



# PROSTATE CANCER *HOT SHEET*

**Us Too! INTERNATIONAL**

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## **LOW-DOSE IRRADIATION FOR GYNAECOMASTIA SHOWS PROMISE**

Low-dose irradiation for the management of gynaecomastia shows promise.

According to a study from the United States, "Gynaecomastia, a benign and often painful enlargement of the male breast, is a common side-effect of some therapies for prostate cancer, including nonsteroidal antiandrogen monotherapy.

"Although gynaecomastia and breast pain are not harmful to the overall health of the patient, they can be serious enough to influence treatment decisions in the management of prostate cancer."

"Prophylactic low-dose irradiation can be effective in reducing the incidence and severity of both gynaecomastia and breast pain. In addition, irradiation may be effective in treating breast pain due to the development of gynaecomastia. Low-dose electron irradiation confers advantageous tissue dosing, is well tolerated, and has manageable side-effects, the most common of which is reversible skin erythema," stated A.P. Dicker and coauthors from Thomas Jefferson University, Jefferson Medical College.

Dicker and coauthors concluded: "Information on long-term safety after irradiation for gynaecomastia is limited at present, but trials are underway. Irradiation is likely to be an effective management option with an acceptable low risk of long-term complications for gynaecomastia associated with hormone therapy for prostate cancer."

Dicker and colleagues published the results of their study in *Lancet Oncology* (The safety and tolerability of low-dose irradiation for the management of gynaecomastia caused by antiandrogen monotherapy. *Lancet Oncol* 2003;4(1):30-36).

## **BLOOD TEST CAN DETECT PROSTATE CANCER**

A test that can detect ovarian cancer using a single drop of blood can also detect prostate cancer, according to researchers with the National Cancer Institute.

The blood test found prostate cancer in 95 percent of men whose cancer was confirmed by conventional means, such as biopsy, and eliminated men suspected of having cancer, the researchers reported.

This new technology has the potential to revolutionize how men are diagnosed with prostate cancer, said Dr. David Ornstein, a urologist at the University of North Carolina at Chapel Hill, who worked on the study. It is likely that it will be possible to use a simple blood test to accurately identify men who are affected with a harmful prostate cancer but spare healthy men from undergoing unnecessary biopsies.

Prostate cancer is the second-biggest cancer killer of men in the United States. It is often found using a PSA test. Men with intermediate scores of between 4 and 10 on the PSA test are usually advised to get a biopsy, and up to 80 percent of men who undergo a biopsy do not turn out to have prostate cancer.

A team including researchers at the Food and Drug Administration and the National Cancer Institute described using the blood test, made by Bethesda, Maryland-based Correlologic Systems Inc.

They compared blood samples from 31 men known to have prostate cancer with those of 25 cancer-free men. They marked a baseline pattern

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## **AGE OF PROSTATE CANCER PATIENTS IS NOT RELATED TO SURVIVAL**

Young prostate cancer patients do not necessarily have a poorer prognosis than older patients, according to the March 15, 2003, issue of the *International Journal of Radiation Oncology, Biology and Physics*, the official journal of ASTRO, the American Society for Therapeutic Radiology and Oncology.

The traditional perception has been that younger prostate cancer patients diagnosed with the disease earlier have more aggressive tumors. To investigate the effect of patient age on outcome, researchers analyzed records from the Department of Defense Center for Prostate Disease Research to determine the disease-free survival of prostate cancer patients who had undergone radiation therapy.

The records of 1,018 patients who received medical care in the Department of Defense were reviewed for this study. All patients had T1-T3 prostate cancer and were treated with radiation therapy between 1988 and 2000. The records of patients receiving adjuvant hormonal therapy or adjuvant or salvage radiation postoperatively were excluded. The median potential follow-up was 85.3 months as of December 31, 2001. After analyzing the data using a variety of methods, researchers found that age did not significantly affect disease-free survival. Other variables analyzed included pre-treatment PSA level, Gleason score, stage and radiation dose.

"Along with the bias that younger patients are more at risk, there is also

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**BRCA2 IS HIGH-RISK SUSCEPTIBILITY GENE, HAS POTENTIAL IMPLICATION FOR MANAGEMENT**

*Am J Hum Genet, 2003;72(1):1-12*  
 “Studies of families with breast cancer have indicated that male carriers of BRCA2 mutations are at increased risk of prostate cancer, particularly at an early age,” researchers in England report.

“To evaluate the contribution of BRCA2 mutations to early-onset prostate cancer, we screened the complete coding sequence of BRCA2 for germline mutations, in 263 men with diagnoses of prostate cancer who were less than or equal to 55 years of age.

“Protein-truncating mutations were found in six men (2.3%; 95% confidence interval 0.8%-5.0%), and all of these mutations were clustered outside the ovarian cancer cluster region. The relative risk of developing prostate cancer by age 56 years from a deleterious germline BRCA2 mutation was 23-fold.

“Four of the patients with mutations did not have a family history of breast or ovarian cancer,” wrote S.M. Edwards and colleagues, Institute for Cancer Research, Translational Cancer Genetics Team.

