Vol 7|Issue 1| 2017 |5-12.

International Journal
of
Pharmacy Review & Research
www.ijprr.com

e-ISSN: 2248 – 9207
Print ISSN: 2248 – 9193

A REVIEW ON ANTICANCER DESEASE AND IT'S TREATMENT

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ABSTRACT

Cancer is an epedemic disease with a lot of development in cures and preventative therapies. It is characterised by cells in the human body continually multiplying with the inability to be controlled or stopped basically form a malignant tumours cells with the potential to be metastatic cancer treatments include chemotherapy, radiotherapy and chemically derived drugs. Treatments such as chemotherapy can put patients under a lot of strain and further damage their health. Therefore, there is a focus on using alternative treatments and therapies against cancer 2.

Key words: Avastin Vinblastine Mushroom Resveratrol Green tea, Antimetabolites.

INTRODUCTION

For many years herbal medicines have been used and are still used in developing countries as the primary source of medical treatment. Plants have been used in medicine for their natural antiseptic properties. Thus, research has developed into investigating the potential properties and uses of terrestrial plants extracts for the preparation of potential nanomaterial based drugs for diseases including cancer 3. Many plant species are already being used to treat or prevent development of cancer. Multiple researchers have identified species of our daily diet, the average intake of flavonoids of every day ranges from150mg to 300mg [1].

As the primary source, flavonoids from citrus fruit or juice take up to 10%, of which juices and fruits offer 8 mg and 3 mg, respectively [2]. The main components in citrus possess phenols, amino acids, essential oils, pectin, carotenoids, flavonoids, and vitamin C. Although flavonoids are generally considered to be nonnutritive agents, interest in flavonoids has arisen because of their potential role in the prevention of major chronic diseases. Flavonoids are polyphenolic compounds and include a phenyl benzopyrone structure, representing as two benzene rings (C6) joined by a linear three-carbon chain (C3), with a carbonyl group at the C4 position. The citrus flavonoids include a class of glycosides, namely, hesperidin and naringin, and another class of O-methylated aglycones of flavones such as nobiletin and tangeretin, which are relatively common two polymethoxylated flavones (PMFs) [3]. PMFs exist almost ubiquitously in citrus plants. Six PMFs and three major 5- demethoxy flavones can be extracted from a variety of citrus peels. The wide biochemical functions of flavonoids in orange peel have been studied extensively recently. They increased serum antioxidant capacity against lipid peroxidation [4] and reduced the elderly oxidative stress. These compounds also performed beneficial effects of anti-inflammation, antitumor [5, 6], and antiatherosclerosis [7]. Meanwhile, they serve as supplementary of drug chemotherapy [8], diabetes health food [9], and neuroprotective drug [10]. In recent years, epidemiological studies have shown that there is a connection that flavonoid intake may reduce the risk of developing colon cancer [11, 12]. Moreover, it may prevent.

WHAT IS ANTICANCER.

Anticancer describes natural methods of health care that contribute to preventing the development of cancer or to bolstering treatment. They are meant to serve as a complement to conventional approaches (such as surgery, radiotherapy, chemotherapy)

BEHAVIORAL CHANGES SLOW THE GROWTH OF CANCER CELLS

Anticancer outlines the role of diet, exercise, stress management and the environment in reducing your chances for cancer.

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Avoiding certain chemicals found in household cleaning products and perfumes is one way you can control your environment. Healthy changes to everyday life can reduce cancer risks by stopping the growth of cancer cells, which he calls "outlaws." These changes, even if they are small, strengthen the immune system. They also reduce cell inflammation, which "outlaws" need to grow. "All in all, anything that boosts our immune system fights cancer".

SPREADING KNOWLEDGE ABOUT CANCER PREVENTION

The inspiration for Anticancer came during dinner with his brother at a small Italian restaurant in Paris. While eating a plate of grilled vegetables and a small side of pasta with pesto, Servan-Schreiber listened to his brother talk about how much their family and friends had changed their lifestyles and behaviors, based on what he had taught them about cancer prevention. "For a number of years, I never talked about my disease or what I was doing to help myself," says Servan-Schreiber. "I wanted my patients to think that I was in good enough shape to care for them, which I was. But, a few years down the line, after I was doing well, my brother told me that as a doctor, I shouldn't keep that information from the public. He said I had to share my findings with the world. And, he was right. It was then that I decided to write 'Anti Cancer'." Anticancer drugs are used to control the growth of cancerous cells. Cancer is commonly defined as the uncontrolled growth of cells, with loss of differentiation and commonly, with metastasis, spread of the cancer to other tissues and organs. Cancers are malignant growths. In contrast, benign growths remain encapsulated and grow within a well-defined area. Although benign tumors may be fatal if untreated, due to pressure on essential organs, as in the case of a benign brain tumor, surgery or radiation are the preferred methods of treating growths which have a well-defined location. Drugs provide a unique forum for interaction and dissemination of original research and educational information relevant to the practice of Cancer Medicine and Anticancer Drugs and its related oncologic disciplines.

