



MOST COMMON CANCERS IN YOUNG ADULTS AND ITS AYURVEDIC MANAGEMENT

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ABSTRACT

The identification and description of malignant diseases are available in the literature of ancient India and Ayurveda. The earliest and for most records are cited in Atharva Veda (2200 B.C.). Around 5000 years ago our Acharyas were already treating patients with problems of abnormal growth or tumors. Charaka Samhita, Sushruta Samhita as well as the Ashtanga Hridayam, which was give very detailed descriptions about Arbuda and Granthi. Changed dietary habit, pollution, industrialization, sedentary life style and stress, are the factors responsible for development of so many fatal diseases. Cancer is one of them. Cancer is a hyper proliferative disorder that involves transformation, dysregulation of apoptosis, proliferation, invasion, angiogenesis and metastasis. Extensive research during the last 30 years has revealed much about the biology of cancer. Numerous reports have suggested that Ayurvedic plants and their components mediate their effects by modulating several of these recently identified therapeutic targets. However, Ayurvedic medicine requires rediscovery in light of our current knowledge of modern medicine. This is to elucidate the young adult cancers, Ayurvedic concept of cancer, classification, causes, pathogenesis, its management and prevention.

KEYWORDS: Young adults, cancer, Ayurvedic concepts, management.

INTRODUCTION

More than 60,000 young adults aged 20 to 39 are diagnosed with cancer each year in the United States. About 4% of all cancers are diagnosed in people in this age range. About 9,000 young adults die from cancer each year. Cancer accounts for nearly 10% of deaths and is the 4th leading cause of death in this age group, behind only accidents, suicide, and homicide. It's the leading cause of death from disease among females in this age group, and is second only to heart disease among males. Young women are more likely to be diagnosed with cancer than young men, but young men and women are equally likely to die of cancer. Survival rates for cancer in young adults have not changed much in recent

decades, unlike the improvements seen in many cancers in children and older adults. In spite of the progress in the science of medicine, the understanding of the cancerous condition is still not complete. Although the knowledge has expanded considerably about the etiology and treatments, the exact cause of the disease and effective management of cancer in general is still on unresolved mystery to the scientists. Cancer has been recognized and characterized by the science of Ayurveda. This article reviews the available literature regarding researches on anti-cancerous Ayurvedic drugs and also includes a summary of treatment strategies for young adult (20 years to 39 years) cancers.

cell proliferate which leads to mutation inactivates DNA repair gene which leads to mutation of pro-oncogene creates an oncogene which leads to mutation inactivates several more tumor suppressor genes finally it leads to cancer.

Stages of Tumor Development

The process of cell transformation can be described as follows:

Development of a **Benign Tumor**.

MODERN MEDICAL POINT OF VIEW

Definition.^[1]

Cancer refers to a large number of conditions that is characterized by abnormal cell division. The multiplication of cells is progressive, uncontrolled and the cells of cancer infiltrate and destroy surrounding healthy tissue. They have the ability to metastasize and spread throughout the body.

Pathogenesis

Mutation inactivates tumor suppressor gene which leads

First Stage

This stage is Tumor initiation stage. A cancer-producing substance in the body gets a chance to enter a cell. This occurs because of two reasons: the cell has become susceptible (has weakened) and there is a carcinogen substance (toxin). This toxin is called an initiator. The DNA is damaged to such an extent that normal cell function and multiplication is no longer possible.

Second Stage

This is a promotion stage. The processes of cell build-up and cell destruction are disturbed. Cell growth is modified but not yet aggressive. This is caused by a so called “promoter”.

Development of a **Malignant Tumor**.

Third Stage

This is a progression stage. The cell multiplies in an aggressive way at the expense of surrounding tissue, due to a “progressor”. In the end the cell will develop into a tumor, deeply rooted in the body tissues. As long as there is one cancer cell, the immune system will be able to detect and destruct it. This will pose a problem when the immune system weakens and the cell has a chance to multiply. This perspective of cancer has mentioned three substances. They can be either (toxins) derived from the environment or have a genetic cause, like for instance UV radiation, asbestos or genetically modified DNA; which is inherited or developed during life.

