



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

HERBALS USED IN CANCER THERAPY

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ABSTRACTS

This review project mainly focuses on the efficacy of herbal compounds in targeting multiple molecules of metabolic pathways for designing novel and effective anticancer therapeutic approaches. The proposed study also focussed on different herbal formulations, plants used in treatment of different cancers and challenges of these herbals during the ADME process This review will focus on the various plant-derived chemical compounds that have, in recent years, shown promise as anticancer agents and will outline their potential mechanism of action. The use of medicinal plant products to manage or arrest the carcinogenic process provides an alternative to the use of conventional allopathic medicine for treatment of the diseases

Herbal medicines are standardised herbal preparations made from mixes of one or more plants that comprise plant parts or plant material in its raw or processed form as active components. Herbal medicine is now a widely used kind of treatment.

The use of herbal medicines in modern medicine is future known and accepted. Even if the majority of these uses are unconventional, it is a known fact that more than 80% of the world's population relies on herbal products and medicines to maintain a healthy lifestyle.

Herbal medicines comprise herbs, herbal materials, herbal preparations, and finished products that contain active compounds, plant parts, other substances, or mixtures of those substances.

The World Health Organization (WHO) defines herbal medicines as “finished, labelled pharmaceutical preparations that contain active components, including aerial, underground, or other plant material or combinations, whether in their natural condition or as plant preparations.”

Additionally, according to the same WHO publication, “medicines having plant material mixed with chemically defined active ingredients, including chemically defined separated elements of plants, are not regarded to be herbal medicines.

Key words- metabolic, allopathic, carcinogenic, arrest, herbals, cancer, potential Mechanism.

INTRODUCTION

■ Herbal medicine is described as: one type of ancient plants can be found as tablets, capsules, powders, teas, extracts.

They are derived from herbs, which are plants or plant parts used for their scent, flavor, or therapeutic properties. If you are thinking about trying herbal medicine to enhance your health, make sure you do your research and consult your medical provider (s) before making any changes. Medicinal plants are plants that have been recognized as medical. Their use ranges from the production of pharmaceutical products to herbal medicine preparations. Herbs are a primary source of health care throughout the world for thousands of years. All over the world, cancer is one of the most serious health problems that affect the duration and quality of the individual. As conventional therapeutic strategies fail to fully fill the major requirements for a successful cancer therapy.

Cell growth and proliferation is regarded as cell division, and the process needs to be tightly controlled in order for cells to correctly function as tissues and organs. The high-speed and uncontrolled effects of the cells' proliferation would be dangerous. Before cell division begins during the semi-conservative replication process on DNA molecules, one strand is copied and then each copy is collectively distributed to daughter cells that are genetically related to one another. Numerous proteins are involved in cell division, and some of them help determine when cells divide and when they do not. Some of them are in charge of ensuring that DNA is copied correctly. Most of them are involved in cell division, which is what's to blame. The term "cancer" refers to illnesses in which aberrant cells proliferate uncontrollably and have the capacity to infect other tissues. The lymphatic and vascular systems of the body can allow cancer cells to spread to other areas of the body. There are numerous disorders that make up cancer. When cells in a particular area of the body begin to multiply uncontrollably, cancer develops. The growth of cancer cells differs from the growth of healthy cells. Cancer cells don't perish; instead, they multiply and create new, aberrant cells. Normal cells cannot invade (grow into) other tissues, only cancer cells can.

Cancer is the second leading cause of morbidity and death globally. Surgery, chemotherapy, radiotherapy, and targeted therapy are common approaches used for cancer treatment. Current therapies have severe side effects such as development of resistance against the cancer treatment by cancer cells. Therefore, the discovery of new approaches for the treatment of cancer are one of the primary objectives in the field of cancer biology. The uses of plant products for the treatment of disease are one of the most successful strategies since ancient times. Numerous plant-based products have demonstrated anti-cancer properties and therapeutic potential with little adverse effects. Natural plant products for cancer treatment can also reduce the adverse effects of the traditional method such as chemotherapy and radiotherapy. A large number of medicinal plants found in nature have anticancer properties but only a few natural products such as vinca alkaloids, taxanes, and podophyllotoxin are used medically as anticancer agents and are commercially available in the market. The objective of this review is to emphasize on the plant products that have shown potential as promising anticancer agents and possible mechanisms involved for inhibition or killing of cancer cells. Some minor ailments like common cold, cough, etc. may be treated using herbal treatments that use the healing qualities of spices. Herbal remedies can be taken in many forms. Infusions are steeping herbs or spices, with parts like leaves and flowers with boiling water for some time. Filtered or unfiltered use this water extracts of spices as herbal remedies. Decoction is boiling roots, bark and hard parts of herbs and spices with water for a long time. For infusions, boiling water is steeped for a while with herbs or spices, along with parts like leaves and petals. Some times essential oil of herbs and spices are also used as herbal remedies. Action of herbal remedies may vary from human to human and care should be observed

in using it. Always inform your healthcare Professional while taking any of the herbal remedies or consuming large quantity of medicinal herbs or spices as medicinal product.

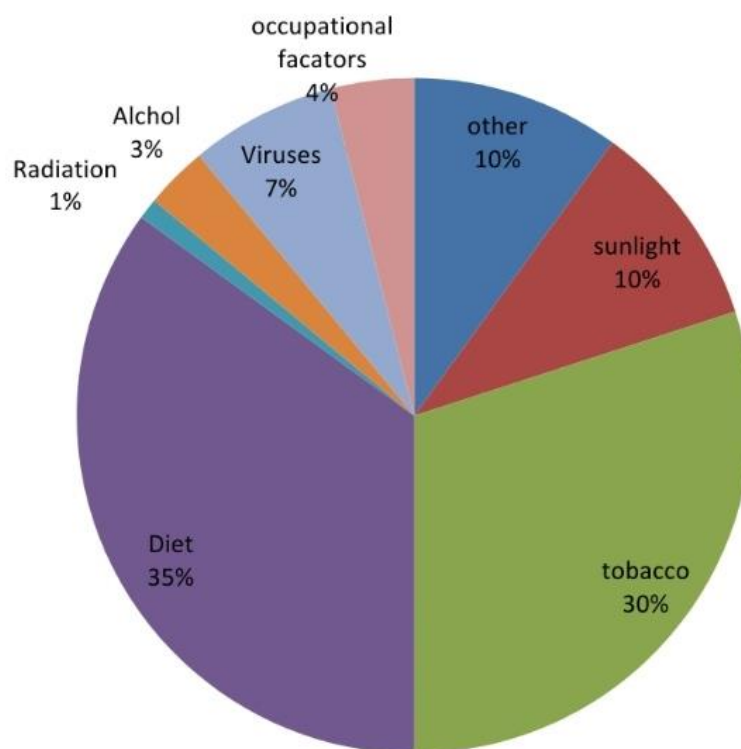
The practitioners reported between 14 and 20 herbs they would use or have used in the past to address the disorders being treated, dispensing them either as simples (single herb) or combinations of herbs.as liquid medications as well as polyherb (many herbs) formulations in dry form (teas, pills) (tinctures, juices).The reason provided by the practitioners for their herb selection revealed an effort to maximise the pharmacological activity of the herbs, particularly in cases when numerous indications were obvious. As an illustration, treating cognitive or memory deficiencies together with the worry, stress, sleep, and depressive states that are frequently associated with ageing and have an impact on a person's everyday life is one example of this.

