

Alternative cancer cures are a myth

In the 14th article in a series on complementary medicine, Edzard Ernst explains why there will never be an alternative cure for cancer

A single Sunday paper can give an impressive insight into how forcefully alternative medicine is currently being promoted. In the *Sunday Times* two months ago (14 August), it was reported that The Prince of Wales's Foundation for Integrated Health is campaigning to sign up 150 GPs by this month to become associates. Subsequently, these doctors are "expected to offer a wide range of herbal and other alternative treatments to their patients". In the same issue, health writer Susan Clark advised a reader to use marigold ointment to treat "little cancers that are the result of sun damage to the skin".

It is understandable that those who promote alternative medicine at any cost are less than happy with me repeatedly stating that there will never be such a thing as an alternative cancer cure. They think that I am factually wrong or at least unacceptably negative — after all, as professor of complementary medicine, I should join them in their promotion.

It is important to understand what alternative cancer cures claim to be. They are treatments that change the natural history of the disease by somehow affecting cancer growth. They are, therefore, entirely different from therapies used for palliative care or cancer prevention, for both of which complementary medicine has a lot to offer.¹

Mainstream vs alternative

Plants have given us powerful cancer drugs: the common periwinkle, for instance, fathered vinblastine and vincristine. So why should there not be other such treasures in the plant kingdom? I am sure there are, but they will not become alternative cancer cures — they will, just like these vinca alkaloids or paclitaxel (from the yew tree), most certainly become mainstream treatments.

Some argue that until science discovers and develops such drugs, their natural precursors could still be used by alternative practitioners to cure cancer patients. I do not think so. Before vincristine was developed, herbalists did not prescribe extract of periwinkle for their cancer patients. The plant is highly toxic and would probably have killed more patients than it cured. The active compounds had to be isolated and dosed carefully to threaten only the cancer cells and not the patient.

There are hundreds, if not thousands, of alleged alternative cancer cures. Type "alternative medicine" into Google and you will find over 21 million pages offering information about this topic. Assessing the first 32 sites resulted in an amazing array of alternative cancer cures being recommended (see Panel).² The temptation for desperate cancer patients to try these options must be huge. Yet, I fear, none of them will realise the dream of an alternative cancer cure.



Henriette Kress

Periwinkle is a source of mainstream, not alternative, cancer treatments

Take shark cartilage, for instance. Based on the (incorrect) notion that sharks do not get cancer,³ it was promoted as an alternative cancer cure. Amazingly, *in vitro* tests demonstrated that shark cartilage has anti-angiogenic activity.⁴ Such findings made the sales figures rocket and the two shark species used for commercial preparations were driven to the brink of extinction. Finally, the first controlled clinical trial of shark cartilage recently showed that our hopes were in vain: it is no cure after all.⁵

I think this is most illuminating. It indicates that regular scientists and conventional oncologists are more than keen to find new anti-cancer drugs. So, if anything looks in the slightest bit promising, they will investigate it. And they do not care whether the potential drug comes from nature or from the laboratory. If the tests turn out to be positive, the result will be a conventional drug — not an alternative cancer cure. Perhaps we will one day see the advent of an anti-angiogenic drug modelled on a compound of shark cartilage. If so, it will be to the credit of those who developed it and not to those who earned millions by grinding up shark fins and selling it as an alternative cancer cure.

Paranoia

All this seems pure common sense. Yet a strange sort of paranoia persists in the realm of alternative medicine. Many believe that mainstream oncology or "big pharma" actively suppresses the fact that shark cartilage or laetrile or the Gerson diet or Essiac, etc, could save thousands of lives of severely af-

ected cancer patients. The myth of alternative cancer cures is created and endlessly perpetuated. In the final analysis, it assumes that scientists are without the slightest bit of conscience. This insults those who dedicate their lives to making progress in cancer care. It is also factually incorrect as evidenced over and over again by true developments, such as those mentioned above.

And what about me? Am I really negative when I write about alternative cancer cures? Should I not join the promoters of the un-critical integration of alternative medicine into the NHS? If my allegiance were with the manufacturers of alternative medicines or the professional organisations of alternative practitioners, I would certainly be misguided, but it is with the patient or consumer. As my goal is to contribute through rigorous research to the health care of tomorrow, my caution is, I think, well-justified. My alleged negative attitude then becomes an undeniably positive stance. Informing cancer patients that shark cartilage, laetrile, Gerson diet, Essiac and so forth, will do them no good could save lives.

References

1. Ernst E, Pittler MH, Stevinson C, White AR. The desktop guide to complementary and alternative medicine. Edinburgh: Mosby; 2001.
2. Schmidt K, Ernst E. Assessing websites on complementary and alternative medicine for cancer. *Annals of Oncology* 2004;15:733–42.
3. Ostrander GK, Cheng KC, Wolf JC, Wolfe MJ. Shark cartilage, cancer and the growing threat of pseudoscience. *Cancer Research* 2004;64:8485–91.
4. Lee A, Langer R. Shark cartilage contains inhibitors of tumor angiogenesis. *Science* 1983;221:1185–7.
5. Loprinzi CL, Levitt R, Barton DL, Sloan JA, Atherton PJ, Smith DJ et al. Evaluation of shark cartilage in patients with advanced cancer. *Cancer* 2005;104:176–82.

Alternative cancer "cures"

"Cures" recommended on popular web sites include:

714-X (main ingredient is camphor), acupuncture, antineoplaston therapy, aromatherapy, astragalus, beta carotene, bovine cartilage, bromelain, Cancell, cat's claw, coenzyme Q10, Coley toxins, curcumin, EPA (omega-3 fatty acids), Essiac, flax seed, garlic, genistein, Gerson's diet, *Ginkgo biloba*, ginseng, glutamine, the Gonzalez protocol, green tea, Hilde Clark's cure for cancer, homeopathy, Hoxsey therapy, hydrazine sulphate, immuno augmentative therapy, laetrile, macrobiotic diet, Maitake mushrooms, meditation, melatonin, mistletoe, modified citrus pectin, Pau D'Arco (*Tabebuia impetiginosa*), PC-SPES (a combination of Chinese herbs), qi gung, red clover, selenium, shark cartilage, visualisation, vitamin C and vitamin E.

Edzard Ernst, MD, FRCP, is professor of complementary medicine at Peninsula Medical School, Universities of Exeter and Plymouth, and editor-in-chief of the journal *Focus on Alternative and Complementary Therapies*