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AS WE SEE IT

So Many Needless Cancer Deaths

By William Faloon

One of today's great misconceptions is how people die. Most believe *disease* to be the leading cause. Nothing could be further from the truth.



Statisticians tabulate diseases that humans die from. Missing from the data is what *enabled* these illnesses to progress to the point of claiming the victim's life.

Medical ignorance is the number one reason people die. This "knowledge deficit" is not limited to Western countries. By looking at the absurd ways people die in third world countries, you will understand the lethal consequences of medical ignorance.

In parts of Africa, for example, AIDS is not considered to be a viral disease.¹ Instead, the belief is that one contracts AIDS by "thinking" they may contract AIDS. Therefore, according to this backward logic, to even "think" that practicing safe sex will prevent AIDS will result in one contracting the disease. The result of this fallacy is that HIV infection has reached epidemic proportions in Africa, as people freely engage in dangerous sexual practices while pretending there is no such thing as the HIV virus.²⁻⁴

In rural Afghanistan, people defecate outside whenever they feel the urge. The result of this unsanitary habit is that infectious diseases that were long ago eliminated in the Western world run rampant.⁵⁻⁷ Even when international aid organizations set up latrines and education programs to prevent the spread of disease this way, many rural Afghans continue to move their bowels in places that result in human feces being introduced into the water and food supply.⁸

IT'S JUST AS BAD IN THE WESTERN WORLD

While examples of third world ineptitudes could fill a book, arrogant doctors in the Western world pretend that they have lifted themselves out of the *sea of ignorance* that has caused so many to perish in the past.

What these doctors fail to understand is that their own apathy and scientific unawareness is causing us to die in *different* ways today.

NEEDLESS CANCER DEATHS

Cancer continues to inflict an epidemic of disability and death on the American population.^{9, 10} These tragedies are largely unnecessary.

Surgical removal of the primary tumor is often the first of many toxic therapies inflicted upon a newly diagnosed cancer patient. While it may seem to make sense to quickly "cut out" the tumor, the harsh reality is that conventional surgery can enable a localized tumor to quickly spread throughout the patient's body.¹¹ As we meticulously described in the December 2009 issue of *Life Extension Magazine®*, unless specific pre-operative interventions are implemented, the **surgical procedure** itself can:

1. Suppress immune function, thus making the patient less able to kill residual localized, circulating, and metastasized tumor cells.¹²⁻¹⁷



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2. Remove natural anatomical barriers that impede tumor growth, thus creating an opportunity for localized tumor recurrence.¹⁸
3. Induce the body to produce growth factors to heal the surgical wound, such growth factors that also promote the proliferation of cell colonies that have spread (metastasized) to other parts of the body.¹⁹⁻²³
4. Induce angiogenesis (new blood vessel growth), thus providing residual cancer cells with new blood vessel infiltrative capacity to feed their rapid growth.^{19, 24-26}
5. Create a systemic inflammatory state that provides residual tumor cells with biological fuel used to stimulate rapid propagation.^{20, 27}

Fortunately, therapies described in our cancer treatment articles (available at www.lef.org), when administered prior to surgery, can circumvent most if not all of these surgically induced side effects. Sadly, few oncologists prescribe these scientifically proven approaches prior to surgery.

ONE OVERLOOKED DRUG...MILLIONS OF LOST LIVES

Cimetidine is the generic name of a once-popular heartburn drug called Tagamet®. It is so safe that it is now sold over-the-counter.

Just as the use of low-dose aspirin to prevent heart attack was overlooked by cardiologists for decades, so have the remarkable anti-cancer effects of cimetidine been ignored by the cancer establishment.

