

Cancer Association of South Africa (CANSA)



Fact Sheet and Position Statement On the Risks of Alternative Cancer Therapies

Introduction

Alternative cancer therapies (treatment) comprises alternative or complementary treatments for cancer that have not been approved by government agencies responsible for the control or regulation of therapeutic goods because of a lack of scientific evidence of their ability to effectively cure cancer or sufficient evidence of their harmful or dangerous side effects.

[Picture Credit: Alternative Treatment]



Alternative cancer therapy includes the following: chemicals, diet and exercise, herbs, devices, manual procedures, and other practices. It is sometimes also referred to as:

- Natural Medicine
- Integrative Medicine
- Holistic Medicine
- Unconventional medicine.
- Unorthodox medicine.

Conventional Cancer Therapy

Conventional cancer therapy involves treatment that is widely accepted and used throughout the world by most healthcare professionals. Examples of conventional treatment for cancer include:

- **Chemotherapy** is the use of cytotoxic drugs to stop the growth of cancer cells, either by killing the cells or by stopping them from dividing. Chemotherapy may be given by mouth, injection, or infusion, or on the skin, depending on the type and stage of the cancer being treated. It may be given alone or with other treatments, such as surgery, radiation therapy, or biologic therapy.

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- **Radiation Therapy** is the use of high-energy radiation from X-rays, gamma rays, neutrons, protons, and other sources to kill cancer cells and shrink tumours. Radiation may come from a machine outside the body (external-beam radiation therapy), or it may come from radioactive material placed in the body near cancer cells (internal radiation therapy or brachytherapy). Systemic radiation therapy uses a radioactive substance, such as a radiolabelled monoclonal antibody, that travels in the blood to tissues throughout the body. Also called irradiation and radiotherapy.
- **Surgery** in several forms are helpful to people with cancer. Some surgeries are used in combination with other types of treatment. Types of surgeries include:
 - Curative surgery removes the cancerous tumour or growth from the body. Surgeons use curative surgery when the cancerous tumour is localized to a specific area of the body. This type of treatment is often considered the primary treatment. However, other types of cancer treatments, such as radiation, may be used before or after the surgery.
 - Preventive surgery is used to remove tissue that does not contain cancerous cells, but may develop into a malignant tumour. For example, polyps in the colon may be considered precancerous tissue and preventative surgery may be performed to remove them.
 - Diagnostic surgery helps to determine whether cells are cancerous. Diagnostic surgery is used to remove a tissue sample for testing and evaluation (in a laboratory by a pathologist). The tissue samples help to confirm a diagnosis, identify the type of cancer, or determine the stage of the cancer.
 - Staging surgery works to uncover the extent of cancer, or the extent of the disease in the body. Laparoscopy (a viewing tube with a lens or camera is inserted through a small incision to examine the inside of the body and to remove tissue samples) is an example of a surgical staging procedure.
 - Debulking surgery removes a portion, though not all, of a cancerous tumour. It is used in certain situations when removing an entire tumour may cause damage to an organ or the body. Other types of cancer treatment, such as chemotherapy and radiation, may be used after debulking surgery is performed.
 - Palliative surgery is used to treat cancer at advanced stages. It does not work to cure cancer, but to relieve discomfort or to correct other problems cancer or cancer treatment may have created.
 - Supportive surgery is similar to palliative surgery because it does not work to cure cancer. Instead, it helps other cancer treatments work effectively. An example of supportive surgery is the insertion of a catheter to help with chemotherapy.
 - Restorative surgery is sometimes used as a follow-up to curative or other surgeries to change or restore a person's appearance or the function of a body part. For example, women with breast cancer sometimes need breast reconstruction surgery to restore the physical shape of the affected breast(s). Curative surgery for oral cancer can cause a change in the shape and appearance of a person's mouth. Restorative surgery may be performed to address these effects.
- **Hormone Therapy** is a treatment that slows or stops the growth of cancers that use hormones to grow.
- **Targeted Therapy** works by targeting specific genes or proteins to help stop cancer from growing and spreading. These genes and proteins are found in cancer cells or in cells related to cancer growth, like blood vessel cells. Targeted therapy, therefore, targets the changes in cancer cells that help them grow, divide, and spread.
- **Immunotherapy** is a form of treatment to stimulate or restore the ability of the body's immune (defense) system to fight infection and disease.

