



POUGHKEEPSIE MAN TO MAN



Prostate Cancer Education & Information Support Program since July, 1993

July 7, August 4 & Sept 1, 2005 Issues 7, 8 & 9 (Meetings to date # 160)

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Our web sites [http://www .geocities.com/charl2ep/Cancer/](http://www.geocities.com/charl2ep/Cancer/) or <http://www .boodrow.com>

Man to Man (M2M) is an educational, not for profit, prostate cancer support program of the American Cancer Society. It is a forum for discussing medical developments & experiences. Protocols discussed at M2M meetings are sometimes based on anecdotal information. It is always advisable to consult a physician before adopting any form of treatment.

July and August Programs

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Both the July & August meetings were regular with open discussions from the floor.

PROGRAM September 1, 2005

Guest speaker Dr. Gerald Sonnenfeld, V.P. Research. Professor of Biological Sciences, Binghamton Univ. "Our Immune System & Active Hexose Correlated Compound (AHCC").

Joint meetings of Man to Man (M2M) and Side by Side (SXS), the prostate cancer (PCa) support and education groups sponsored by the American Cancer Society, were held on July 7, August 4, & September 1, 2005 in the Central Hudson Electric Company Auditorium-6, Rt.9, Poughkeepsie, NY. There were 35 in July, 50 in August including 7 new M2M members and 16 SXSs. September 1 meeting had 55 including 19 SXS. Several of the new members were given our NEWBIE BOOK.

PLEASE NOTE Poughkeepsie M2M has back issues of our newsletters & information on PCa.

go to

<http://www.geocities.com/charl2ep/Cancer/>
or <http://www.boodrow.com>

He first laid out the foundation of his talk by referring to his work with Nassa concerning the health of the astronauts both in space and after landing. He pointed out that, upon returning to earth, the astronaut's blood tests indicated alterations in the immune system. This was caused by exposure to a variety of factors, including micro gravity, stress, radiation, nutrition problems, disruption of the circadian and loss of bone and muscle.

In studying this immune response it would be nice to use humans in the exact scenario. But, this is impossible due to the small numbers of people in flight. Statistical results require a larger population to have valid results. Therefore, you must resort to models that exist in other studies to get an idea how to set up a current study. These models were: bed rest, isolation,

sleep deprivation, high altitude and submarine exposure.

To simulate immune suppression, mice were used in the study. In trying to mimic weightlessness the mice had their hind legs unloaded by not letting them touch anything. This depressed their immune system for a time and then an infection was introduced. The infected mice with compromised immune systems had a much higher mortality rate than the controls. The next step was to do the same experiment but give AHCC to the mice. This clearly showed that the mice given AHCC had a very high survival rate compared to the controls.

In trauma, humans have a very high death rate when getting an infection. This was simulated with mice which were infected but given AHCC, had a very high survival rate.

The conclusion of the studies was that AHCC seems to be a large immune booster and can protect mice when their immune system is impaired and they are infected with a disease. This has to be proven in a human study using standard research methods of randomization and double blinding. There have been many studies in Asia using AHCC for various human diseases and the results were good. But, there have been limited clinical studies our country. This is changing and several of these trials are just beginning. So, stay tuned.

JIM KISEDA M2M Poughkeepsie

The following are notes from symposiums that Dr. Sonnenfeld has presented in Japan

2003-04-05

Space Flight, the Immune System and Resistance to Infection

Gerald Sonnenfeld

Department of Microbiology, Biochemistry and Immunology, Morehouse School of Medicine, Atlanta

2003

Space flight conditions have been shown to have inhibitory effects on a variety of physiologic functions of mammals, including muscle, bone, and neurovestibular function. One of the physiologic functions that has also been shown to be affected is the immune system. The immune system in space flight conditions is, generally, inhibited. The effects of space flight conditions on immunity have been tested during and after actual space flights, as well as in models of space flight conditions that are utilized on the earth.

Experiments have been carried out utilizing tissue culture systems, animal models and humans. The results of the experiments indicate that cell-mediated immune responses, including leukocyte proliferation, leukocyte subset distribution, and cytokine production, are altered by space flight conditions. The mechanism of these space flight-induced alterations in the immune system function remain to be established; however, it is likely that multiple factors are involved in altering the immune system, including microgravity, stress and neuroendocrine factors, sleep disruption, and nutritional factors. Changes in the immune system that occur during and after actual space flight have not yet been shown to alter resistance to infection because appropriate experiments have not been carried out.