CHEMOTHERAPY

Chemotherapy (also called chemo) is a type of cancer treatment that uses drugs to destroy cancer cells. Chemotherapy works by stopping or slowing the growth of cancer cells, which grow and divide quickly. But it can also harm healthy cells that divide quickly, such as those that line your mouth and intestines or cause your hair to grow. Damage to healthy cells may cause side effects. often, side effects get better or go away after chemotherapy is over.

AVASTIN

Avastin (bevacizumab) is a cancer medication that interferes with the growth and spread of cancer cells in the body. It is used to treat a certain type of brain tumor, and certain types of cancers of the kidney, lung, colon, rectum, cervix, ovary, or fallopian tube. Avastin is also used to treat cancer of the membrane lining the internal organs in your abdomen it is usually given as part of a combination of cancer medicines. Avastin (bevacizumab) is a recombinant humanized monoclonal IgG1 antibody that binds to and inhibits the biologic activity of human vascular endothelial growth factor (VEGF) in in vitro and in vivo assay systems.

FLUOROURACIL (5-FU)

Fluorouracil (5-FU) is an anticancer medicine that works by slowing or stopping cell growth. The medicine interferes with the ability of abnormal cells to grow on the skin's top layer. It is used normally for Colon and rectal cancer, Breast cancer, Gastrointestinal cancers including: anal, esphageal, pancreas and gastric (stomach), Head and neck cancer. 5-FU is a Pyrimidine antagonist, belongs to the category of chemotherapy called antimetabolites. Antimetabolites are very similar to normal substances within the cell. When the cells incorporate these substances into the cellular metabolism, they are unable to divide. Antimetabolites are cell-cycle specific, Pyrimidine antagonist Serious adverse reactions to 5-FU are; chest pain, EKG changes and increases in cardiac enzymes - which may indicate problems with the heart. These symptoms are very rare but increased for patients with a prior history of heart disease.

Anti-Cancer Drugs

"Cancer" is the term we give to a large group of diseases that vary in type and location but have one thing in common: abnormal cells growing out of control. Under normal circumstances the number and growth of all our cells is a highly controlled mechanism. But when the control signals in one of these cells goes wrong, and its life cycle becomes disturbed, it divides and divides. It continues multiplying uncontrollably, and the result of this accumulation of abnormal cells is a mass of cells called a "cancer". The drugs used to treat cancer are Anti cancer drugs, when we hear about Anticancer drugs, most of us immediately think of chemotherapy.

VINBLASTINE

Vinblastine is used in combination with other chemotherapy drugs to treat Hodgkin's lymphoma (Hodgkin's disease) and non-Hodgkin's lymphoma (types of cancer that begin in a type of white blood cell that normally fights infection), and cancer of the testicles. It is also used to treat Langerhans cell histiocytosis (histiocytosis X; Letterer-Siwe disease; a condition in which too many of a certain type of white blood cell grows in parts of the body). It may also be used to treat breast cancer that has not improved after treatment with other medications and gestational trophoblastic tumors (a type of tumor that forms inside a woman's uterus while she is pregnant) that has not improved after surgery or treatment with other medications. Vinblastine is in a class of medications called vinca alkaloids. It works by slowing or stopping the growth of cancer cells in your body.

ANTICANCER PLANT-DERIVED DRUGS

Plant-derived drugs are desired for anticancer treatment they are natural and easily available. It is tolerated and non-toxic to normal human cells. However, there are exceptions such as cyanogenetic glycosides, saponins, lectins, lectins, lignans, and some taxanes.