- Monoclonal Antibody Therapy is a form of immunotherapy that empowers the body's immune system to attack cancer cells. Monoclonal antibodies used in cancer treatment are designed in a laboratory to target certain antigens — foreign substances in the body — that live on the surface of cancer cells. By targeting those antigens, the antibodies are able to latch onto the cancer cells and activates other disease-fighting 'warriors' in the immune system to fight the cancer.
- Biological Therapy, a form of immunotherapy, is any form of treatment that uses the body's natural abilities that constitute the immune system to fight infection and disease or to protect the body from some of the side effects of treatment.
- **Stem Cell Transplant** replaces stem cells. It is used when stem cells or bone marrow have been damaged or destroyed by disease, including some types of cancer, or by high doses of chemotherapy or radiation therapy used to treat cancer. Bone marrow is the soft, spongy tissue inside your large bones. The bone marrow's main job is to make blood cells that flow through the body. Stem cells are the most basic cells in the bone marrow, and they develop into different types of blood cells. There are 2 major types of stem cell transplant – allogeneic and autologous. In an allogeneic stem cell transplant, stem cells are removed from another person (a donor) and given to the recipient. In an autologous stem cell transplant, one provides one's own stem cells. If one receives stem cells from an identical twin, this is called a syngeneic transplant.

A List of Alternative Cancer Treatments

For a comprehensive list of the most common alternative cancer treatments, please refer to ANNEXURE A of this document.

Claims Made by Supporters of Alternative Cancer Therapies

Angeles Health:

Angeles Health, Chula Vista, California, United States of America, make the following claims regarding the alternative cancer treatment which it provides:

- it provides the best treatment for cancer
- it is more successful than chemotherapy with a better survival rate
- it has no side effects
- it is not exorbitant in cost
- more than half (54%) of cancer patients turn to alternative cancer treatment

(Angeles Health).

Cancertruth following the 'Australian Study':

By visiting the Website of "Cancertruth", one will come across a statement: Chemo has more than a 97% fatality rate! One must ask: Where does this number come from?

The answer: The "2% chemo efficacy" comes from an Australian study into the contribution of chemotherapy to 5-year cancer survival, and the researchers claimed to have found that the average benefit of chemotherapy was about 2%.

So: the study is about the **contribution of chemotherapy to survival and not about survival of patients having chemotherapy**. For obvious reasons, this study has become immensely popular with alternative therapists and is quoted by them ad nauseam.

Over time, the 2-3% *contribution* to survival had somehow become 2-3% **plain survival** – full stop.

Some of these supporters of “alternative cancer therapies” now actually claim the outcome of the study was that of all cancer patients receiving chemo, only 2-3% survive for more than 5 years. In other words: chemotherapy kills an average 97% of cancer patients within 5 years.

The ‘Australian Study’ was conducted in 2004, using data from 1998.

The aim of the ‘Australian Study’ was: to conduct a literature search for randomised clinical trials reporting a 5-year survival benefit attributable **solely to cytotoxic chemotherapy** in adult malignancies.

The researchers set out wanting to know what the contribution was of chemotherapy to 5-year survival. There are various therapies for the treatment of cancer: surgery, radiotherapy, hormonal therapy, immunotherapy – and chemotherapy. The researchers wanted to know to what extent chemotherapy contributed to 5-year-survival of cancer patients.

Of all 154 871 patients whose files were examined, in 3 306 of these, 5-year survival could be attributed **solely** to chemotherapy. In 98% of the patients, 5-year survival was due to a combination of factors like surgery, radiotherapy, etcetera - of which chemotherapy sometimes also was a factor and sometimes was not.

The researchers then **extrapolated** the outcomes to all cancers. The real average 5-year cancer survival in Australia, at the time of the study, was 60%. On the basis of the extrapolation of the outcome of the ‘Australian Study’, the researchers estimated that the average contribution of chemotherapy to 5-year survival would be 2.3% in Australia and 2.1% in the United States of America.

Nowhere in the study does it say that only 3 306 patients survived their chemotherapy and consequently 151 665 patients died because of chemotherapy. When one leaves out a few words and manipulates the statistics, one gets a completely different message.