■ Global trends may have an effect on how people view and use professional herbal medicine within the larger healthcare system. The pursuit of novel therapeutics has resulted in Research into plant extracts, the production of derivatives, and secondary metabolite components such phenols, alkaloids, and terpenoids as potential pharmaceutical leads in the prevention and treatment of AD and neurodegenerative illnesses

The use of over-the-counter herbal treatments is increasing, and there are risks to patient safety from bad counsel, poor product quality control, and inadequate information (including failure to disclose use of herbal medicine to the GP) and physicians have brought up the issue of the validity of complementary and alternative medicine (CAM) as well as the dangers to the general public of utilising over-the-counter (OTC) medications as opposed to prescription medications

■ In general, herbal medicines are not as effective as conventional prescription medications.While some people find relief from modest symptoms or adverse effects with herbal therapy, many people find greater

Causes of cancer



comfort from prescription medication. Unwanted side effects from prescription drugs may lead some people to think about using natural remedies. Compared to prescription medications, herbal remedies frequently carry a lower risk of adverse effects. They are less effective than medications, which contributes to this. In contrast to individuals who use prescription medications like benzodiazepines, patients who utilise natural treatments for insomnia are less likely to have tremors, dizziness, or spasms. When herbal medicines do have side effects, they are often not severe. Most people experience constipation. Herbal treatments also have a decreased risk of addiction. Generally speaking, pharmaceutical medications function better than herbal therapies. Herbal therapy can help some people with minor symptoms or side effects, but many people find prescription medication to be more calming. Some individuals may be prompted to consider adopting natural therapies by unfavourable side effects from prescribed medications. Compared to prescription medications, herbal remedies frequently carry a lower risk of adverse effects. They are less effective than medications, which contributes to this.

■ In contrast to individuals who use prescription medications like benzodiazepines, patients who utilise natural treatments for insomnia are less likely to have tremors, dizziness, or spasms. When herbal medicines do have side effects, they are often not severe. Constipation is a common condition. Dependency is more likely to occur. Cancer is a condition in which the body's aberrant cells grow. It is brought on by the body's aberrant cells multiplying and dividing uncontrollably. Currently, the discovery of new medications for treating diseases like cancer has largely come from medicinal plants. Antioxidant and anticancer qualities of ancient plants are still used today to cure illnesses. Traditional medicine did not benefit many people worldwide. There were numerous hazardous side effects from chemotherapy. On the other hand, natural cancer treatments such the use of herbal plants products minimise toxic side effects. To find a novel medicine, this article provides a thorough analysis of several medicinal plants with anticancer potential.

BACKGROUND

■ Cancer was among the leading causes of morbidity and mortality in 2020 with 19.3 million new cases and 10 million deaths, according to the data provided by International Agency for Research on Cancer. Many different types of chemotherapeutic agents with diverse mechanisms of action, efficacy and toxicity profiles have been developed and approved as chemotherapeutic agents. Current failures associated with standard cancer treatment and a wide range of side effects of these methods have led the researchers to seek for new treatments. Recently, the use of complementary medicine is becoming increasingly popular among cancer patients. Complementary and alternative medicine (CAM) is defined as 'a group of diverse medical and healthcare systems, practices, and products that are not part of standard medical care' by the National Cancer Institute. The National Center for Complementary and Integrative Health (NCCIH) considers natural products, such as herbal mixtures, vitamins, minerals and probiotics as a part of CAM.

■ According to the 2020 National Health Interview Survey (NHIS), 17.7% of American adults use a dietary supplement other than vitamins and minerals. Effects of several products including herbal mixtures which are used in countries in the South-East Asia region have been investigated in lung cancer, pancreatic cancer and immuno-oncology studies. Mounting evidence has suggested that signaling pathways in human cancers can be potentially modulated by natural products and novel herbal compounds. A commercially available polyherbal formulation (PHF) containing multiple herbs; *Commiphora myrrha*, *Curcuma zedoaria*, *Elettaria cardamomum*, *Olea europaea*, *Eryngium campestre*, *Illicium verum*, *Cinnamomum umverum*, *Myristica fragrans*, *Crocus sativus* has been used in this study. The evidence from the literature showed that these herbs have demonstrated anticancer effects in many in vitro and in vivo studies.

■ **The American Cancer Society (ACS)-** defines cancer as a group of diseases that are characterized by the uncontrolled growth and spread of abnormal cells. The characteristics of cancer, which are abnormalities, uncontrollability, and invasiveness, are frequently overemphasised in cancer research papers. According to research, healthy cells carry out the body's usual duties, but cancer cells stop acting normally. After rapidly dividing to provide the new growth required to replace damaged cells, cells divide normally once again. Malignant, however, is characterised by the haphazard or aberrant division of cancer cells. A non-structural mass known as a tumour is created as a result of this aberrant cell proliferation. Depending on the organ from which they arise, cancers exhibit varying behaviours. An early piece of evidence is a 60,000-year-old Neanderthal man's grave. According to Polen research, all of the plants buried with the corpse had medicinal properties. The ancient Egyptians had a lot of knowledge about medicinal herbs. 3500 years ago, the Ebers Papyrus

EARLIER CHINA:

Numerous herbal remedies found in the Pun-tsao, a pharmacopoeia that was published in the year 1600, are said to have been created by Shen-nung, a legendary Chinese emperor who reigned over 4500 years ago.

INDIA'S HISTORY

The Rig-Veda, a collection of Hindu sacred scriptures, mentions herbal treatment more than three thousand years ago. This serves as the foundation for the Ayurvedic medical system.

MEDICAL SYSTEM.

Ancient Greek and Roman: Hippocrates, the Father of Medicine and a Greek physician, used a variety of herbal remedies in his treatments (460–377 B.C.). Roman medical expert Dioscorides

■ According to archaeological data, people have been using medicinal herbs since the Paleolithic period, or about 60,000 years ago. Herbal treatments have been documented in writing since the Sumerians' list-making of plants more than 5,000 years ago. In ancient Egypt, herbs are mentioned in Egyptian medical papyri, shown in tomb illustrations, and on rare occasions found in medical jars containing trace amounts of herbs. Some ancient cultures recorded information about plants and their medicinal uses in books called herbals. The Ebers Papyrus, which dates to around 1550 BC and is one of the oldest, longest, and most significant medical papyri of ancient Egypt, includes more than 700 compounds, most of which are of plant origin. The ophrastus of Eresos, who published Greek Historia Plantarum in the 4th century BC, Diocles of Carystus, who wrote in the 3rd century BC, and Krateuas, who wrote in the 1st century BC, are the authors of the oldest known Greek herbals. Scholars have discovered overlap with the Egyptian herbals from the few intact fragments of these books that have survived. Bronze Age Chinese archaeological sites from the Shang Dynasty (c. 1600–1046 BC) included seeds that were presumably utilised for herbal medicine. In the Huangdi Neijing, a prehistoric Chinese medical treatise, 224 different compounds are named, and more than 100 of them are plants.

