CHAPTER - 8
SUMMARY

Cancer is an abnormal growth of cells which tend to proliferate in an uncontrolled way and, in some cases, to metastasise (spread). Cancer is not one disease. It is a group of more than 100 different and distinctive diseases. The symptoms of cancer include a sore that does not heal, unusual bleeding or discharge from any source, indigestion or difficulty in swallowing, obvious change in wart or mole, nagging cough or hoarseness of voice, thickening or swelling in breast or anywhere else in body, change in bowel or bladder habits, and pain during sexual intercourse or bleeding. The risk factors for cancer include gender, age, menstruation, age at first sexual intercourse and number of children, breastfeeding, dietary habits and obesity. The causes of cancer include a variety of physical factors such as ionizing radiations, environmental toxicity, dietary patterns, infection, smoking and tobacco chewing, alcoholism, chemical agents, and genetic factors and family history.

Cancer is a leading cause of death worldwide which are projected to an estimate of 12 million deaths in 2030. Among males, lung cancer is the most common type, followed by prostate cancer. Among females, breast cancer is by far the most common type with 1.38 million new cancer cases diagnosed in 2008. Colorectal cancer is the third most common cancer among males and the second among females. Stomach cancer is the fourth most common type, with 9,89,000 new cases diagnosed in 2008. In 2004, cervical cancer was the fifth most common cause of cancer death among females in the world, and 4,89,000 new cases were added. In 2008, it became the third most common cancer in females, and the seventh overall. Liver cancer is the sixth most common cancer in the world, with 7,50,000 new cases diagnosed in 2008. Bladder cancer is the ninth most common cancer in the world, with 3,83,000 new cases diagnosed in 2008.

In India, during the year 2001, nearly 0.80 million new cases were estimated. The estimated cases of cancer were more for females than for males in 2001 (0.406 millions as against 0.392 millions). Among males,
cancer of the stomach is the leading site of cancer in Bangalore (Karnataka) and Chennai (Tamil Nadu). Among females, cervix and breast are the two leading sites of cancer. In India, the cancer deaths accounted for about 8 per cent deaths in the year 2005 and are the second most common non-communicable disease other than the cardio-vascular diseases.

In Punjab, the incidence of breast cancer is highest in four Districts including Rupnagar, Bathinda, Faridkot and Sri Muktsar Sahib. The myeloid leukaemia is highest in India in Bathinda District of Punjab with the incidence of 2.4 per 1,00,000. In Patiala, the incidence of skin cancer among males is 1.4 per 1,00,000 is one of the highest in India. The larynx cancer in Patiala occurs with the incidence of 4.8 per 1,00,000 and in Rupnagar with the incidence of 3.7 per 1,00,000. Gall bladder cancer has an incidence of 6.4 per 1,00,000 in Chandigarh and 1.7 per 1,00,000 in Patiala. Oesophagus cancer among males is common in Bathinda with the incidence of 6.2 per 1,00,000 and Fatehgarh Sahib with the incidence of 5.0 per 1,00,000. Oesophagus cancer among females is most common in Sri Muktsar Sahib with incidence of 3.6 per 1,00,000, Mansa with incidence of 3.6 per 1,00,000, Patiala with incidence of 3.5 per 1,00,000 and Rupnagar with incidence of 3.0 per 1,00,000. The recent survey conducted by Punjab government found that a total of 2,733 persons (1,643 women and 1,090 men) were found to be affected by cancer in Punjab (Singh, 2011).

The present study is an attempt to study the socio-cultural dimensions and health care of patients suffering from cancer with special reference to Malwa region of Punjab with the following objectives:

- To trace the palaeopathology of cancer through evidences from skeletal and mummified remains on the basis of secondary sources, like published sources and references of cancer in ancient texts, if any.
- To assess ecological factors contributing to cancer in Punjab.
- To understand the beliefs and perceptions related to cancer.
- To know the health-seeking behaviour among the cancer patients.
To study the body image concerns among cancer patients.

To analyse concerns of advanced cancer patients at end-of-life.

To know the portrayal of cancer in print and electronic media.

For the present study, both primary and secondary data were collected. The primary data were collected from 230 patients suffering from cancer (200 undergoing active treatment and 30 undergoing symptomatic treatment) using in-depth interviewing and observation. The case studies and narratives of the respondents were also noted and conversations were recorded. The secondary data were collected from Census of India, different books, journals and newspapers. The secondary data was also collected from two daily English newspapers, The Tribune and The Times of India from March 2009 to February 2012. Several books were also consulted from A. C. Joshi Library, Panjab University, Chandigarh; Library of Department of Anthropology, Panjab University, Chandigarh; Post Graduate Institute of Medical Education and Research, Chandigarh; British Library, Chandigarh; State Library, Chandigarh; and Library, Dabur Dhanwantary Ayurvedic Medical College and Hospital, Chandigarh. The data collected was analysed both qualitatively and quantitatively using themes.

The thesis is spread over 8 chapters with 132 case studies, narratives, 5 conversations, 3 bar-diagrams, 5 pie-charts, 33 plates and 75 tables.

**Palaeopathology of cancer**

To trace the palaeopathology of cancer through evidences from skeletal and mummified remains, and the references of cancer in ancient texts, the data were collected from various published studies and ancient texts. Based on data collected from various secondary sources, it can be concluded that there are a considerable number of skeletal evidences of cancer but there is a rarity of neoplastic lesions in ancient human mummies. This led some scholars/authors to speculate that a neoplastic tissue does not undergo mummification due to some sort of biochemical difference with respect to normal tissues. Zimmerman (1977) convincingly disproved this speculation. The rarity of cases of cancer in ancient time led some authors to think that
human carcinoma was unable to produce bone metastasis in ancient times. Capasso (2005) disproved this speculation as being groundless because palaeopathological evidence in the form of mummified remains is present. David and Zimmerman (2010) suggest that rarity of cancer cases in ancient human populations could be due to the factors such as age at death, diet and environmental factors. As life span was shorter in antiquity and as cancers for the most of part are diseases of later life, the incidence of cancer is expected to be lower than at present, and the evidence for it in ancient remains is correspondingly scanty. Even when cancer was present, death may well have been directly or indirectly due to primary lesions before detectable signs of metastasis occurred. However, other factors to explain this lack of evidence include the limitations of the diagnostic methods used by early investigators to study these remains, and the insufficiency of data to provide reliable rate of cancer incidence.