Not only does *cimetidine* have proven *immune-boosting* properties, but it specifically inhibits *angiogenesis* and can block the *adhesion* of certain tumor cells to blood vessel walls where they establish metastatic colonies.²⁸⁻³⁸

We first recommended cimetidine in 1985 as an adjuvant cancer therapy. Since then, a plethora of published scientific studies document remarkable survival improvements when patients with many kinds of cancer take this non-toxic drug.^{35,39-44}

In a **1994** study, only **7%** of colorectal patients given cimetidine (400 mg by mouth twice a day 5 days pre-operatively and IV 2 days post-operatively) died over a 3-year time period compared to a startling **41%** in the control group (not taking cimetidine).⁴⁰ In a **2002** study, **84.6%** of cimetidine-treated patients afflicted with a common type of **colon cancer** were alive after 10 years compared to only **49.8%** in the non-cimetidine group.³⁵ The cimetidine dose given was 800 mg each night. Cimetidine should be administered at least five days prior to surgery and taken for at least one year thereafter.

An enormous amount of published data documents the life-saving benefits of *cimetidine* against a wide variety of cancers. Yet here we are in the year **2010**, and virtually no oncologist prescribes this safe and low-cost medication.

Colon cancer alone kills about **55,000** Americans annually.⁴⁵ Just bringing this one piece of information about cimetidine to the public's attention could save **tens of thousands of lives** every year in the United States! That is why the **Life Extension Foundation®** reminds members of the wealth of life-saving knowledge that is available to them. In many cases, the efficacy of these therapies was validated decades ago. The problem is pharmaceutical company control over academia, the media, and the FDA results in information about these low-cost life-saving therapies being suppressed.



THE ANTI-CANCER EFFECTS OF METFORMIN

Few doctors understood why we suggested that healthy people consider taking the anti-diabetic drug metformin in the early **1990s**. Based on our review of published studies, metformin induced many anti-aging benefits including enhancing insulin sensitivity and assisting in weight loss.

An article published in the **January 13, 2010** issue of the *Journal of the American Medical Association* describes the anti-cancer benefits of metformin as follows:

“Metformin has been shown to have antitumor effects in vivo in animal models, and in epidemiologic studies, including an increased pathologic complete response rate in combination with preoperative chemotherapy in breast cancer patients...Bonanni and his colleagues are investigating the anti-proliferative effect and mechanism of action of metformin in a phase 2 trial in women with early breast cancer who are waiting for surgery.”⁴⁶

We have long postulated that metformin's anti-cancer effects are at least partially based on its ability to enhance *insulin sensitivity*, thereby reducing the amount of tumor-promoting insulin secreted by the pancreas to metabolize glucose.

Metformin is a safe and inexpensive generic prescription drug, yet its utility is ignored in the conventional oncology setting. I personally take 850 mg 2 to 3 times a day of metformin to reduce my risk of a host of age-related diseases, including cancer.

TRAVEL TO LIVE

You can pick up *cimetidine* at your local pharmacy. Nutrients and other therapies suggested in our cancer treatment protocols are readily available. For many cancer patients, however, traveling to clinics that offer advanced therapies may be their only chance to live.

An example of this need for travel is an experimental immunotherapy for advanced **melanoma** being run at Northwestern University in Chicago, Illinois. Immune-enhancing approaches against melanoma in the past have been disappointing. Doctors at Northwestern University, however, are using a novel approach that has produced impressive results.



In this FDA-approved clinical trial, a topical cream (called *imiquimod*) is applied to the exposed tumor twice a day for a total of six weeks. At weeks two and four, the doctors expose the area to an infrared laser. The topical **imiquimod** cream binds with receptors on cancer cells and stimulates them to activate proteins that “broadcast” the presence of the tumor cells to the immune

system. In essence, the patient’s own tumor cells become a unique anti-tumor vaccine. The laser portion of the treatment is designed to hyper-activate the imiquimod with the objective of inducing a systemic immune response against metastatic melanoma cells. Imiquimod is an FDA-approved drug and this is an FDA-approved clinical trial. To inquire about participating, call Stephanie St. Pierre, MD at 312-695-6786 or email s-stpierre@northwestern.edu. This study is referenced by the ClinicalTrials.gov identifier: NCT00758797. **Study details can be found on the FDA-approved clinical trials Web site:** www.clinicaltrials.gov.