■ In ancient India, where nutrition was the primary method of treating illnesses, herbs were also frequently used in traditional medicine. The Material One example of herbal writing that was used for 1500 years until the 1600s is Medica, which was initially written in Greek by Pedanius Dioscorides (c. 40-90 AD) of Anazarbus, Cilicia, a Greek physician, pharmacologist, and botanist. According to archaeological evidence, people have been using medicinal herbs since the Paleolithic period, or about 60,000 years ago.

■ The first known written record of herbal medicine dates back to about 5000 years ago and was discovered on a Sumerian clay slab. There are 12 different ways to prepare drugs using more than 250 different plants. In texts known as herbals, certain prehistoric cultures discussed plants and their medicinal

applications. In Egyptian medicinal papyri, the herbs are mentioned. The Ebers Papyrus, which dates from 1550 BC and comprises more than 70 compounds, mostly of plant origin, is the oldest, longest, and most significant medical papyrus. Theophrastus wrote "Historia Plantarum," a work that classified 500 therapeutic plants, and it contains the first Greek herbals that are currently known.

■ More than 100 of the 224 compounds mentioned in the Huangdi Neijing, an ancient Chinese medical treatise, have been uncovered in archaeological sites from the Bronze Age of China dating back to the Shang Dynasty (1600 BC). There are 365 plant-based medicines in the Chinese "Pen T Sao" treatise on roots and grasses, which was written by Emperor Shen Nung around 2500 BC. Early Middle Ages herbal medical knowledge was primarily obtained from Benedictine monks in Europe and England. The Canon of Medicine, authored by the Arabian School's famous scholar Avicenna, became the accepted medical text in the Arab world. 760 medicinal plants are discussed in this book, along with the medication that can be made from them.

■ The Ayurvedic system of medicine, which goes back to 4,000 BC in India, is the oldest system of medicine. The oldest literature in Sanskrit, including the Atharva Veda and the Rig Veda, detail the medical knowledge that served as the foundation for the Ayurveda system. In the past, ancient Indians documented a variety of additional herbs and minerals employed in Ayurveda. Herbalists such as Charaka and Sushruta during the 1st millennium BC. The sixth-century BC text known as the Sushruta Samhita lists 700 medicinal herbs, 64 mineral preparations, and 57 animal-based remedies. Siddha's system of medicine is also one of the oldest traditional medicines. It is practiced mostly in Tamil Nadu. According to the tradition, eighteen Siddhars were supposed to have contributed to the development of Siddha medicine.

TYPES OF CANCER

■ FIRST TYPE OF CANCER—

CARCINOMA –

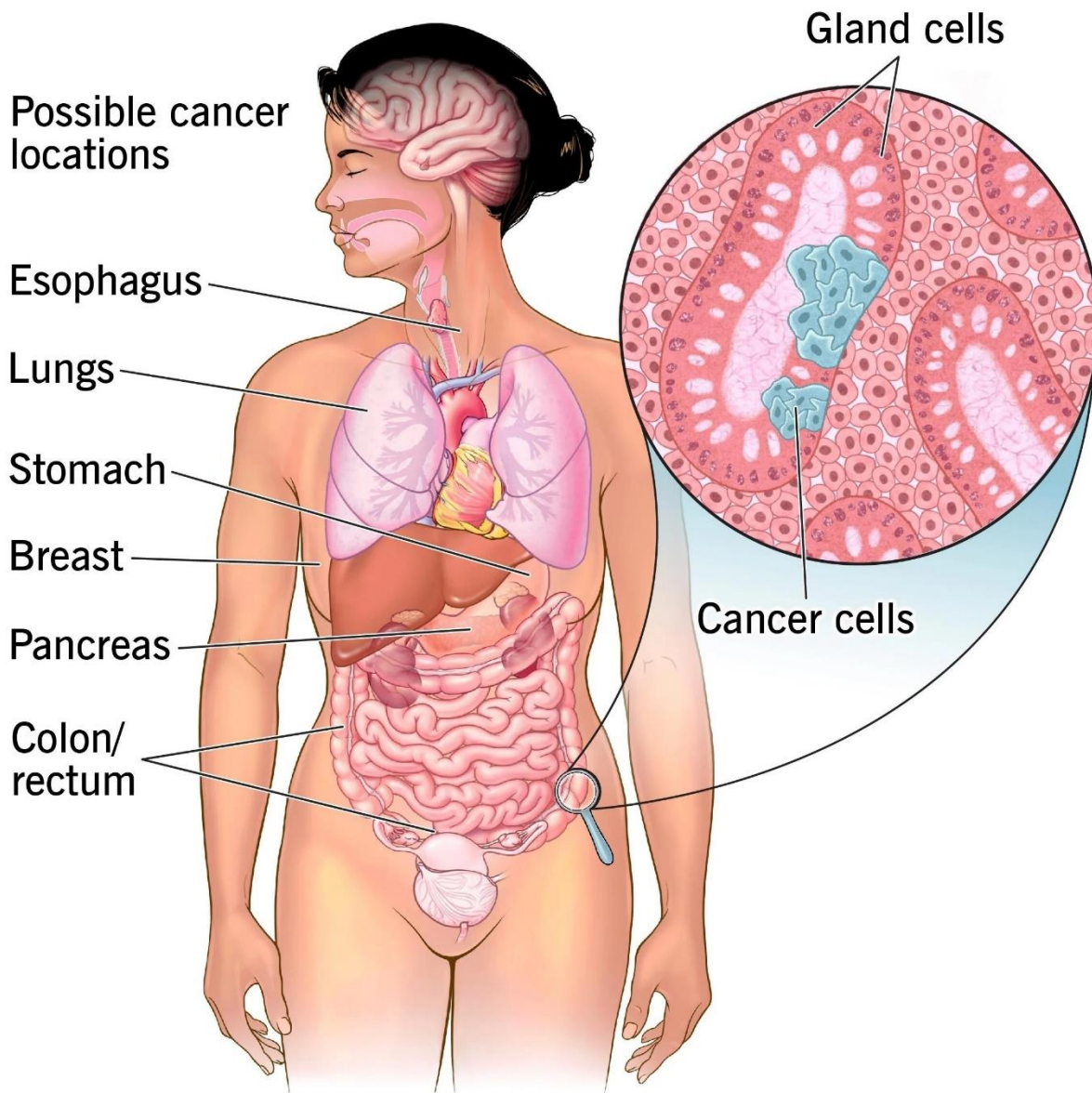
Cancer that develops in epithelial tissue is called a carcinoma. The majority of your organs, as well as your skin and internal body pathways like your oesophagus, are lined with epithelial tissue. The majority of malignancies that affect your head and neck, skin, breasts, kidney, liver, lungs, pancreas, and prostate gland are carcinomas.