When one looks at the ‘Australian Study’ design, several flaws become apparent:

- The researchers looked at a lot of cancers, but they did not look at all of them.
- They did not differentiate between cancers for which chemotherapy is the primary treatment and cancers for which chemotherapy is only given as an adjuvant as is the case in most solid tumours.
- They did not include cancers for which chemotherapy is very effective, such as leukaemia.
- They did not include children’s cancers, some of which are highly responsive to treatment, e.g. Wilms’ Tumour, with about 90% surviving at least 5 years.
- They did not differentiate between early stage cancers (tumour <1cm, no metastases in lymph nodes), for which chemotherapy often is not indicated, and late stage, incurable cancers which had already metastasised at the time of diagnosis.

(Morgan, Ward & Barton, 2004).

A Study on Alternative Cancer Treatment by Scientists from Yale University

Scientists from Yale University sifted through the National Cancer Database for their study "Use of Alternative Medicine for Cancer and Its Impact on Survival". The National Cancer Database holds around 34 million records of cancer patients, showing treatment programmes as well as survival rates.

From this data, the researchers followed 280 people who were diagnosed with cancer in 2004 that opted for alternative cancer treatment rather than conventional cancer treatments. They also followed 560 control patients, who were also diagnosed with cancer but chose to take conventional cancer treatments (chemotherapy, radiotherapy, and surgery, etcetera).

The researchers tracked both groups over a period time and found that after five years, 78.3% of people who opted for conventional medical treatment were still alive. Sadly, only 54.7% of people who opted for alternative cancer therapies were still alive after the five years.

Scientific evidence from the Yale University study shows that making use of alternative cancer treatments instead of conventional cancer treatments, increases the risk of dying from cancer.

Watch Out for These Warning Signs

The American Cancer Society provides the following warnings:

- Be suspicious of any treatment that says it can cure cancer or other difficult-to-treat diseases (such as chronic fatigue, multiple sclerosis, AIDS, etc.). It's important to remember that those claims have not been proven.
- Be suspicious of any treatment that claims to offer benefits with no side effects. Even herbs and vitamins have possible side effects. If the treatment is marketed as having no side effects, it has likely not been studied in rigorous clinical trials, where side effects would be seen.
- Be suspicious of promoters who attack the medical or scientific community or who tell you not to use standard or traditional medical treatment.
- Beware of treatments you can get in only one clinic, especially if that clinic is in a country with less strict patient protection laws than those in the United States, the United Kingdom (UK) or the European Union (EU).
- Beware of terms such as "scientific breakthrough," "miracle cure," "secret ingredient," or "ancient remedy." Beware of personal stories that claim amazing results but provide no actual scientific evidence.
- Find out about the training and education of anyone supporting the treatment or using it to treat you. Find out if they are medical doctors and whether they are experts in cancer care or complementary medicines.
- Find out whether scientific studies or clinical trials have studied this treatment in people (not just animals), and what side effects have been reported. Find out if the treatment could harm you or interact badly with your other medicines or supplements.
- Learn whether the findings have been published in trustworthy journals after being reviewed by other scientists who are experts in the same field, or if they have been promoted only in the mass media, such as books, magazines, the internet, TV, infomercials, and radio talk shows.

The Position of the Cancer Association of South Africa (CANSA) regarding Alternative Cancer Therapies

The Cancer Association of South Africa (CANSA) cannot support any form of cancer treatment and/or any other method of cancer treatment that is not rooted in medical scientific knowledge, and of which the effectiveness and safety had not been reliably established by means of clinical trials.

About Clinical Trials

Clinical trials are research studies that involve people. They are conducted under controlled conditions. Only about 10% of all drugs started in human clinical trials become an approved drug.

Clinical trials include:

- Trials to test effectiveness of new treatments
- Trials to test new ways of using current treatments
- Tests new interventions that may lower the risk of developing certain types of cancers
- Tests to find new ways of screening for cancer

The South African National Clinical Trials Register provides the public with updated information on clinical trials on human participants being conducted in South Africa. The Register provides information on the purpose of the clinical trial; who can participate, where the trial is located, and contact details.