The researchers concluded: “Twenty-two variants of uncertain significance were also identified. These results confirm that BRCA2 is a high-risk prostate-cancer-susceptibility gene and has potential implications for the management of early-onset prostate cancer, in both patients and their relatives.”

**COGNITIVE FUNCTION MAY DECLINE IN MEN WITH PROSTATE CANCER TREATED WITH ANDROGEN SUPPRESSION MONOTHERAPY**

*Green H.J, et al. BJU Intl 2002;90:427-32*  
 Androgen suppression monotherapy for prostate cancer may be linked to impaired memory, attention, and executive functions, a new study indicates.

Investigators randomly assigned 82 men with extraprostatic prostatic cancer to receive continuous leuporelin, goserelin, cyproterone acetate, or close clinical monitoring. Cognitive assessments were performed on the patients at baseline, prior to treatment initiation, and 6 months following treatment.

Men who received androgen suppression monotherapy performed worse on 2 of the 12 examinations for attention and memory compared with baseline assessments.

Twenty-four of 50 subjects who were randomized to active treatment and

assessed 6 months later showed a clinically significant decrease in 1 or more cognitive exams. However, no patients randomized to close monitoring demonstrated a decline on any exam performance.

We consider that the findings from this study have implications for the timing of hormonal therapy and information given to patients facing androgen suppression, the authors concluded.

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**COULD ARSENIC BECOME A NEW TREATMENT FOR PROSTATE CANCER?**

Men with prostate cancer who do not respond to standard therapies may some day find hope in arsenic trioxide treatment, according to a phase II clinical trial conducted by researchers at Montefiore Medical Center and reported on at Mt. Sinai School of Medicine’s Chemotherapy Foundation Symposium XX in late November, 2002, in New York.

Under an NIH grant, Robert E. Gallagher, MD, director of leukemic cell biology at Montefiore Medical Center and the Albert Einstein Cancer Center in the Bronx, NY studied the effectiveness and safety of arsenic trioxide treatment on 15 prostate cancer patients who had failed at least two hormonal treatments and may have had prior chemotherapy or radiation therapy. In one patient in particular, who was also receiving radiation therapy, PSA (prostate specific antigen) levels dropped precipitously.

“We had promising results in two patients in our study,” said Dr. Gallagher. “but expanded studies are needed to determine the effectiveness of the arsenic treatment in larger populations.”

Arsenic has already proved to have a “remarkable clinical effectiveness” in patients with relapsed acute promyelocytic leukemia, according to Dr. Gallagher.

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**FIGHTING CANCER WITH A VACCINE? AIM OF RESEARCH IS TO FIND A SAFER, LESS HARSH TREATMENT**

*Chicago Sun-Times*

In a new approach to fighting cancer, researchers are working to develop vaccines to stimulate the immune system to destroy malignant cells, without the severe side effects that often accompany radiation and chemotherapy.

Clinical trials are underway to test dozens of vaccines for melanoma, lymphoma, leukemia and cancers of the colon, breast, prostate, kidney and pancreas.

No cancer vaccines are in general use yet,

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but several are in the final stages of testing before they go before the federal Food and Drug Administration for approval. One vaccine already has been approved in Canada.

The vaccines are designed to treat existing cancers, not to prevent the disease. The aim is to develop a vaccine, or a combination of vaccines, that would cure a given type of cancer with a few shots in the arm. Failing that, doctors hope the vaccines still might be able to be used in combination with radiation or chemotherapy to extend a patient's life.

"It would be very cool if it could be perfected," said Dr. Thomas Gajewski of the Univ of Chicago, which is conducting several clinical trials of cancer vaccines.

While vaccines have shrunk tumors in some patients and might even have cured a few, many patients haven't been helped.

"We've had some gratifying responses, but we don't get them all the time," said Dr. Jon Richards of Advocate Lutheran General Hospital in Park Ridge, which is testing a melanoma vaccine.

The National Cancer Institute cautions that vaccine researchers still "have much work to do to show clear evidence of benefit."

Arthur Knott, 61, hopes to benefit from a prostate cancer vaccine being tested by the University of Illinois at Chicago. But, noting that the vaccine is in its early stages, Knott said, "I'm not too sure it's going to do me much good."

Knott, who is president of Federal Screw Products in Chicago, completed radiation treatments in early 2000 for an aggressive form of prostate cancer. Doctors believe the radiation probably didn't get all of the cancer cells. If the vaccine works, Knott's own immune system will kill any remaining cancer.

"You want to nail it before it comes back," said Dr. David Peace, who's conducting the UIC clinical trial.

Knott received a series of vaccine shots last year. Lab tests show the vaccine has boosted the number of his immune system's "killer T cells" that target prostate cancer cells. So far, there's no detectable signs the cancer has bounced back.

Because cancer cells are similar to normal cells, it's easy for them to slip under the immune system's radar.

"They're just quiet enough so the immune system doesn't wake up and notice," Gajewski said.