There are a great amount of details about cancer in ancient texts. The Indian, Greek and Roman, Unani, Egyptian and other texts such as Arabic, Bible, Jewish and Byzantine describe the existence of various forms of cancer as well as efforts to treat the disease and understand its causes. In ancient Indian texts, cancer was in existence and correctly diagnosed as early as 2000 BC. The term *arbuda* is used in the ayurvedic texts to describe cancer. The cancer of the lips, alveolus, tongue, palate, pharynx, throat, thyroid and penis are commonly described in the ayurvedic texts. About twenty diseases of the female genital organs are described by Sushruta. None of them are typical of the malignancy of either the uterus or the ovaries. Being deeply placed organs it was not possible for the ancient physicians to observe these diseases and describe them correctly. This is also true about malignancy in other deep seated organs such as lungs, liver, stomach, colon, etc., about which not much references are made in "Sushruta Samhita". Sushruta mentioned surgery, caustic alkali and cauterisation as modes of treatment for cancer. He described cauterisation as the more important than the application of caustic alkali. It is also suggested that a proper cauterisation should be based on size and shape, vital spots and strength of the patient. In case of incomplete removal, he cautioned of recurrences which can be fatal. A
number of plant based preparations have been mentioned by Sushruta for the treatment of cancer as well.

It was in the time of Hippocrates, around 400 BC that a word for cancer first appeared in the medical literature i.e., *Karkinos*, Greek word for 'crab'.

The section on Greek and Roman texts, deals with the history of treatment of cancer by examining the theories of tumour formation, as they were codified by leading physicians together with therapeutic methods they proposed in their writings. In Greek texts, the cause of disease was linked to the doctrine of the four bodily humours, according to which any imbalance in their disposition results in sickness. Women found in menopause, for instance, were held to be susceptible to breast cancer (Karpozilos and Pavlidis, 2004). The cancer was considered curable only at early stages. The hidden tumours were not easily operable and surgical treatment was not encouraged in the head, neck and the back. The treatment of breast, uterus and pharynx cancers figures predominantly in Greek literature. The affected part, as in breast cancer, was removed by operation and the healthy tissue was cauterised until the bleeding has stopped altogether. On the other hand, herbs, oil, vinegar and medicinal minerals appear in numerous instances in the remedial preparations. Plasters and pharmaceuticals for treating cancerous growths and indurations combined botanical extractions, such as opium, poppy seeds, plants, trees, mixed with variety of substances, such as honey, bees, wax, oils and fats, and in combination with lead, gypsum, copper ore, rock alum, yellow orpiment, zinc oxide, cadmium and silicon dioxide. The ingredients were mixed as a rule with wine, vinegar, olive oil and, in several instances with ass's milk and women's milk. The latter were employed perhaps on the account of its anti-bacterial properties. A single case history was described but no specific treatment of cancer was mentioned by Hippocrates.

Cancer of the breast was seen by Galen (most famous Greek physician during the Roman period) as the commonest cancer of his time. For centuries no further cases were described, until Cato, 2nd century BC, advocated the use of cabbage poultices for all tumours and breast cancer in particular. Aetus of Amida probably described the Paget's cancer of nipple for the first time. By
the 2nd century AD treatment comprised a variety of local applications, systemic medications, venesection and surgery. Surgical methods were first described by Celsus and subsequently by Leonidas (usually combined with cautery) proved curative when applied early in the disease (Retief and Cilliers, 2011). The early Roman medicine was a mixture of religion and witchcraft, but as time went by, it became more influenced by the Greek medical sciences, which were more developed. This influence can be traced back to Galen, a famous Roman physician of Greek origin, whose doctrines dominated medicine for more than 15 centuries (El-Gammal, 1998).

A detailed description of cancer is available in Unani texts and the term \textit{sartan} meaning 'crab' is used to describe cancer. According to Unani texts, three humours namely, \textit{Safra} (bile), \textit{Balgham} (phlegm) and \textit{Sauda} (Melano or black bile) are responsible for cancer. The blood is not considered as responsible for cancer causation. The treatment for cancer described in Unani texts include drugs (plant drugs, mineral drugs and animal origin drugs used orally, externally or both) and surgery. Polypharmacy is the rule in the Unani system of medicine as single drugs are seldom mentioned in Unani texts. The recipes may sometimes include as many as 20 to 30 ingredients. There is a wealth of information about cancer in Unani texts. According to Aslam et al. (1981), it is doubtful whether all the conditions diagnosed and treated for cancer by ancient physicians were actually cancer or other swellings, oedemas, abscesses, ulcers, purulent slow healing wounds, etc., which were confused with cancer.

The description of cancer in Egyptian literature has shown that it was present in Egyptians which necessitated them to counter attack the disease (Rehemtulla, 2010).

Thus, cancer in humans has been uncovered in the medical records left by ancient Egyptians as well. The other texts which mentions about cancer are Arabic, Bible, Jewish and Byzantine which not only make references about cancer but also mention about its treatment. The methods of cancer treatment such as excision and cauterisation have been mentioned in detail by Arabic physician Rhazes (850-932 AD). He also mentioned a case in which
symptoms of cancer appears to be consistent with the colorectal cancer. Other scholars like Maimonides (1135-1204 AD), Albucasis (936-1013 AD) and other Byzantine physicians indirectly contributed to the understanding of cancer. They talked of previous works and also translated them so as to make them available to ordinary practitioners.

When we compare the different ancient texts on cancer, it is interesting to note that cancers of cervix, breast, bones, etc. are not frequently discussed in the ayurvedic texts in contrast with Greek medical literature in which breast cancer is discussed in much greater depth. It is quite likely that the breast cancer was rare in culture where keeping the daughter unmarried even after menarche was considered sinful for a father and also having many children was considered to be fulfillment of the life of a woman. When we compare the medicinal plants used in Unani and Ayurvedic treatment, the name of two plants with anti-cancer activity appears to be common. These include *Jasminium officinale* and *Cucurbita maxima*.

Based upon ancient written records and palaeopathological evidences, it may be concluded that cancer is not a modern disease and it has been a health concern since the dawn of humanity.