For additional information, please visit: www.sanctr.gov.za/

Medical Disclaimer

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Sources and References Consulted or Utilised

Alternative Treatment

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Alphabetical List of Alternative Cancer Treatments

General Treatments

German New Medicine – a popular medical system devised by Ryke Geerdts Hamer (1935–2017), in which all disease is seen as deriving from emotional shock and mainstream medicine is regarded as a conspiracy promulgated by Jews. There is no scientific evidence to support its claims and no biological reason why it should work.

Greek Cancer Cure – a putative cancer cure invented and promoted by microbiologist Hariton-Tzannis Alivizatos. It consisted of intravenous injections of a fluid for which Alivizatos would not reveal the formula. No trials conducted – ingredients unknown – so scientific evidence.

Herbalism – a whole-body approach to promoting health, in which substances are derived from entire plants so as not to disturb what herbalists believe is the delicate chemistry of the plant as a whole.

Holistic Medicine – a general term for an approach to medicine which encompasses mental and spiritual aspects, and which is manifested in sundry complementary and alternative methods. There are no recorded clinical trials available on 'holistic medicine'.

Naturopathy – a system of alternative medicine based on a belief in energy forces in the body and an avoidance of conventional medicine; it is promoted as a treatment for cancer and other ailments without any scientific evidence to support its claims.

Diet-based Treatments

Alkaline Diet – a restrictive diet of non-acid foods, such as that proposed by Edgar Cayce (1877–1945), based on the claim this will affect the pH of the body generally, so reducing the risk of heart disease and cancer. It is scientifically not possible to change the pH of the body.

Breuss Diet – a diet based on vegetable juice and tea devised by Rudolf Breuss (1899–1990), who claimed it could cure cancer. Even though a diet based on vegetables is healthy, it contains no known substances that can 'cure' cancer.

Budwig Protocol (or Budwig Diet) – an "anti-cancer" diet developed in the 1950s by Johanna Budwig (1908–2003). The diet is rich in flaxseed oil mixed with cottage cheese, and emphasises meals high in fruit, vegetables, and fibre; it avoids sugar, animal fats, salad oil, meats, butter, and especially margarine. No clinical trials recorded.

Fasting – not eating or drinking for a period – a practice which has been claimed by some alternative medicine practitioners to help fight cancer, by "starving" tumours. Starving tumours also starves the body and breaks down immune response.

Fermented Foods – it comprises foods that are loaded with healthy bacteria which play a major role in regulating the health of one's entire body and mind. It is claimed that individuals who harbour harmful microbes in their gut microbiomes are at an increased risk for metabolic disorders, diseases and various cancers. Some of these cancers include Colorectal carcinoma, Pancreatic cancer, and Gallbladder cancer. Naturally fermented foods are getting a lot of attention from health experts these days because they may help strengthen one's gut microbiome, however no evidence of curing cancer is available.

Hallelujah diet – a restrictive "biblical" diet based on raw food, claimed by its inventor to have cured his cancer. No scientific evidence could be found to support the claims.

Ketogenic Diet – a diet rich in healthy fats and low in carbohydrates. It is claimed that this diet stimulates the production of ketones in the body through a biological process that circumvents the use of respiration within the mitochondria. Diets which heavily burden the mitochondria with energy synthesis increase the risk of free radical formation and also increase the rate of mutations within

cells. These mutations can lead to various cancers such as Colon cancer, Lung cancer, and Breast cancer.

Kousmine Diet – a restrictive diet devised by Catherie Kousmine (1904–1992) which emphasised fruit, vegetables, grains, pulses and the use of vitamin supplements only. There is no scientific evidence available on the ability of the Kousmine Diet to cure cancer.

Macrobiotic Diet – a pescatarian diet (adding freshwater and saltwater fish and shellfish to a vegetarian diet) based primarily on consuming locally and organically grown whole grains, vegetables, and beans. The ideal breakdown is 60% whole grains, 30% vegetables, and 10% beans, tofu, or sea vegetables (seaweed).

Moerman Therapy – a highly restrictive diet devised by Cornelis Moerman (1893–1988). Its effectiveness is supported by anecdote only – there is no evidence of its worth as a cancer treatment.

Superfood – a marketing term applied to the consumption of certain foods with supposed health-giving properties. They cannot substitute for a generally healthy and balanced diet.