You may not qualify to participate in this clinical study or may not want to be bothered with the bureaucratic red tape. Fortunately, this same protocol is being done in the Bahamas for melanoma, and a modified version is being studied to treat breast cancer. In order for this treatment to be administered, a tumor lesion must be present near the surface of your skin, such as a breast lump, a chest wall breast lesion, or a superficial melanoma tumor. To inquire about clinical programs being offered in the Bahamas, call the International Strategic Cancer Alliance (ISCA) at **610-628-3419** or log on to www.is-canceralliance.com.

ISCA is an organization that can refer you to specialized medical centers around the world that offer potential life-saving therapies. It is regrettable that so many cancer patients choose the “convenience” of their local chemotherapy ward and deprive themselves of non-toxic and possibly curative treatments available a plane ride away.

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THE SUPERCHARGED GRANULOCYTE

Granulocytes are a type of immune cell that up until recently have not been considered particularly effective in killing cancer cells. In a discovery that made headline news around the world, Dr. Zheng Cui of the Wake Forest University School of Medicine developed a colony of mice with *supercharged granulocytes* that successfully fight off any form of virulent transplanted cancer.⁴⁷ The supercharged granulocytes in these mice infiltrate tumor cells and destroy them. The mice exposed to these tumor cells are healthy, cancer-free, and have a normal life span.



This exciting cancer research project started serendipitously in 1999 when Dr. Cui was testing the effects of administering cancer cells to mice. He found that one mouse did not develop cancer no matter how many cancer cells he administered. Further research led him to discover that the mouse that appeared to be immune from cancer had an extra amount of potent granulocytes for specifically killing cancer cells without harming normal cells. When Dr. Cui administered healthy, potent *granulocytes* to mice with cancer, he cured them.⁴⁸ Laboratory research showed that the granulocytes appeared to explode cancer cells like guided missiles!

Dr. Cui showed in laboratory experiments that immune cells from some people can be almost **50 times** more effective in fighting cancer than in others.⁴⁹ What that means is that these *supercharged granulocytes* can be harvested from healthy young donors and infused into cancer patients with curative intent. In response to these findings, the **Life Extension Foundation** is helping to fund a human clinical trial of this potential curative cancer treatment.

This new clinical trial will test this approach in humans with advanced cancer, including metastases, who have not been helped by conventional cancer therapies. The trial has received an IND (investigational new drug) status from the FDA and Institutional Review Board approval. The principal investigator/lead physician for this trial is Dipnarine Maharaj, MD, who has in-depth experience in stem cell transplantation, including transfusion of blood products, hematology, and oncology.

To obtain further information about participating in this new study, contact the non-profit arm of the South Florida Bone Marrow/Stem Cell Transplant Institute, 10301 Hagen Ranch Road, Suite 600, Boynton Beach, Florida, 33437, at **561-752-5522**.

DESIGNING AN INDIVIDUALLY TAILORED CANCER TREATMENT

For decades, traditional medicine has made cancer treatment decisions based on the “*one-size-fits-all*” approach—whereby everyone with a particular cancer receives the same treatment. Tragically, this approach has failed to benefit the majority of women with metastatic breast cancer who received standard chemotherapy protocols. This approach refuses to acknowledge the individual differences inherent in the cancer that could have affected treatment. Now, exciting new advances in Circulating Tumor Cell (CTC) technology can allow medical science to finally move away from this outdated approach and towards an *individually* tailored cancer treatment program.⁵⁰



An advanced diagnostic blood test is available in Germany that not only detects the presence of *circulating tumor cells*, but performs a gene expression analysis to identify which treatments (including nutritional-based approaches) are most likely to be effective. The importance of testing circulating tumor cells is that these cells can be genetically dissimilar from the primary tumor. This means that even if your oncology surgeon was progressive enough to have analytical tests performed on your primary tumor, the cells that broke away may bear little resemblance and therefore require a very different treatment regimen.

