CHAPTER – I
INTRODUCTION

Oncology from the Greek word onkos (mass, tumor) and logos (study, best describes the study of malignant diseases. Malignancy is surprisingly common, developing at sometime in the life of more than one third of the population and it is the second most common cause of death in the world, after cardiovascular diseases. There is however significant variation with age, sex and geography in the incidence of the various types, as well as in the resources available for detection and treatment. Amongst the most common solid tumours, such as lung and breast cancer, the incidence is often higher in the developed world. For example, lung cancer is becoming increasingly common throughout the world, but of 14/100000 in India, the incidence is much lower than in UK, where it is four times higher. Similarly breast cancer, which accounts for around 20-25% of all female cancers in both India and UK.

Cancer may be regarded as a group of diseases characterized by a (i) abnormal growth of cells (ii) ability to invade adjacent tissues and even distant organs, and (iii) the eventual death of the affected patient if the tumour has progressed beyond that stage when it can be successfully removed. Cancer can occur at any site or tissue of the body and may involve any type of cells.

The major categories of cancer are: (a) Carcinomas, which arise from epithelial cells lining the internal surfaces of the various organs (e.g. mouth, oesophagus, intestines, uterus) and from the skin epithelium; (b) Sarcomas,
which arise from mesodermal cells constituting the various connective tissues (e.g. fibrous tissue, fat and bone); and (c) Lymphomas, myeloma and leukaemias arising from the cells of bone marrow and immune systems.

The term “primary tumour” is used to denote cancer in the organ, while “secondary tumour” denotes cancer that has spread to regional lymph nodes and distant organs. When cancer cells multiply and reach a critical size, the cancer is clinically evident as a lump or ulcer localized to the organ of origin in early stages. As the disease advances, symptoms and signs of invasion and distant metastases becomes clinically evident (WHO, 1997).

There are wide variations in the distribution of cancer throughout the world. The International variations in the pattern of cancer are attributed to multiple factors such as environmental factors, food habits, life style and genetic factors.

Cancer afflicts all communities worldwide. Approximately 10 million people are diagnosed with cancer and more than 6 million die of this disease every year. About 22.4 million persons were living with cancer in the year 2000 (WHO 2003). This represents an increase of around 19 percent in incidence and 18 percent in mortality since 1990 (WHO 2008).

In terms of incidence, the most common cancers worldwide are lung cancer (12.3 per cent of all cancers), breast cancer (10.4 per cent) and colorectal cancer (9.4 per cent). For any disease, the relationship of incidence to mortality is an indication of prognosis. Similarly incidence and mortality rates being indicative of an essentially fatal condition. Thus, lung cancer accounts for most deaths from cancer in the world (1.1 million) annually, since it is most invariably associated with poor prognosis. On the other hand, appropriate intervention is often effective in avoiding fatal outcome
following diagnosis of breast cancer. Hence, this particular cancer, which rank second in terms of incidence, is not among the top three causes of death from cancer, which are respectively cancers of the lung, stomach, and liver.

The most conspicuous feature of the distribution of cancers between the sexes is the male predominance of lung cancer. Stomach, oesophageal, liver and bladder cancer are also much more common in males. For the most part, differences in distribution between the sexes are attributable to difference in exposure to causative agents rather than to variation in the susceptibility. For other tumour types, including cancers of pancreas and colorectum, there is little difference in the sex distribution. Generally, speaking, the relationship of incidence of mortality is not affected by sex. Thus, for example, the prognosis following diagnosis of liver or pancreatic cancer is dismal for both males and females. Many other tumour types are more responsive to therapy, so that cancers of breast, prostate and uterine cervix are the cause of death in only a minority of patients diagnosed (WHO, 2003).

The burden of cancer is distributed unequally between developed and developing countries, with particular cancer types exhibiting different patterns of distribution.

The total cancer burden is highest in affluent societies, mainly due to a high incidence of tumour associated with smoking and western lifestyle, i.e., cancer of the lung, colorectum, breast and prostate. In developing countries, up to 25 per cent of tumours are associated with chronic infections, e.g., hepatitis B (liver cancer), human papilloma viruses (Cervical cancer), and Helicobacter pylori (stomach cancer). In some western countries, cancer mortality rates have recently started to decline, due to
reduction in smoking prevalence, improved early detection and advances in
cancer therapy (WHO, 2003).