Carcinoma makes for 80% to 90% of all cancer diagnoses, making it the most prevalent type of cancer. Epithelial tissue, which lines your organs, internal body passageways, and skin, is where cancerous tumours develop. Tumors known as carcinoma can develop on your skin, in your lungs, breasts, prostate, colon, kidneys, pancreas, and other organs. Most people categorise cancer according to where it develops (colorectal cancer, breast cancer, etc.), although this is merely one method. In addition, the types of tissues where cancer cells first develop are used by scientists to classify various malignancies. Tumors are solid masses that are created by the growth and multiplication of cancer cells. Tumors can produce cancerous cells that can escape and spread to other parts of your body (metastasize). How far a cancer has spread is indicated by its label.

The term "carcinoma in situ" refers to a localised cancer. Carcinoma that has invaded nearby tissue is referred to as an invasive carcinoma. Cancer that has metastatic spread to other organs in your body An organ surface lining cancer called a carcinoma starts in the cells that line the skin, lungs, and digestive tract. About 80 to 90 percent of all malignancies are carcinomas, making them the most prevalent type of cancer. The DNA of cells is altered in carcinomas, causing uncontrollable cell growth and division. These alterations may be inherited or picked up over time. Smoking, exposure to specific chemicals, radiation, and specific viruses are all carcinogen

risk factors. According to the cancer's form and location, the symptoms of carcinoma can differ. A lump or mass, changes in skin tone or texture, unexpected weight loss, exhaustion, and pain are typical symptoms. The type and stage of the cancer determine the course of treatment for carcinoma. Surgery, radiation therapy, chemotherapy, targeted therapy, and immunotherapy are all possible forms of treatment.

Adenocarcinoma



HERBALS USE IN CARCINOMA CANCER —

The traditional cancer therapies including chemotherapy, radiation, and surgery cannot be replaced by herbal cancer remedies. Herbal remedies may, however, be used in conjunction to conventional therapies by some cancer patients.

Among the herbal remedies are:

The turmeric spice contains a substance called curcumin. Researchers have looked into its capacity to lessen inflammation and inhibit the development of cancer cells.

- **GREEN TEA:** Polyphenols, which are chemicals that may aid to lessen inflammation and decrease the growth of cancer cells, are present in green tea.

Ginseng: For many years, traditional Chinese medicine has employed the herb ginseng. Its ability to lessen inflammation and delay the development of cancer cells has been researched.

- **REISHI MUSHROOM:** For millennia, traditional Chinese medicine has employed the herb reishi mushroom. Its ability to lessen inflammation and delay the development of cancer cells has been researched.

- **ASTRAGALUS:** For thousands of years, astragalus has been a staple of traditional Chinese medicine. Its ability to lessen inflammation and delay the development of cancer cells has been researched.

- **CAT'S CLAW:** For many years, traditional medicine has utilised the herb cat's claw. Its ability to lessen inflammation and delay the development of cancer cells has been researched.

- **ESSIAC TEA** Essiac tea is a herbal beverage produced from a blend of plants, including Indian rhubarb, slippery elm, sheep sorrel, and burdock root. Its ability to lessen inflammation and delay the development of cancer cells has been researched.

■ SECOND TYPE OF CANCER—

2. SARCOMA—

Sarcoma is a form of cancer that can appear anywhere on your body. The term "sarcoma" refers to a large range of malignancies that start in the soft (also known as connective) tissues and bones (soft tissue sarcoma). It is unclear what causes sarcoma exactly. Sarcomas can, like many other malignancies, be caused by DNA mutations that disrupt the genes that control cell growth, according to scientific theory. These mutations can be inherited from one's parents or developed throughout one's lifetime. Cancerous tissue such as bone or muscle can give rise to sarcoma. The two main forms of sarcoma are those of the bone and soft tissues. Soft tissues like fat, muscle, nerves, fibrous tissues, blood vessels, or deep skin tissues can produce soft tissue sarcomas. Any area of the body can contain them. Sarcomas are a rare variety of malignant (cancerous) tumour that grow in connective tissue, including fat, muscle, blood vessels, nerves, and the tissue that envelops bones and joints. Sarcomas are rare types of tumours. The size and location of the tumour affect the symptoms. Surgery, radiation, chemotherapy, targeted therapy, and immunotherapy are all forms of treatment. Sarcomas are malignant (cancerous) tumours that form in the soft tissue and/or bone. Other body structures are supported by soft tissues, such include:

Muscle.

Tendons.

Cartilage.

Ligaments.

Vascular system.

Nerves.

Sarcomas are extremely uncommon, accounting for approximately 1% of adult cancer diagnoses and 15% of paediatric cancer diagnoses. In the US, 16,000 new cases of sarcoma are reported annually (around 4,000 bone sarcomas and approximately 13,000 soft tissue sarcoma can develop everywhere on your body, from the top of your head to the tips of your toes):

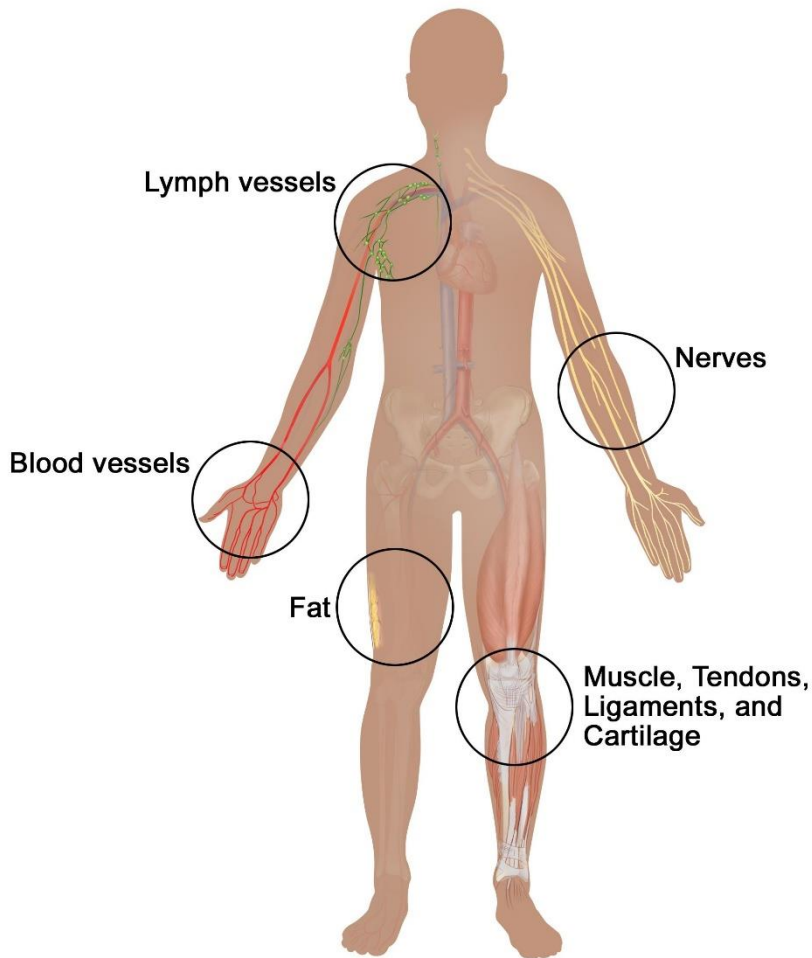
40% happen in your lower body (legs, ankles, feet).