**Ecological factors contributing to cancer in Punjab**

To analyse ecological factors contributing to cancer in Punjab, an attempt has been made to reconstruct the pre-green revolution ecological history of Punjab followed by green revolution and various other factors that affect the health in Punjab. In the case of present-day Punjab, a full understanding of the physical landscape takes on a significant role, primarily because of the emphasis on wheat and paddy cultivation both historically, and particularly within the post-green revolution era. The excess cultivation of both crops has signalled alarm over their impact on soil health and groundwater availability throughout Punjab. Since the 1980s, an ensuing conversation across agricultural research circles in Punjab has emphasised switching from the wheat and paddy cycle to a more biodiverse system; nonetheless, such efforts have been opposed as being economically nonviable (Punjab State Council for Science and Technology, 2007). The
reconstruction of ecological history of pre-green revolution Punjab clearly indicate that although the green revolution led to the decreased crop diversity by promoting monocropping instead of multicropping but the commercialisation of agriculture started much before. The Mughal period saw an increase in cultivation of cotton in the dry areas such as Malwa region of Punjab for commercial purpose. The Sikh rule also witnessed the expansion of commercial agriculture resulting in growing spectrum of cash crops such as cotton, sugarcane, tobacco, indigo, oilseeds and spices, etc. and loss of forests. It was during British period that Punjab made a mark in the yields of wheat and rice. The rice was introduced in Punjab to compensate for the rice famines in Eastern India, which witnessed the agricultural decline at that time. So, it was not only the green revolution that changed the ecology of Punjab by focussing more on commercialisation of agriculture but the processes of commercialisation began much before the green revolution. The reconstruction of the ecological history of Punjab also reveals that there was a vast biodiversity of crops available in Punjab but various economic and political processes that took place before and after green revolution led to the loss of biodiversity. A number of studies (Joia et al., 1978; Kalra and Chawla, 1980; Chattopadhyay, 1998; Chahal et al., 1999; Shetty, 2004; Mathur et al., 2005; Aulakh et al., 2005; Singh, 2008; Misra, 2008; Thakur et al., 2008) highlighted the environmental problems in Punjab.

Demographic characteristics of the respondents

The major themes that are generated for the analysis are: socio-demographic characteristics of the respondents, beliefs and perceptions of respondents related to cancer, health-seeking behaviour of the respondents, concerns of patients suffering from cancer undergoing active treatment and concerns at end-of-life: Patient’s, caregiver’s and health care provider’s perspectives.

In the present study, 51.3 per cent respondents were females and 48.7 per cent respondents were males. The mean age of all respondents in the present study was 46.88 years (45.88 for males and 47.84 for females). The differences between the mean ages of males and females were non-
significant. The ages of the respondents ranged between 22 to 78 years. There were non-significant differences between age distributions of respondents with respect to gender. The maximum numbers of respondents in the present study were in the age group 31-40 years and minimum numbers of respondents were in age group 71-80 years.

Regarding caste-wise distribution of respondents, it was found that majority of respondents were Jatt Sikh (63.5 per cent) followed by Majhabi Sikh (30.4 per cent) and Ramgarhia Sikh (6.1 per cent). There were non-significant differences in caste-wise distribution of respondents with respect to gender. A total of 87.8 per cent of the respondents were married in the present study while 3.5 per cent were unmarried and other 8.7 per cent constituted either separated, widowed or widowers. There were non-significant differences in marital status of respondents with respect to gender.

In the present study, a majority of respondents (45.6 per cent) were educated upto senior secondary followed by 30 per cent graduates and above, 15.7 per cent educated upto middle and remaining 8.7 per cent of the respondents were illiterates. Among males, the majority were farmers (56.2 per cent) followed by labourers (32.1 per cent), government employees (7.2 per cent) and 4.5 per cent in other professions. Among females, the majority were housewives (61.0 per cent) followed by labourers (26.3 per cent), government employees (9.3 per cent) and 3.4 per cent in other professions. There were highly significant differences in occupational status of respondents with respect to their gender.

Among the males, 87.5 per cent were undergoing active treatment and other 12.5 per cent were undergoing symptomatic treatment. Among females, 86.5 per cent were undergoing active treatment and other 13.5 per cent were undergoing symptomatic treatment. The majority of respondents undergoing active treatment were in the age group 31-40 years (25.0 per cent) whereas the majority of respondents undergoing symptomatic treatment, the majority (26.7 per cent) were in the age group 61-70 years.

All the oral and prostate cancer patients were males and all cancer of cervix and breast cancer patients were females as these are particularly
cancers of females. Among males, majority were suffering from oral cancers (51.8 per cent) and among females, a majority were suffering from breast cancer (38.2 per cent) The majority of oral cancer patients were in the age group 31-40 years, majority of gall bladder cancer patients were in the age group 31-40 years, majority of cancer of cervix patients were in the age group 41-50 years, majority of breast cancer patients were in the age group 51-60 years, majority of cancer patients with primary unknown with metastasis were in the age groups 21-30 years and 51-60 years, and majority of prostate cancer patients were in the age group 61-80 years. There were significant differences in types of cancer with respect to age.

**Beliefs and perceptions related to cancer**

The prevalence of beliefs and perceptions amongst cancer patients is a reflection of the level of knowledge among them regarding cancer. Such beliefs influence the health-seeking behaviour of patients and may lead to delay in seeking medical care. During the interviews, none of the respondents and their family members used the term ‘cancer’ as they believed that it is such a dreaded disease that using the term alone would cause cancer to them. They described cancer as a disease which spreads very fast as it develops its tentacles all over the vital organs of the human body and ultimately leads to death. The respondents also described cancer as an incurable disease.

The respondents who were not aware of their cancer diagnosis used the terms like pinṇa (rounded mass), gath/gand (dense mass), rasauli (tumour) and ulcer to describe their disease. The respondents who were aware of their cancer diagnosis used the terms like marī bīmaṇī (bad disease), chandarī bīmaṇī (dreaded disease), bhairī bīmaṇī (worst disease), opṛ bīmaṇī (unknown disease), jar vala phora (rooted sore), mare karmā vāli bīmaṇī (disease caused due to bad karmā) and Bikaner vāli bīmaṇī (disease treated at Bikaner). The common beliefs of respondents related to cancer can be summarised as:

- Cancer is caused due to past karmā and kismat.
- Cancer is a contagious disease and spreads from one person to another.
- Cancer is incurable and a fatal disease.
- Cancer grows faster after surgery or any attempt made to remove the cancerous mass. This makes it incurable.

The respondents expressed the appearance of a pinnā (rounded mass), gath/ gand (dense mass), rasauli (tumour) or ulcer with pain, continuous pain in any part of body, unusual bleeding either from mouth, anus or vagina/penis, constant indigestion, change in bowel habits (constipation or loose motions for a longer period), loss of appetite and sudden weight reduction as their first symptoms.