The vaccines that are being developed employ a variety of strategies to alert the immune system that a cancer cell is the enemy. Some vaccines consist of tumor cells that have been removed from a patient, grown in the lab and altered so they can't multiply. When these cells are put back into the patient, it's hoped they'll stimulate the immune system to attack the tumor. Other vaccines are made of substances taken from the tumor, called antigens, that should turn on the immune system.

Most vaccines so far have caused only mild side effects, including redness where the shot is given, low-grade fever and fatigue. There's a theoretical danger, though, that a vaccine could rev up the immune system too much. For example, a kidney cancer vaccine might attack the kidney as well as the tumor.

"If we miscalculate, the downside could be disastrous," Richards said.

A cancer vaccine seems most likely to succeed if the cancer is in an early stage. In advanced cancer, there may be too many cancer cells for even a revved-up immune system to destroy.

Nevertheless, many clinical trials so far have involved patients with advanced cancers. In cancer research, new treatments often are first tried on patients who have failed conventional therapy. But these patients are the ones "least likely to benefit," Richards said.

Researchers hope to test vaccines on patients who have earlier-stage cancers, when tumors are microscopic. The downside of this approach is that it could take five or 10 years to determine whether the vaccine works. That's how long it can take early-stage cancer to develop.

One key to success, researchers say, is discovering why vaccines have provided little or no benefit to many people, while working wonders on patients such as Betty P. Bouchard.

Bouchard, 75, has melanoma, the most serious form of skin cancer, which can spread to the liver, lungs or brain. About two years ago, a surgeon removed a malignant, quarter-size mole from her leg. A year later, after the cancer sprouted 21 new moles on her leg, Bouchard was referred to Gajewski.

After the U. of C. researcher gave her experimental vaccine shots, the moles disappeared, and scans have found no evidence of cancer anywhere in her body.

"As far as I know, I'm cancer-free," she

said. "I feel terrific. I hope the day comes when they get [cancer vaccines] out in the world."

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IDEA FOR PROSTATE TREATMENT BASED ON BREAST CANCER DISCOVERY**

Dr. Charles Graham of the Department of Anatomy and Cell Biology will lead the Queens group, which has been awarded a \$300,000 Idea Development Award from the US Army's Prostate Cancer Research Program.

The study is based on earlier findings that tumor cells exposed to very low levels of oxygen become resistant to the killing effects of anticancer drugs. Reduced oxygen levels contribute to the drug resistance by blocking the production of nitric oxide (NO) in the tumor cells.

"This was an exciting finding because it opened the possibility of using drugs such as nitroglycerine, which deliver NO or mimic its effects, to increase the sensitivity of cancers to conventional anticancer drugs," said Dr. Graham in a media release. "Most patients who die of prostate cancer do so because the tumor spreads and fails to respond to therapy."

Additional benefits of nitroglycerine (which has been used to treat chest pain for more than 100 years) are that it is relatively inexpensive and that it has no significant side effects.

The researchers will administer nitroglycerine, as well as other 'NO mimetic' drugs, to human and rodent prostate cancer cells, to test whether this is a feasible approach for increasing the sensitivity of prostate cancers to anticancer drugs. They also hope to develop a better understanding of how prostate cancer cells become resistant to chemotherapy.

"While this research may result in new approaches to the treatment of patients with prostate cancer, it also has the potential of leading to novel ways of enhancing the efficacy of chemotherapy against other cancers, such as breast cancer," said Dr. Graham

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GREATER HEIGHT ASSOCIATED WITH INCREASED RISK OVER AGE 50**

Greater height appears to be positively associated with subsequent risk of prostate cancer in men over age 50, according to a study presented at the national meeting of the American College of Preventive Medicine Meeting in San Diego.

Michael Gaziano, MD, chief of the division of aging at Brigham and

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## 10 THINGS TO LOVE ABOUT PROSTATE CANCER SURVIVORS

By Justine Cowan  
Technical Writer, CPDR

Since I joined the cancer research field almost three years ago I have developed an intense admiration for a very special group of men that I have come to know through various interviews, group support sessions, health expos and everyday Internet correspondence. These are the prostate cancer survivors - men suddenly confronted with a life-threatening disease who arm themselves with the knowledge, courage and deep-seated strength to become advocates for their own health, choose a treatment option or therapy to eradicate their cancer and then impart this knowledge, often forcefully, to men in the general population who might not have accurate information on prostate cancer, or just be too frightened to address the issue.

What amazes me the most about all these gentlemen is their warmth and openness in sharing their personal accounts of how the cancer affected them and their spouses, partners and families. They never hold anything back as they speak to me, a woman writer who was wearing diapers while they were providing for their families and fighting the enemy in Vietnam, about the very intimate details of how prostate cancer sapped their manhood, destroyed their normal bodily functions and, due to certain hormonal therapies, given them "hot flushes" or enlarged breasts. The survivors' open communication and camaraderie with me has often led to laughter, and after that trails off, quiet reflection on the gift of health.