Electromagnetic and Energy-based Treatments

Bioresonance Therapy – diagnosis and therapy delivered by attaching an electrical device to the patient, on the basis that cancer cells emit certain electromagnetic oscillations. No scientific evidence or clinical trials available.

Electro Physiological Feedback Xrroid Therapy – an electronic device promoted as being capable of diagnosing and treating cancer and a host of other ailments. The Quantum Xrroid device is claimed to balance 'bio-energetic' forces that the scientific community does not recognise as real. It mainly reflects skin resistance (how easily low-voltage electric currents from the device pass through the skin), which is not related to the body's health.

Light Therapy – the use of light to treat medical conditions including cancer. It uses chromotherapy (the science of using colours to adjust body vibrations to frequencies that result in health and harmony) or the use of light boxes. No scientific evidence available on the curative effects of light alone.

Magnetic Therapy – the practice of placing magnets on and around the body in order to treat illness. Although this has been promoted as a treatment for cancer and other diseases available scientific evidence does not support these claims.

Orgone Therapy – a type of life force proposed to exist by Wilhelm (1897–1957) which he claimed could be harnessed to cure diseases, including cancer, by sitting inside an "orgone accumulator" – a cupboard-like box with metal and organic linings. Only hearsay evidence exists.

Polarity Therapy - a type of energy medicine based on the idea that the positive or negative charge of a person's electromagnetic field affects their health. Although it is promoted as effective for curing a number of human ailments, including cancer, available scientific evidence does not support claims that polarity therapy is effective in treating cancer or any other disease.

Rife Frequency Generator – an electronic device purported to cure cancer by transmitting radio waves. There is no scientific evidence available.

Sunlight – It is claimed that proper functioning of the body's glands is critical to removing toxins from one's body necessary in treating cancer. Dr. Budwig advocated that the sun is a natural source of photons which creates a magnetic field and attracts electrons. She also believed that sunlight exposure stimulates glandular function of the pancreas, bladder, salivary glands, liver and gall bladder. No clinical trials were ever conducted to support this claim.

Therapeutic Touch (or TT) – contrary to its name, a technique that does not usually involve touching; rather, practitioners holds their hands close to a patient to affect the "energy" in their body.

Hybrid Treatments

Clark's "Cure for All Cancers" – an alternative medicine regime promoted by Hulda Regehr Clark (1928–2009), who (before her death from cancer) claimed it could cure all human diseases, including all cancers. The regime was based on the belief that disease was caused by "parasites", and included herbal remedies, chelation therapy, and the use of electronic devices.

Contreras Therapy – treatment offered at the Oasis of Hope Hospital in Tijuana, Mexico which includes a number of ineffective treatments including the use of amygdalin and metabolic therapy.

Gerson Therapy – a predominantly diet regime, generally based on: limiting salt, protein and other foods; ingesting large quantities of fruit and vegetables through juicing; augmenting the intake of potassium and iodine; and the use of coffee enemas. Gerson therapy has never been assessed in clinical trials as a cure for cancer.

Gonzalez Protocol – a treatment regime devised by Nicholas Gonzalez (1947–2015) based on Gerson therapy. See comment under 'Gerson Therapy' above.

Hoxsey Therapy – a treatment consisting of a caustic herbal paste for external cancers or a herbal mixture for "internal" cancers, combined with laxatives, douches, vitamin supplements and dietary changes. There is no scientific evidence to support these claims.

Issels Treatment – a regime recommended to be used alongside conventional treatment. It requires removal of metal fillings from the patient's mouth, and adherence to a restrictive diet.

Kelley Treatment – a treatment regime devised by William Donald Kelley (1925–2005) based on Gerson therapy, with additional features including prayer and osteopathic manipulation. Famously, Steve McQueen used it for three months before his death. He had numerous metastatic tumours in his neck and abdomen. The evidence speaks for itself.

Live Blood Analysis – in alternative medicine, the practice of examining blood samples under a high-powered microscope, claiming this can detect and predict cancer and other illnesses, so leading to a prescription of dietary supplements that are supposed to function as treatment.

Livingstone-Wheeler Therapy – a therapeutic regime that included a restricted diet, various (unnamed) drugs, therapy and the use of enemas.

Lorraine Day's 10-Step Programme – a regime devised by Lorraine Day to cure cancer, based on a restrictive diet and behavioural changes, such as giving up work and ceasing to watch television.