MUSHROOMS

Mushroom natural ingredient with having a high potential as a crude drug, given its anti-tumor as well as antiviral, and antibacterial properties. These results suggest that increased intake of white button mushrooms may promote immunity against tumors and viruses through the enhancement of a key component, effects of mushrooms are thought to be due to their ability to modulate immune cell functions it contain mainly to polysaccharides especially beta-d glucan derivates, glycopeptide/protein complexes proteoglycans, proteins, and triterpenoids. Really mushroom have an important role in immunomodulating and anti-tumor activities

RESVERATROL

Resveratrol inhibits cellular events associated with tumor initiation, promotion, and progression. Another possible crude drug or crude drug element found in the skin of red grapes and, therefore, in red wine that has been identified on the basis of its ability to inhibit cyclooxygenase (COX) activity is observe in resveratrol.

GREEN TEA

Green tea is now well-known to most people for having medicinal benefit. Green tea contain polyphenol-(-)-epigallocatechin-3-gallate (EGCG) has various beneficial properties including chemopreventive, anticarcinogenic, and antioxidant actions.

HERBALS

Chinese herbal medicine historically *Scutellaria baicalensis* is a widely used as a antiinflammatory and anticancer therapy that is being tested as a treatment for prostate cancer. Generally human prostate cancer cell lines (LNCaP, androgen dependent, and PC-3, androgen independent) were assessed for growth inhibition when exposed to *S. baicalensis*. *S. baicalensis* exerted dose- and time-dependent increased growth inhibition in both cell lines. After treatment with *S. baicalensis*, PGE2 synthesis in both cells was significantly reduced, resulting from direct inhibition of COX-2 activity rather than COX-2 protein suppression. *S. baicalensis* also inhibited prostate-specific antigen production in LNCaP cells. In animal studies, after a 7-week treatment period with *S. baicalensis*, tumor volume was reduced by 50%, demonstrating that *S. baicalensis* may be a novel anticancer agent for treating prostate cancer. *Artemisia asiatica* has also been frequently used in traditional Asian medicine for the treatment of diseases involving inflammation, cancer, and microbial infection.

PHARMOCOLOGY OF CANCER DRUGS: Cancer treatment is an area of medicine where the concepts of multi-modality, drug delivery, and personalized medicine are the most advanced. Therefore, Pharmacology of Anti-Cancer Drugs will also have a particular interest in the following issues: The synergy between chemotherapy and other anticancer modalities, including radio-, immuno- and gene therapy; the use of nanoscale particles or targeting moieties to improve drug bioavailability; and the identification of biomarkers derived from proteomics, and genomics or imaging technologies to predict response or resistance to drug treatment.

METHOTREXATE

Methotrexate is in a class of medications called antimetabolites. Methotrexate treats cancer by slowing the growth of cancer cells. Methotrexate is also used to treat certain types of cancer including cancers that begin in the tissues that form around a fertilized egg in the uterus, breast cancer, lung cancer, certain cancers of the head and neck, certain types of lymphoma, and leukemia.

Antineoplastic Agents

Antineoplastic agents travel the body and destroy cancer cells. Many of the side effects associated with antineoplastic agents occur because treatment destroys the body's normal cells in addition to cancerous cells. Alkylating agents for Cancer treatment, They generally have limited but important uses, and often have significant hepatotoxicity. The antineoplastic agents are not easily classified. Historically, they are categorized as alkylating agents, antimetabolites, natural products,hormones and antagonists, and miscellaneous. In recent years, however, the miscellaneous group has come to include some of the most important agents. Anticancer agents can also be classified by indication (lymphoma, leukemia, melanoma, solid tumor), mechanism of action (such as alkylating agents, antibiotics, biological response modifiers, antiandrogens, topoisomerase inhibitors or protein kinase inhibitors), chemical structure (folic acid analog, platinum coordination complex, purine or pyrimidine analog, monoclonal antibody) or as cytotoxic or nonspecific vs noncytotoxic or targeted.

Antimetabolites

Antimetabolites are drugs that interfere with one or more enzymes or their reactions that are necessary for DNA synthesis. They affect DNA synthesis by acting as a substitute to the actual metabolites that would be used in the normal metabolism (for example antifolates interfere with the use of folic acid). Many antimetabolites are used for therapeutic purposes. Sulfanilamides, for example, are antimetabolites that disrupt bacterial, but not human, metabolism and are used to eradicate bacterial infections in humans. Other examples include antagonists of purines (azathioprine, mercaptopurine, and thioguanine) and antagonists of pyrimidine (fluorouracil and floxuridine). Cytarabine, which also has antiviral properties, interferes with dihydrofolate reductase, which is necessary for the synthesis of tetrahydrofolate and subsequently for the synthesis of the folic acid needed for DNA formation. Methotrexate, used most often in the treatment of acute

leukemia, breast cancer, lung cancer, and osteogenic sarcoma (osteosarcoma), has also been used in low doses for the treatment of rheumatoid arthritis.