As per **American Cancer Society**,^[2] the most Common cancers in young adults are:

The types of cancers seen in young adults (ages 20 to 39) are not unique to this age group, but the most common types in this age range are largely different from those in children or older adults. Some of the most common cancers in young adults are.

Breast cancer, Lymphomas (non-Hodgkin and Hodgkin), Melanoma, Sarcomas (cancers of connective tissues like muscles and bones), Cancers of the female genital tract (cervix and ovary), Thyroid cancer, Testicular cancer, Colorectal cancer, Leukemia, Brain and spinal cord tumors.

Even within this age group, some of these cancers become more or less common as people age. For example, leukemia's and lymphomas are more common in adults younger than 25, where as breast, cervical, and colorectal cancers are more common in older people. Many other types of cancer can occur in teens and young adults as well.

Breast cancer

Breast cancer is seen most often in older women. It's rare before age 30, but it becomes more common as women age. Among young adults, the outlook tends to be better in those who are older at the time of diagnosis. The most common sign of breast cancer is a new lump or mass that's often hard and painless, although some cancers are

soft, tender, or even painful. Young women often have breast lumps that are not cancer. In fact, the younger a woman is, the more likely it is that a breast lump will be benign (not cancer). Although most lumps aren't breast cancer, there's always a chance that a lump may be cancer, even in a younger woman. Other possible signs of breast cancer include breast pain or swelling, thickening of the breast skin, changes in the nipple, or fluid (other than milk) leaking from the nipple.

Lymphomas

Lymphomas start in certain cells of the immune system called lymphocytes. These cancers most often affect lymph nodes and other lymph tissues, like the tonsils or thymus (a small organ in front of the heart). They can also affect the bone marrow and other organs. They can cause different symptoms depending on where the cancer is. Most common symptoms include weight loss, fever, sweats, tiredness, and lumps (swollen lymph nodes) under the skin in the neck, armpit, or groin. There are 2 main types of lymphoma: Hodgkin lymphoma (sometimes called Hodgkin disease) and Non-Hodgkin lymphoma. Both types can occur in young adults.

Hodgkin lymphoma is most common in 2 age groups, early adulthood (age 15 to 40, usually people in their 20s) and late adulthood (after age 55). This type of cancer is similar in all age groups, including which types of treatment work best. Non-Hodgkin lymphoma (NHL) is less common than Hodgkin disease in young adults, but the risk of NHL goes up as people get older. There are many types of NHL. Some of the types seen more often in young adults tend to grow quickly and require intensive treatment, but they also tend to respond better to treatment than NHL in older adults.

Melanoma

Although melanoma is more likely to occur in older adults, this is a cancer that's also found in younger people. In fact, melanoma is one of the most common cancers in people younger than 30 (especially younger women). Melanoma that runs in families may occur at a younger age. The most important warning sign for melanoma is a new spot on the skin or a spot that's changing in size, shape, or color. A spot that looks different from all of the other spots on your skin can also be a warning. If you have any of these warning signs, have your skin checked by a doctor. The chance curing a melanoma is often very good if it's found and treated early. But if left alone, it can grow and spread quickly, which can make it much harder to treat.

Soft tissue and bone tumors (sarcomas)

Sarcomas are cancers that start in connective tissues such as muscles, bones, or fat cells. There are 2 main types of sarcoma: soft tissue sarcomas (which start in muscles, fat, blood vessels or other some body tissues) and bone sarcomas. Sarcomas can develop at any age, but some types occur most often in older children and teens.

