

# Why there will never be an alternative cancer cure

Edzard Ernst

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Complementary Medicine, Peninsula Medical School, Universities of Exeter and Plymouth, Exeter, UK.

Correspondence to E. Ernst, Complementary Medicine, Peninsula Medical School, Universities of Exeter and Plymouth, 25 Victoria Park Road, Exeter EX2 4NT, UK.

Tel: +44 (0)1392 424989; fax: +44 (0)1392 427562; e-mail: Edzard.Ernst@pms.ac.uk

Type 'alternative medicine' into Google and you will find about 40 million sites offering information on this topic. Assessing the 32 most popular sites, we found a dazzling array of 'alternative cancer cures' (ACCs) being recommended (Table 1) [1]. By ACCs I mean heterodox treatments that claim to change the natural history of the disease by somehow affecting cancer growth. Well-known examples are shark cartilage, Laetrile and Essiac.

The new 'kid on the block' is Ukrain. In this issue, Lanvers-Kaminsky *et al.* [2] report an important in-vitro study suggesting that Ukrain may indeed have some useful anticancer activity. Their finding confirms previous in-vitro results. Ukrain has also been tested in several clinical trials that generated encouraging results, but sadly seemed less than reliable [3].

Plants and other natural substances frequently do possess anticancer properties *in vitro*. They certainly have given us many useful cancer drugs: the common Periwinkle, for instance, fathered Vinblastin and Vincristin. So why should there be no such thing as an ACC? Why should we not find other such treasures in nature? I am sure there are! They will never become ACCs; however, they will, just like Vinca drugs, be researched rigorously and tested scientifically; during this process they become entirely mainstream.

Until science discovers and develops such drugs, some might argue, their natural precursors could still be used by alternative practitioners to cure cancer patients! I disagree! Before Vincristin was developed, herbalists did not prescribe extracts of Periwinkle for their cancer patients. The plant is highly toxic. The active compounds had to be isolated and dosed carefully to kill only the cancer cells and not the patient.

Shark cartilage is another apt example. On the basis of the (incorrect) notion that sharks do not get cancer [4], it was (and is) heavily promoted as an ACC. In-vitro tests even demonstrated that shark cartilage has anti-angiogenic activity [5]. Such findings made the sales figures rocket and subsequently the two shark species used for the commercial preparations were driven to the brink of extinction. Finally, the first and so far only controlled

clinical trial of shark cartilage demonstrated that our hopes were in vain: it is no cure after all [6].

The story confirms that regular scientists and conventional oncologists are keen to find new anticancer drugs. So, if anything looks remotely promising, they will

**Table 1** Alternative cancer cures recommended on popular web sites

Name	n
Shark cartilage	11
Coenzyme Q10	10
Laetrile	10
Gerson diet	9
Mistletoe	9
Acupuncture	8
Antineoplaston therapy	8
Bovine cartilage	8
Vitamin C	8
Hoxsey therapy	7
714-X	6
Cucumin	6
Essiac	6
Genistein	6
Green tea	6
Astragalus	5
$\beta$ -Carotene	5
Garlic	5
Immunoenhancement therapy	5
Meditation	5
Melatonin	5
PC-SPES	5
Selenium	5
Visualization (imagery)	5
Cancell	4
EPA ( $\Omega$ -3 fatty acids)	4
Hydrazine sulphate	4
Macrobiotic diet	4
Modified citrus pectin	4
Pau D'Arco ( <i>Tabebuia impetiginosa</i> )	4
Vitamin E	4
Aromatherapy	3
Cat's claw	3
<i>Ginkgo biloba</i>	3
Ginseng	3
Maitake mushroom	3
Qi gung	3
Red clover	3
Bromelain	2
Coley toxins	2
Flax seed	2
Glutamine	2
Gonzalez protocol	2
Hilde Clark's cure for cancer	2
Homoeopathy	2

n, number of recommendations (total number of sites=32).

investigate it. Just as Lanvers-Kaminsky *et al.* [2] studied Ukrain, scientists do not care whether the potential drug comes from nature or from the laboratory. If the tests continue to be positive, the result will eventually be a conventional drug – not an ACC. Perhaps one day, we will see the advent of an anti-angiogenic drug modelled on a compound of shark cartilage. And perhaps one day, we will license Ukrain for the treatment of certain cancers. If so, it will be to the credit of those who investigated and developed it, and not of those who earned millions promoting unproven remedies as ACCs.

All this seems pure common sense. Yet, a strange sort of paranoia stubbornly persists in the realm of ‘alternative’ medicine. Many believe that mainstream oncology and ‘big pharma’ conspire to actively suppress the fact that shark cartilage or Laetrile or the Gerson diet or Essiac, etc., could save thousands of lives of cancer patients. Sometimes this is even supported by statements from VIPs; Prince Charles, for instance, recently told us in no uncertain terms about the virtues of the Gerson diet [7]. Thus, the myth of an ACC is created and perpetuated. In the final analysis, this myth assumes that scientists are sadistic misfits without morals, ethics or a conscience. It is therefore highly insulting to those who dedicate their lives to making progress in cancer care [7]. All this clearly does not further the cooperation between oncologists and ‘alternative’ practitioners. The ones who loose out, I am afraid, are the patients who often find it hard to make sense out of the many confusing messages they receive.

Lanvers-Kaminsky *et al.* [2] point us in the right direction. Ukrain and other promising anticancer agents (regardless of their natural or synthetic nature) will continue to be investigated until they turn out to be either useless (as in the case of Essiac [8]) or useful (as perhaps in the case of Ukrain [2,3]). Meanwhile we should speak out against the notion of ACCs [7]. The concept is unfortunately popular [9], but clearly not helpful. It exploits highly vulnerable patients and enriches irresponsible snake oil peddlers.

## References

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