In South East Asia Region, cancer accounts for a significant
proportion of morbidity and mortality. It is estimated that about half a
million people die every year from cancer. Cancer contribute to 3.4 per cent
of all deaths reported from India, 6.6 per cent from Indonesia, 2.9 per cent
from Myanmar, 0.8 per cent from Nepal, 4.2 per cent from Sri Lanka, and
5.5 per cent from Thailand (WHO, 2002).

In India, Indonesia, Sri Lanka and Thailand, the most common site of
cancer in men are respiratory tract (trachea/bronchus/lungs) cancer, and cancer
of cervix is the most common cancer in women in India and Indonesia.
Cancers associated with the use of tobacco constitute nearly 44.6 per cent of
cancers in men, and 20 per cent of cancers in women. Over 80 per cent of
cases come for treatment at a very late stage when survival rates are low.

In India, the National Cancer Registry Programme of the ICMR
provides data on incidence from five population – based registers and one
rural – based population registry at Barshi, Maharashtra.

It is estimated that there are approximately 2-2.5 million cases of
cancer in India at any given point of time, with around 7-9 lakh new cases
being detected each year. Nearly half of these cases die each year.

The population based cancer registries in India over a population of
34 million, i.e., 18.4 million males and 15.56 million females. Among males,
high incidence rates were reported for tobacco-related cancers. The number
of cancer cases among males is estimated as 3.9 lakh and among females as
4.3 lakh. The estimated number of deaths from all the population based
registries are 25.19 per 100,000 population for males and 23.52 per 100,000 population for females (ICMR, 2004).

The four most frequent cancers in males in India are mouth/oropharynx, oesophagus, stomach and lower respiratory tract (trachea/bronchus/lungs). For women, cancers of the cervix, breast, mouth/oropharynx and oesophagus are the most frequent. A number of these cancers are highly amenable to primary and secondary prevention. Tobacco, which is widely used in India, is a major cause of cancer of the upper digestive and respiratory tract. It is estimated that 91 per cent of oral cancers are directly related to the use of tobacco.

Among Indian women, cancers of the cervix, ovary and breast account for nearly 60 percent of all cancers. Several studies reveal a close association of cervical cancer with poor genital hygiene, early consummation of marriage, multiple pregnancies, and contact with multiple sexual partners. It is also, reported that breast cancer is proportionately on the increase in a few metropolitan areas of India. This appears to be related to late marriage, birth of the first child at a later age, fewer children and shorter periods of breast feeding, which are increasingly common practice among the educated urban women (WHO, 1999).

Hardly any disease is more feared than cancer. Cancer remains the second leading cause of death after coronary heart disease. The precise trigger for the disease is not well understood, but the process by which cancer spreads is straightforward. Certain cells in the body become altered and multiply rapidly and in an uncontrolled fashion. As these cells grow they form tumours, which is left unchecked, suck nutrients from healthy cells and
body tissue, ultimately destroying the body’s ability to function properly (Robert S Feldman, 1997).

Although the process involved in the spread of cancer are basically physiological in nature, accumulating evidence suggests that the emotional responses of cancer patients to their disease may have critical effect on its course. A Study by Petingale of (1985) found that people who adopt a fighting spirit are more likely to recover than those who pessimistically, suffer and submit themselves to death. The study analyzed the survival ratio of women who had undergone the removal of a breast due to cancer. The results suggested that the survival ratio were related to the psychological response of the women who stoically accepted their fate, trying not to complain, and those who felt that the situation was hopeless, that nothing could be done showed the lowered survival rates. On the otherhand the survival rates of women who showed a fighting spirit, and the survival rates of women who erroneously denied that ever they had cancer were significantly higher. According to this study, cancer patients with a positive attitude were more likely to survive than those with a negative attitude.

Studies such as these suggest that patient’s emotional responses may partially determine the course of their disease. Although the exact mechanism by which the process could occur is not well understood, accumulating evidence indicates that a patients’ emotional state may affect the immune system, the body’s natural defenses that fight disease. In the case of cancer, it is possible that positive emotional responses may produce natural killer cells that help to control the size and spread of cancerous tumours. Conversely, negative emotions may suppress the ability of the same kind of cells to fight tumours. (Glaser et. al, 1986, Holland and Lewis, 1993; Anderson, Kiecolt and Glaser, 1994).
The notion that a positive mental state increases longevity is supported by other studies. Psychologists Sandra Levy and colleagues, for example, found that factor they labeled joy, referring to mental resilience and vigor was the strongest predictor of survival times for a group of patients with recurrent breast cancer (Levy et al 1988). Similarly, cancer patients who are characteristically optimistic reported less distress throughout the course of their treatment. (Carver, 1990; Carver et al : 1993)

