



Cancer Vs Magno

**The Business Diary Team
Pune, August 2009**

The word cancer (first used by Hippocrates) comes from Karcinos (Carcinos), the Greek word for the crustacean-the crab. Hippocrates used this word to describe the ailment because the tentacle projections (of cancer afflicted cells) immediately called to mind its similarity to the form of a crab.

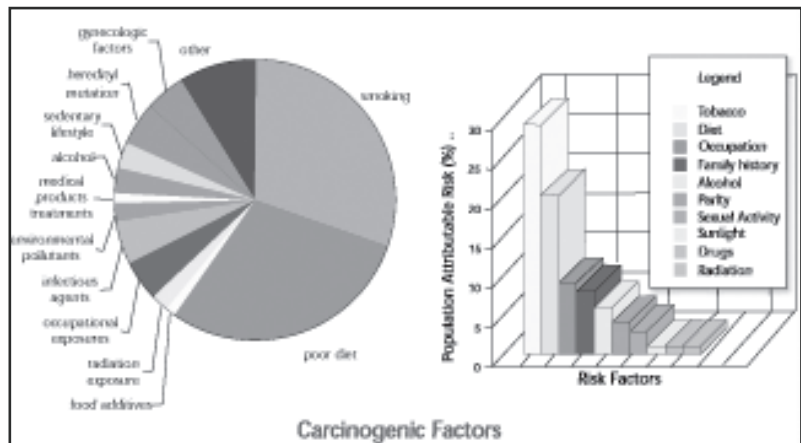
Cancer is characterised by an uncontrolled division of the cells that can be expressed as a solid tumor, also called as malignant tumor (e.g. breast cancer) or just an excessive multiplication of cells without the formation of tumor (e.g. blood cell cancer).

Development of Cancer: Carcinogenesis

The substance that causes cancer is termed as a carcinogen. Carcinogens damage the generic material (DNA) of cells and convert a normal cell into a cancerous cell. This process of transformation, from a normal cell to a cancerous cell, is called as carcinogenesis.

Carcinogens are responsible for the production of cancer cells. Once produced, the rapid multiplication or proliferation of cancerous cells is what results in an invasion of the tumor on the surrounding tissue. This starts a fight between the normal and malignant (cancerous) cell for space and nutrition. Victory of the malignant cells, in this battle, leads to the destruction of adjacent organs and gradually, the size of the tumor increases.

Some cancerous cells detach from the tumor and enter the blood



and lymphatic circulation. As soon as they find a suitable site, they anchor themselves in that organ and develop a new tumor known as a secondary tumor or metastasis. This is how cancer spreads from one organ to other.

All cells have a definite life span. They undergo apoptosis when their life span is complete (apoptosis is a term used to define 'programmed cell death'). Some cancer cells lose this programme and thus live indefinitely.

It Is A Serious Situation!

The gravity of this fatal disease is more than can be imagined. Let's take a look at the statements (specific to India) published by various study groups to help us understand better its menacing magnitude -

- One in 12 women in urban India will develop cancer in her life time.
- One every 10 cancer deaths worldwide is in urban India. What's more alarming is that 75-80 per cent of cancer patients are in the advanced stages of the disease at

the time of diagnosis.

- India has the highest rate of cervical cancer in the world.
- Over the next 10 years eight per cent deaths in India will be due to cancer.

Cancer & Oxidative Stress

To understand the role of oxidative stress in cancer, it is essential to know about certain elements called as free radicals.

An atom has protons and neutrons at its center and electrons revolving around the center in orbits. In normal conditions, these electrons are found in pairs. If an electron revolving around the center is not paired, the species is called as a 'Free Radical'. Free Radicals are unstable and highly reactive. To achieve stability they 'rob' electrons from the surrounding molecules to produce an electron pair. Due to this, the molecule from which the electron is removed becomes unstable and turns into a free radical. This process of robbing repeats with the new free

Cancer Vs

(Continued From Page No. 13)
radical and the chain progresses. In this way, a single radical is capable of producing a sequence of electron transfer reactions. The process of removal of electrons is called as oxidation. And the stress thus generated by the free radicals is called as oxidative stress.

These free radicals attack fatty acids and proteins in cell membranes and cause damage to it. Free radicals also damage the DNA.

Free radicals and oxidative stress play a crucial role in the development of cancer. Exposure to various environmental factors, including tobacco smoke and radiation leads to the formation of free radicals. Over time, such damage may become irreversible and even lead to cancer.

Antioxidants & Cancer

Antioxidants are substances whose presence, in relatively low concentrations, significantly inhibits the rate of oxidation. It is the counter to the process of oxidation. Antioxidants deal with these free radicals and control oxidative stress.

Every cancer patient is exposed to oxidative stress due to an excessive burden of free radicals, which are produced either by the disease or by the treatment. To neutralise this oxidative stress our body has a store of natural antioxidants present in the form of various secretions such as Albumin, Bilirubin, Estrogen, etc. These are the natural (Physiological) antioxidants that our body uses to fight off the threat posed by oxidative stress. These natural antioxidants, which are synthesised in our bodies, may not always be sufficient to take care of the additional burden of free radicals generated in cancer. So, we need extra antioxidants from our diet.

Magno & Cancer

Magno health drink is a plant-based proprietary liquid formula, 100 per cent vegetarian (whole food) nutritional supplement, prepared using herbs and herbal extracts. It is a herbal dietary supplement that contains six antioxidant ingredients, viz: Mangosteen Juice, Aloe Vera Juice, Goji Berry Juice, Green Tea Extract, Grape Seed Extract, and

Noni Fruit Juice.

We can get a large amount of antioxidants from our food as well. But, our supposedly "modern", and deviously unhealthy, food habits prevent the sufficient intake of these much - needed dietary antioxidants. This is the reason why we need additional supply of antioxidants. Various herbal antioxidants present in nature have the potential to offer a range of advantages in cancer.

Herbal antioxidants like Grape Seed extract, Goji Berry, Noni and Mangosteen, which are richly found in Magno, induce apoptosis of these cells and promote the death of cancer cells. Further, Grape Seed extract, Noni Fruit and Green Tea, if administered along with anti-cancer agents, can improve the efficacy of these agents and reduce toxicity. Goji Berry may improve recovery of the immune function during and after chemotherapy and radiotherapy.

Magno is a dietary supplement and not a medicine.

For further details visit: www.greenwayshealthcare.com