In this issue of Life Extension magazine, we feature two articles describing the critical importance of circulating tumor cell testing in cancer patients. One of these tests is available in the United States while another is widely used in Europe. To find out how to obtain either of these circulating tumor cell (CTC) tests, refer to the two articles in this month's issue.

HAVE WE AROUSED YOUR APPETITE FOR NOVEL CANCER TREATMENTS?

The **Life Extension Foundation** was established in 1980 to enlighten the world about innovative approaches to disease treatment that are overlooked by the medical establishment.

Our **30-year** track record reveals our non-profit organization to be decades ahead of mainstream doctors in introducing lifesaving medical therapies.

I've provided just a few tidbits of information to arouse your appetite about the in-depth cancer treatments that are available to the enlightened cancer patient. To the detriment of most cancer victims, these technologies are too often ignored by practicing oncologists.

As a member of the **Life Extension Foundation**, you have the assurance that we will make every effort to guide you to the most avant-garde treatments in the event you develop cancer. I hope you understand how today's cancer industry, which financially thrives on the sale of toxic/minimally effective patented drugs, wants this knowledge to be suppressed.

SAVING ONE LIFE AT A TIME

Cancer is a complex disease that requires a multi-pronged effort to provide the best chances of attaining a cure, remission, or significant extension of life. Discoveries are occurring in the research setting, but the process by which they are incorporated into clinical oncology practice is excruciatingly slow. Through various clinical research programs Life Extension funds, access to novel treatments, along with state-of-the-art labs that analyze a patient's cancer profile, are expedited. Our costs involved in funding these cancer research programs are significant, but we view the results as well worth the expenditure of our time and financial resources.

A stage IV lung cancer patient with metastatic lesions to the brain came to us for help in October 2008. Therapy was initiated using conventional drugs (cisplatin and Alimta® (pemetrexed) combined with the immune enhancing agent Anvirzel™. Additional support against microbial infection was then introduced using Immune26®. **Gc macrophage activating factor** was later incorporated into this patient's regimen to provide additional immune support.

This patient presented to us with a CEA tumor marker blood level of **498.2**, indicating very advanced disease. After 11 months of treatment, the **CEA** reading is down to **17.9**. The patient is not cured, but has responded remarkably well to this novel treatment, showing reduced size of cancer lesions. The chart below shows improvement in this patient in response to individualized aggressive treatment.

We have extensive detailed records that have been maintained during the entire treatment phase—this includes MRI scans, PET scans, pathology reports, blood tests, and reports of gamma knife procedures that have been performed at regular intervals. This patient would likely be dead now if not for the aggressive clinical study program we designed for him.

One compound we evaluated in this patient is **Gc macrophage activating factor** (Gc-MAF).

Published findings demonstrate complete remissions for the patients who participated in two separate trials on breast and prostate cancer. The mechanism of action of Gc-MAF is activation of the immune system (the macrophages) by the use of the Gc protein, which is often referred to as vitamin D binding protein. A large clinical study using Gc-MAF is being planned and will be announced in a future issue of Life Extension Magazine®.

For more information on customized cancer care and exciting research programs please contact Örn Adalsteinsson, PhD at International Strategic Cancer Alliance (ISCA) at 610-628-3419.

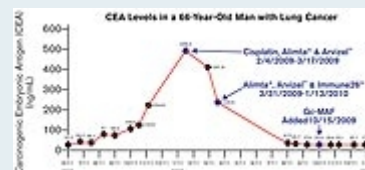


Figure 1: Carcinoembryonic antigen (CEA) levels in a patient with stage IV non-small cell lung cancer (NSCLC). The patient's CEA dropped dramatically after initiating an integrative cancer care program.