The second thing that amazes me about these guys is their advocacy. No better group than those who have beat the odds can spread the word to the public about the importance of early screening for prostate cancer. When I recently worked at a health expo with members of the *Us Too!* group from the Washington, D. C. area, I stood back to watch them in action. One volunteer would approach a passer-by, often middle-aged or African-American, look him in the eyes, take him by the arm and ask him what his current PSA blood test was. If the man didn't know

this information or hadn't been tested for a few years, he was counseled and then escorted to the free screening, including digital rectal examination (DRE) and prostate-specific antigen (PSA) blood test by a local clinic! This passion to help another man, often through intimidation that segues into a candid question and answer session, is an inspiration to all of us who work every day in the cancer research field. Whether it be in the clinic, the laboratory or the office, we all want to save men's lives.

Next, prostate cancer survivors live each day to the fullest. They're fun people - vibrant, loving and remarkable. They tell great, compelling stories. When you meet them they don't fade into the corners. They love to hug - even the first time they meet you! They stand out, and when you are introduced to them, you will remember their first names. They're just glad to be alive - to have stifled their disease.

I know the spouses and partners of so many of the survivors I have met. In fact, many of these ladies are the ones who "lovingly nudged" the men in their lives to visit the doctor in the first place. These ladies have fought beside their men and have also armed themselves with tremendous knowledge on the subject of cancer as well as the latest research and treatments.

And just as I learn about their lives and families, so too do they learn about mine. We relate to each other on a human level and talk about everything. This is especially true when I interview men of my father's World War II generation. They in particular seem eager to know about my husband, kids and background.

I have noticed that these survivors are well-educated patients. They are intelligent, motivated and highly informed about their disease. Once these men are diagnosed, they devour any and all information that they can get their hands on about prostate cancer. Their knowledge is oftentimes comparable to that of some of the PhDs and MDs with whom I work on a daily basis at the Center for Prostate Disease Research - <http://www.cpdrr.org>. After discussing all of the available information with their families, they arrive at their own personal conclusions about the most appropriate treatment

path. They are proactive and take charge of their health. They become their own best advocates.

I could write six more things that there are to love about prostate cancer survivors (as promised in the title). But, I must conclude. I have manuscripts to edit that will hopefully add to the wealth of literature on this disease and one day, not too far in the future, help scientists and clinicians find the cure for this "silent killer" that has affected so many of these men that I consider my friends. Good friends are worth keeping around.

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## BLOOD TEST

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of proteins found only in the blood of men with cancer, then used this pattern to identify cancer in 266 new patients

The proteomic pattern correctly predicted 36 of 38 patients with prostate cancer, while 177 of 228 patients were correctly classified as having benign conditions, the researchers wrote.

The test results were not always entirely clear. The blood test suggested cancer in 51 men whose biopsies cleared them of cancer.

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## PATIENT AGE NOT ALWAYS A FACTOR

(continued from page 1)

a perception that younger patients are better suited to surgery than radiation therapy. While our results did not allow us to draw any conclusions about the effectiveness of radiation versus surgery, this study questions the view that age should have any influence on the selection of a treatment modality," said Peter A.S. Johnstone, M.D., of the Naval Medical Center in San Diego and lead author of the study. "Absent data comparing radiation with surgery in young men, physicians counseling patients regarding potential therapies for prostate cancer should not consider the age of the patient to be a factor in choosing a treatment."

**NEWS YOU CAN USE**

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Women's Hospital and the Veterans Administration Hospital in Boston, together with six associates, investigated three categories of height (less than 70 inches, 70 to 71 inches, and 72 inches or taller), plus age (less than 50 years, 50 to 59 years, and 60 years and over), to the risk of prostate cancer.

Investigators used data reported by 1634 men suffering from prostate cancer who had been enrolled in the Physicians Health Study - a randomized, placebo-controlled trial of aspirin and beta-carotene in 22,071 US men - over a 14-year follow-up period.

For the study, the researchers examined the effect of age on the relationship of height, weight, and body mass index (BMI) to prostate cancer risk. However, they found no relationship of weight and BMI to prostate cancer in this population.

"Increasing height appeared to be a risk factor for prostate cancer over age 50," said Gaziano. "Statistically significant risk estimates suggest that in older age groups the relationship between height and prostate cancer increases. However, those less than age 50 have no statistically risk of prostate cancer with increasing height."

Men over 72 inches in height and over age 50 had a 32% greater risk of prostate cancer. Over 72 inches in height and over age 60, men faced a 24% greater risk.

Gaziano called the study's findings "preliminary" and said that more research would provide a clearer picture of these relationships

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**LOWER SERUM SELENIUM & VITAMIN E LEVELS ARE FOUND TO INCREASE RISK**

*Int J Cancer, 2003;103(5):664-670*

According to recent research from the United States, "Prostate cancer is the fourth most common cancer in men worldwide and the most common cancer in men in the United States, with reported incidence rates for American blacks being the highest in the world."