However, using ground-based models, conditions similar to those induced by space flight have been shown to lead to impaired immune responses and decreased resistance to bacterial and viral infections. The alterations in the immune system induced by space flight conditions could lead to compromised defenses against infection and tumors.

Therefore, there is a great need for development of countermeasures against the impaired immune defenses induced by space flight.

**Potential Future Studies with AHCC for
Modulation of Infection
In Immunosuppressed Hosts
Gerald Sonnenfeld**

**Department of Biological Sciences,
Binghamton University,
State University of New York, Binghamton,
NY
2004**

Activated Hexose Correlated Compound (AHCC) is a derivative of basidiomycete mushrooms that has been shown to modulate immune responses. Recently, we have shown that mice that have been exposed to hindlimb unloading, a model of some space flight conditions, are immunosuppressed. These mice showed decreased resistance and enhanced mortality due to infection with gram-negative bacteria such as *Klebsiella pneumoniae* and *Pseudomonas aeruginosa*.

Treatment of the mice with AHCC before and during hindlimb unloading resulted in enhanced resistance to infection and decreased mortality. Therefore, there is potential for AHCC treatment to prevent infections in other situations where the host is immunosuppressed. One of the most important areas for future study is infection during serious trauma. Infection is the leading cause of late death in humans who have been exposed to serious trauma. Very often, even though the bacteria involved are sensitive in vitro to antibiotics, antibiotic prophylaxis is not effective because of the suppressed immune system of trauma victims. Models in which AHCC could be tested include the following models of trauma and infection in mice: intramuscular infection, the thigh suture model, the dual infection-laparotomy model, and a burn model. Studies of this nature would help to establish a possible role for AHCC in prevention of negative consequences of surgical wound infection.

**Trauma and Infection
Gerald Sonnenfeld**

**Department of Biological Sciences and Vice
President for Research,
Binghamton University, State University of
New York, NY
2005**

The leading cause of late death after serious trauma remains infection. This continues to be a problem despite the use of antibiotics and extensive research for over twenty years to find preventative measures. Individuals exposed to very serious trauma become immunosuppressed. The most marked signs of immunosuppression are decreased expression of class II major histocompatibility antigens on macrophages and decreased opsonic activity of serum. Some seriously injured trauma patients are slow to recover their immunological function, and these patients run the greatest risk of infection. The infection usually is caused by gram negative organisms from the gut and occurs whether or not there has been trauma resulting in penetration of the gut. There is no way to predict which patients will remain immunosuppressed and become infected, so a preventative measure that could be applied to all patients would be desirable.

Several mouse models exist to study this problem, and include the thigh suture model, the intramuscular model, and the dual infection laparotomy model. These models make the determination of prevention of infection for trauma patients feasible to be studied. Agents such as AHCC and Oligonol could be applied to these models.

**Funded in part by a grant from the Amino
Up Chemical Co., Ltd., Sapporo, Japan.**

Thanks to Teresa Hardin for typing this article.

**For additional Information pricing/ordering
etc. on AHCC /GCP two immune enhancers
either call 845 473-9841 or e mail
GCPAHCC@AOL.COM**

Newcomers & PCa. 101 July 7, 2005

**There were two newbies this month. No
additional information was given**

Newcomers & PCa.101 August 4, 2005

1) He is 52 years old. He was diagnosed with PCa in 1994. DRE was positive. GG was 7 or 8. He underwent a radical prostatectomy which was "successful", (no problem.) His PSA was rising since 2002. His doctor has recommended 30 radiation therapy treatments. He is presently on hormone treatment with Viador to reduce testosterone. He states his "treatment is going well."

2) He has an enlarged prostate. He states his PSA is OK.. He had many questions questions about doctors and is here for information.

3) He is 50 years old. He was diagnosed a year ago and also has bladder cancer. His PSA was 1.2 and now is 4. He is addressing the bladder cancer first, He is leaning toward seed implants. He has asked for some information on bladder cancer trials ongoing at Columbia Presbyterian.

4) He is 69 years old. He was diagnosed with PCa in June of 2004. At that time his PSA was 2.2. In 2005, it went up to 3.6 Biopsy positive. GG is 3+4. A radical prostatectomy (RP) has been recommended by his doctor and is scheduled for Sept. 2005.

5.) He is 86 years old. He underwent RP 13 years ago. He does not eat canned foods. He would like to know how to get a PSA blood test 3 or 4 times a year as medicare keeps rejecting his claims. We will provide him with that info.

Newcomers & PCa.101 September 1, 2005

1) He is 66 years old. In June his PSA was in the 2 range, now it is 8 and his free PSA is presently over 25. He had a biopsy which was positive with a GG=7. T1 stage.