Soft tissue sarcomas

These cancers can start in any part of the body, but they often develop in the arms or legs. Rhabdomyosarcoma, a cancer that starts in cells that normally develop into skeletal muscles, is most common in children younger than 10, but it can also develop in teens and young adults. Most other types of soft tissue sarcomas become more common as people age. Symptoms depend on where the sarcoma starts, and can include lumps (which might or might not cause pain), swelling, or bowel problems.

Bone sarcomas

The 2 most common types of bone cancer, osteosarcoma and Ewing sarcoma, are most common in teens, but they can also develop in young adults. They often cause bone pain that gets worse at night or with activity. They can also cause swelling in the area around the bone. Osteosarcoma usually starts near the ends of the long bones in the legs or arms. The most common places for Ewing sarcoma to start are the bones in the pelvis, the chest wall (such as the ribs or shoulder blades), or in the middle of the long leg bones.

Cancers of the female genital tract (cervix and ovary)

Cervical cancer tends to occur in midlife. Most cases are found in women younger than 50. It rarely occurs in women younger than 20. Most of these cancers can be found early, or even prevented, with screening tests. Vaccines against HPV, the virus linked to most cervical cancers, can also help prevent it. The most common symptom of cervical cancer is abnormal vaginal bleeding. Overall, ovarian cancer is much more common in older women than in women younger than 40. But some types of ovarian cancers, known as germ cell tumors, are more common in teens and young women than in older women. Early ovarian cancer usually does not cause symptoms, but some women might feel full quickly when eating or have abnormal bloating, belly pain, or urinary symptoms.

Thyroid cancer

The risk of thyroid cancer tends to go up as people get older, but it's often found at a younger age than most other adult cancers. It's much more common in women than in men. The most common symptom of thyroid cancer is a lump in the front of the neck. Most thyroid lumps are not cancer, but it's important to have them checked to be sure. Other symptoms of thyroid cancer can include pain or swelling in neck, trouble breathing or swallowing, and voice changes. The chance of curing these cancers is usually very good, especially in people younger than age 45.

Testicular cancer

Testicular cancer most often develops in young men. About half of testicular cancers occur in men between the ages of 20 and 34, but it can occur at any age. Most often, the first symptom of testicular cancer is a lump on the testicle, or the testicle becomes swollen or larger.

Some testicular tumors might be painful, but most of the time they are not. In general, the outlook for testicular cancers is very good, and most of these cancers can be cured.

Colorectal cancer

Cancers of the colon and rectum are much more common in older adults, but they can occur at any age. In young adults, they are more likely to be linked to an inherited genetic condition that puts the person at higher risk. Screening tests can often find these cancers early, but screening is not recommended for younger adults unless they have strong risk factors such as a known inherited condition. Symptoms of colorectal cancer can include rectal bleeding, dark-colored stools, changes in bowel habits, belly pain, loss of appetite, and weight loss. Among young adults, the outlook for these cancers tends to be better in those who are older at the time cancer is found.

Leukemia

Leukemia's are cancers of the bone marrow and blood. They are the most common cancers in children, but they can occur at any age, and, in fact, most leukemia's occur in older adults. Most leukemia's in young adults are acute (fast growing) types such as Acute lymphocytic leukemia (ALL) and Acute myelogenous leukemia (AML). Chronic leukemia's are not common in young people, although chronic myelogenous leukaemia (CML) becomes more common as people reach their late 30s and older. Leukemia can cause bone and joint pain, tiredness, weakness, pale skin, bleeding or bruising, fever, weight loss, and other symptoms.

Brain and spinal cord tumors

There are many types of brain and spinal cord tumors, and the treatment and outlook for each is different. In children, most brain tumors start in the lower parts of the brain, such as the cerebellum (which coordinates movement) or brain stem (which connects the brain to the spinal cord). Adults are more likely to develop tumors in upper parts of the brain. Spinal cord tumors are less common than brain tumors in all age groups. Brain tumors can cause headaches, nausea, vomiting, blurred or double vision, dizziness, seizures, trouble walking or handling objects, and other symptoms.

Treatment

Conservative management: chemotherapy, radiotherapy management.