References

1. Sabuni LP. Dilemma with the local perception of causes of illnesses in central Africa: muted concept but prevalent in everyday life. Qual Health Res. 2007 Nov;17(9):1280-91.
2. Golooba-Mutebi F, Tollman SM. Confronting HIV/AIDS in a South African village: the impact of health-seeking behaviour. Scand J Public Health Suppl. 2007 Aug;69:175-80.

3. Mshana G, Plummer ML, Wamoyi J, Shigongo ZS, Ross DA, Wight D. 'She was bewitched and caught an illness similar to AIDS': AIDS and sexually transmitted infection causation beliefs in rural northern Tanzania. *Cult Health Sex.* 2006 Jan-Feb;8(1):45-58.
4. Thomas F. Indigenous narratives of HIV/AIDS: morality and blame in a time of change. *Med Anthropol.* 2008 Jul-Sep;27(3):227-56.
5. Ahmad K. Public health in Afghanistan plunges to new depths. *Lancet.* 2001 Jul 28;358(9278):301.
6. Ahmed A, Edward A, Burnham G. Health indicators for mothers and children in rural Herat Province, Afghanistan. *Prehosp Disaster Med.* 2004 Jul-Sep;19(3):221-5.
7. Kakar F, Ahmadzai AH, Habib N, Taqdeer A, Hartman AF. A successful response to an outbreak of cholera in Afghanistan. *Trop Doct.* 2008 Jan;38(1):17-20.
8. Meddings DR, Ronald LA, Marion S, Pinera JF, Oppliger A. Cost effectiveness of a latrine revision programme in Kabul, Afghanistan. *Bull World Health Organ.* 2004 Apr;82(4):281-9.
9. Meetoo D. Chronic diseases: the silent global epidemic. *Br J Nurs.* 2008 Nov 27-Dec 10;17(21):1320-5.
10. Sheinfeld Gorin S, Gauthier J, Hay J, Miles A, Wardle J. Cancer screening and aging: research barriers and opportunities. *Cancer.* 2008 Dec 15;113(12 Suppl):3493-504. Turn page for additional references and a successful case history that utilized a comprehensive multi-modal protocol.
11. Goldfarb Y, Ben-Eliyahu S. Surgery as a risk factor for breast cancer recurrence and metastasis: mediating mechanisms and clinical prophylactic approaches. *Breast Dis.* 2006-2007;26:99-114.
12. Benish M, Bartal I, Goldfarb Y, et al. Perioperative use of beta-blockers and COX-2 inhibitors may improve immune competence and reduce the risk of tumor metastasis. *Ann Surg Oncol.* 2008 Jul;15(7):2042-52.
13. Kloosterman T, von Blomberg BM, Borgstein P, Cuesta MA, Scheper RJ, Meijer S. Unimpaired immune functions after laparoscopic cholecystectomy. *Surgery.* 1994 Apr;115(4):424-8.
14. Little D, Regan M, Keane RM, Bouchier-Hayes D. Perioperative immune modulation. *Surgery.* 1993 Jul;114(1):87-91.
15. McHoney M, Eaton S, Wade A, et al. Inflammatory response in children after laparoscopic vs open Nissen fundoplication: randomized controlled trial. *J Pediatr Surg.* 2005 Jun;40(6):908-13; discussion 913-4.
16. Nielsen HJ, Hammer JH, Moesgaard F, Kehlet H. Immunologic consequences of surgery, anesthesia and blood transfusion. *Surgical immunosuppression. Ugeskr Laeger.* 1989 Sep 11;151(37):2348-52.
17. Weiss G, Meyer F, Matthies B, Pross M, Koenig W, Lippert H. Immunomodulation by perioperative administration of n-3 fatty acids. *Br J Nutr.* 2002 Jan;87 Suppl 1:S89-94.
18. Capogrosso Sansone B, Delsanto PP, Magnano M, Scalerandi M. Effects of anatomical constraints on tumor growth. *Phys Rev E Stat Nonlin Soft Matter Phys.* 2001 Aug;64(2 Pt 1):021903.
19. Zhao T, Xia WH, Zheng MQ, Lu CQ, Han X, Sun YJ. Surgical excision promotes tumor growth and metastasis by promoting expression of MMP-9 and VEGF in a breast cancer model. *Exp Oncol.* 2008 Mar;30(1):60-4.
20. Arias JI, Aller MA, Arias J. The use of inflammation by tumor cells. *Cancer.* 2005 Jul 15;104(2):223-8.
21. Kim LS, Huang S, Lu W, Lev DC, Price JE. Vascular endothelial growth factor expression promotes the growth of breast cancer brain metastases in nude mice. *Clin Exp Metastasis.* 2004;21(2):107-18.
22. Mercurio AM, Lipscomb EA, Bachelder RE. Non-angiogenic functions of VEGF in breast cancer. *J Mammary Gland Biol Neoplasia.* 2005 Oct;10(4):283-90.
23. Bondestam J, Salven P, Jääskela-Saari H, et al. Major surgery increases serum levels of vascular endothelial growth factor only temporarily. *Am J Surg.* 2000 Jan;179(1):57-9.