The findings of this study support the view that the making of a symptom is a complex activity involving individual cognitive processes and negotiations with others, including health care professionals. In the present study, the construction of symptoms as possible signs of cancer was not always straightforward for the respondents. Hence, the findings illustrate the importance of extending intrapersonal perspectives of symptom experience to take into account the influence of social context in the way individuals name and assign meaning to changes they recognise in their bodies.

Some of the respondents shared the initial symptoms with their family members or 'significant others' but there were others who downplayed their symptoms. The reasons for downplaying symptoms include belief that cancer is caused due to karmā or kismat, gender roles, stigma associated with cancer, to save the family honour and the family members from worry. The other reasons include the belief that lumps especially in breast are common 'milk lumps' or due to menstrual cycle. The downplaying of the cancer symptoms leads to the late diagnosis and delay in the treatment. Here, open communication can play an important role as stated by some of respondents in whose cases the open discussion led to sharing of symptoms by the respondents which led to early diagnosis. The role of mass media and NGOs is also very important in this context. Both of these can create awareness.
among the cancer patients, their families and general public regarding cancer which may lead to more acceptance of the disease.

A majority (total 56.5 per cent; males 70.5 per cent, females 43.2 per cent) of cancer patients were aware of their diagnosis. There were non-significant differences in awareness of diagnosis with respect to age but the differences between awareness of diagnosis with respect to type of treatment were found to be highly significant.

It is important to understand the ways in which diagnosis is described and lived as for each patient, there can be differences in description of diagnosis. The cancer patients described their reaction at the time of diagnosis as shock, disbelief and instant reminder of others suffering. The cancer in their descriptions of their diagnosis also mentioned about the cancer deaths in their families, the associated death fear and uncertainty. They also used religion, social support and role in decision-making as strategies to cope with cancer.

Prognosis is the forecast of probable course and outcome of a disease and in simple terms, it is the stage of disease and its future implications for the patients. A majority of cancer patients (88.7 per cent) were unaware of their prognosis and only 11.3 per cent were aware. There were significant differences in awareness of prognosis with respect to gender and age. Awareness of prognosis was more among gall bladder and oral cancer patients and least among the cancer of cervix patients. There were non-significant differences in awareness of prognosis with respect to type of cancer.

Cancer was highly prevalent in the field area and people consider it to be a common but chronic disease. There were two major reasons why a patient is not told about cancer prognosis. Firstly, it is the belief that the patient will not be able to bear the shock and he/she will be depressed, hopeless and social isolated. Secondly, it is also feared that a patient may refuse treatment knowing that disease is not curable or in order to save the financial resources and efforts of the family.
There were non-significant differences in awareness of prognosis with respect to type of treatment. The reason for higher awareness of prognosis among respondents receiving the symptomatic treatment was that they understand that they are not receiving any kind of active treatment like chemotherapy, radiotherapy or surgery and are only given medication to reduce their symptom burden and suffering.

The diagnosis of cancer leads to a number of queries in the minds of both the patients and their families. The information-seeking behaviour of the cancer patients is divided into two sub headings including information related to diagnosis and information related to prognosis. Based on the observations of conversations between doctors, patients and the caregivers, a number of questions which are asked by the patients are frequently enlisted. The information related to diagnosis included the questions related to treatment, the treatment option available, duration of treatment and side-effects of the treatment. It was found that a number of questions were asked by the respondents related to prognosis but these questions are generally not answered as it is believed that it would be too hard for a patient to bear the shock, especially if they are in advanced stage of disease. The respondents ask questions relating to treatment options available, chances of cure, duration, and cost of treatment. Both the patient and the family face a financial burden that may influence their decisions for carrying out their further treatment of the patient. Thus, at the time of diagnosis and during the course of treatment, the financial concerns were found to be most important for both the patients and the families. The discussion relating to cost of treatment and alternative or traditional systems of medicine is very common. In these cases, the doctor does not suggest any other system of treatment and tells the patients and the families to focus on the biomedical system only. As the treatment of cancer runs over a long period of time, it leads to information seeking regarding the duration of the treatment. The other matter of concern regarding the treatment is the side-effects of the treatment. This concern is very common among the female cancer patients who inquire about the side-effects of the treatment, the ways in which these side-effects can be dealt and precautions to be taken during the treatment. It is further observed that the
information needs of the patients regarding prognosis are not fulfilled, especially when the stage of disease is advanced. The information related to prognosis is provided only to the caregivers and rest is left to them. This practice can be supported by the doctor's saying, “Ehna nu bāhar bithao te tusi phir ajo” (Make them sit outside and you come back again) to discuss the course of treatment and other information. This is a very common practice in a clinical setting.

The diagnosis of cancer leads to attribution of causes to it. A majority (53.5 per cent; 39.3 per cent males and 66.9 per cent females) of the respondents believed karma to be the cause of cancer followed by contamination of underground water 20.9 per cent (34.8 per cent males and 7.7 per cent females), contagion 9.6 per cent (12.5 per cent males and 6.8 per cent females), hereditary 5.2 per cent (3.6 per cent males and 6.8 per cent females), stress 4.3 per cent (4.5 per cent males and 4.2 per cent females), kismat 3.9 per cent (2.7 per cent males and 5.1 per cent females), injury 0.9 per cent (0.9 per cent males and 0.9 per cent females) and remaining 1.7 per cent of the respondents did not tell any cause of cancer. There were highly significant differences in causes of cancer mentioned by the respondents with respect to gender.

Among the respondents undergoing active treatment, 48.0 per cent mentioned karma as a cause of cancer and a minimum percentage (1.0 per cent) mentioned injury as a cause of cancer. Among the respondents undergoing symptomatic treatment, 90.0 per cent mentioned karma as a cause of cancer while a minimum percentage of respondents (3.3 per cent) mentioned stress as a cause of cancer. There were highly significant differences in causes of cancer mentioned by the respondents with respect to type of treatment received.