What is increasingly clear is that certain types of psychological therapy have the potential for extending the lives of cancer patients. According to a study done by David Spiegel, women with breast cancer who received psychological treatment lives at least a year and a half long, and experienced less anxiety and pain than women who did not participate in therapy. (Spiegel, 1993; Lewis et. al, 1994). Those in the central group lived an average of about one and a half years after starting the study, while those who had been in group therapy lived an average of about three years. And the three women who are still alive ten years later all had been in the group receiving psychological treatment.

While Spiegel’s results regarding the benefits of psychological therapy are persuasive it is premature to say definitively that of psychological therapy prolongs life. According to a study by the US Government, the question of whether psychological methods influence the onset and progression of cancer is still an open one (office of technology Assessment, 1990), Still the results are promising. One day, perhaps, psychological therapy will become a standard part of the treatment for cancer. (Golden, Gresh, Robbins, 1992, Spiegel, 1993).
Life is full of circumstances and events, known as stressors that produce threat to our wellbeing. Even pleasant events can produce, stress, although negative events results in detrimental consequences than positive ones. (Sarason, Johnson and Siegel, 1978; Brown and McGill 1989).

Stress is the response to events that threaten an individual’s ability to deal adequately with the situation. According to Selye’s general adaptation syndrome model, stress follows three stages; alarm and mobilization, resistance and exhaustion. The specific nature of stressors varies from person to person; what is stressful for one person may be invigorating to another. There are three general categories of stressors; cataclysmic events, personal stressors, and background stressors.

Following an exceptionally stressful event, some people develop a characteristic pattern of symptoms, which includes a sense of bewilderment, anxiety, anger, depression, overactivity and withdrawal. The symptoms are transient; they start to subside within a few hours and usually completely resolve within three days of their onset. Precipitating events include a traumatic diagnosis such as that of AIDS or cancer, death of a family member, a major accident, assault and rape.

Stress can take its toll in many ways, producing both biological and psychological consequences. Often the immediate reaction to stress is biological one. Exposures to stressors induce a rise in certain hormones secreted by the adrenal glands, on increase in heart rate and blood pressure and changes in how well the skin conducts electrical impulses. (Mason, 1975; Selye 1976). On a short term basis these responses may be adaptive because they produce an emergency reaction; in which the body prepares to
defend itself through activation of the sympathetic nervous system. These responses may allow more effective coping with the stressful situations.

However, continued exposure to stress results in a decline in the body’s overall level of biological functioning due to the constant secretion of the stress related hormones. Over time, stressful reactions can promote deterioration of body tissues such as blood vessels and the heart. Ultimately, we became more susceptible to disease as our ability to fight off germs is lowered (Kiecolt – Glaser and Glaser, 1986, Schneiderman, 1983; Cohen, Tyrell & Smith 1993).

In addition to major health difficulties, many of the minor aches and pain we experience may be caused or worsened by stress. These include headaches, backaches, skin rashes, indigestion, fatigue and constipation. Furthermore, whole classes of medical problems, known as psychosomatic disorders, often result from stress. These medical problems are caused by an interaction of psychological, emotional and physical difficulties.

The effects of stress are best illustrated by a model developed by Hans Selye, a major stress theorist (Selye, 1976). This model, General Adaptation syndrome suggests that, the same set of physiological reactions to stress occurs regardless of the particular cause of stress.

Anxiety is a common emotion and is typically a response to a perceived threat, such as an impending operation. It is a common emotion during the early stages of illness when a patient doesn’t know what do expect and may fear the worst. Anxiety is common in medical patients. It may be transient, persistent, episodic or limited to specific situations. Symptoms of anxiety can be divided into two groups: psychological and somatic. Apprehension, fear of impending disaster, irritability and depersonalization
are some of the symptoms. Tremor sweating palpitation, chest pain, breathlessness, headache, dizziness, diarrhea frequency of micturition, initial insomnia and poor concentration are some of the somatic symptoms of anxiety.

Anxiety and worry are universal human experiences and only assume medical significance if they are disproportionate to stress or persist after these have been resolved. Anxiety is common during early stages of illness but usually subsides. Persistent anxiety is distressing, interferes with medical management and may require specific attention. Symptoms of anxiety can complicate the presentation of the underlying physical illness.