T.M. Vogt and colleagues, NCI, Division of Cancer Epidemiology and Genetics, wrote: "The etiology of prostate cancer and an explanation for the racial disparity in incidence in the United States remain elusive. Epidemiologic studies suggest that selenium, an essential trace element, may protect against the disease. To further explore this hypothesis, we measured serum selenium in 212 cases and 233

controls participating in a multicenter, population based case control study that included comparable numbers of American black and white men aged 40-79 yrs. Serum selenium was inversely associated with risk of prostate cancer (comparing highest to lowest quartiles, OR=0.71, 95% CI 0.39-1.28; p for trend =0.11), with similar patterns seen in both blacks and whites. Cubic regression spline analysis of continuous serum selenium indicated a reduced risk of prostate cancer above concentrations of 0.135 microgr/ml (median among controls) compared to a reference value set at the median of the lowest selenium quartile."

"Because both the selenoenzyme GPX and vitamin E can function as antioxidants, we also explored their joint effect. Consistent with other studies, the inverse association with selenium was strongest among men with low serum alpha-tocopherol concentrations," the researchers continued.

The "results suggest a moderately reduced risk of prostate cancer at higher serum selenium concentrations, a finding that can now be extended to include American blacks. Since selenium exposure varies widely throughout the world, further research on optimal concentrations for cancer prevention is justified."

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**PATIENTS WITH HORMONE-REFRACTORY PROSTATE CANCER, BONE METASTASES MAY BENEFIT FROM ZOLEDRONIC ACID TREATMENT**

*J Natl Cancer Instit 2002;94:1458-68*

Zoledronic acid given at 4 mg appears to reduce skeletal-related events in prostate cancer patients with bone metastases, a new trial finds.

In a double blind study, researchers randomly assigned patients with hormone-refractory PCA and a history of bone metastasis to intravenous zoledronic acid at 4 mg (n=214), zoledronic acid at 8 mg (subsequently reduced to 4 mg; 8/4 - n=221), or placebo (n =208) every 3 weeks for a 15-month period.

Fred Saad and colleagues assessed the proportions of patients with skeletal-related events. Time to first skeletal-related event, skeletal morbidity rate, pain and analgesic scores, disease progression, and drug safety were assessed.

Nearly 38% of the subjects who were administered zoledronic acid at 4 mg, 28% who received zoledronic acid at 8/4 mg, and 31% of the placebo group completed the study. Results demonstrated that a

larger proportion of patients who received placebo developed skeletal-related events compared with the 4 mg zoledronic acid (44.2% vs 33.2%; 95% CI, -20.3% to 1.8%; P=.021) and 8/4 mg zoledronic acid arms (38.5%; 95% CI, -15.1% to 3.6 %; P=.22).

The median time to the first skeletal-related event was 321 days for patients in the placebo group and 363 days for patients who received zoledronic acid at 8/4 mg (P=.491). However, the median time to the first skeletal-related event was not reached for the patients who received zoledronic acid at 4 mg (P=.011).

Compared with the urinary markers in patients in the placebo group, urinary markers of bone resorption were statistically significantly reduced in the patients in both zoledronic acid arms (P=.001). Patients who received placebo experienced more pain and had increased analgesic scores compared with patients who received zoledronic acid. There were no differences among the groups with regard to disease progression, performance status, or quality of life scores. While the 8-mg dose of zoledronic acid was associated with renal function deterioration, the drug administered at 4 mg as a 15-minute infusion was well tolerated.

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**PATIENTS WITH METASTATIC HORMONE-RESISTANT PROSTATE CANCER BENEFIT FROM WEEKLY EPIRUBICIN THERAPY**

*Petrioli R, et al. Brit J Can 2002;87:720-5*

Weekly administration of epirubicin chemotherapy may have swift and lasting palliative results and may positively effect quality of life (QoL) and survival for patients with metastatic hormone-resistant prostate cancer (HRPC), research shows.

The patients treatment in the trial consisted of 30-minute weekly intravenous infusions of epirubicin 30 mg m2 of the body-surface area. All subjects had metastatic HRPC.

Palliative response, defined as a reduction in pain intensity and improvement in performance status, was the primary endpoint. Secondary endpoints included the duration of the palliative response, QoL, and survival.

Of the 131 evaluable patients, 57 patients (44%) met the primary requirements of palliative response following 6 treatment cycles and 73 patients (56%) met the criterion after 12 cycles. The median

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## A CANCER DIAGNOSIS CAN SPARK A CASCADE OF HEALTH-RELATED LIFESTYLE CHANGES IN DIET, EXERCISE AND SUPPLEMENT USE

More than 65 percent of adult cancer patients in western Washington report making one or more health-related lifestyle changes in response to their cancer diagnosis, according to a Fred Hutchinson Cancer Research Center survey published in the March issue of the *Journal of the American Dietetic Association*.

Almost all of the patients overwhelmingly feel that such changes — whether a healthier diet or increased exercise or dietary-supplement use — improve their health and well-being.

This survey of more than 350 cancer patients in Washington is the first population-based study of its kind to look at changes in health-related behaviors up to two years following cancer diagnosis.