Anti-tumor Antibiotics

Anthracyclines are anti-tumor antibiotics that interfere with enzymes involved in DNA replication. These drugs work in all phases of the cell cycle. They are widely used for a variety of cancers.Examples of anthracyclines include: Daunorubicin, Doxorubicin (Adriamycin), Epirubicin, Idarubicin. These drugs are not like the antibiotics used to treat infections. They work by altering the DNA inside cancer cells to keep them from growing and multiplying.

Topoisomerase Inhibitors

These drugs interfere with enzymes called topoisomerases, which help separate the strands of DNA so they can be copied during the S phase. (Enzymes are proteins that cause chemical reactions in living cells.) Topoisomerase inhibitors are used to treat certain leukemias, as well as lung, ovarian, gastrointestinal, and other cancers.Topoisomerase inhibitors can be classified according to which type of enzyme they affect: Topoisomerase I inhibitors include: Topotecan, Irinotecan (CPT-11). Topoisomerase II inhibitors include: Etoposide (VP-16), Teniposide, Mitoxantrone (also acts as an anti-tumor antibiotic).

Mitotic Inhibitors

A mitotic inhibitor is a drug that inhibits mitosis, or cell division. These drugs disrupt microtubules, which are structures that pull the cell apart when it divides. Mitotic inhibitors are often plant alkaloids and other compounds derived from natural products. They work by stopping mitosis in the M phase of the cell cycle but can damage cells in all phases by keeping enzymes from making proteins needed for cell reproduction. They are used to treat many different types of cancer including breast, lung, myelomas, lymphomas, and leukemias.

Cytotoxic Drugs

Cytotoxic drugs (sometimes known as antineoplastics) describe a group of medicines that contain chemicals which are toxic to cells,. Cytotoxic drugs inhibit or prevent the function of cells. Cytotoxic drugs are primarily used to treat cancer, frequently as part of a chemotherapy regime. Recently, their uses have expanded to treat certain skin conditions (e.g., psoriasis), rheumatoid and juvenile rheumatoid arthritis, and steroid-resistant muscle conditions. The most common forms of cytotoxic drugs are known as antineoplastic. The terms ‘antineoplastic’ and ‘cytotoxic’ are often used interchangeably. Cytotoxic drugs have also been associated with negative health effects for developing fetuses, including higher incidences of spontaneous abortions, congenital malformations, low birth weight, and infertility. As part of any cytotoxic exposure reduction plan, protective reassignment for a worker who is pregnant, breastfeeding or intends to conceive a child must be put in place.

Hormonal Drugs for Cancer Therapy

Hormone therapy is a form of systemic therapy that works to add, block or remove hormones from the body to slow or stop the growth of cancer cells. Hormone therapies slow or stop the growth of hormone receptor-positive tumors by preventing the cancer cells from getting the hormones they need to grow. They do this in a few ways. Some hormone therapies, like the drug tamoxifen, attach to the receptor in the cancer cell and block estrogen from attaching to the receptor. Other therapies, like aromatase inhibitors, lower the level of estrogen in the body so the cancer cells cannot get the estrogen they need to grow. Hormone therapy for breast cancer treatment is different from menopausal hormone therapy (MHT). MHT may also be called postmenopausal hormone use or hormone replacement therapy.

Chemotherupatic Agents

Chemotherapy is a form of cancer treatment that involves taking one or more of a type of drug that interferes with the DNA (genes) of fast-growing cells. These drugs are further subdivided into specific classes such as alkylating agents, antimetabolites, anthracyclines, and topoisomerase inhibitors. They are usually given by IV infusion (slowly injected into your vein), but can be given orally (in pill form) or by direct infusion into a limb or the liver. Chemotherapy drugs used to treat melanoma include dacarbazine, temozolomide, paclitaxel, cisplatin, carmustine, fotemustine, vindesine, vincristine, and bleomycin. Combinations of chemotherapy agents are also often for melanoma the CVD (cisplatin, vincristine and dacarbazine) and BVLD (bleomycin, vincristine, lomustine and dacarbazine).

Carcinogens

A carcinogen is any substance, radionuclide, or radiation that is an agent directly involved in causing cancer. This may be due to the ability to damage the genome or to the disruption of cellular metabolic processes. Carcinogens are agents that can cause cancer. In industry, there are many potential exposures to carcinogens. Generally, workplace exposures are considered to be at higher levels than for public exposures. Material safety data sheets (MSDSs) should always contain an indication of carcinogenic potential.