Depression is present in a quarter to half of all medical patients. Symptoms of depression can be divided into psychological and somatic. Psychological symptoms are depressed mood, reduced self esteem, pessimism, guilt, loss of interest, loss of enjoyment and suicidal thinking. Somatic symptoms are reduced appetite, weight change, disturbed sleep, fatigue, loss of libido, bowel disturbance, and retardation.

Symptoms of anxiety or depression are common when serious illness is diagnosed. This common psychological response to physical illness is known as ‘adjustment disorder’. Symptoms usually start within a month of diagnosis and tend to parallel the course of the illness. Clearly in patient with life threatening progressive illness, such as cancer, psychological symptoms are unlikely to resolve spontaneously, and specific interventions with drugs and psychotherapeutic techniques are indicated. Between 20 to 40 % of patients with cancer are found to suffer from depression of some point in their diagnosis (Davidson, 2002).
Estimates of the prevalence of depression in patients vary greatly but it is probable that at least 25% may develop significant mood disorder in advanced cancer (IAPC, 2007).

A Review of 12 articles reported a range of depression rates from 3% to 69% (Payne, 1998).

Certain types of cancer, such as pancreatic cancer are associated with an increased incidence of depression. A spectrum ranging from sadness to adjustment disorder to depressive illness is recognized. There is concern that depression may be under diagnosed. This may be due to a number of reasons including a diurnal variation in symptoms such that it may be missed, social ‘cover up’, or presentation with physical symptoms. Other confounding factors may be presentation with overriding anxiety or slowly developing worsening of personality traits, such as attention seeking, which may go unnoticed. Biological features such as weight loss and lethargy are not reliable as features of depression in patients with terminal illness and greater emphasis must be placed on psychological and behavioural features.

Recognizing depression as important is because patients often have a good response to antidepressant drugs. However, depression is often missed because symptoms overlap with appropriate grief about dying (sadness), with demoralization (hopelessness, helplessness, ‘no point in struggling on’) and with the somatic symptoms of cancer (anorexia, constipation, weight loss). Many patients also try to hide their negative feelings (Twycross, 2003).

The concept of subjective well being is empirically derived and has several definitional aspects (Diener, 1984). Being subjective rather than objective well being is assessed from the internal perspective of the
individual rather than measured against the objective criteria of normative standards. (Campbell, 1976).

Since happiness has captured, and continues to capture the interest of so many people, it should not come as a surprise that philosopher and many others debating the concept have long yearned for a way to measure it. Subjective well being is not the same as happiness although the terms are often used synonymously. SWB, in fact, is a broad category of phenomena that includes peoples’ emotional responses, domain satisfactions, and global judgments of life satisfaction. (Diener et al: 1999). Specifically, reported that SWB consists of two distinctive components (Diener, 1994), and affective part, which refers to both the presence of positive affect (PA) and the absence of negative affect (NA) and a cognitive part. The affective part is a hedonic evaluation guided by emotions and feelings, while the cognitive part is an information – based appraisal of ones life for which people judge the extend to which their life so far measures up to their expectations and resembles their envisioned ‘ideal’ life.

Another variable selected for the study is physical symptoms. Weakness, disturbance in sleep, pain, body pain, nausea, vomiting, appetite, sore mouth, dysphaigia, vertigo, alopecia, headache, palpitation, less saliva etc., are the various physical symptoms included for the study.

Symptoms in cancer patients can be due to the disease, metastasis and related to different types of treatment like surgery, chemotherapy and radiotherapy. In addition, the symptoms vary with the organ affected. However, certain symptoms due to the systematic affects can be common; like weight loss and general weakness. These symptoms require very careful analysis; some patients loose weight and develop weakness as a direct result
of bio modulation of metabolizes by tumour, which is called cancer cachexia syndrome. In this syndrome calories cannot be utilized in the usual way.

Pain is the unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage. In other words, pain is a somatopsychic phenomenon (Twycross, Wilcock, 2001). Pain is a complex physiological and emotional experience and not a simple sensation. Pain is a common symptom.