Ruth E. Patterson, Ph.D., R.D., and colleagues in Fred Hutchinson's Public Health Sciences Division led the study, which was supported by grants from the National Cancer Institute and funds from Fred Hutchinson. Researchers at Bastyr University in Kenmore, Wash., and Kaiser-Permanente in Oakland, Calif., also consulted on the project.

Patients were asked if they had made any major changes in diet, physical activity or supplement use to cope with cancer or reduce the risk of cancer returning or spreading. Psychological factors that might influence such changes, such as perceived health status and desire for personal control, also were assessed via questionnaire.

Overall, the researchers found lifestyle changes were very common after a cancer diagnosis. Fifty percent of those surveyed started taking new dietary supplements (most common were multivitamins and/or vitamin E), 40 percent made dietary changes (most common was eating more fruits and vegetables), and 20 percent

started a new physical activity (most commonly aerobic exercise). Two-thirds of patients reported making at least one such behavior change in the previous year, a quarter of those surveyed reported making two changes, and nearly 10 percent made improvements in all three areas.

"The vast majority of patients reported that these lifestyle changes improved their health and well-being," said Patterson, a member of Fred Hutchinson's Public Health Sciences Division and a research associate professor at the University of Washington School of Public Health and Community Medicine. Most of these changes were healthful and consistent with national cancer-prevention guidelines, such as eating more fruits and vegetables and less fat. Other changes, such as supplementation with vitamin C, garlic or echinacea, were more controversial.

"Because of the possibility of negative drug-herb interactions, as well as the possibility that supplement use could interfere with chemotherapy, health-care providers need to be aware that supplement use is common among cancer patients," Patterson said. "Anyone who is in active cancer treatment should talk to their medical team about the use of vitamins and supplements, which may need to be curtailed during treatment," she said.

Age, gender and treatment history affected the trend toward lifestyle change. For example, older patients (those over 60) were about half as likely to make dietary changes after a cancer diagnosis, female patients were twice as likely to take new dietary supplements, and those undergoing multiple treatments (radiation therapy, surgery and/or chemotherapy) were two to three times more likely to make changes in diet or physical activity. More educated patients also were more likely to make dietary changes and take new supplements.

Psychological factors associated with health-related behaviors included a strong desire for personal control and a conviction that one's health is largely within one's control. In contrast, a person's perceived health status — whether they thought

themselves to be in excellent or poor condition — did not significantly impact lifestyle change.

The study findings suggest several key messages for health-care practitioners.

"These data suggest that cancer survivors are highly motivated to attempt lifestyle changes in diet, physical activity and dietary-supplement use as much as two years after diagnosis," Patterson said. "However, little is known about how lifestyle behaviors affect cancer recurrence and prognosis.

"Nonetheless, family, friends, media and personnel at health-food stores may readily give advice, much of which is offered with a degree of certainty that is out of proportion with available scientific evidence. Therefore, studies are needed that test hypotheses about changing health behavior to improve survival rates after a cancer diagnosis."

"Cancer survivors are motivated to make positive changes yet are vulnerable to nutrition misinformation," said David Grotto, a registered dietitian and spokesman for the American Dietetic Association. "Registered dietitians are uniquely qualified to guide cancer patients and survivors in adopting science-based, healthy dietary choices and lifestyle strategies."

The survey was based on telephone interviews with 356 adults who had been diagnosed with breast, prostate or colon cancer between February 1997 and December 1998. The group was divided equally among men and women, with equal representation among the three types of cancer. The participants were located through Fred Hutchinson's Cancer Surveillance System, a population-based registry of cancer incidence in western Washington that is part of a nationwide cancer registry funded by the National Cancer Institute.

One limitation to the study, Patterson noted, is that the survey was limited to patients with breast, prostate and colorectal cancer who were interviewed up to two years after diagnosis. Because survival rates for these cancers are high, motivations for making lifestyle changes among

these patients may be different from those of patients with malignancies that have a poor prognosis, such as lung or pancreatic cancers.

In addition, the study population reflects western Washington demographics, which is predominantly white. Additional studies are needed to assess lifestyle changes among cancer patients in other racial/ethnic groups.

“The results of these analyses indicate that cancer patients are often making lifestyle changes months to years after diagnosis and represent a group of adults who could benefit from counseling on diet and physical activity,” Patterson said. “Health-care providers who work with cancer survivors need to be wary of dismissing or discounting dietary supplements or other nutritional or exercise regimens given that patients overwhelmingly feel that these activities improve their health and well-being.”

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length of response was 9 months.

The median global QoL improved in 52% of the subjects following 6 cycles of treatment and in 68% of subjects following 12 cycles. The survival rates for 12- and 18-months were 56% and 31%, respectively, with a median survival of approximately 13 months.

Overall, the therapy was well tolerated. Researchers observed grade 3 neutropenia in 8% of the patients, grade 3 anemia in 7% of patients, and grade 3 thrombocytopenia in 3% of the patients.