Surgical management

partial, radical removal of effective site.

AYURVEDIC POINT OF VIEW

Ayurvedic concept of cancer, Charaka^[3] and Sushruta samhitas,^[4] explain cancer as inflammatory or non-inflammatory swelling and mention them as either Granthi (minor neoplasm) or Arbuda (major neoplasm). Ayurvedic literature defines three body-control systems,

viz., the nervous system (Vata or air), the venous system (Pitta or fire), and the arterial system (Kapha or water) which mutually coordinate to perform the normal function of the body. In benign neoplasm (Vataja, Pittaja or Kaphaja) one or two of the three bodily systems are out of control and is not too harmful because the body is still trying to coordinate among these systems. Malignant

tumours (Tridosaja) are very harmful because all the three major bodily systems lose mutual coordination and thus cannot prevent tissue damage, resulting in a deadly morbid condition.

Ayurvedic classification of neoplasm depends on various clinical symptoms in relation to Tridoshas.

TABLE NO: 1

Group I	It can be clear malignancy, which includes Arbuda and Granthi	e.g. Mamsarbuda (melanoma) and Raktarbuda (leukaemia), Mukharbuda (oral cancer), etc.
Group II	It can be considered as cancer	e.g. Tridosaj Gulmas (abdominal tumours like carcinomas of the stomach and liver or lymphomas).
Group III	It can be possibility of malignancy	e.g. Visarpa (erysipelas), Asadhya Kamala (incurable jaundice) and nadi vrana (sinusitis)

Nidana (Etiology)

According to Sushruta, the fundamental cause of major neoplasm is the pathogens that affect all parts of the body. Injuries to skin, muscular tissues and blood vessels, unhealthy foods, poor hygiene and bad habits results in the derangement of doshas, which leads to the manifestation of tumors. Excess of water or fat in the corpus of the tumor and the stability and rigid

confinement of the doshas in a particular place were described as reasons for the non-infectious and non-suppurative nature of these abnormal growths.^[5,6] Cancer in each person differs according to the person's exposure to pathogens and genetic constitutions which make each of them to react differently to the same diet. The factors responsible for vitiation of doshas are.

TABLE NO: 2

Vata	Excessive intake of bitter, pungent, astringent, dry foods and stressful conditions.
Pitta	Excessive intake of sour, salty, fried foods and excessive anger
Kapha	Excessive intake of sweet, oily food and sedentary nature.
Rakta	Excessive intake of acid or alkali containing foods. Fried and roasted foods, alcoholic beverages, sour fruits are some examples. Excessive anger or severe emotional upset, sunbathing or working under scorching sun or near fire and hot conditions, etc. are some other causes.
Mamsa	Excessive use of exudative foods like meat, fish, yoghurt, milk and cream. Behaviours leading to exudation like sleeping during the day and overeating are some of the causes for pathogens invading the fatty tissues.
Medas	Excessive intake of oily foods, sweets, alcohol and lazy attitude.

Pathogenesis

TABLE NO: 3

Sanchaya	Early stages of localized neoplastic changes.
Prakopa	Transformation of primary growths into metastatic tumors.
Prasara	Metastasis
Sthana samsraya	Complete metastasis and secondary growth.
Vyakti	Clinical signs and symptoms are expressed.
Bheda	Stage where differentiation of growth occurs on the basis of histopathology.

Classification

Based on the predominance of the vitiated dosha involved, tumors have been classified in to the six major categories, i.e. vataja, pittaja, kaphaja, raktaja, mamsaja and medoja.

Management.^[7]

Following principles are adopted for the management of Arbuda and Granthi

(i) Poulitice and Sudation (ii) Rakta mokshan (Blood letting) (iii) Agni karma and Kshara karma (Cauterization and Caustics) (iv) Internal medication and (v) Surgery^[7] Following principles are adopted for the management of Arbuda and Granthi.