The perception regarding causation of cancer among cancer patients varied from karma, contamination of underground water, contagion, hereditary, kismat and stress. A number of respondents described various verses from Guru Granth Sahib in context of karma (p. 2, 7, 8, 15, 66, 78, 134, 144, 176, 184) and kismat (p. 4, 394) as a cause of their suffering and diseased state of health.
The causes of cancer mentioned by respondents such as contagion which the respondents mentioned were not actually the causes of cancer. Some of them were mere misconceptions about cancer. Some of other misconceptions regarding cancer causation include the belief that cancer is contagious and may also be caused due to injury. Yet other important misconception includes the belief that surgery leads to faster growth of cancerous cells and makes it incurable. The other common misconception is that it recurs again and again, reduces the life of an individual, and ultimately leads to death.

**Health-seeking behaviour of cancer patients**

Health-seeking behaviour is a useful concept for describing the events that take place when a person is sick, the steps taken by an individual who perceives a need for help as he or she attempts to solve a health problem. These steps are conceptually differentiated as elements in the health-seeking process: symptom definition, illness-related shifts in role behaviour, lay consultations and referral, treatment actions and adherence. These elements describe health-related actions that a sick person may exhibit but they are not necessarily sequential.

Some of the important reasons mentioned by the respondents for shift from one medical system to the other are ineffectiveness of and dissatisfaction with the previous medical system, further spread of disease, accessibility and affordability of previous health care services, and beliefs related to cancer.

During the course of fieldwork, the researcher also asked from the respondents regarding the various types of treatment taken by them to cure cancer. It was found that, both the majority of male (N=74) and female (N=92) respondents used both biomedical and traditional treatment. There were non-significant differences in types of treatment taken by respondents with respect to their gender.

35.0 per cent of respondents in the age group of 41-50 years used only biomedical treatment. Biomedical and alternative treatments were used by
46.7 per cent of respondents in age group 31-40 years. Both biomedical and traditional treatments were used by 25.3 per cent of respondents in age group 31-40 years. All the biomedical, alternative and traditional treatments were used by 33.3 per cent respondents in age group 21-30 years. There were highly significant differences in types of treatment taken by respondents with respect to their age. There were significant differences in types of treatment taken by respondents with respect to their marital status. There were non-significant differences in types of treatment taken by respondents with respect to their educational status.

Ackerknecht (1947) writes, “disease and its treatment are only in the abstract purely biological processes. Actually such facts as whether a person gets sick at all, what kind of disease he acquires and what kind of treatment he/she receives depend largely upon social factors”. In the present study a number of factors such as accessibility and affordability of health care services, religion, social support and role of ‘significant others’, and beliefs related with cancer have been found to affect the health-seeking behaviour of respondents.

It was found that the accessibility and affordability of health care services are two very important factors that affect the health-seeking behaviour of the cancer patients. A detailed description of the concept of health and disease in Sikhism is provided to understand the religious context and how this religious context affects the views of cancer patients and families in relation to cancer. It was found that 99.2 per cent females and 98.2 per cent males believed in presence of God. There were non-significant differences in belief in God among respondents with respect to gender and type of treatment. One way in which religion may benefit people is through the attributions it provides. An important attribution is the selective incidence or 'why me'. It was found in the study that cancer patients usually question why they are chosen for such a disease by God.

There were non-significant differences in religious coping styles used by the respondents with respect to gender. The most commonly used religious coping style in both the genders was deferring religious coping style (63.3 per
cent for males and 61.9 for females) followed by collaborative religious coping style (32.2 for males and 33.9 per cent for females) and self-directing religious coping style (4.5 per cent for males and 4.2 per cent for females). In all age groups, deferring religious coping styles was the most common followed by collaborative religious coping styles and self-directing religious coping styles. There were non-significant differences in religious coping styles used by the respondents with respect to age.

With respect to type of treatment, 62.7 per cent respondents (61.5 per cent undergoing active treatment and 70.0 per cent undergoing symptomatic treatment) used deferring religious coping style. Among all types of cancers, the most commonly used religious coping style was deferring religious coping style followed by collaborative religious coping style. There were non-significant differences in religious coping styles used by the respondents with respect to type of cancer.

The religion emerged as an important aspect of health-seeking behaviour among the respondents. Pāth, ardās or visits to religious places formed an important aspect in the process of gaining normalcy. These practices have basis in the ingrained belief systems of the people. Religion was found to be essential aspect of life of the respondents. Practising certain religious activities was a regular feature of a large number of respondents. Thus, it was likely that taking religious recourse for seeking help for healing and health was a common yet significant aspect of health-seeking behaviour of the respondents.

In the present study, it was found that social support played a very important role in health-seeking behaviour among cancer patients as a number of respondents reported that they discussed their initial symptoms and course of treatment with their family members and ‘significant others’. Not all the respondents received the amount of social support which they needed. Thus, some of these cancer patients quoted some of the verses from Sri Guru Granth Sahib (p. 10, 23) to support their argument that nobody is a real support and only God is always there to support them. The social support received was also found to be affected by age and gender of the cancer patients which further affected their health-seeking behaviour.
The other factor that affected the health-seeking behaviour among cancer patients was the beliefs related to cancer. In a number of narratives, cancer has been described as a disease which means death. As a result of this belief, a number of cancer patients desired death. The other barrier to seeking health care services was the belief that cancerous growth increases after the surgery and after the surgery, cancerous cells grows much faster than before. So, the surgery as the treatment of cancer was not considered as an ideal option by the cancer patients and their families. This was a common belief in the field areas and similar belief was also held by the desi healers (quacks).

It was found from the narratives and case studies of respondents that some of the NGOs such as ‘Roko cancer’ working in the field areas under study try to create awareness among individuals regarding cancer.

**Concerns of cancer patients undergoing treatment**

The body image concerns were also discussed under four sub themes such as hair loss or alopecia as a result of chemotherapy, body image concerns among breast cancer patients, body image concerns among cancer patients with gynaecological cancers and body image concerns among oral cancer patients. The other interrelated themes such as stigma and social non-disclosure, and concerns about other family members are also discussed under this theme.

Regarding body image concerns, integrity of the body (73.0 per cent) appeared to be the most important concern followed by identity (27.0 per cent). With respect to gender, both the males and females were more concerned about body integrity than body identity but if we compare, the integrity issues were more among males (N=94) than females (N= 74) and the identity issues were more among females (37.3 per cent) as compared to males (16.1 per cent). There were highly significant differences in body image concerns with respect to gender.

On comparing the body image concerns with respect to type of treatment received, it can be concluded that the integrity remains the major...
concern (71.5 per cent for patients undergoing active treatment and 83.3 percent for patients undergoing symptomatic treatment) than identity (28.5 per cent for patients undergoing active treatment and 16.7 per cent for patients undergoing symptomatic treatment). There were non-significant differences in body image concerns with respect to type of treatment.