15% happen in your upper body (shoulders, arms, wrists, hands).

30% happen in your pelvis, abdomen, chest wall, and trunk.

15% of events happen in your mind.

Soft Tissue Sarcoma



HERBAL TREATMENTS OF SARCOMA CANCER –

Since ancient times, herbal therapy has been utilised to treat a wide range of conditions, including cancer. A form of cancer known as sarcoma affects the body's connective tissues, including the muscles, bones, and fat. Herbal medication may be used to assist control symptoms and enhance quality of life even if there is no known treatment for sarcoma.

Plants are the source of herbal remedies, which have been used for ages to treat a wide range of diseases. It is believed that herbal remedies function by promoting the body's own mechanisms for healing. Additionally, some herbs may have immune-modulating, anti-inflammatory, and antioxidant properties.

Turmeric, ginger, green tea, garlic, ginseng, and reishi mushrooms are some examples of herbal remedies that may be used to treat sarcoma. The anti-inflammatory and antioxidant properties of turmeric are known to help decrease inflammation and shield cells from cellular damage. Ginger is believed to contain immuno-modulating and anti-inflammatory characteristics that could help lower inflammation and strengthen the immune system. Antioxidant and anti-inflammatory properties of green tea are known to help prevent cell damage and lessen inflammation. Garlic is known to contain immuno-modulating and anti-inflammatory characteristics that could assist to suppress inflammation and strengthen the immune system. The anti-inflammatory, antioxidant, and immunological-modulating characteristics of ginseng are thought to help reduce inflammation, shield cells

from oxidative damage, and strengthen the immune system. Anti-inflammatory, antioxidant, and immunological-modulating characteristics of reishi mushrooms are thought to help reduce inflammation, shield cells from harm, and strengthen the immune system.

Herbal remedies should only be used under the supervision of a trained healthcare expert and with caution. Herbal remedies may have negative side effects and interact with other treatments. It's crucial to talk to your doctor about any herbal medications you're thinking about using. Since ancient times, herbal therapy has been utilised to treat a wide range of conditions, including cancer. A form of cancer known as sarcoma affects the body's connective tissues, including the muscles, bones, and fat. Herbal medication may be used to assist control symptoms and enhance quality of life even if there is no known treatment for sarcoma. Plants are the source of herbal remedies, which have been used for ages to treat a wide range of diseases. It is believed that herbal remedies function by promoting the body's own mechanisms for healing. Additionally, some herbs may have immune-modulating, anti-inflammatory, and antioxidant properties.

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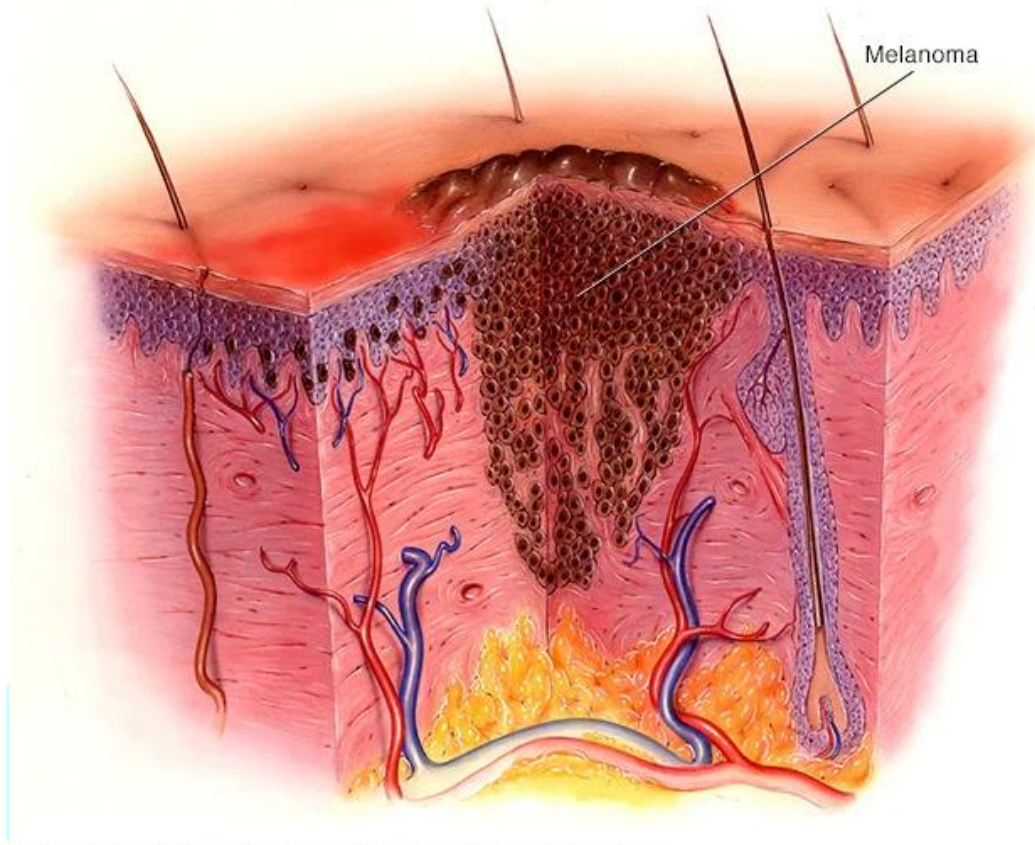
■ THIRD TYPE OF CANCER

3. MELANOMA-

Skin cancer called melanoma develops in the cells (melanocytes) that regulate the pigment in your skin. In this diagram, melanoma cells may be seen penetrating deeper layers of skin from the skin's surface. Melanoma is an intense kind of skin cancer that starts in the cells that create melanin, the coloring agent that provides the skin with its hue. It is the most severe type of skin cancer and may spread to other parts of the body if not treated. It can appear anywhere on the body, but is most frequently found on the back, chest, arms, and legs. It is most often caused by being exposed to UV radiation from the sun or tanning beds. Those with fair skin, a family history of the disease, and a history of sunburns are at higher risk of developing melanoma. Treatment options may include surgery, radiation, chemotherapy, and immunotherapy.

Melanoma can be located on any part of the body, though it is most frequently seen on the back, chest, arms, and legs. It has also been seen on the scalp, the palms of the hands, and the bottoms of the feet. The most frequent symptom of melanoma is an alteration in the size, shape, or hue of a mole. Other indications of it include a new mole, or a wound that does not heal. Risk factors for melanoma include having light skin, having a family history of it, and suffering from sunburns or too much sunlight exposure. Treatment for melanoma

depends on the progression of the cancer and can involve surgery, radiotherapy, chemotherapy, and immunotherapy.