(i) Poulitice and Sudation

Kushmanda (Benincasa cerifera), ervaruka (Cucumis utilissimus), narikela (Cocos nucifera), priyala (Buchanania lanzan spreng) and eranda (Ricinus communis) seeds are boiled with milk, water and ghee and mixed with oil, is applied in vataja tumor. Moringa pterygosperma (shigru) and the juice of meat (mamsa rasa) are boiled and steam is to be passed through a tube over the tumor. In paittika tumor, mild fomentation and poultices are applied along with purgation. After rubbing the part with the leaves of udumbara (Ficus glomerata Linn.) or other leaves having rough surface, the paste of finely powdered sarjarasa (Viteria indica), priyangu

(*Callicarpa macrophylla*), rakta chandana (*Pterocarpus santalinus*), arjuna (*Terminalia arjuna*) and yashti Madhu (*Glycyrrhiza glabra*) mixed with honey, is sprinkled over the tumor. Local application of various medicated pastes are used after purification (samsodhan chikitsa), especially after emesis. The paste of the drugs used for emesis and purgation may also be applied to arrest the kaphaja tumor. Purification or detoxification therapies in cancer patients as pre therapy to conventional line of treatment has been studied. The study showed that these procedures increased body weight, improved serum immunoglobulins, increased hemoglobin levels and normalized liver functions. It was found helpful in minimizing the adverse effects of chemotherapeutic agents. Purification therapies are advocated for the management of tumors based on the involvement of dosha. Oleation (snehana) is advised for vata dash, purgation (virechana) is for pitta dosha and emesis (vamana) is advised for kapha dosha. Caustics (kshara) in a cow's urine are also prescribed as a local application for kaphaja tumor after the bloodletting procedure. Another medicated poultice made up of boiled meet has also effective in cancer conditions.

(ii) Rakta mokshan (Blood letting)

Bloodletting again and again is indicated after purification in the management of vataja, pittaja, kaphaja and Medaja tumors. The use of cow's horn, non poisons leaches and gourd (*Lagenaria vulgaris*) for blood letting has been advised in vataja, pittaja and kaphaja tumors respectively. In medaja tumors blood letting has been advised after making an incision over the tumor. Blood

letting improves the collateral circulation of affected parts and cleanses the microcirculatory channels directly by removing toxic materials from the body there by helps to reduce the inflammation and to arrest the further growth of the tumor.

(iii) Agni karma and Kshara karma (Cauterization and Caustics)

Thermal cauterization (Agni karma) and application of caustics (Kshara Karma) is used alone or in combination with surgery for the management of kaphaja tumors, medaja tumors and tumors that do not respond to medical management. The recurrence of tumor after surgical excision was recognized by Susruta. His idea was that the even the last particle of dosha of a tumor left over would lead to a fresh growth and bring death just like the last spark of an unextinguished fire. A radical excision was advised to avoid recurrence. To prevent the recurrence of the disease therapeutic cautery and the application of caustics have been advised especially after surgery to achieve the complete cure.

(iv) Internal Medicaments

Several studies have been conducted in past 20 years to evaluate the effect of Ayurvedic drugs in the management of tumor and the results of all the studies found significant. Study revealed that Ayurvedic drugs not only prevent the progress of the disease but induce apoptosis (cell death) too. More than 25 herbs reported to have the potent anti tumor activities in various studies. Few of them are mentioned below.