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### POSITIVE SURGICAL MARGINS PREDICT DISEASE RECURRENCE IN PATIENTS WITH EXTRAPROSTATIC CARCINOMA

*Cancer 2002;95:1215-9*

Positive surgical margins were found to be a significant predictor of disease recurrence in patients with extraprostatic (pT3a/b N0) prostate carcinoma following radical prostatectomy, investigators found.

Sankar Kausik and colleagues evaluated the data of 842 subjects with extraprostatic carcinoma who underwent radical prostatectomy between 1987 and 1995. No seminal vesicle or regional lymph node involvement was found in these patients.

Results indicated that 354 subjects (42%)

had  $\geq 1$  positive surgical margins, while 488 subjects (58%) showed no margin involvement. The sites of margin positivity included the apex (n3), base (nG), posterior prostate (n7), and the anterior prostate (n). A total of 111 subjects were found to have  $\geq 2$  positive surgical margins.

For patients with no positive surgical margins, the 5-year survival free of clinical recurrence and/or biochemical failure was 76%, and it was 65% for patients with 1 positive surgical margin (P=.0001).

No significant difference was found in biochemical disease progression between patients with 1 versus those with  $\geq 2$  surgical margins. After controlling for preoperative PSA, Gleason score, and DNA ploidy, positive surgical margins were a significant predictor (P=.0017) of clinical disease recurrence and biochemical failure, as revealed by multivariate analysis.

The results of the current study indicate that surgical margin status is important in those patients with limited extraprostatic carcinoma, the study authors wrote. However, they added, The benefit of adjuvant therapy or the adjustment of surgical techniques to optimize recurrence-free survival in both these groups remains to be evaluated.

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### PROSTATE CANCER TREATMENT LINKED TO COMORBIDITY AND SYMPTOMS

*Hall et al, Cancer 2002;95:2308-2315*

Specific symptoms and comorbid disease may influence choice of treatment for PCa say US researchers.

Previous reports have suggested that the type of treatment received for prostate cancer is associated with comorbidity, but there is little information about which specific diseases or symptoms affect these decisions.

Dr. Irene Hall from the Centers for Disease Control and Prevention in Atlanta and colleagues examined the relationship between initial treatment for prostate cancer and the presenting symptoms and comorbidity.

The researchers extracted data on demographic characteristics, comorbid conditions, symptoms, tumour stage and grade, and treatment from the medical records of 1,054 prostate cancer patients aged 35-95 years participating in the Kaiser Permanente medical care program in the San Francisco Bay area.

For analysis of the first course of treatment, patients were divided into three categories: two of aggressive treatment (surgery or surgery with radiation therapy; and radiation therapy only) and one of non-aggressive therapy (no treatment, hormone therapy or chemotherapy).

Most men received aggressive treatment (63.6 per cent) while the remainder received no treatment, hormonal therapy or chemotherapy. Overall, a substantial proportion of patients (61.1 per cent) had no comorbid conditions.

The researchers found that men who were older or had a higher stage and grade of disease were less likely to receive aggressive treatment, and that radiation therapy was less likely among men with prior cancer.

Men with congestive heart failure, cerebrovascular disease, chronic pulmonary disease or diabetes were more likely to receive surgery or non-aggressive treatment than radiation therapy.

The team also found that men over 60 years of age and black men with myocardial infarction were less likely to receive radiation therapy.

They established that surgery was less common in men with prior cancers or congestive heart failure. Higher rates of surgery were shown to occur in diabetic patients without dysuria or hematuria, and among patients with urinary frequency and paraplegia or hemiplegia. Patients without these symptoms were less likely to receive surgery. Dr Hall and the team conclude that comorbidity may be a strong factor in decision-making about treatment for prostate cancer.

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### PSA ADJUSTED FOR TRANSITION ZONE VOLUME MAY BE EFFECTIVE PREDICTOR OF PROSTATE CANCER

*J Urol 2002;160:986-90*

Alpha 1-antichymotrypsin-PSA complex adjusted for transition zone volume was a useful predictor of cancer in men who had undergone previous negative prostate biopsies and could be used to avoid more repeat biopsies, investigators suggested.

Researchers performed 1 or more systemic repeat biopsies in 144 patients. Eighty-six of these patients had PSA levels between 4 and 10 ng/ml at repeat biopsy.

The subjects with cancer detected at the repeat biopsy were compared with subjects who did not have cancer detected. The comparisons were made with regard

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to digital rectal examination findings, PSA-based parameters, and an atypical prostate on initial prostate biopsy.

Dr. Minoru Horniaga's team found prostate cancer on the repeat biopsy in 39 of the 144 patients and in 19 of the subset analysis of 86 patients. However, no significant difference was observed in serum PSA levels between patients with and without PCa. Receiver operating characteristics analysis demonstrated that the alpha 1-antichymotrypsin-PSA complex adjusted for transition zone volume has the greatest area under the curve values (0.756 for all 144 patients; 0.768 for the subset analysis of 86). Furthermore, multiple logistic regression analysis of the subset of 86 subjects indicated alpha 1-antichymotrypsin-PSA complex adjusted for transition zone volume as the only significant independent predictor of cancer.