2) His age was not given. He has been treated for an enlarged prostate for several years. His PSA is now 12. He has had 3 biopsies and all were negative. He is here for information.

Herb Ilker-PCa 101 M2M Poughkeepsie

EXERCISE and PSA

From Nutrition Action Health Letter, July/August 2005 comes the following: Older men who got at least 3 hours of vigorous exercise a week had almost 70% lower risk of advanced PCa than similar men who had little or no vigorous exercise.

Examples of vigorous exercise are running, jogging, biking, swimming, tennis, racquetball, weight training and heavy outdoor work. Making the findings a tad complicated, no link was found between PCa and non-vigorous exercise. Nor did the researchers find any effect of exercise (even vigorous) in men younger than 65.

Unfortunately no details about this study were given, such as the sample size, controls, etc.. This can be found however in the Archives of Internal Medicine 165:1005, 2005. The Health Letter recommends to do "the most (and the most vigorous) exercise you safely can." And it reminds us that even moderate exercise like walking and climbing stairs can reduce the risk of heart disease, stroke, diabetes, colon cancer, diverticula disease, osteoporosis, an enlarged prostate and more.

Obviously more research needs to be done.

Mike Kulla, Poughkeepsie M2M

Joke Du Jour True Doctor Stories

One day I had to be the bearer of bad news when I told a wife that her husband had died of a massive myocardial infarct. Not more than five minutes later, I heard her reporting to the rest of the family that he had died of a "massive internal fart."

Passed away

Bob Smalley: long time member of M2M. His wife Janet is a long time SxS member. Our deepest sympathies go out to Janet & the family.

Jack Shortle: long time member of M2M. His wife Ellie is a long time SxS member. Our deepest sympathies go out to Ellie & the family.

Gerry Fidelholtz: several year member of M2M.

Ron Koster: Founder (1995) and Facilitator of M2M kingston, now called PCa 101. Ron will be missed. You can read his accomplishments at <http://boodrow.com/pc101/bindex.htm>

BLOOD MARKERS

By popular demand we are reprinting "Additional Blood Markers" that may help PCa patients keep track of how their cancer is. We've recently talked a bit about PSA in conjunction with PAP and AP -- all valid and valuable markers. There are others, though, that are a tougher sell to our physicians sometimes. They are utilized by the world-class specialists, however, and for those interested in filing this away, I am reposting it for your reference files. Always check with your physician.

CEA (CarcinoEmbryonic Antigen). Is a cell surface -fetoprotein expressed by many different tumor types, including poorly differentiated PC. Prior to the advent of PSA elevated CEA was found in 30% of newly diagnosed prostate can-

cers. Moderately elevated CEA concentrations have been found only in patients with either "pure" or "predominantly" hormone insensitive disease (without soft tissue lesions) and particularly after suppression of hormone sensitive cell subpopulations.

CGA (Chromagranin A), there is a B, C, etc.,. These "markers" are products of the tumor cell population and sometimes are clues as to the tumor taking on an identity that is associated more with certain clinical behavior, such as small cell prostate cancer. Such small cell tumors grow faster, involve liver, lung and lymph nodes in unusual sites, frequently don't express much PSA and have lytic bone lesions instead of dense blastic lesions, etc. CGA is an excellent marker for neuroendocrine tumors, particularly nonfunctioning tumors, and the measurement of CGA is also useful to detect prostatic carcinoma in patients whose PSA is not elevated."

DNA-Ploidy DNA (DeoxyriboNucleic Acid) is the basic biologically active chemical which defines the physical development and growth of nearly all living organisms. PLOIDY is a term used to describe the number of sets of chromosomes in a cell. Tests performed on biopsy samples are reported as: DIPLOID; having one complete set of normally paired chromosomes, which is a normal amount of DNA. Diploid cancer cells tend to grow slowly and respond well to hormone therapy, ANEUPLOID: having an abnormal number of sets of chromosomes and Tetraploid which means having two paired sets of chromosomes, which is twice as many as normal. Aneuploid cancer cells tend not to respond well to hormone therapy.

DHEA (DeHydroEpiAndrosterone) is an adrenal androgen. DHEA levels decline with age, yet prostate gland enlargement and cancers increase with age. It is possible that DHEA, being a weak androgen, can actually attach to and block testosterone or DHT receptors on prostate tissue, thus preventing the influence by more powerful androgens.