TABLE NO: 4

	Botanical Names ^[8]	Properties
1	Allium Sativum	Solid extract and oil are applied on infected area. Water soluble compounds are anti-cancer activity. Useful in breast, colon and prostate cancers.
2	Abrus Precatoris	Leaf decoction and root power are applied on infected area. Useful in yoshida sarcoma, fibrosarcoma and ascites tumor cells.
3	Alstonia Scholaris	Leaf extract is useful. Useful in treating HIS sarcoma and benzopyrene induced stomach carcinoma.
4	Asparagus Racemosus	Powder is useful. Useful in treating of human epidermoid carcinoma.
5	Andrographis Paniculata	Power or juice of leaf or stem is useful. It is useful in various cancers.
6	Amorphopallus Campanulatus	Mature tuber is burnt and then mixed with butter and jaggery and applied externally on infected area.
7	Azadirachta Indica	Isolated neem compounds show efficacy against a wide variety of human cancers. It is useful in cancers of colon, skin, breast.
8	Berberis Aristata	Power is useful in human epidermal carcinoma of the nasopharynx and N-nitrosodiethylamine induced carcinogenesis.
9	Barleria Priotis	Oil prepared with whole plant is applied externally during acute stages.
10	Basella Rubra	Leaves are ground with sour buttermilk and administered with salt .
11	Baliospermum Montanum	Paste consisting of Baliospermum Montanum, Plumbago Zeylanica, Euphorbia Nerii Folia, Calotropis Procera, Semecarpus Anacardium and jiggery applied to tumors.

12	Boswellia Serrata	Bark decoction, gum resins are given internally and oil is applied externally on tumors. It is useful in the treatment of human epidermal carcinoma of nasopharynx, leukemia and brain tumors.
13	Curcuma Domestica	Curcuma Domestica powder in combination with Symplocos racemosa and soybean seed oil are mixed with honey and used externally.
14	Capparis Spinosa	Paste of Capparis Spinosa, Agave Grandiflora and Lagerflora is applied locally for treatment of Kaphaja Granthi
15	Euphorbia Hirta	Powder and liquids used in virus leukemia
16	Eugenia Jambolana	Paste of Glycyrrhiza Glabra, Eugenia Jambolana, Terminalia Arjuna and Calamus Rotang is applied externally for Pittaja Granthi
17	Elephantopus Scaber	Fine paste of leaves of Ficus Glomerata, Tectonia Grandis and Elephantopus Scaber mixed with honey is applied locally for Pittaja Arbuda.
18	Ficus Bengalensis	Ficus Bengalensis and Sausseria Lappa mixture is applied to decrease tumor growth on bones.
19	Flacourtia Romantchi	Paste of Flacourtia Romantchi, Cassia Fistula and Capparis Sepiaria is applied on Kaphaja tumors
20	Hygrophila Spinosa	Seed powder and liquid extract are given to cure Daltons lymphoma for local application.
21	Madhuca Indica	Bark paste of Madhuca Indica, Syzygium Cumini and Salix Caprea for local application.
22	Moringa Oleifera	Paste of Moringa Oleifera Seeds, Solanum Xanthocarpum, Sinapis Dichotoma, Holarrhena Antidysenterica and Nerium odoratum roots prepared with butter milk is used for Arbuda.
23	Oxoxylum Indicum	Paste is applied for Granthi.
24	Prosopis Cineraria	Paste made of Prosopis Cineraria seeds, Raphanus Sativa, Moringaoleifera, barley and mustard with buttermilk are applied locally on infected area.
25	Pandanus Odoratissimus	A paste of Pandanus Odoratissimus and sugar applied on externally.
26	Pterospermum Acerifolium	Flowers of Pterospermum Acerifolium mixed with sugar and applied externally.
27	Phyllanthus Niruri	Aqueous extract of Phyllanthus Niruri is applied locally.
28	Raphanus Sativus	Local application of Raphanus Sativus paste with radish ash is effective in Kaphaja Arbuda.
29	Ricinus Communis	Paste of Ricinus Communis, Benincasa Cerifera, Cucumis Memordica, Cocos Nucifera and Eranda Beeja along with buttermilk or milk is applied externally for Vataja Arbuda.
30	Tinospora Cordifolia	Mixture of Helloborus, Niger, Tinospora Cordifolia, Clerodendron Seeatum, Aegle Marmelos, Hoya Viridiflora and Elephantopus Scaber is applied locally for the Vataja Granthi.
31	Terminalia Arjuna	Terminalia Arjuna bark powder is applied on Kaphaja and Pittaja Granthi.
32	Vitis Vinifera	Mixture of Terminalia Chebuka, grape juice sugar cane juice is used to treat intestinal cancers
33	Zingiber Officinale	Rhizome powder act as anticancer activity.