Purine Antagoinsts for Cancer Treatment

The purine antagonists function by inhibiting DNA synthesis in two different ways They can inhibit the production of the purine containing nucleotides, adenine and guanine. If a cell doesn't have sufficient amounts of purines, DNA synthesis is halted and the cell cannot divide. They may be incorporated into the DNA molecule during DNA synthesis. The presence of the inhibitor is thought to interfere with further cell division.

Chemo Side Effects: It's difficult to predict exactly what side effects you'll experience while having chemotherapy. Different people react to treatment in different ways. Many of the common side effects of chemotherapy are listed below, Hair loss is a potential side effect of chemotherapy. Anemia, Appetite Loss, Bleeding and Bruising (Thrombocytopenia), Constipation, Diarrhea, Edema, Fatigue, Hair Loss (Alopecia), Infection and Neutropenia, Lymphedema, Memory or Concentration Problems, Mouth and Throat Problems, Nausea and Vomiting, Nerve Problems (Peripheral Neuropathy), Pain, Sexual and Fertility Problems (Men), Sexual and Fertility Problems (Women), Skin and Nail Changes, Sleep Problems, Urinary and Bladder Problems.

Combined Chemotherapy

Traditional treatment of cancer has been facing a huge number of problems, in view of its complex molecular pathophysiology that varies according to each type. Several ways in the treatment of breast cancer have been developed that are surgery, chemotherapy, hormonal therapy, and radiation. Doxorubicin, a chemotherapeutic agent commonly used in breast cancer treatment, showed low effectivity, rendering its resistance and toxicity on normal tissues. An approach in overcoming such problem is the development of agents used in combination with chemotherapeutic agents to lead to better result. Cochemotherapy may increase chemotherapeutic agents' efficacy, allowing the use of lower dosage of chemotherapeutic agent, resulting in the decrease of toxicity on normal tissues compared to chemotherapeutic agent alone. In terms of medicine, hesperidin, tangeretin, and nobiletin could all improve doxorubicin cytotoxic chemotherapy.

Radiation therapy

Radiation therapy (also called radiotherapy, X-ray therapy, or irradiation) is the use of ionizing radiation to kill cancer cells and shrink tumors. Radiation therapy can be administered externally via external beam radiotherapy (EBRT) or internally via brachytherapy. The effects of radiation therapy are localised and confined to the region being treated. Radiation therapy injures or destroys cells in the area being treated (the "target tissue") by damaging their genetic material, making it impossible for these cells to continue to grow and divide. Although radiation damages both cancer cells and normal cells, most normal cells can recover from the effects of radiation and function properly. The goal of radiation therapy is to damage as many cancer cells as possible, while limiting harm to nearby healthy tissue. Hence, it is given in many fractions, allowing healthy tissue to recover between fractions. Radiation therapy may be used to treat almost every type of solid tumor, including cancers of the brain, breast, cervix, larynx, liver, lung, pancreas, prostate, skin, stomach, uterus, or soft tissue sarcomas. Radiation is also used to treat leukemia and lymphoma.

Paclitaxel Against Cancer: Paclitaxel drug targets tubulin. Paclitaxel treated cells have difficulty with the spindle assembly, cell division and also chromosome segregation which is in opposing nature to Colchicine, a drug that targets tubulin. Paclitaxel is known to suppress microtubule minus ends detachment from centrosomes. The beta-tubulin subunit is known to have the binding site for Paclitaxel.

DIET IN CANCER DISEASES

1. APPLES

The natural fiber in apples ferments in the colon, it produces chemicals that help fight the formation of cancer cells, according to German research. Other studies have shown that one type of antioxidant found in apples, called procyanidins, triggered a series of cell signals that resulted in cancer cell death.

2. Salads

Healthy monounsaturated fats (like those in avocados and its oil) will help your body better absorb anticancer antioxidants such as lycopene (from, say, tomatoes) and beta-carotene.

3. Bean sprouts

Bean sprouts are a rich source of sulforaphane, one of the most potent anticancer compounds isolated from a natural source. Sprouts can contain 50 times more sulforaphane than mature beans. Garnish chicken or beef noodle soup with sprouts, sprinkle a layer of sprouts on a whole grain tuna salad wrap, or add sprouts to a veggie omelet.