DHT (DiHydroTestosterone) 5 alpha-dihydrotestosterone is the male hormone which is most active in the prostate. It is made when an enzyme (5 alpha reductase) in the prostate stimulates the transformation of testosterone to DHT. There are reports that DHT is as much as 4X more active in prostate cancer than Testosterone.

Proscar (finasteride) is considered a potent 5 alpha reductase inhibitor and often prescribed as part of a complete androgen blockade (CAB).

NSE: (Neuron-Specific Enolase) is a specific marker for neuroendocrine tumors which express proteins or enzymes that are reflective of a differentiated tumor cell population such as small cell prostate cancer. When both CGA and NSE are elevated the prognosis is considered poor.

PAP (Prostatic Acid Phosphatase) is an enzyme measured in the blood whose levels may be elevated in patients with prostate cancer that has invaded or metastasized elsewhere. PAP is not elevated unless the tumor has spread outside the anatomic prostatic capsule. A persistently elevated serum PAP is considered evidence of mets, but only 75% of patients with mets have an elevated PAP.

Serum PAP noted at the time of diagnosis of prostate cancer is usually associated with extra prostatic spread. In a study at the Johns Hopkins University School of Medicine, 21 of 460 men or 4.6% had elevations of PAP. Of those men fully evaluated evidence of extra prostatic disease was documented in all. Positive bone scans, extraprostatic extension of disease, PSA > 100, positive lymph nodes and positive seminal vesicles were found. Most of the above patients with increased PAP's (17 of 21) had abnormal DRE's consistent with disease outside of the prostate or PSA's >100. Therefore in these patients the PAP was not that helpful. In the remaining 4 patients, the PAP was helpful in directing treatment towards systemic therapy as opposed to local

therapy. A PAP determination as part of the initial staging evaluation is still reasonable. In addition, in some patients PSA may be normal or zero while the PAP is elevated proving the PAP to be the only remaining biologic marker that can be followed.

PSA (Prostate Specific Antigen) is a protein secreted by the epithelial cells of the prostate gland including cancer cells. An elevated level in the blood indicates an abnormal condition of the prostate gland, either benign or malignant. PSA is used to detect potential problems in the prostate gland and to follow the progress of treatment. PSA is currently used as a specific diagnostic marker for the early detection of prostate cancer and to separate patients with tumors from those without tumors; multiple criteria are often used; the following PSA screening "cutoff" levels for PCa are replacing the older 4.0 value:

| Age | PSA "cutoff" |
|-------|-----------------|
| 40-49 | up to 2.5 ng/ml |
| 50-59 | up to 3.5 |
| 60-69 | up to 4.5 |
| 70-79 | up to 6.5 |

Free PSA analysis sometimes called "PSA-II" (Prostate-Specific Antigen type II) reports the percentage of free-PSA to total-PSA (total-PSA = free-PSA + bound-PSA) and is helpful for screening purposes when PSA values are above the normal threshold for an age group and less than 10; one study showed that men with PSA II > 25% had no PCa; those with < 10% were likely to have PCa.

PSADT (PSA Doubling Time) has been evaluated in patients with a rising PSA after local treatment with either RP or RT. In these settings PSADT has been shown to be significantly shorter in those patients who developed metastases than in those who did not develop metastatic disease. If the PSADT is < 10 months there is a high probability of metastatic disease. Patients post-RP with this finding would not be good can-

didates for local RT; however patients with a long PSADT would be such candidates. Patients post-RT with a short PSADT have a high likelihood of metastatic disease whereas those with a long PSADT might be candidates for salvage cryosurgery.

PSA RT-PCR: PSA (Reverse Transcriptase-Polymerase Chain Reaction) is a blood test that detects micrometastatic cells circulating in the blood stream. It may be useful as a screening tool to help avoid unnecessary invasive treatments (RP, RT, etc.) on patients with metastasized PCa. Although not FDA approved, it is available at locations where FDA approved clinical trials of the test are being done.

PROLACTIN (PRL) is a trophic hormone produced by the pituitary which increases androgen receptors and increases sensitivity to androgens. Prolactin modulates prostatic androgen uptake, affects its intracellular metabolism and utilization, and thereby promotes differentiation, growth and secretory function of the prostate. Many but not all men treated with hormone manipulations develop elevated prolactin levels and men who develop hyperprolactinemia during estrogen, diethylstilbestrol, cyproterone or estramustine treatment have been reported to have a much higher rate of disease progression and death from prostate cancer. It has been theorized that prolonged prolactin stimulation from long-term hormone therapy could play role in the onset of androgen resistant tumors.