Metabolic Therapies – an umbrella term for diet- and enema-based "detoxification" regimes, such as the Gerson Therapy, promoted to cure cancer and other disease. See comments under 'Gerson Therapy'.

Nieper Therapy – a regimen devised by Hans Alfred Nieper (1928–1998) which was based on taking a variety of substances, including amygdalin and vitamins, and which Nieper claimed could treat a variety of serious ailments, including cancer. Nieper's claims were never substantiated.

Plant- and Fungus-based Treatments

Actaea racemose (or black cohosh) – a flowering plant from which dietary supplements are made that are promoted for their health-giving properties and its ability to prevent and cure cancer.

Amygdalin (sometimes going by the trade name Laetrile or Vitamin B₁₇) – a glycoside, has been promoted as a cancer cure. However, it has been found to be ineffective and toxic because of its cyanide content; its promotion has been described as "the slickest, most sophisticated, and certainly the most remunerative cancer quack promotion in medical history."

Cannabis (and Cannabis Oil) – used as a recreational and medicinal drug. Potentially mind-changing chemicals derived from cannabis which have been studied for potential anti-cancer effect and while there has been much laboratory work, claims that cannabis has been proven to cure cancer are highly misleading. There is currently evidence that it may assist in stimulating appetite and help to reduce nausea and vomiting. There is also evidence that it can assist in pain control, however, no evidence yet of cancer curing potential.

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Cansema (also called black salve) – a dangerous and controversial alternative cancer treatment. The product is commonly classified as an escharotic—a topical paste which burns and destroys skin tissue and leaves behind a thick, black scar called an eschar.

Echinacea – a group of herbaceous flowering plants in the daisy family, marketed as a herbal supplement that can help combat cancer. There is no scientific evidence to show that *echinacea* can help treat, prevent or cure cancer in any way

Grape Diet – a fruit, popularized for supposed anti-cancer effect by Johanna Brandt (1876–1964) who championed a “grape diet”, and promoted more recently in the form of grape seed extract (GSE). There is very little reliable scientific evidence available at this time that drinking red wine, eating grapes, or following the grape diet can prevent or treat cancer in people. Alcohol is a Group 1 cancer causing chemical.

Graviola – See Soursop below.

Juicing (or Juice Therapy) – the practice of consuming juice made from raw fruit and vegetables. This has been claimed to bring many benefits such as slowing aging or curing cancer; however, there is no convincing scientific evidence that extracted juices are healthier than whole foods.

Kombucha – a kind of fermented tea claimed to cure a variety of human illnesses including AIDS and cancer; these purported uses are however not backed by evidence. The consumption of Kombucha has been associated with adverse effects including muscle inflammation, poisoning, and infection. Kombucha is a fermented, slightly alcoholic, lightly effervescent, sweetened black or green tea drink commonly intended as a functional beverage for its supposed health benefits.

Laetrile – See Amygdalin above.

Mangosteen – a fruit native to Southeast Asia which is promoted as a “superfruit” and in products such as XanGo Juice for treating a variety of human ailments including cancer. Mangosteen products have antioxidant effects and may, therefore, interfere with the intended effects of cancer treatments. Clinical trials are not available.

Milk Thistle (*Silybum marianum*) – a biennial plant that grows in many locations over the world. It is promoted on the internet for its claimed ability to slow certain kinds of cancer, but that there is no good evidence in support of these claims.

Modified Citrus Pectin – a substance chemically extracted from citrus fruits and marketed in dietary supplement form as a treatment for prostate cancer and melanoma. There is no scientific evidence of its effectivity.

Mushrooms – promoted on the internet as useful for cancer treatment. There is currently no evidence that any type of mushroom or mushroom extract can prevent or cure cancer.

Rauwolfia serpentina (or snakeroot) – a plant used as the basis of a herbal remedy that some believe may treat cancer. It has many dangerous side effects (causes serious poisoning, convulsions and coma that may culminate in death) and is likely to increase the risk of cancer.

Saw Palmetto (or *serenoa repens*) – a type of palm tree found growing in the south eastern United States. Its extract has been promoted as a prostate cancer medicine; however, available scientific studies do not support claims that saw palmetto can prevent or treat prostate cancer in humans.