Patients with palliative care needs, most commonly have chronic malignant pain. It is important to assess each specific pain and to identify the likely cause. Almost a third of patients with advanced cancer do not experience pain, 80% have more than two pains. Many patients have more than one pain. It is useful to classify pain into predominantly Nociceptive or Neuropathic categories in order to determine the correct management. Nociceptive pain refers to pain resulting from stimulation of peripheral nerves. Neuropathic pain refers to pain arising from injury the peripheral or central nervous system.

Causes of pain in cancer are cancer related, treatment related, associated factors and unrelated to cancer. Cancer related pain can be from bone, nerve compression or infiltration, soft tissue infiltration, visceral, muscle spasm, lymphoedema, and raised interracial pressure.

Treatment related to pain can be due to surgery, postoperative scars, adhesions, radiotherapy fibrosis, and chemotherapy neuropathy.

Associated factors for pain can be due to constipation, pressure sores, bladder spasms, stiff joints, post herpetic neuralgia etc.,. Unrelated to cancer can be low back pain, arthritis, angina and trauma. Total pain is the term used when psychological, physical, social and spiritual distress combine to
affect the patient. Breakthrough pain is a flare in pain of rapid onset, moderate to severe intensity and of short duration.

Gastro intestinal symptoms include oral problems like oral thrush, sore mouth, dry mouth etc., xerostomia is the subjective feeling of a dry mouth and is often associated with speech, chewing or swallowing, the need to keep drinking and loss of taste. This is a common problem in advanced cancer.

Nausea and vomiting are symptoms, which can cause patients and their relatives in deep distress. Of the two, nausea causes most misery. Causes of nausea are multiple and it is important to analyze the likely cause so that appropriate therapy can be initiated. Causes of vomiting can be drug induced, radiotherapy, chemotherapy, metabolic, raised intracranial pressure, and delayed gastric emptying and gastric irritation.

Constipation is characterized by difficult or painful defecation and is associated with infrequent bowel evacuations and hard small faces. Constipation can be extremely debilitating and can become the patients overriding concern.

The most common causes of diarrhea in the palliative care setting include imbalance of laxative therapy, drugs, faecal impaction, radiotherapy and malabsorption of fat or water (IAPC, 2007).

Symptoms due to chemotherapy affects are variable and often drug specific, Alopecia mucositis, fibrosis, nausea and vomiting, diarrhea, neuropathy, anemia etc., can be the effects of chemotherapy.

Radiotherapy related effects include alopecia, mucositis, xerostomia cough, nausea, diarrheas etc.
Insomnia is another symptom in cancer patients. In addition to the pain, the psychological problems and worries can cause insomnia.

It is now, recognized that cancer management can rarely be delivered by one specialty. There are several strategies and treatment modalities to manage cancer. Surgery, Chemotherapy and Radiotherapy are the three main different modes of treatment used alone or in combination for the anagement of cancer. This has given rise to the concept of multidisciplinary team comprising surgeons, oncologists, Pathologists, Radiologists and often-specialized nurses. It is important that a core team could maintain good communications with primary care, palliative care and rehabilitation services.

Because of the serious nature of the disease, cancer patients have various psychological problems. Many a times they are not properly attended to. This fact needs special attention in the management of cancer patients. Psychological intervention like counselling, relaxation therapy etc., can be helpful in reducing the psychological problems like stress, anxiety etc. Such treatment modalities will be supplementary to the current medical treatment.

There has been a recent rapid expansion in the indication for chemotherapy for cancer owing to the introduction of new drugs and the recognition that combination chemotherapy is often more effective than using single agents. A different chemotherapeutic drug has different models of action and is useful to classify these drugs based on the affect on biochemical pathways that lead to cell replication or DNA synthesis.

Although the major role of chemotherapy is in the treatment of advanced disease, there is increasing interest in adjuvant chemotherapy. Adjuvant chemotherapy is established in the treatment of breast and
colorectal cancer. Unequivocally, and its efficacy has been proven by large seek randomized controlled trials.

Toxicity is the limiting factor in the use of chemotherapy, and there is a wide range of possible complications. Nausea, vomiting and mucositis are common and alopecia occurs frequently with some drugs such a doxorubicin. Leucopenia and thrombocytopenia are common; and in many instances are accepted parts of treatment. Hormonal effects can also be induced by chemotherapy and of particulars importance are the effects on reproductive organs. Apart from nonspecific toxicities, there are also specific complications.

Other form of cancer therapy is hormonal therapy. Some types of cancer, notably of breast, endometrium and prostate are hormone sensitive. Hormones exert their activity on cells by means of receptors, which bind the hormone and initiate a series of events that lead to cell growth and proliferation. Hormone therapy in cancer is useful in hormone sensitive hormones and can take a number of forms.