On comparing the body image concerns with respect to type of cancer, it can be concluded that there are some type of cancer such as breast cancer where the identity issues are higher (62.2 per cent) than the concerns regarding integrity (37.8 per cent). The reason for more identity issues among breast cancer patients is that the majority of these patients were in age groups i.e., 31-60 years. The identity issues are lower among the respondents with gall bladder cancer. None of the respondents with prostate cancer reported any identity issues. This may be because of the reason that majority of respondents with prostate cancer were in age group 61-80 years. There were highly significant differences in body image concerns with respect to type of cancer.

It was found that the hair loss is an unavoidable side-effect of undergoing chemotherapy, and it is often experienced as distressing or traumatic. Research suggests that hair loss may also have a psycho-social impact on patients self-esteem, body image, and self-concept, but little is known about the category of patients that might be more vulnerable or resilient to these effects, and what factors might ameliorate this distress. Preparing patients for hair loss is a significant challenge for health care providers, and yet little is known about the process of preparing from the perspective of cancer patients themselves. Since preparation for hair loss has been identified as a key role for health care providers, understanding more about this crucial period may enhance ability to support cancer patients through this potentially difficult time. In the study, an attempt has been made to understand the hair loss as a process which include preparing for hair loss, experiencing hair falling out, realising the altered sense of self and minimising effects. It was found that the respondents prepared themselves for hair loss by gathering information from three sources which include health care providers (doctors and nurses), other cancer patients undergoing treatment.
and information material in form of posters, pamphlets, etc. It was observed that talking and discussing with fellow patients was the most important source of information-seeking. This is known as social comparison. Social comparison helps to gain information about the treatment, side-effects, ways of coping, etc. The respondents were asked whether they tried to contact or meet other cancer patients. 67.40 per cent respondents agreed that they contacted or met other cancer patients to compare their own condition and course of treatment with others while 32.60 per cent respondents did not contact or met any other cancer patient. The respondents who contacted or met other cancer patients were inquired whether they made an upward comparison or a downward comparison. The findings of the present study are in contrast with the findings of Van der Zee et al. (2000) as majority (53.54 per cent) of the cancer patients tends to compare themselves with those who were doing better.

During the experience of hair falling out, the respondents explained their experiences in context of gender and religious identities. They also felt that family members ignore them and they feel isolated and uncomfortable. In this section, the religious identity of Sikhs is also discussed in detail. As hair loss means a loss of religious identity apart from loss of gender identity, thus, body image concerns in relation to hair loss were prominent. A number of verses from Sri Guru Granth Sahib (p. 149, 344, 443, 941, 981) have also been discussed to support the narratives of respondents.

The respondents in the present study, especially the women considered hair as a symbol of womanhood, loss of which leads to the realisation that some important part of identity as a woman is lost. Thus, the efforts have been made by them to minimise their hair loss. This is in line with findings by Rosman (2004). The respondents in the present study told that they felt that changes to their appearance had rendered their diagnosis to be public knowledge, and even their attempts to camouflage their appearance had further led to their identity as cancer patients.

The present study shows that health care providers pay a little attention to chemotherapy-induced hair loss. Indeed, the medical professionals tend to
under-estimate how big an impact this phenomenon has on patients' everyday lives. For most of the respondents in the study, it was a great sufferance. Furthermore, it was found that loss of hair leads the women to vulnerability of realising an altered sense of self, which they do not accept themselves. In order to minimise the hair loss caused due to chemotherapy, the respondents both men and women tend to cover their heads with either turban or a dupattā respectively usually black in colour. It was found that hair loss also led to realisation of altered sense of self among those men who never covered their heads before but a complete bald look lead to realisation of loss of religious identity and men also tend to cover their heads. The present study discusses the impact of an altered appearance during cancer treatment on a man which is often under-estimated, possibly reflecting a pre-conception that issues such as hair loss are a greater concern for women than for men.

While comparatively little research has focussed specifically on the personal impact of an altered appearance during chemotherapy treatment, the present study offers an original insight into this aspect of cancer patient's experiences of cancer diagnosis and treatment. Previous research into the psychological impact of chemotherapy has reported patients ranking hair loss as the second most severe side-effect of treatment (Carelle et al., 2002). The present study supports the findings made by Rosman (2004) in demonstrating that it is the outward changes that publicly identified participants as having cancer and as a consequence, presented them with an additional array of potential stress. In essence their appearance acts as a visible indicator of their disease status to both themselves and others, including those who may have previously been unaware of it. Hair loss is seen as a confirmation of identity as a cancer patient.

As in Punjab, the women wear salwār kamțj and the women residing in the villages usually cover their head with dupattā wrapping it around their upper body. Thus, the body image concern in relation to breast cancer was not in relation to public appearance but a concern related to women themselves. The women told that the scars of surgery reminds them of their loss which they consider to be irreparable and moreover, the questions asked by other women from their family as well as social network makes them
realise that they have lost their privacy. Sometimes, the women suffering from breast cancer take the social support extended to them in a negative connotation and feel that there is something wrong with them.

As in most of the cases of gynaecological cancers, surgery followed by radiation is the usual treatment given to the patients. Thus, there are no identity issues in relation to public appearance but it is also a concern which affects the women and their relationship with their partners. It was found that women wished to ask a number of questions from their doctors but due to lack of communication between doctors and patients in relation to gynaecological or sexual issues, they did not ask many of these. The factors that were found to affect the doctor-patient communication in this context are time constraints, focus on treatment rather than on communication, age and gender differences between doctor and the patient, lack of rapport establishment, and cultural insensitivity. The women with gynaecological cancers have a number of fears relating to resuming sex after treatment in fear of spread of disease or recurrence of disease after sexual intercourse. The sexual problems of the patients can be addressed and anticipated through the physician’s communication with the patient. In the hospital setting, a psycho-social counsellor can be a great help. Moreover, the patients should be encouraged to discuss their sexual problems and difficulties with their physicians. Stead et al. (2003) discussed the benefits of discussing the sexual issues between physicians and the patients. These include:

- Understanding that such problems are normal
- Knowledge of the cause and duration of problems
- Provides an opportunity and permission for women to ask questions about sexual activity
- Helps to reduce anxiety caused by problems
- Helps to improve communication with partners