24. Shantha Kumara HM, Cabot JC, Hoffman A, et al. Minimally invasive colon resection is associated with a transient increase in plasma sVEGFR1 levels and a decrease in sVEGFR2 levels during the early postoperative period. *Surg Endosc.* 2009 Apr;23(4):694-9.
25. Shantha Kumara HM, Hoffman A, Kim IY, et al. Colorectal resection, both open and laparoscopic-assisted, in patients with benign indications is associated with proangiogenic changes in plasma angiopoietin 1 and 2 levels. *Surg Endosc.* 2009 Feb;23(2):409-15.
26. Zhong YS, Lu SX, Xu JM. Tumor proliferation and apoptosis after preoperative hepatic and regional arterial infusion chemotherapy in prevention of liver metastasis after colorectal cancer surgery. *Zhonghua Wai Ke Za Zhi.* 2008 Aug 15;46(16):1229-33.
27. Ceelen WP, Morris S, Paraskeva P, Pattyn P. Surgical trauma, minimal residual disease and locoregional cancer recurrence. *Cancer Treat Res.* 2007;134:51-69.
28. Bobek V, Boubelik M, Kovarik J, Taltynov O. Inhibition of adhesion breast cancer cells by anticoagulant drugs and cimetidine. *Neoplasma.* 2003;50(2):148-51.
29. Eaton D, Hawkins RE. Cimetidine in colorectal cancer—are the effects immunological or adhesion-mediated? *Br J Cancer.* 2002 Jan 21;86(2):159-60.
30. Fukuda M, Kusama K, Sakashita H. Cimetidine inhibits salivary gland tumor cell adhesion to neural cells and induces apoptosis by blocking NCAM expression. *BMC Cancer.* 2008 Dec 18;8:376.
31. Fukuda M, Tanaka S, Suzuki S, Kusama K, Kaneko T, Sakashita H. Cimetidine induces apoptosis of human salivary gland tumor cells. *Oncol Rep.* 2007 Mar;17(3):673-8.
32. Hayashi A, Kobayashi K, Imaeda Y, Matsumoto S. Cimetidine inhibits the adhesion of cancer cells with sialyl Lewis epitope onto the vascular endothelium. *Gan To Kagaku Ryoho.* 2003 Oct;30(11):1788-90.
33. Li Y, Yang GL, Yuan HY, et al. Effects of perioperative cimetidine administration on peripheral blood lymphocytes and tumor infiltrating lymphocytes in patients with gastrointestinal cancer: results of a randomized controlled clinical trial. *Hepatogastroenterology.* 2005 Mar-Apr;52(62):504-8.
34. Lin CY, Bai DJ, Yuan HY, et al. Perioperative cimetidine administration promotes peripheral blood lymphocytes and tumor infiltrating lymphocytes in patients with gastrointestinal cancer: Results of a randomized controlled clinical trial. *World J Gastroenterol.* 2004 Jan;10(1):136-42.
35. Matsumoto S, Imaeda Y, Umemoto S, Kobayashi K, Suzuki H, Okamoto T. Cimetidine increases survival of colorectal cancer patients with high levels of sialyl Lewis-X and sialyl Lewis-A epitope expression on tumour cells. *Br J Cancer.* 2002 Jan 21;86(2):161-7.
36. Natori T, Sata M, Nagai R, Makuuchi M. Cimetidine inhibits angiogenesis and suppresses tumor growth. *Biomed Pharmacother.* 2005 Jan-Feb;59(1-2):56-60.
37. Newton GD, Pray WS, Popovich NG. New OTC drugs and devices: a selected review. *J Am Pharm Assoc (Wash).* 1996 Feb;NS36(2):108-16.
38. Tomita K, Izumi K, Okabe S. Roxatidine- and cimetidine-induced angiogenesis inhibition suppresses growth of colon cancer implants in syngeneic mice. *J Pharmacol Sci.* 2003 Nov;93(3):321-30.
39. Lefranc F, Yeaton P, Brotchi J, Kiss R. Cimetidine, an unexpected anti-tumor agent, and its potential for the treatment of glioblastoma (review). *Int J Oncol.* 2006 May;28(5):1021-30.
40. Adams WJ, Morris DL. Short-course cimetidine and survival with colorectal cancer. *Lancet.* 1994 Dec 24-31;344(8939-8940):1768-9.
41. Adams WJ, Morris DL. Pilot study--cimetidine enhances lymphocyte infiltration of human colorectal carcinoma: results of a small randomized control trial. *Cancer.* 1997 Jul 1;80(1):15-21.