HERBAL TREATMENTS OF MELANOMA CANCER –

Since ancient times, herbal medicine has been utilised to treat a wide range of illnesses, including cancer. The use of herbal medicine to treat melanoma, a kind of skin cancer, has drawn more attention in recent years. Herbal remedies are frequently used with traditional medical procedures like surgery, chemotherapy, and radiation therapy.

The Following Are Examples Of Herbal Treatments For Melanoma:

Turmeric, a spice that is frequently used in Indian cooking, has a substance called curcumin. Curcumin may help slow the spread of melanoma cells, according to studies.

•**GREEN TEA:** Polyphenols, which are substances found in green tea, may help slow the formation of melanoma cells.

•**REISHI MUSHROOM:** For decades, traditional Chinese medicine has employed reishi mushrooms as a sort of fungus. Reishi mushrooms may help slow the spread of melanoma cells, according to studies.

•**CAT'S Claw** :is a kind of vine that grows in the Amazon rainforest. According to studies, cat's claw may slow the growth of melanoma cells.

•**GRAVIOLA:** In the Amazon rainforest, there are particular trees known as graviola. Graviola may help slow the spread of melanoma cells, according to studies.

It's crucial to remember that herbal remedies shouldn't be utilised in place of traditional therapies like surgery, chemotherapy, and radiation therapy. Only utilise conventional therapy in addition to herbal medications.

Before using any herbal remedies, it's also a good idea to discuss them with your doctor because some of them may interfere with other prescriptions or have negative effects.

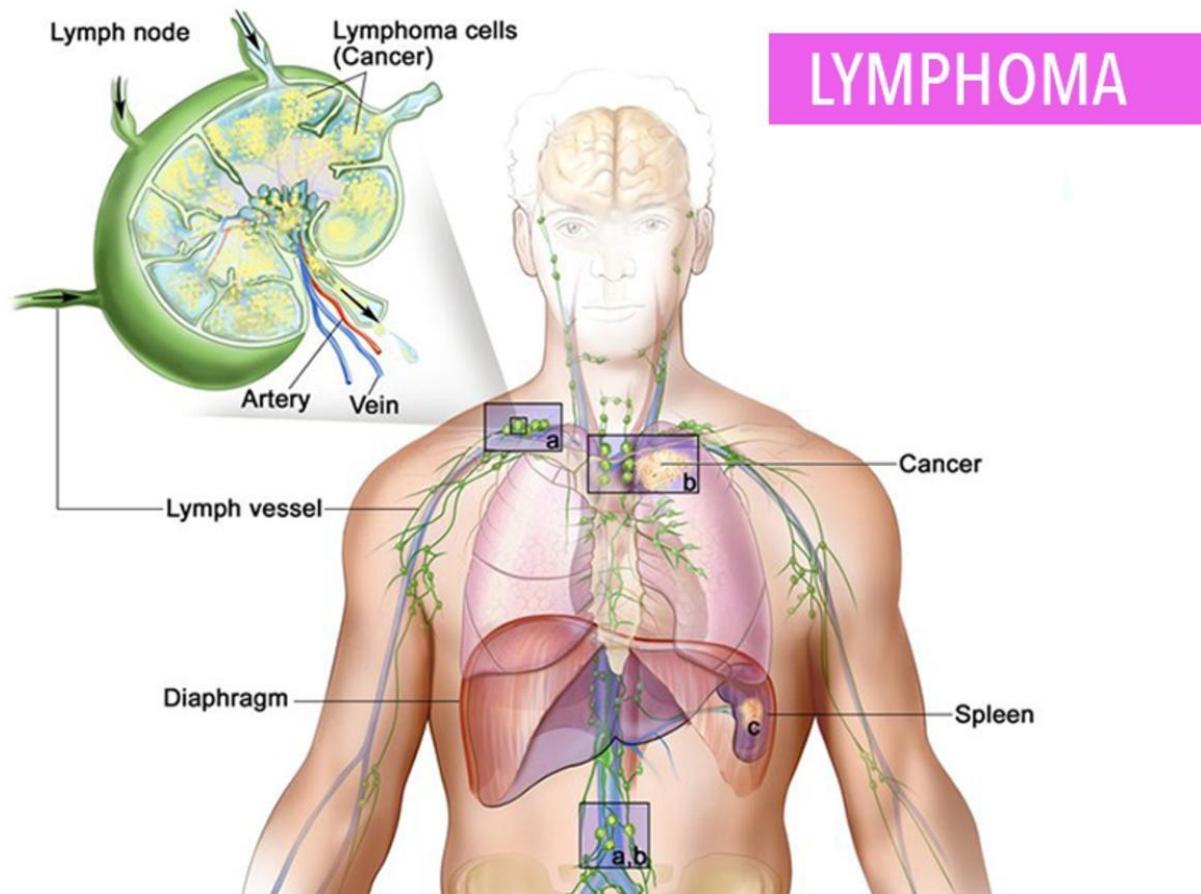
■ FOURTH TYPE OF CANCER

4.LYMPHOMA

The body's defence against sickness network is called the lymphatic system. The lymph nodes, spleen, thymus, and bone marrow are all part of it. Hodgkin's lymphoma and non-Hodgkin' lymphoma are the two main kinds of lymphoma

A form of cancer known as lymphoma affects the immune system's lymphatic system. It is a type of cancer that affects lymphocytes, which are white blood cells that support the immune system. Non-Hodgkin lymphoma and Hodgkin lymphoma are both types of lymphoma. Swollen lymph nodes, fever, night sweats, weight loss, and exhaustion are all potential lymphoma symptoms. Chemotherapy, radiation therapy, and/or targeted therapy are possible lymphoma treatments. A form of cancer known as lymphoma affects the immune system's lymphatic system. It is a type of cancer that affects lymphocytes, which are white blood cells that support the immune system. Lymph nodes, the spleen, the bone marrow, and other organs are only a few of the places in the body where lymphocytes can be found where lymphoma might develop. Hodgkin lymphoma and non-Hodgkin lymphoma are the two main subtypes of lymphoma. Young adults are more likely to develop Hodgkin lymphoma than non-Hodgkin lymphoma, and vice versa.

Swollen lymph nodes, fever, night sweats, weight loss, exhaustion, and itching are some of the signs and symptoms of lymphoma. A physical examination, blood tests, imaging studies, and a biopsy are frequently used to make diagnoses. Chemotherapy, radiation therapy, targeted therapy, immunotherapy, and stem cell transplant are all possible lymphoma treatments. The lymphatic system is impacted by lymphoma, a kind of cancer. Despite being a serious condition, lymphoma has effective treatment options. Your body contains a network of lymphatic veins and nodes, which together make up the lymphatic system.



HERBAL TREATMENTS OF LYMPHOMA CANCER –

The use of herbal medicine as a supplemental treatment for lymphoma cancer is growing in popularity. Plant-based medications known as herbal medicines have been used for many years to treat a wide range of illnesses. They are thought to possess immune-modulating, anti-inflammatory, and antioxidant characteristics that could aid to lessen lymphoma symptoms and enhance general health.