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**STUDY IDENTIFIES FACTORS ASSOCIATED WITH GOOD SEXUAL OUTCOME IN PROSTATE CANCER SURVIVORS**

*Schover L, et al. Cancer 2002;95:1773-85*

Although a large majority of men who survive PCa treatment have subsequent sexual dysfunction, the priorities a man places on sexuality and on having a sexually functional partner are important factors in achieving sexual function, over and above, the influence of age and medical factors, a new study suggested.

To identify factors associated with good sexual outcome in a large group of survivors of localized prostate carcinoma, researchers sent surveys to 2,636 men in the Cleveland Clinic Foundation's Prostate Cancer Registry. The subjects were treated with definitive radiotherapy or underwent prostatectomy. The surveys collected data on demographic items, past and current sexual functioning, partner's sexual functioning and health, and other factors believed to affect sexual satisfaction. Overall, 1,236 men (49%) returned the survey. After comparing responders with nonresponders, the authors said the sample may have been somewhat biased toward subjects interested in maintaining sexual function. Survey results indicated that at the time of prostate cancer diagnosis, 36% of the subjects had erectile dysfunction (ED). However, 85% of the participants reported having ED within the previous 6 months.

Only 13% of the responders had reliable, firm erections spontaneously. Erections

were achieved in 8% of the men with medical treatment. The subjects reported as much distress about the loss of desire and difficulty having satisfying orgasms as they were about ED.

**CORRECTION / CLARIFICATION**

Us Too! apologizes for an error made in the March 2003 issue of the HotSheet in the article entitled "Developing a health strategy for your prostate cancer". Bill Blair, Chairman of the Us Too! Scientific Advisory Council, whose ideas were the genesis of the article has been kind enough to clarify our error. Apologies to Bill and those who were confused by the error.

"The paragraph that states - 'Pyrilinks-D urine test, as a measure of bone loss. (Costs about \$50, vs. \$800 for a bone-density test.)' should have read "bone scan", not "bone density". With respect to measurement of bone loss in prostate cancer patients, many times it is recommended that a bone density test be done before any definitive therapy. Physicians should be well aware of the detrimental effects of androgen deprivation therapy on bone loss with consequent osteopenia and in many cases osteoporosis occurrence. I personally developed osteoporosis on my first round of androgen deprivation therapy [15 Mo.], and am struggling with the condition. The comments in the article were for men with advanced prostate cancer who are at high risk of bone metastasis and loss of bone matrix may well contribute to this phenomenon. Monitoring bone loss is recommended using urinary Pyrilinks evaluation which measures DPD, a collagen linking agent found in bone. This is a dynamic test whereas bone density is a static examination of bone structure, i.e. it looks at the structure after the damage is done whereas DPD monitors the immediate effects of bone loss when corrective action can be taken, i.e., Bisphosphonate treatment. Both tests are of value but in different settings: Yearly bone density, with urinary Pyrilinks-D several times during the year."

Of the 84% of patients who reported having a current sexual partner, 66% said that their partner had a sexual problem. A strong association was found between younger age and better sexual outcome.

When demographic factors were taken into account, improved sexual outcome was found to be significantly associated

with medical factors. These factors included not having neoadjuvant or current antiandrogen therapy, undergoing bilateral nerve-sparing prostatectomy or brachytherapy, and having better mental and physical composite scores. Sexual factors associated with a better outcome included having normal erections prior to prostate cancer treatment, choosing a treatment based on the hope that it would preserve sexual function, having more sexual partners in the past year, and having a sexually functional partner, the researchers reported. The authors concluded "results of the survey confirm the impression that the literature has been overestimating the success of both surgery and radiation therapy in preserving sexual function."

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**WARNING OVER VITAMIN "SELF-TREATMENT"**

*American Journal of Preventive Medicine.*  
In an analysis of more than 45,000 men and women between the age of 50 and 75, nutritionist Dr Jessie Sattia-Abouta and colleagues from the Univ of N. Carolina looked at the relationship between a cancer diagnosis and use of supplements.

More than 75 per cent of those studied regularly took a vitamin or mineral - the most popular being vitamins E and C, calcium, folate and selenium. Supplement use was most common among those who were older, female, highly educated and of a normal weight. Participants who had medical conditions were also more likely than their healthy peers to take vitamin supplements. In some cases the patients had a clear understanding of what had been recommended for their disease.

Coronary patients, for example, were more likely to report taking vitamin E and folate and those with high cholesterol had a higher chance of taking niacin. However, patients with prostate cancer and osteoporosis were no more likely to take selenium and calcium than those without their conditions in spite of scientific reports that these supplements could be potentially helpful. In addition, the researchers found that patients' choice of supplement reflected the fact that they were misinformed. One example of this was male participants who took selenium for an enlarged prostate even though studies show the supplement may only be of possible use for cancer of the gland.

"Healthcare providers need to make sure patients know what supplements they should be using and ensure they are not taking harmful doses," said Satia-Abouta.