Over the years, there has been great deal of interest in stimulating the immense response, based on the concept that cancer cells might be significantly antigenic or that the immune response is diminished in patients with cancer. The first attempt at immunotherapy was based around attempts to nonspecifically enhance the immune response using agents such as BCG, corynebacterium to Levamisole.

Gene therapy can be defined as the treatment of disease process by intruding genes into the patient. The main problem in gene therapy is developing effective method for introducing genes into cancer cells.
The Biomedical industry has recently produced a wide range of biological modifiers, which show great promise both as single agents and in combination with conventional chemotherapy. However, as cancer is such a heterogeneous disease, it is unlikely that a single form of therapy will be appropriate for all cancers.

Palliative care is an important component of multidisciplinary teamwork. Much palliative care can be delivered at home. Palliation means to cloak or cover over. Palliative care seeks to ‘cloak’ symptoms and support the patient with incurable disease when the prognosis is poor.

Palliative care is an approach that improves the quality of life of patients and their families facing the problems associated with life threatening illness, through the prevention and relief of suffering by means of early identification, impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual (WHO, 2002).

The palliative care approach aims to promote physical, psychosocial and spiritual wellbeing. It is a vital and integral part of all clinical practice, whatever the illness or its stage, informed by knowledge and practice of Palliative Care principles.

Palliative medicine is the appropriate medical care of patients with active, progressive and advance disease for whom the prognosis is limited and the focus of care is the quality of life. Palliative medicine includes consideration of the families needs before and after the patients’ death.

Terminal care is an important part of palliative care and usually refers to the management of patients during their last few days, weeks or months of life, from a point at which it becomes clear that the patients is in a progressive state of decline.
Need and significance of the study

Cancer is regarded as a group of diseases characterized by an abnormal growth of cells, ability to invade adjacent tissues and even distant organs, and the eventual death of the affected patient if the tumour has progressed beyond that stage when it can be successfully removed.

As with other chronic diseases, cancer too has a multifactorial aetiology. As mentioned earlier cancer remains the second important cause of death after coronary heart disease. The precise trigger for the disease is not well understood but the process by which cancer spreads is straightforward. Certain cells in the body become altered and multiply rapidly and in an uncontrolled fashion. Although the processes involved in the spread of cancer are physiological in nature, accumulating evidence suggests that the emotional response of cancer patients to their disease may have a critical effect on its course (Pettingale et al. 1985). In the case of cancer, it is possible that positive emotional responses will produce natural killer cells that help to control the size and spread of cancerous tumours. Conversely, negative emotions may suppress the ability of the same kind of cells to fight tumours. (Glaser et al 1986; Holland & Lewis, 1993; Anderson, Kiecolt – Glaser, & Glaser, 1994).

It is undoubtedly, proved that stress and anxiety affect the health of the individuals. Stress and anxiety also lead to the development of hypertension coronary heart disease and cancer.

Cancer being a dreadful disease, it is obvious that these patients will have anxiety. In addition, they will have anxiety about the type of treatments to undergo and the probable outcome of the treatment. Anxiety is a normal reaction to cancer. Anxiety associated with cancer may increase feelings of
pain, interfere with one’s ability to sleep, cause nausea and vomiting and interfere with the patients and family’s quality of life. If left untreated severe anxiety may even shorten a patients’ life.

A patient may become more anxious as cancer spreads or treatment becomes more intense. The level of anxiety experienced by one person with cancer may differ from the anxiety experienced by another person. Most patients are able to reduce their anxiety by learning more about their cancer and the treatment they can expect to receive. Anxiety may also be experienced by patients who are in severe pain, are disabled, have few friends or family members to care for them, have cancer that is not responding to treatment or have a history of severe physical or emotional trauma.

Patients with advanced cancer experience anxiety due not to fear of death, but more often from fear of uncontrolled pain, being left alone, or dependency on others. Many of these factors can be alleviated with treatment. (http://www.cancer.gov).

Depression is a disabling illness that affects 15% to 25% of cancer patients. Patients who are receiving palliative care for cancer may have frequent feelings of depression and anxiety, leading to a much lower quality of life. Patients in palliative care who suffer from depression report being more troubled about their physical symptoms.