The other important concern of cancer patients undergoing treatment was stigma. A number of cancer patients faced discrimination against them by
their families and members of their social network. Stigma is not a singular concept expressed and experienced in a common way. Rather, it is a complex phenomenon expressed both subtly and overtly, and it is subjectively experienced in multiple ways that are partially dependent upon the nature of stigmatising condition and the social circumstances of the individual. Stigmatised persons loose social status, they are discounted and discredited-reduced in the minds of others from being whole and acceptable individuals to those whose identities are spoiled or tainted (Goffman, 1963). Furthermore, due to the reactions of others as well as to internalised self-feelings (Crocker et al., 1991), stigmatised person's life chances and opportunities are lessened, they are set apart from others, and they are considered to apart from others, and they are considered to be inferior and to represent a danger to society, all of which lead to social rejection and social isolation (Goffman, 1963). Not surprisingly, stigma has been demonstrated to have a negative impact on social interaction, employment opportunities, emotional well-being, and self-perception (Link et al., 1997). In other words, stigma has a negative impact on both the individual's self-concept and on the social responses of others.

Illness is a socially constructed phenomena based on the value of life and health. The specific nature of stigma associated with a serious illness may be dependent on whether the individual can be blamed or held responsible for its occurrence, whether the illness has potentially serious consequences for others, the illness, and/ or whether it results in a decreased level of competence. Once a stigma becomes evident to others, persons become labelled as outsider, and expectations and assumptions are associated with the individual from which patterns of response from others emerge during interaction (Becker, 1963). As the person internalises the label, it becomes a part of his/her identity, and thereby, a part of the self that generates behaviour. In the present study, it was found that a stigma is associated with cancer because of following reasons:

Firstly, it is believed that cancer is caused due to karmā and the individuals are held responsible for the disease. This leads to labelling of the individuals with cancer as 'cancer patients' which leads to their seclusion as a
result of related stigma. Stahly (1988) rightly said that the disease like cancer motivates the individuals around cancer patients to believe that ‘they get what they deserve’ and this belief helps them to save themselves from fear of getting the disease.

Secondly, the treatment of cancer leads to a number of bodily changes and disfigurement which leads to labelling of cancer patients, and they receive a new identity which is different from their previous gender and religious identity. In this case, stigma is both from outside as well as from the individual as he/she feels different, isolated and secluded from the rest.

Thirdly, it is believed that cancer is contagious and spreads from one person to others. The others around the cancer patients believe that cancer can also affect them. This creates a fear regarding cancer and people choose to stay away from those who suffer from cancer to save themselves from the disease.

Fourthly, it is believed that cancer will increase debilitation and lead to eventual death. This belief also leads to cancer related stigma. Sontag (1978) also pointed out that illnesses are stigmatising because they represent potential or existing physical limitations; they are associated with particular negative images and myths, and therefore, take a symbolic meaning.

The belief that cancer is contagious and another belief that cancer is hereditary along with the associated stigma were found to lead cancer patients to have a number of concerns about their family members. These concerns not only include health concerns but also relate to social standing of cancer patients and their families in the society.

**Concerns at end-of-life**

The results of the EORTC QLQ-C30 instrument regarding concerns of advanced cancer patients at end-of-life shows that advanced cancer patients benefit from the palliative care. Except for role functioning and social functioning, other items on functional scale showed marked improvement. However, sustained symptoms such as fatigue (thakāvat), nausea (ji kacchā honā), pain (dard), dyspnoea (sah chadnā) and appetite loss (bhukh nā lagnā)
were found. The other symptoms like insomnia (neend nā aunā) and constipation (kabāj) showed a marked improvement. Thus, it can be concluded that palliative care plays a very crucial role in improving QOL among advanced cancer patients. It can be concluded that palliative care plays a very crucial role in improving quality of life among advanced cancer patients. The palliative care is an essential component of cancer care. Its importance is becoming increasingly recognised but it requires investment in research, education and services, incorporating appropriate needs assessment and outcome measurements, if it is to achieve its potential to improve quality of care for cancer patients and their families, and help them live well until they die as well as to die well.

The fulfillment of gender roles appeared to be the most important concerns of patients with advanced cancer. The most significant role described by the respondents includes that of mother towards her children and that of a wife towards her husband. The respondents wanted to fulfill some of their pending responsibilities before their death. Other than concerns about social roles and responsibilities, the cancer patients also discussed the financial difficulties faced by their families. It was also found that due to financial constraints, some of the cancer patients who were diagnosed in initial stages of cancer stopped their treatment and revisited the health care providers only when it became difficult for them to bear the symptom burden.

After knowing about prognosis of advanced cancer of the patients, the caregivers were found to have two kinds of concerns, one is regarding the time and other is regarding the suffering of the patients. Importance of time was found to be the most important concern among the caregivers of the respondents. The time was verbalised and reflected in the conversations between caregivers and health care providers and the caregivers wished to know about exact time which the respondents are left with. At this time, spouses were found to be the most vulnerable group. On the basis of observations made, it can be suggested that apart from open communication and counselling of the patient, it is also very important to counsel and listen to the concerns of the caregivers especially spouses at patient's end-of-life so as to save them from difficulty in coping with bereavement of patient. Other
concern among the caregivers was about the suffering of the patients and wished relief for the patient's suffering. At patient's end-of-life health care providers also tried to give hope to the patients and their families by mentioning that the life is in God's hand and they cannot do much to save patient's life but can only reduce suffering which can potentially affect quality of life. The doctors were also asked about euthanasia as a mean to end patient's suffering. The doctors considered it as sin which is against all religions and believed that nobody is greater than God to impart death.