ProstaScint™ Monoclonal Antibody Scan (111 In-CYT-356) The ProstaScint scan may prove useful in the staging of prostate cancer prior to any local therapy. It involves the use of an Indium-111 labeled monoclonal antibody which reacts with prostate cancer, benign prostatic hypertrophy and to a lesser extent, normal prostate tissue. An abnormal scan may detect metastatic prostate cancer to lymph nodes or other sites and identify patients who are not candidates for local therapy. It may also prove valuable in assessing patients who have a PSA ele-

vation after RRP. If an abnormal ProstaScint scan is found confined to the prostatic bed it may support the rationale for local radiation therapy.

Pyrilinks D is a laboratory test that measures deoxypridinoline (Dpd), a specific marker of bone resorption(loss), which is excreted unmetabolized in urine. It can be used to support the decision to initiate antiresorptive therapy and track changes in bone resorption rates in response to therapy. If Dpd levels are higher than 5.4 in "men", the patient is experiencing accelerated bone resorption and may be at increased risk of bone loss. The test is usually run to establish a base line and then at 3 to 6 month intervals to monitor therapy.

TESTOSTERONE (T) is the male hormone or androgen which comprises most of the androgens in a man's body; chiefly produced by the testicles; may be produced in tissues from precursors such as androstenedione; T is essential to complete male sexual function and fertility.

**NCI CONSUMER ADVOCATES E-NEWS,
August 19, 2005**

**Prostate Cancer Clinical Trial Continues at
NCI's Center for Cancer Research
at NIH in Bethesda, Maryland**

Several trials have shown that specific vaccines can generate immune cells that recognize and kill tumor cells that express prostate specific antigen (PSA) when given subcutaneously. In this study, we plan to give additional vaccinations directly into the prostate gland to evaluate the safety and feasibility of this approach. Studies in mice have shown that when similar vaccines are given directly into the tumor, they are much better at shrinking that tumor than when given subcutaneously. It is important to note that the patient population being studied has failed radiation and has no further standard treatment options. For more information about this trial,

please visit:

<http://bethesdatrials.cancer.gov/ola/gulley/05c0017/>

For information about other cancer clinical trials conducted at the Center for Cancer Research, please visit

<http://bethesdatrials.cancer.gov/> .

SUGAR AND CANCER Part 3

In Part 1 I discuss the link between sugar and cancer. Dr. Joseph Mercola says that there is no single food item that is more damaging to health than sugar, and nearly all of us are addicted to it. Sugar addiction is what the first part of this article is about. A Princeton University psychologist has shown that in rats, sugar can affect the brain in some of the same ways as drugs like cocaine and heroine (I wont go into the science) and can cause the same chemical withdrawal symptoms as addictive drugs.

While many people say anecdotally that sugar is addictive, no one has done research on it before, the psychologist observed. Addiction has three parts: binging and increasing intake of a substance over time; withdrawal when the substance is taken away; and craving, or a recurring and sometimes increasing urge for the substance during abstinence. Sugar can cause all three of these behaviors says the researchers.

In one of numerous studies, the researchers inserted tubes in rats' stomachs so that they could ingest sugar water, but then they drained it out before being digested. Even with the sham-feeding technique, the experiment promoted addiction. Liquid Candy. Soda pop is the quintessential junk food -- just sugar calories and no nutrients. The soft drink industry has succeeded in making it a mainstay of the American diet. The good news is that sales have declined since

1998 by 12%. What accounts for this?

Nutrition Action Health letter July/August 2005 thinks it's due to a number of reasons. The popular Atkins diet urged people to minimize soft drinks and other foods rich in refined sugars and starches, as did the Sugar Busters and South Beach diets. What with the obesity epidemic awareness, people started cutting out high-calorie junk foods like soda pop. Many communities have dispensed with soft drinks from elementary schools, many middle schools and some high schools.

Additionally, the Center for Science in the Public Interest lambasted the soft drink industry in their widely published report, Liquid Candy (CSPI is the nonprofit publisher of Nutrition Action Health letter).Liquid Diet has recently been updated and CSPI has petitioned the FDA to require labels on non-diet soft drinks to tell consumers why they should drink less. Will the FDA side with industry or good health, or will industry get the message?

Mike Kulla, Poughkeepsie M2M

Meetings and speakers for 2005

•October 6-To be Annonuced!

•November 3-Dr. Matthew Milowsky, Cornell Weill "Clinical Trials with Monoclonal Antibodies."

•December 8---Maarten Bosland, PhD. "The Soy Controversy & PCa."

Note Change of Date for December.