death was 5.5 percent for those receiving androgen deprivation, and 2 percent among those who did not. For men younger that 65 years, the rates were also increased, 3.6 percent and 1.2 percent respectively. There was also an increased risk of death in men who received androgen deprivation in addition to radiation or cryotherapy, but it was not statistically significant.

“The results of this study and others support the view that use of [androgen deprivation therapy] may contribute to death from cardiovascular causes and underscore the importance of careful cardiovascular evaluation and intervention before initiating [androgen deprivation therapy] in patients with localized prostate cancer,” the authors write.

In an accompanying editorial, Jerome Seidenfeld, Ph.D., of the Blue Cross and Blue Shield Association in Chicago and colleagues explain that the design of the study makes it difficult to conclude whether androgen deprivation therapy caused the increase in deaths from heart disease. They point out that it is unlikely that androgen deprivation therapy would have these effects only in men whose prostates were removed but not those treated with radiation and other methods.

“The article by Tsai [and colleagues] has raised an interesting hypothesis, but patients and clinicians need better risk estimates for cardiovascular death associated with [androgen deprivation therapy] use that are based on randomized trials rather than retrospective analysis,” the editorialists write.

IRE shows remarkable promise as a “minimally invasive, inexpensive surgical technique to treat cancer. It has the advantages that it is easy to apply, is not affected by local blood flow, and can be monitored and controlled using electrical impedance tomography,” Mr. Davalos explained. He and other researchers will continue to advance this promising method to treat cancer.
What You Should Know Beforehand if Your Treatment Selection is Surgery

One man’s story

For years, I had watched my annual PSA test result creep upwards until it “spiked” at nearly double the previous year’s already troublesome number.

I chose surgery. My urologist, a highly skilled surgeon, told me prostate cancer (PC) is an “individual” disease that varied from man to man and the side effects of surgery, such as incontinence and impotence, are not predictable in individual cases (although statistics are available by age group, severity of disease and type of treatment). When you think about it, PSA test results, Gleason scores, the “TNM” system of gauging cancer severity, government and other statistics on PC (including deaths per year), statistics on PC treatment outcomes, and Partin tables all could persuade you that PC is some kind of “numbers game.” But, finally, the numbers and outcomes that matter most to you and I are our own personal numbers and outcomes. So, I’m going to share a few things your surgeon may not mention. After all, a surgeon’s priority is to remove all the cancer that he sees.

My surgeon gave me good written information on a variety of post-surgical topics, including instructions on dealing with that bothersome catheter, but there were things not mentioned. For example, I was surprised by but not prepared for the unpredictable blitzkrieg pains in my penis after surgery. Apparently, nothing could be done about those random nerve firings and they eventually subsided and stopped. Also, it was several weeks before the pain subsided in the area where my prostate used to be. Sitting was problematic but discomfort was eased somewhat by perching on a soft pillow.

Ever since we were young, we have relied on our urge sensation to know when it’s time to urinate. I was surprised to have that urge almost nonstop while wearing a catheter and then less frequently after the catheter was removed. The urge can’t be relieved when you’re wearing a catheter and, I was surprised to find, it was not relieved by voiding after the catheter is removed. My next surprise was when that familiar life-long urge sensation continued to diminish in intensity and frequency and finally disappeared altogether! I asked another surgery patient who had this experience how, without the old urge sensation, he knew when he had to urinate. He couldn’t describe the feeling but, somehow, his body has given him a new subtle signal, which matches my experience. (By the way, “timed voiding” is a practice that can help retrain your body.)

In spite of the terrible “initiation fee” I paid (i.e., PC), I’m pleased to have joined the PCSA fraternity. This group of incredibly knowledgeable and supportive men regularly finds humor (a good medicine) and hope in our situations. At least one of these good men declared he “never leaked a drop” after his surgery. Other men I know who had surgery claimed to have been dry in five weeks or even two weeks. So, my expectations were unrealistically high as I began to deal with my own incontinence—but my experience soon forced me to remember each man is unique. Even though my surgeon spared all my nerves, my initial incontinence was total and recovery started out discouragingly slow. But after many weeks and many Kegels, I experienced a big improvement almost overnight, although I’m not dry, yet. My surgeon says most men are dry after a year. I hope to do better than that. (My surgery was May 29, 2007.)