Snakeroot – See *Rauwolfia serpentina* above.

Soursop (or Graviola) – It is recommended to prevent, cure, and treat cancer of any kind. There have been no human studies to confirm the claims.

Venus flytrap – a carnivorous plant, the extract of which is promoted as a treatment for a variety of human ailments including skin cancer. No human studies have been conducted to confirm the claims.

Vitamin B₁₇ – See Amygdalin above.

Physical Procedures

Colon Cleansing – the practice of cleansing the colon using laxatives and enemas to "detoxify" the body. Coffee enemas in particular are promoted as a cancer therapy. See Gerson Therapy.

Cupping – a procedure in which cups are used to create areas of suction on the body to treat cancer. Although claimed by proponents as an alternative cancer treatment, available scientific evidence does not support claims that cupping has any health benefits

Spiritual and Mental Healing

Faith Healing – the attempt to cure disease by spiritual means, often by prayer or participation in religious ritual.

Hypnosis – the induction of a deeply relaxed and yet alert mental state. Some practitioners have claimed hypnosis might help boost the immune system. However, available scientific evidence does not support the idea that hypnosis can influence the development or progression of cancer.

Meditation (also Transcendental Meditation and Mindfulness) – mind-body practices in which patients attempt to master their own mental processes. Even though this may help to improve the quality of life for people with cancer, available scientific evidence does not suggest that meditation is effective in treating cancer or any other disease.

Synthetic Chemicals and Other Substances

Apitherapy – the use of products derived from bees, such as honey and bee venom, as a cancer therapy. The use of bee venom may result in fatal allergic reaction.

Cancer Cell Treatment – a patented cream-based formula. The product claims to disrupt the Krebs cycle of cancer cells, causing them to die without there being any scientific evidence to support the claims.

Chelation Therapy – removal of metals from the body by administering chelating agents. Chelation therapy is a legitimate therapy for heavy metal poisoning, but it has also been promoted as an alternative treatment for diseases including cancer. Chelation therapy can be toxic and has the potential to cause kidney damage, irregular heartbeat, and even death.

Cytokine Therapy (or Klehr's Autologous Tumour Therapy) – a so-called immunotherapy with a therapeutic substrate made of cytokines from the cancer patients' blood. The inventor of this method is Nikolaus Walther Klehr, a dermatologist, who practiced it in his private clinic.

Dimethyl Sulfoxide (or DMSO) – an organosulphur compound that has been promoted as a treatment for cancer since the 1960s.

Hyperbaric Oxygen Therapy – the use of a pressurized oxygen environment as therapy. Hyperbaric oxygen therapy has a number of accepted uses – for example hyperbaric chambers are used for treating decompression sickness. The therapy has also been promoted as a cure-all for a wide range of conditions, including cancer, for which there is no evidence of effectiveness.

Insulin Potentiation Therapy (or insulin-potentiated targeted low-dose therapy (IPTLD)) – the practice of injecting insulin, usually alongside a low dose of conventional chemotherapy drugs, in the belief that this improves the overall effect of the treatment. Although it may cause a temporary reduction in tumour size for some patients, there is no evidence that it improves survival time or any other main outcomes.

Oxygen Therapy – in alternative medicine, the practice of injecting hydrogen peroxide, oxygenating blood, or administering oxygen under pressure to the rectum, vagina, or other bodily opening. Claims that putting oxygen-releasing chemicals into a person's body is effective in treating cancer, can be extremely dangerous.

Ozone Therapy – the application of ozone to the body, either externally or internally. It cannot health any form of cancer.

Sodium Bicarbonate (or Baking Soda) – the chemical compounds with the formula Na HCO_3 , sometimes promoted as a cure for cancer by alternative medical practitioners such as Tulljo Simoncini. One cannot alter the pH of the human body artificially, the claims are, therefore, unfounded.

Urine Therapy (or Urotherapy) – the practice of attempting to treat cancer – or other illnesses – by drinking, injecting or taking an enema of one's own urine, or by making and taking some derivative substance from it.

(Wikipedia; Quackwatch; Cancer Network; Science-based Medicine; NHS, UK; Dawes, L.L. (2013); Fred Hutch; Cancer Tutor; National Council Against Health Fraud; US Food and Drug Administration).