You can consume herbal medications as teas, tinctures, pills, and extracts. Turmeric, ginger, green tea, ginseng, and astragalus are common medicines used to treat lymphoma. These plants are thought to strengthen the immune system, lessen chemo-therapy side effects, and reduce inflammation.

The use of herbal medicine as a complementary therapy for lymphoma cancer is growing in popularity. A number of ailments are treated with herbal medications, which are made from plants. They can be used in conjunction with other treatments and are thought to have fewer negative effects than conventional ones.

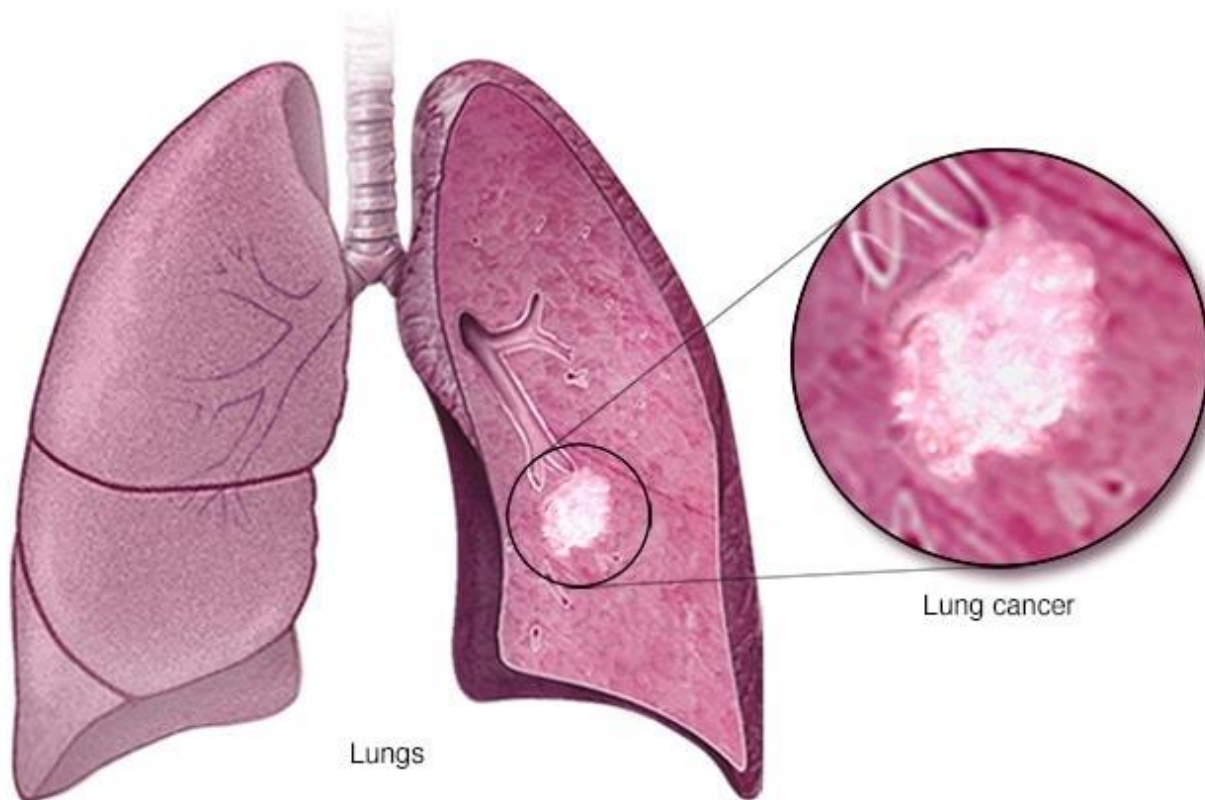
Astragalus, mistletoe, and turmeric are some of the herbal medications used to treat lymphoma cancer. Inflammation is thought to be decreased and the immune system strengthened by astragalus. It is believed that mistletoe has anti-tumor effects and may help shrink tumours. It is thought that turmeric has anti-inflammatory and antioxidant effects.

■ FIFTH TYPE OF CANCER

5.LUNG CANCER–

Cancer is a condition when the body's cells proliferate uncontrollably. Lung cancer describes cancer that first appears in the lungs.

Beginning in the lungs, lung cancer has the potential to spread to the lymph nodes or other bodily organs, including the brain. The lungs may potentially get cancer from other organs. Metastases are the term for the growth of cancer cells from one organ to another. One kind of cancer that starts in the lungs is lung cancer. In the US, it is the main cause of cancer-related deaths in both men and women. Non-small cell lung cancer (NSCLC) and small cell lung cancer are the two primary kinds of lung cancer (SCLC). Approximately 85% of all occurrences of lung cancer are NSCLC, making it the most prevalent kind. It typically develops in the lungs' outermost regions and has three subtypes: adenocarcinoma, squamous cell carcinoma, and giant cell carcinoma. With about 10-15% of cases, SCLC is a less frequent form of lung cancer. It typically develops in the middle of the lungs and spreads and expands Swiftly.



Smoking, secondhand smoke exposure, exposure to specific chemicals or pollutants, and a family history of lung cancer are all risk factors for lung cancer. Small cell and non-small cell lung cancers are typically considered to be the two primary kinds (including adenocarcinoma and squamous cell carcinoma). The growth and treatment of these particular forms of lung cancer vary. Comparatively speaking, non-small cell lung cancer is more prevalent. Lung Cancer at the National Cancer Institute is a good place to find out more.

HERBAL TREATMENTS OF LUNG CANCER –

Lung cancer is just one of the many diseases that are treated with herbal medicine. Combining herbal remedies with conventional therapies like chemotherapy and radiation therapy is a common practise.

Plants are the source of herbal medicines, which are thought to offer therapeutic benefits. Herbs are used for a variety of purposes, some of which are supposed to have anti-cancer characteristics while others are thought to lessen the negative effects of chemotherapy and radiation therapy.

Ginseng, green tea, turmeric, ginger, garlic, and licorice root are some examples of herbs that are used to cure lung cancer. These plants are thought to have anti-inflammatory, immune-boosting, and antioxidant qualities.

Lung cancer is one condition that has been treated with herbal plants for ages. Although there is no scientific proof that using herbal plants as a treatment for lung cancer is effective, some herbs may be useful in easing symptoms and enhancing quality of life.

Herbs That Are Frequently Used To Treat Lung Cancer Include:

TURMERIC: For centuries, traditional medicine has used the spice turmeric. It contains curcumin, a substance whose anti-inflammatory and antioxidant activities have been demonstrated. According to studies, curcumin may lessen inflammation and decrease the development of cancer cells.

GREEN TEA: Green tea has a lot of antioxidants that can help shield cells from the harm that free radicals can do. Green tea may help lower the risk of lung cancer and limit the disease's course, according to studies.

GINSENG: For many years, traditional Chinese medicine has employed the herb ginseng. It is thought to have immune-stimulating and anti-inflammatory properties. According to studies, ginseng may help lower the risk of Lung cancer and halt the disease's development.