In addition to my surprise at the length of time it’s taking to dry up, I was also surprised that incontinence introduced penile tissue sores and irritation in the crotch. But when you’re incontinent, that area is warm and moist and provides a favorable environment for fungus development. A prescription of nystatin and triamcinolone acetonide cream may be used (sparingly) on penile tissue that splits open, as can hydrocortisone and iodoquinol cream, which requires a prescription. The over-the-counter antifungal powder, Zeasorb-AF, can help keep those rascally fungi away.
The PCSA has a group of Angels. We are a group of ladies who have banded together to help other ladies in the same situation as ourselves. Prostate cancer is a “couple’s” disease. When a man is diagnosed, the first thought for the woman is that ‘I don’t want to lose him to cancer.’ Secondly, we don’t want to lose our quality of life. Women at this time may feel very isolated. The care is going to the man and there is really no one for the woman to talk to. It may be a very depressing time. This is why the Angels group was formed. Women were needed to answer other women’s questions, the intimate questions that are such an important part of a couple’s life. Questions that are just too sensitive to talk to a man about. There are nine of us in our Angels group. Our husbands have had various treatments: radical prostatectomy, brachytherapy, proton beam, radiation, and hormone therapy. The PCSA Angels are willing to talk to ladies by phone or in person. Just phone the PC office and they will pair you with an Angel whose husband has had similar treatment.

At some of the PC meetings, the women break away from the men and have their own private meeting. This is wonderful because we are able to discuss the effects of the disease on us. New women to the group are able to pair up with an Angel whose husband has had the same type of treatment. We are an open group and talk freely, taking questions and hopefully finding answers.

Our Angels have various points of view that I want to share with you:

- Keep up a dialogue with your husband and be part of the decision-making process.
- Stop being fearful and find solutions.
- Visit the doctor together - four ears are better than two!
- Talk to other people in the same situation.

Also here are some quotes to help you:
“We hear the diagnosis and think our husbands are going to die. It’s not the end of the world. It’s not the end of intimacy and sexual activity. There are options.”
“I admired my husband for his analytical skills. We kept an upbeat attitude. It has not been the end of everything, we did it together.”
“We have all been through it. At the time we think we are the only ones and feel isolated. You are not alone, this year in New Mexico some 1410 men will be told that they have PC. Be patient and prove to your husband that you want and need him.”

I am completely convinced that it is necessary for women to be active in the PC society. Let us spread the word that there is help for women who otherwise may feel very isolated.

(Continued from page 6)

A Few Things...

Other things you should know:
1. There may be a shortening or shrinking of your penis. This common side effect is due to scar tissue and the shortening of the urethra (since part of the urethra is removed during surgery).
2. Restoring and maintaining healthy blood flow to the penis as soon as possible after surgery is important to keep scar tissue elastic.
3. Drugs like Viagra and Levitra can help, as can using a vacuum device on the penis several times a week.
4. Make sure there are no penile lesions or tissue splits if a vacuum device is used!
5. A shorter penis may produce a new fold of skin on the penis which may invite fungi.

Finally, here’s a list of activities (excluding certain intimate ones) I’ve found that can cause someone with stress incontinence to “leak.” **The Oops List**: Being startled, blowing your nose, burping, clearing your throat, coughing, doing Kegels, fatigue, golfing, jumping up and down, laughing, lifting, passing gas, pushing hard, rolling over, running or jogging, sneezing, squatting, stretching, stooping, **tai chi chuan**, waiting too long to void, wincing, yawning, and yoga.
Chairman’s Corner

In writing my quarterly “Chairman’s Corner”, I sometimes find myself repeating the same message, hopefully in a slightly different manner. This issue’s by-line could be Friends Helping Friends or The Benefits of a Support Group. Over my several years of participation in our Association I have had the opportunity to encourage men and their wives to make contact with us for information about prostate cancer. I have also talked with many cancer-free men and their wives about prostate health, screening, and our purpose as a support group. It seems that if I bring up the subject of prostate cancer in a conversation, invariably the other person(s) (that includes the ladies) will have a friend or be a friend of a friend who has been recently diagnosed with prostate cancer and they will pass my name and number to that friend. My point here is that we survivors should be proactive in making others aware of our Association, our buddy list, the PC Angels, and our bi-weekly support meetings. I have heard only compliments and “thanks” from men and their wives who have been in contact with our Association after their diagnosis. We have the opportunity to be facilitators in helping families cope with prostate cancer, both prior to and after therapy. Please help a friend in need find us!

Once again I must ask our readers and members for a little help. We still need a CPA. Being a non-profit organization, our fiscal reporting is monitored very closely. Kristie uses QuickBooks and does a superb job, however, because of the rules and regulations for a non-profit it behooves us to have a CPA review our records. We are not asking for pro bono, just a reduced rate. If you can help, please contact Joe Nai at the Association office. 254-7784.

Happy Holidays and Good Health To All,

Robert Wood, Chairman, PCSANM