42. Kinouchi T, Saiki S, Maeda O, Kuroda M, Usami M, Kotake T. Treatment of advanced renal cell carcinoma with a combination of human lymphoblastoid interferon-alpha and cimetidine. *J Urol*. 1997 May;157(5):1604-7.

43. Matsumoto S. Cimetidine and survival with colorectal cancer. *Lancet*. 1995 Jul 8;346(8967):115.

44. Svendsen LB, Ross C, Knigge U, et al. Cimetidine as an adjuvant treatment in colorectal cancer. A double-blind, randomized pilot study. *Dis Colon Rectum*. 1995 May;38(5):514-8.

45. Washington MK. Colorectal carcinoma: selected issues in pathologic examination and staging and determination of prognostic factors. *Arch Pathol Lab Med*. 2008 Oct;132(10):1600-7.

46. Hampton T. Researchers probe targeted agents' clinical potential for cancer prevention. *JAMA*. 2010 Jan 13;303(2):115-6.

47. Cui Z, Willingham MC, Hicks AM, et al. Spontaneous regression of advanced cancer: identification of a unique genetically determined, age-dependent trait in mice. *Proc Natl Acad Sci U S A*. 2003 May 27;100(11):6682-7.

48. Hicks AM, Riedlinger G, Willingham MC, et al. Transferable anticancer innate immunity in spontaneous regression/complete resistance mice. *Proc Natl Acad Sci U S A*. 2006 May 16;103(20):7753-8.

49. Available at: <http://www.newscientist.com/article/mg19526224.800-cancerresistant-people-lend-out-their-killer-cells.html>. Accessed January 18, 2010.

50. Benoy IH, Elst H, Philips M, et al. Prognostic significance of disseminated tumor cells as detected by quantitative real-time reverse-transcriptase polymerase chain reaction in patients with breast cancer. *Clin Breast Cancer*. 2006 Jun;7(2):146-52.

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