Counselling can greatly benefit a person with cancer. People living with cancer are often focused on their medical needs, and they may feel they do not have the time, money, energy, or need to care for their emotional needs. There are many ways by which, professional Counselling helps a person with cancer, and Counselling can be a way for someone to better understanding and resolve a pressing issue or concern. Counselling can also
help to explore longstanding problems unrelated to the disease that may have come to the surface during the cancer experience.

Relaxation techniques can also reduce tension, depression and anxiety; yet few cancer treatment programmes use these techniques on a regular basis.

Relaxation therapy reduced symptoms of anxiety more than it did with any other side effects, regardless of the type of cancer treatment given to the patient.

Studies related to effectiveness of psychological interventions in cancer are very few in India. Some of the study reports from abroad, give a promising result that psychological interventions will be useful as an adjunct to the existing modes of treatment.

From clinical experience, it is found that psychological interventions would help for a better prognosis in cancer patients undergoing standard treatment procedures mentioned earlier. In addition, it would be a milestone in the pain and palliative treatment.

In the practice of modern medicine treating cancer patients, due importance and emphasis has to be given for psychological intervention. It will be very much useful and helpful for the recovery and in minimizing the psychosocial problems of the cancer patients. Health education, Counselling and Guided Somato Psychic Relaxation (GSPR) techniques are assumed beneficial in this context.

In a country like India with high incidence and prevalence of cancer, more significance is given to pain and palliative care supplementary to the standard modes of treatment like surgery, chemotherapy and radiotherapy. There is paucity of research in the area of psychological intervention in the
management of cancer patients. Hence, there is a need to study the effectiveness of a scientifically accepted psychological intervention method.

A ‘Psychological interventions programme’ consisting of Health education, Counselling and Guided Somato Psychic Relaxation (GSPR) techniques will be cost effective and supplementary to the existing modes of cancer treatment.

It is worth trying the effectiveness of such a Psychological intervention programme in reducing the psychosocial and physical problems of cancer patients. It will be useful to have a better prognosis for the cancer patients and to the mankind at large. The medical profession can explore new avenues in the form of psychological approaches as complementary and supplementary to the treatment and can improve subjective well being and reduce the symptoms and complications. It will be a major breakthrough in the care and support of cancer patients. In addition, this will help in understanding more about the mind body relationship in cancer and to include psychological intervention as part of management of cancer patients. Hence, the investigator proposes to undertake a study entitled “Effectiveness of psychological intervention in the management of cancer patients”.

Statement of the problem

Malignancy or cancer is surprisingly common, some time of life developing at some time of life of more than one third of the population. It is the second most common cause of death in many countries. Among men, the leading eight cancer killers are lung, stomach, liver, colon-rectum, oesophagus, mouth-pharynx, prostate and lymphoma. Among women, they are cancers of the breast, stomach, colon-rectum, cervix, lung, oesophagus and liver. The four most frequent cancers in males in India are
mouth/orpharynx; oesophagus, stomach and lower respiratory tract, for women, cancers of the cervix, breast, mouth/oropharynx and oesophagus are the most frequent.

Cancer is a highly stigmatized, frightening sometimes life-threatening illness, which provokes stress in itself in addition to co-morbid secondary phenomena such as major depression. It terms of traits, individuals who tend to repress negative emotions, minimizing, anger and depression may tend to have higher cancer incidence or worse disease prognosis. It is undoubtedly, proved that stress and anxiety affect the health of the individuals. The physiological effects of intense stress can even lead to sudden death in some cases. Cancer being a dreadful disease it is quite natural that these patients will have anxiety. Subjective wellbeing consists of three primary components; positive affect, negative affect and life satisfaction. Knowing that one is suffering from cancer itself is a shocking thing for the patient. This will cause fear, anxiety or depression. Psychotherapeutic intervention will be helpful in reducing the anxiety, stress, depression and associated psychological complications.

Studies related to the effectiveness of psychological interventions are very few in India. Based on some of the study reports from abroad, it is giving a promising result that psychosocial interventions will be useful as an adjuvant to existing modes of treatment. From clinical experience, it is found that the psychological interventions would help for a better prognosis in cancer patients undergoing standard treatment procedures mentioned earlier. In addition, it will be mainstay in the pain and palliative care.

In this study cancer of head and neck, alimentary tract, breast and lungs are included. The psychological intervention package consists of health
education, Counselling and guided somato psychic relaxation. This is an intervention study with cases and control based on pre-test, post test, delayed post test design.

