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Life Extension Foundation sponsors highly promising breast cancer trial

According to the National Cancer Institute, more than 40,000 women will die of breast cancer this year, while nearly 180,000 new cases of the dread disease will be diagnosed.¹ Over the course of a lifetime, one in eight women will receive such a diagnosis.² Breast cancer is an all-too-prevalent disease that seems to touch every American sooner or later. These patients are our mothers, sisters, wives, daughters, friends, and co-workers. But despite these grim statistics, there's ample reason for hope. Advances are being made, victories won.

Novel treatment

For example, Life Extension Foundation is pleased to report that it's funding highly promising research that has already yielded remarkably encouraging preliminary results. Principal investigator, Dr. Richard Ishmael—with colleague Dr. Steven Hamilton—has completed a Phase I trial using two existing chemotherapeutic drugs for the treatment of stage IV breast cancer. Administered in a novel alternating dose protocol, the drugs docataxel and gemcitabine show great promise.

Stage IV is the grim term used to describe breast cancer that has spread beyond the breast; often to the bones, lungs, liver, or brain. It's considered largely incurable, with a mere 7% five-year survival rate. According to Medline Plus (US National Library of Medicine), "*For stage IV cancer, the goal is to improve symptoms and prolong survival. However, in most cases, stage IV breast cancer cannot be cured.*"²

Dr. Ishmael and colleagues hope to rewrite that prognosis

The doctors who are investigating this novel approach are not reinventing the wheel, but instead are carefully building and expanding upon previous research, which demonstrated that docataxel and gemcitabine could kill some breast cancer cells, some of the time. Suspecting that subtle alterations in how these drugs are administered—at what times and in which doses—might significantly affect their impact on cancer cells, the doctors devised experiments on cancer cells growing in culture to determine an optimized treatment regimen. Eventually they found that when these drugs are administered alternately (but not simultaneously), at specific doses, they exert a synergistic effect. That is to say, their effectiveness against cancer cells is greater than that exerted by either drug alone, or even in combination.

Seeking additional patients

Moving from the laboratory to the clinic, the investigators enrolled stage IV breast cancer patients in a Phase I trial, and fine-tuned the doses and treatment schedule until optimum results were obtained. A further benefit of this protocol is a reduction in side effects and overall toxicity. The team, which now includes additional oncologists in the Oklahoma City area, is currently treating more women in an ongoing Phase II trial, and they are seeking new subjects.

Although the trial is in the early stages, impressive results have already been obtained. *"The first patient...has had a complete response,"* writes collaborator Dr. Orn Adalsteinsson. Dr. Ishmael concurs.

"[This protocol] is unique. There are a lot less side effects; it's better tolerated... We've had very, very good results." So far only one of nine patients has failed to respond. Four have experienced a "complete response." With additional patients, Dr. Ishmael hopes to be able to report soon that the results are nothing short of extraordinary. *"Dr. Ishmael is one of the most effective oncologists in the US,"* says Dr. Adalsteinsson. *"He has been very successful."*

Potential subjects with early stage IV breast carcinoma (first relapse or metastatic presentation) wishing to volunteer for inclusion in this trial should contact Dr. Ishmael at 1-869-469-3907. Alternately, you may e-mail Dr. Ishmael at ishdr@aol.com.

This study is being funded by a grant from the Life Extension Foundation.

—Dale Kiefer

1. Available at: <http://www.cancer.gov/cancertopics/types/breast> Accessed May 25, 2007.
2. Available at: <http://www.nlm.nih.gov/medlineplus/ency/article/000913.htm> Accessed May 25, 2007.

Health Concern

Breast cancer

Most women share a common fear: developing breast cancer. This is not an unfounded fear when considering that, except for lung cancer, breast cancer is the most common cancer found in women, accounting for one of every three diagnoses. However, men are also affected by breast cancer.

One of the most important supplements for a breast cancer patient is the hormone melatonin. Melatonin inhibits human breast cancer cell growth (Cos et al. 2000) and reduces tumor spread and invasiveness in vitro (Cos et al. 1998). Indeed, it has been suggested that melatonin acts as a naturally occurring anti-estrogen on tumor cells, as it down-regulates hormones responsible for the growth of hormone-dependent mammary tumors (Torres-Farfan 2003).

A high percentage of women with estrogen-receptor-positive breast cancer have low plasma melatonin levels (Brzezinski et al. 1997). There have been some studies demonstrating changes in melatonin levels in breast cancer patients; specifically, women with breast cancer were found to have lower melatonin levels than women without breast cancer (Oosthuizen et al. 1989). Normally, women undergo a seasonal variation in the production of certain hormones, such as melatonin. However, it was found that women with breast cancer did not have a seasonal variation in melatonin levels, as did the healthy women (Holdaway et al. 1997).

<http://www.lef.org/protocols/prtcl-022.shtml>

Featured Products

Dual Action Cruciferous Vegetable Extract with Resveratrol & Cat's Claw

Scientists have identified specific extracts from cruciferous vegetables (broccoli, cauliflower, Brussels sprouts, etc.) that modulate hormones in a way to help maintain healthy cell division. For instance, animal studies have shown that the cruciferous vegetable extract indole-3-carbinol (I3C) modulates estrogen hormones by favorably changing the ratio of protective 2-hydroxyestrone versus the damaging 16-hydroxyestrone. Indole-3-carbinol also induces phase I and II detoxifying enzymes that can help neutralize estrogen metabolites and xenobiotic estrogen-like environmental chemicals. Human studies support the beneficial role of I3C in positively altering estrogen metabolism. Di-indolyl-methane (DIM), a phytonutrient found in cruciferous vegetables, has been shown in animal studies to help maintain normal levels of a potentially damaging estrogen called 4-hydroxyestrone.



<http://www.lef.org/newshop/items/item00969.html>

Melatonin Capsules

Melatonin keeps our circadian cycle in tune as it communicates with the body's cells. Not only does this hormone work to maintain cell health, it appears to regulate a system of self-repair and regeneration. When this hard-working hormone is diminished, our biological functions are impaired.



<http://www.lef.org/newshop/items/item00330.html>

Life Extension Vacations Inaugural Life Extension Cruise

Cruise the Western Caribbean and learn insider secrets to a significantly extended life span and vibrant health! Join us for the inaugural Life Extension "Fountain of Life" Cruise on October 27, 2007 for a week of fun-filled activities and the opportunity to rub elbows with fellow Life Extensionists aboard Norwegian Cruise Line's luxurious Norwegian Sun.

Enjoy additional incentives such as:

- Shipboard credit of \$50 per stateroom
- 10% discount on all onboard Life Extension product orders
- Incentives for renewing your membership onboard
- Contests and drawings for free Life Extension Gift Cards and gift baskets!

You'll want to be part of this life-changing cruise — do it for fun, do it for life!

You'll enjoy:

- Welcome aboard cocktail reception
- Presentations highlighting the latest in integrative therapies and antiaging research
- Product previews on new cutting-edge antiaging products
- One-on-one advisor appointments
- And so much more to help you attain optimal health
- Ship amenities such as Freestyle Cruising® at top-notch restaurants and exciting excursions: swim with dolphins, tour ancient ruins and more!

Be a part of Life Extension history! Hurry, space is limited on a first come, first serve basis.

Book by July 1, 2007, and receive an onboard coupon booklet valued at \$300.

<http://www.lef.org/event.html#lev>

If you have questions or comments concerning this issue or past issues of *Life Extension Update*, send them to ddye@lifeextension.com or call 954 202 7716.

For longer life,



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