Taxol, Yew & Cancer

The U.S. Government has given a drug company a monopoly on the exploitation of the rare and slow-growing yew tree, to make a "cancer drug." People who question the propriety of this deal hesitate to speak out, because they feel they might be depriving some woman with ovarian cancer of "the chance to live."

We should remember that our cancer establishment, the alliance between government and the medical/pharmaceutical industry, has been claiming victory against cancer for several decades, while the death rate from cancer has steadily increased. This discrepancy between their claims and reality can be understood with the help of three facts:

1. By increasing the number of people diagnosed as having cancer, the "cure" rate can be increased. Every middle-aged person has some tissue that could be diagnosed as "cancerous." Soon, magnetic resonance imaging will be so sensitive that most of those "cancers" can be found, and the "cure rate" will rise to about 90%, but the death rate from cancer won't decline.

2. The baby-boom that followed World War II caused the rate of increase in cancer mortality to decline, because most cancer occurs in older people, and they were becoming a smaller percentage of the whole population. The same tricks used by the cancer industry could allow someone to claim that the "standard" lifespan was now about 92 years. Although this is statistical fraud of the crudest sort, it has been consistently accepted and promoted by university scientists of the "first rank," who benefit financially from the misrepresentation.

3. The same baby-boom caused an increase in childhood leukemia. At the same time, radiation from atomic bomb testing and prenatal X-rays caused a real increase in the risk of leukemia. The American Cancer Society used 1940 for "age-standardization" to make the general cancer rate look better, but they re-standardized when talking about childhood leukemia, so their calculations would show a downward trend. The downward trend in childhood disease was naturally produced by a declining birthrate, the end of the baby boom, but it was undoubtedly reinforced by the end of atmospheric nuclear testing and by the decreased use of prenatal X-rays. But these figures are the basis for the cancer industry's main claims of success.

Many poisons can cause tumors to shrink, and the yew tree contains such poisons. But shrinking a tumor has nothing to do with increasing a patient's survival prospect. The quack-busters have made that point many times in attacking "unproven cancer remedies."

At best, taxol is an unproven cancer remedy, but when a drug monopoly is promoting a new product, facts hardly matter.

The mechanism of taxol's cytotoxicity is probably similar to that of colchicine, namely, interference with the microtubule system. Microtubules are essential for cell division and many other cell functions. The goal of cytotoxic chemotherapy is to block cell division in cancer, without destroying cell division in essential tissues such as blood, the intestine's lining, skin, and the immune system. Certain cells of the immune system are uniquely fragile, and this fragility sometimes makes it possible to kill a cancer derived from those fragile cells, without killing the patient. The use of glucocorticoid hormones to destroy thymus-derived cancers takes advantage of that natural sensitivity and fragility.

Besides cell division, many (if not all) cellular functions depend on normal microtubule physiology. Microtubules are especially prominent in nerve cells. They are involved in axonal transport. It is not surprising that taxol is very toxic to nerve cells.[1,2] Microtubules are probably involved in the amoeboid movement of white blood cells, and taxol is very toxic to the neutrophils. Microtubules are involved in the fusion of their digestive enzyme vacuoles with their phagocytic vacuoles.[3] The neutrophils, effective tumor cell killers, would not be poisoned by a rational therapy. (These cells also govern wound healing and tissue remodeling, and I will discuss them later in relation to aging and regeneration.)

The metabolism of cholesterol into pregnenolone and progesterone (which are natural anti-cancer factors) is blocked by taxol.[4] Adrenalin secretion is also inhibited by taxol,[5] and adrenalin too, has some relevance to cancer control, e.g., it is anti-mitotic.

Certain cytotoxic treatments have a very rational basis. For example, cyanide poisoning followed by thiosulfate detoxification, is based on the fact that cancer cells consistently lack the enzymes for detoxifying cyanide by combining it with sulfur. Cyanide is too cheap to warrant serious consideration as a cancer therapy. (The pharmaceutical industry has undoubtedly considered promoting their cancer drugs to replace cyanide in capital punishment, but so far death by torture is acceptable only for cancer patients.) The established specificity of cyanide/thiosulfate toxicity for cancer cells contrasts with the generalized toxicity of taxol, which could be classed with whole-body irradiation as a desperate and irrational approach.

One aspect of taxol research might advance our understanding of the body's defenses against cancer. It happens that taxol, like bacterial endotoxin, stimulates macrophages to secrete tumor necrosis factor (TNF). This knowledge might lead to an insight into the nature of the process that controls TNF, and how that process fits into normal immunity. Promoting the body's natural immunity, combined with reducing our exposure to cancer-causing factors, should have higher priority in the health sciences, but the power of the drug industry focuses attention on the idea of medically killing cancer cells.

William McGuire (Johns Hopkins School of Medicine) reported in 1989 that 12 patients out of 48 with "refractory" ovarian cancer[6] "responded" to taxol treatment. All but two of the patients were dead by July, 1991. Ninety-six percent mortality doesn't sound very good.

A study at the University of Pennsylvania Cancer Center[7] found that, in patients with extensive malignant disease, there was no difference in survival time for patients who got conventional treatment, and 78 similar patients who were treated with unorthodox methods at the Livingston-Wheeler Clinic. A growing number of physicians recognize the uselessness of most conventional treatments.

A 77 year-old friend of mine had a physical examination, and learned that he had prostate cancer, though there had been no symptoms. As soon as he was given estrogen "therapy," he became miserable, and was never comfortable again, and died of a stroke a few months later. He believed that the misery was "extending" his life, because that is what his physician told him. There is clear evidence that estrogen does not prolong survival in prostate cancer patients, and the often cited "research" which is said to show the efficacy of estrogen treatment was nothing but a survey of doctor's opinions. The survey was done at a time when it was believed that prostate cancer is caused by testosterone, and that estrogen antagonizes testosterone. In fact, animal experiments show that estrogen causes prostate cancer, and *in vitro* tests show that it, but not testosterone, stimulates cell division in human prostate tissue. Progesterone, which antagonizes both estrogen and testosterone, has been used to shrink enlarged prostates, but estrogen continues to be used to treat prostate cancer.

If poisons are going to be used against cancer, they should be more toxic to the cancer than to the patient, and they should extend the patient's lifespan, and/or decrease suffering.

A very competent cancer researcher found that the patients who delayed longest in going for medical treatment for cancer had the longest survival. If patients would remind their doctors to "first do no harm," there might be fewer lives lost in the heroic "war against cancer."

Correspondence and Subscriptions:
Ray Peat, Ph.D.
Ray Peat's Newsletter
P.O. Box 3427
Eugene, OR 97403
503-345-9855

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