4. Bran cereal

Bran, one of the richest sources of dietary fiber, is the indigestible outer husk of wheat, rice, oats, and other cereal grains. Bran's high fiber content may reduce the risk of colon and other obesity-related cancers. In addition to eating bran in the morning, stir a couple of spoonfuls of oat bran into a stew or use wheat bran instead of bread crumbs to top casseroles. These colon cancer signs are easy to miss.

5. Carrot

Carrots be your go-to dip utensil. In addition to being our most abundant source of beta-carotene, carrots also contain other carotenoids, including alpha-carotene and bioflavonoids, which have been linked to reducing the risk of cancer, especially lung cancer. However, studies have shown that beta-carotene supplements may be particularly harmful to smokers.

6. Nibble on corn

It contains a phenolic compound called ferulic acid, which may inhibit cancer-causing substances. Think outside the cob: You can mix corn kernels with chopped bell pepper and ground pork for a tasty burger, or even add some cooked kernels to a smoothie.

HERBS USED IN AYURVEDA THAT DESTROY COLON & OTHER CANCERS FAST

1. Ashwagandha

Due to being an adaptogen, this herb is used for literally hundreds of ailments in Ayurvedic medicine. It 'intuits' where your body needs support and provides it. Ashwagandha increases our resistance to stress while increasing energy levels, freeing up the body's systems to scavenge rouge cells. According to research conducted on the herb, ashwagandha helps in the slowing down of the growth of the cancer cells and inhibits the growth of tumor cells without harming the good cells.

2. Garlic

Numerous double-blind studies have shown that garlic is a powerful herb for treating cancer. Naturopaths have been using raw garlic, and even garlic juice or soups, to treat cancer for ages. Garlic has even proven to kill brain cancer cells (in addition to colon cancers) without harming healthy cells, and with no side effects. Add some onions and broccoli, and you've got a cancer fighting power-house. It is also a staple of the Ayurvedic herbal medicine cabinet.

3. Green Tea

Green tea isn't just a social grace, but a healing remedy for colon and other cancers. Not only does it inhibit the formation of cancerous cells, but the catechin polyphenols within can even kill cancerous cells without harming healthy cells. By drinking green tea regularly, you can eradicate colon tumors while they are in their most infant stages.

4. Celandine

A member of the poppy plant family, celandine has been known to treat colon cancer as well. It also boosts the immune system so that cancer and other disease never have a chance to develop. Further, the herb treats diseases like asthma and atherosclerosis.

5. Aloe Vera & Apple Cider Vinegar Fasts

While these two herbal remedies act together primarily as a means to cleanse the colon, thereby eliminating toxins which could accumulate in the digestive tract causing disease, they are also great anti-inflammatory agents. The benefits of Apple Cider Vinegar (ACV) cannot be understated. It helps with candida overgrowth (also shown to contribute to many cancers) and lowers blood glucose levels. Aloe Vera juice has been shown to help people who have tried numerous pharmaceutical meds - folfox, xeloda, avastin and other chemotherapies to no avail.

6. Ginger Root

An Ayurvedic staple, ginger is used in many Indian dishes. Inflammation markers that have been earlier proved in clinical research as precursors to colon cancer can be reduced significantly by the consumption of ginger powder or ginger roots. A powerful anti-inflammatory, ginger soothes and heals the digestive tract, and therefore has been suggested as one of the best home remedies for the treatment of colon cancer.

7. Turmeric

Turmeric is one of the most powerful, researched anti-cancer foods out there. Its active component curcumin has been found to reduce certain types of tumors by 81%! Researchers at UCLA found that curcumin is the component harnessing the ability to actually block cancer growth. Not surprisingly, the cancer-fighting ability that turmeric possesses makes up only a single *facet* of the many benefits of turmeric.

Figure 1. Cancer

Figure 2. Cancer chemotherapy

Figure 3. Marketed product of Avastin

Figure 4. Marketed product of Flurouracil

Figure 5. Vinca plant (Flower & Leaves)

CONCLUSION

High profile disease are grown in the developing world's is cancer. In 2007 the WHO published that in 2005, 7.6 million people died from cancer related diseases with the majority of these people living in low-income countries 49. In the United States cancer is the cause of 1 in 4 deaths and in 2010 it was estimated there were over 1.5 million new cases of cancer 50. Cancer Research UK said in 2012 14.1 million adults were diagnosed with cancer Chemically-derived drugs have been developed and other cancer treatments pre-exist Therefore, there is a demand for alternative treatments with naturally-derived anticancer agents with plants being the desired source.

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