REISHI MUSHROOM: For many years, traditional Chinese medicine has used a particular kind of mushroom called reishi. It is thought to have immune-stimulating and anti-inflammatory properties. According to studies, reishi mushrooms may help lower the incidence of lung cancer and slow the disease's development.

ASTRAGALUS: For many years, traditional Chinese medicine has employed the herb astragalus. It is thought to have immune-stimulating and anti-inflammatory properties. Astragalus may help lower the risk of lung cancer and decrease the disease's development, according to studies.

CONCLUSION

- A strategy for the detection and treatment of cancer is an essential part of any comprehensive cancer control strategy. Its primary objective is to either completely cure cancer patients or greatly extend their lives while ensuring a high quality of life.
- Herbal medicines are standardised herbal preparations made from mixes of one or more plants that comprise plant parts or plant material in its raw or processed form as active components. Herbal medicine is now a widely used kind of treatment.
- The uses of plant products for the treatment of disease are one of the most successful strategies since ancient times.
- Herbal medicine uses plant extracts or combinations of plant extracts to treat disease and advance wellness. For usage as a cancer treatment, there is insufficient solid scientific data.
- Plants are used to create herbal medications. They combine various plant components, such as leaves, flowers, or roots. Different medical uses can be made of each component of the plant.
- Different techniques are used by manufacturers to extract the compounds from the plant materials. To prepare the remedy, they employ both fresh and dried botanicals.

- Plants are employed as medicines in herbal therapies. Herbal medicines are used by people to treat or prevent disease. They employ them to alleviate symptoms, increase energy, unwind, or reduce weight.

REFERENCE-

- Paravattil, B., Kheir, N., Yousif, A., 2017. Utilization of simulated patients to assess Diabetes and asthma counselling practices among community pharmacists in Qatar. *Int. J. Clin. Pharm.* 39 (4), 759–768. <https://doi.org/10.1007/s11096-017-0469-8>.
- Act No. 362/2011 Coll. On Medicines and Medical Devices and Amendment and Supplementing of Certain Acts. [Zákon č. 362/2011 Z. z. o liekoch a Zdravotníckych pomôckach a o zmene a doplnení niektorých zákonov]. <http://www.zakonypreludi.sk/zz/2011-362> (accessed 30 July 2018).
- Boardman, H., Lewis, M., Trinder, P., Rajaratnam, P., 2005. Use of community Pharmacies: a population-based survey. *J. Public Health* 27 (3), 254–262. <https://doi.org/10.1093/pubmed/fdi032>.
- Arslan FT, BasbakkalZ Kantar M. Quality of life and chemotherapy – related Symptoms of Turkish cancer children undergoing chemotherapy. *Asian Pac J Cancer Prevention*. 2013;14:1761–1768.
- Ameen A. Assessment of patients knowledge in managing side effects of Chemotherapy. *J Canc Educ*. January 2019;35(4). <https://doi.org/10.1007/s13187-019-1469-2>.
- Sung H, Ferlay J, Siegel RL, et al. Global cancer statistics 2020: GLOBOCAN Estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA A Cancer J Clin* 2021;71:209–49.
- SEER Cancer Stat Facts: Lung and Bronchus Cancer. National Cancer Institute. Bethesda, MD, <https://seer.cancer.gov/statfacts/html/lungb.html>.
- Apperson, G.L., 1914. *The Social History of Smoking*. Martin Secker, London. Austin, G.A., 1978. *Perspectives on the History of Psychoactive Substance Use*. NIDA. Rockville, Maryland.
- Stewart, G., 1967. A history of the medicinal use of tobacco 1492-1860. *Med. Hist.* 11,228–268.
- Nissen, N., 2011. Perspectives on holism in the contemporary practice of Western herbal Medicine in the UK. *J. Herb. Med.* 1 (4), 76–82. <https://doi.org/10.1016/j. Hermed.2011.11.002>.
- Reeve, J., 2010. Interpretive medicine: Supporting generalism in a changing primary Care world. Occasional Paper (Royal College of General Practitioners). 88, 1–20, v. PMID: PMC3259801 <https://europepmc.org/article/PMC/3259801>
- Yamamoto, S., Azuma, E., Muramatsu, M., Hamashima, T., Ishii, Y., Sasahara, M., 2016. Significance of extracellular vesicles: pathobiological roles in disease. *Cell Struct. Funct.* 41 (2), 137–143. <https://doi.org/10.1247/csf.16014>.
- Antwi, S., Asiedu-Larbi, J., 2019. Acute toxicity of Dyspepsia, a report to Food and Drug Authority, Ghana, Pharmacology and Toxicology Department. *Cent. Plant Med. Res.* Arienti, V., Corazza, G.R., Sorge, M., Boriani, L., Ugenti, F., Biagi, F., Maconi, G., Sottili, S., Thiel, D.V., Gasbarrini, G., 1994. The effects of levosulpiride on gastric And gall-bladder emptying in functional dyspepsia. *Aliment. Pharmacol. Ther.* 8 (6), 631–638.
- Madisch, A., Andresen, V., Enck, P., Labenz, J., Frieling, T., Schemann, M., 2018. The Diagnosis and treatment of functional dyspepsia. *Dtsch Arztebl Int* 115, 222–232. <https://doi.org/10.3238/arztebl.2018.0222>.

- Alsuhaibani, S., Khan, M.A., 2017. Immune-stimulatory and therapeutic activity of *Tinospora cordifolia*: double-edged sword against salmonellosis. *J. Immunol. Res.* 2017, 1787803 <https://doi.org/10.1155/2017/1787803>.
- Givetash, L., 2020. China Is Encouraging Herbal Remedies to Treat COVID-19, but Scientists Warn Against It. Available online: <https://www.nbcnews.com/news/world/china-encouraging-herbal-remedies-treat-covid-19-scientists-warn-against-n1173041>.
- Chin, A., Chu, J., Perera, M., Hui, K., Yen, H.L., Chan, M., Peiris, M., Poon, L., 2020. Stability of SARS-CoV-2 in different environmental conditions. *Lancet Microbe.* <https://doi.org/10.1101/2020.03.15.20036673>.
- Aboubakr, H.A., Nauertz, A., Luong, N.T., Agrawal, S., El-Sohaimy, S.A., Youssef, M.M., Goyal, S.M., 2016. In vitro antiviral activity of clove and ginger aqueous extracts Against feline calicivirus, a surrogate for human norovirus. *J. Food Prot.* 79 (6), 1001–1012. <https://doi.org/10.4315/0362-028X.JFP-15-593>.
- San Chang, J., Wang, K.C., Yeh, C.F., Shieh, D.E., Chiang, L.C., 2013. Fresh ginger (*Zingiber officinale*) has antiviral activity against the human respiratory syncytial Virus in human respiratory tract cell lines. *J. Ethnopharmacol.* 145 (1), 146–151. <https://doi.org/10.1016/j.jep.2012.10.043>.
- Ahn, K., 2017. The worldwide trend of using botanical drugs and strategies for Developing global drugs. *Bmb. Rep.* 50 (3), 111–116. <https://doi.org/10.5483/Bmbrep.2017.50.3.221>.