DISCUSSION

In older adults, many cancers are linked to lifestyle-related risk factors such as smoking, being overweight, eating an unhealthy diet, not getting enough exercise, and drinking too much alcohol. Exposures to things in the environment, such as radon, air pollution, chemicals in the workplace, or radiation during medical tests or procedures, also play a role in some adult cancers. These types of risk factors usually take many years to influence cancer risk, so they are not thought to play a large role in

cancers in children, teens, or young adults. Cancer occurs as a result of changes (mutations) in the genes inside our cells. Genes, which are made of DNA, contain the instructions for nearly everything our cells do. Some genes control when our cells grow, divide into new cells, and die. Changes in these genes can cause cells to grow out of control. Some people inherit gene changes from a parent that increase their risk of certain cancers. In people who inherit such a mutation, this can sometimes lead to cancer earlier in life than would normally be

expected. Examples include BRCA gene mutations, which increase the risk of breast and some other cancers, and APC gene mutations, which increase the risk of colorectal cancer. But most cancers are not caused by inherited gene changes. The causes of gene changes in certain adult cancers, but the reasons for gene changes that cause most cancers in children, teens, and young adults are not known. Many are likely to just be random events that sometimes happen inside a cell, without having an outside cause. Still, there are some known causes of cancer in young adults. For instance.

- Exposure to ultraviolet (UV) light from the sun or from tanning beds can increase the risk of melanoma and other skin cancers.
- Infection with some types of human papilloma virus (HPV) can increase the risk of cervical and some other cancers.
- Infection with human immunodeficiency virus (HIV) can raise the risk of non-Hodgkin lymphoma, Kaposi sarcoma, and some other cancers.
- Treatment with chemotherapy or radiation therapy for a childhood cancer can increase the risk of getting a second cancer, especially leukemia, later on. Still, these and other known risk factors probably account for only a small portion of cancers in young adults overall.

CONCLUSION

Most cancers in young adults do not have a known cause, so it's not possible to prevent all of them. But some can be prevented. Ayurveda places major to prevent the cancer causative factors. Unlike with many cancers in older adults, lifestyle-related risk factors (such as smoking) are not thought to play much of a role in cancers in young adults. A few environmental factors, such as radiation exposure, have been linked with cancer risk in young adults. But some exposures may be unavoidable, such as if a child or teen needs radiation therapy to treat cancer. There are some things you can do to lower your risk of getting certain kinds of cancer, such as:

- Avoid smoking
- Limiting time spent in the sun and avoiding tanning salons
- Limiting sex partners and using safe sex practices, which can lower the risk of infection with human papilloma virus (HPV) and human immunodeficiency virus (HIV) While lifestyle-related and environmental risk factors don't have a large effect on cancers in young adults, exposure to these risk factors during the teenage and young adult years can still increase a person's risk of getting cancer as they get older. It's important to develop and maintain healthy habits early in life, such as not smoking, staying at a healthy weight, keeping active, and eating a healthy diet. Healthy habits like these can also lower your risk for many other types of health problems later on. From above description it is evident that early our Acharyas had a good understanding of etiology, clinical manifestations, symptoms, classification,

malignant and benign nature of tumors, metastasis, recurrence, diagnosis, prognosis and treatment. It is remarkable that the basic information is fairly consistent with the current knowledge in these areas given the technology available 800 years ago. Acharyas also recognized the facts that malignant tumors must be completely and extensively excised so that not a trace of tumor is left in the body for even a trace can grow back to a tumor. Various treatment methods, both local and systemic, and various herbal formulations found useful in many tumors are presented. Ayurvedic therapies are useful as an adjuvant to conventional therapy.

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