**Objectives of the study**

1. To study, the effectiveness of a psychological intervention package in the management of cancer patients.

2. To study, the stress of cancer patients before and after the psychological intervention programme and to compare with the control group.

3. To study, the anxiety of cancer patients before and after the psychological intervention programme and to compare with the control group.

4. To study, the depression of cancer patients before and after the Psychological intervention programme and to compare with the control group.

5. To study, the subjective well being of cancer patients before and after the psychological intervention programme and to compare with the control group.

6. To study, the physical symptoms of cancer patients before and after the psychological intervention programme and to compare with the control group.

7. To study, the selected socio demographic variables of cancer patients with relation to stress. (Age, Sex, Martial status, Religion, Diet, Personal habits)
8. To study, the selected socio demographic variables of cancer patients in relation to anxiety. (Age, Sex, Martial status, Religion, Diet, Personal habits)

9. To study the selected socio demographic variables of cancer patients in relation to depression. (Age, Sex, Martial status, Religion, Diet, Personal habits)

10. To study, the selected socio demographic variables of cancer patients in relation to subjective wellbeing. (Age, Sex, Martial status, Religion, Diet, Personal habits)

11. To study, the effectiveness of psychological intervention programme in different types of cancer patients.

12. To study, the role of selected socio demographic variables on psychological intervention in cancer patients.

NULL HYPOTHESES

1. There will not be any significant difference in the stress of cancer patients before and after psychological intervention.

2. There will not be any significant difference in the anxiety of cancer patients before and after psychological intervention.

3. There will not be any significant difference in the depression of cancer patients before and after psychological intervention.

4. There will not be any significant difference in the subjective wellbeing of cancer patients before and after psychological intervention.
5. There will not be any significant difference in the physical symptoms of cancer patients before and after psychological intervention.

6. There will not be any significant difference in the stress of cancer patients with and without psychological intervention.

7. There will not be any significant difference in the anxiety of cancer patients with and without psychological intervention.

8. There will not be any significant difference in the depression of cancer patients with and without psychological intervention.

9. There will not be any significant difference in the subjective wellbeing of cancer patients with and without psychological intervention.

10. There will not be any significant difference in the physical symptoms of cancer patients with and without psychological intervention.

11. There will not be any significant difference in the stress among different types of cancer patients (Head and Neck Cancers, Gastrointestinal Cancers, Breast Cancer, Lung Cancer).

12. There will not be any significant difference in the anxiety among different types of cancer patients (Head and Neck Cancers, Gastrointestinal Cancers, Breast Cancer, Lung Cancer).

13. There will not be any significant difference in the depression among different types of cancer patients (Head and Neck Cancers, Gastrointestinal Cancers, Breast Cancer, Lung Cancer).

14. There will not be any significant difference in the subjective wellbeing among different types of cancer patients (Head and Neck Cancers, Gastrointestinal Cancers, Breast Cancer, Lung Cancer).
15. There will not be any significant difference in the physical symptoms among different types of cancer patients (Head and Neck Cancers, Gastro intestinal Cancers, Breast Cancer, Lung Cancer).

16. There will not be any significant difference in the stress among different types of cancer patients before and after psychological intervention.

17. There will not be any significant difference in the anxiety among different types of cancer patients before and after psychological intervention.

18. There will not be any significant difference in the depression among different types of cancer patients before and after psychological intervention.

19. There will not be any significant difference in the subjective wellbeing among different types of cancer patients before and after psychological intervention.

20. There will not be any significant difference in the physical symptoms among different types of cancer patients before and after psychological intervention.

21. There will not be any significant difference in the stress of cancer patients with respect to selected socio demographic variables (Age, Sex, Martial status, Religion, Diet, Personal habits.)

22. There will not be any significant difference in the anxiety of cancer patients with respect to selected socio demographic variables (Age, Sex, Martial status, Religion, Diet, Personal habits.)
23. There will not be any significant difference in the depression of cancer with respect to selected socio demographic variables (Age, Sex, Martial status, Religion, Diet, Personal habits.)

24. There will not be any significant difference in the subjective wellbeing of cancer patients with respect to selected socio demographic variables (Age, Sex, Martial status, Religion, Diet, Personal habits.)

25. There will not be any significant difference in the physical symptoms of cancer patients with respect to selected socio demographic variables (Age, Sex, Martial status, Religion, Diet, Personal habits.)