A number of coping strategies were used by advanced cancer patients such as search for meanings, religion, use of alternative and traditional systems of medicine, and communication. With search for meanings, the cancer patients tried to search meaning behind their illness. It was found that there was a difference in search for meaning among those who were aware of their diagnosis and those who were not aware. The respondents who were aware of their diagnosis tried to search meanings relating to their illness while those who were not aware tried to search meanings behind their suffering. The respondents also attributed causes to cancer to further search meanings behind the cancer and related suffering. Religion also helped the respondents to find out the reasons behind cancer. The respondents quoted a number of verses from Sri Guru Granth Sahib (p. 1, 5, 9, 13, 15, 21, 30, 31, 39, 45, 52, 137, 149, 375, 438-439, 517, 555, 595, 853, 877, 935, 1256, 1379, 1382, 1412, 1428) on suffering and death in religious context. These verses explained death as inevitable and as an event which happens to every individual who is born. It was further described that the time and means of death are secret and the death is in hands of God. The others concepts that were discussed include the concepts of 'reincarnation' and 'death while alive'. It was also found that the respondents not only undergo the biomedical treatment for cancer but also a variety of alternative and traditional systems of medicine which leads respondents to make sure that they survive cancer. The other coping strategy used by cancer patients was communication. Communication can play a very important role in understanding experiences of cancer patients by their health care providers and similarly it can also help in creating awareness among cancer patients and their families regarding cancer.
It was found in the study that there is concealment of cancer diagnosis and prognosis from the patients who were diagnosed at an advanced stage of disease. This is in contrast to the informed consent, self-determination and autonomy, which are guiding principles of biomedical ethics. These principles do not hold true for the present study in which protection of the patient from hopelessness and fear of death, tranquility, family and relationships assume greater importance in face of death. Similar arguments have also been made by Fox (1991), Gordon and Paci (1997), Bosk (1999) and Kleinman (1999).

The perspectives of patients, caregivers and health care providers were obtained regarding whether the patient should be told about prognosis. The patients believed that they should be told about prognosis because it helps to cope better and is important to accept the fact that the disease is incurable. It also helps to take timely decisions regarding financial resources, distribution of wealth, family related decisions and to prepare the caregivers. While caregiver’s believed that patient should not be told about prognosis because patient will not be able to bear the shock and will be depressed. They also fear that the patient may refuse treatment after knowing about the stage of disease and also to save the financial resources for the family members. They also believe that patients may lose hope and may get isolated from their families. In support of the patient’s perspective and in contrast to what caregivers believed, health care providers believed that patients should be told about the prognosis as it helps the patients to accept their condition and also to receive the treatment with dignity. The health care providers also believed that knowing about prognosis not only helps patients to cope but also allows the patients to take treatment decisions for them. As a result, the quality of life of the patients also improves.

In the present study, the patients and caregivers talked of good and bad death while the health care providers talked of dignified death. He/she receives ample amount of end of life care and support during the terminal stage. Thus, three prominent concepts related to death are found in the present study. These include the concept of ‘good’, ‘bad’ and ‘dignified’ death.

In the present study, the patients described a ‘good death’ as one in which a patient is aware of cause of death with less symptom burden as well
as less financial and emotional burden on the family and one which takes place at home/native place with community participation. The caregivers defined 'good death' as one in which takes place at home without any kind of suffering and awareness about the nearing death and with social support of the family at end-of-life. It is also mentioned that fulfillment of last wish is very important. Thus, the term 'good death' is described by respondents and their caregivers as a death which is without any suffering and comes very easy to an individual. The caregivers in their contest for 'good death' focus on healing unto death so as to reduce the suffering of the patient.

The caregivers defined ‘bad death’ as which occurs due to diseases like cancer, AIDS, etc. in an institutional setting without the social support of the family and fulfillment of last wish, with suffering, symptom burden, and artificial support system.

The health care providers defined ‘dignified death’ as one in which patient has less symptom burden due to improved quality of life with an open communication between health care providers and patients and the patients play an important role in their end-of-life decision making. The term izzat (dignity) is very often used by health care providers in context of death. The death which is caused due to suffering, lack of care and symptomatic burden is described as 'undignified'.

Role of mass media

In order to discuss the role of mass media, the content analysis of two daily English newspapers, The Tribune and The Times of India, and various electronic media sources was done. The focus of the content analysis was to find out how cancer is portrayed in various print and electronic media especially cancer in areas under study which include Bathinda, Faridkot, and Sri Muktsar Sahib. The data collected from 669 newspaper articles was analysed by using manifest and latent themes. In manifest themes, four sub themes, breakthroughs in medical treatment of cancer, theories regarding causes and prevention of cancer, environmental causes of cancer and social aspects were analysed. The analysis of data clearly reveals that the political/economy frame is the most dominant frame of portrayal of cancer in
mass print media followed by lifestyle frame. This finding is not in line with the earlier studies of Clarke (2004), Clarke and Everest (2006) and Clarke and Ameron (2008). In lifestyle frame, the list of causes of cancer was large even, at times contradictory. The prevention possibilities were exclusively framed if they were entirely within the individual capabilities of individual action. In political/economy frame, environmental causes of cancer such as uranium, fertilisers, pesticides and arsenic in ground water were mentioned. In medical frame, a total of 43 articles mentioned about the scientific breakthroughs in diagnosis and treatment of cancer. In social frame, the aspects like stigma, quality of life, interpersonal relationships, gender roles and social roles were discussed. In latent themes, sub themes like use of military metaphors, use of scary statistics and use of personal testimonies were analysed. The liberal use of military metaphors like ‘battle’, ‘war’, ‘bullet’, ‘fight’, ‘conquer’, ‘killer’, ‘bomb’ was found. The findings were in favour of Sontag (1991) who stressed that metaphors are essentially military where cancer is concerned. Similar use of scary statistics was found and personal testimonies of 13 cancer survivors and patients were also found apart from celebrity testimony of actress Lisa Ray, cricketer Yuvraj Singh, politician Priya Dutt and cyclist Lance Armstrong. The study is a step ahead in the field of media anthropology and a qualitative analysis of the social construction and portrayal of cancer in mass print media.

It is clear from the analysis of coverage by electronic media especially, the portrayal of ‘cancer train’ that the coverage of cancer is stigmatising and the train that carries patients from Bathinda to Bikaner is repeatedly referred to as ‘cancer train’. On the other hands, through mention of personal testimonies, the social problems of patients suffering from cancer are also highlighted. These include financial problems, selling of farm land, suicides, inability to carry forward the treatment, problem of finding a suitable match for their children, etc.

**Suggestions**

Based on the primary data, the following suggestions are made for the patients suffering from cancer:
• There is an urgent need to create the awareness regarding the symptoms, causes and treatment of cancer as there are a number of misconceptions regarding cancer which are highly prevalent in the areas under study.

• There is a wide-spread stigma related to cancer which can only be dealt with if the health care providers, volunteers, NGOs, and other resource persons come together and create awareness that neither cancer is contagious nor does all types of cancers are hereditary. There is a need to create a space for patients suffering from cancer to live a dignified life.

• For the patients undergoing active treatment, counselling is very important to accept the disfigurements and bodily changes that occur as a result of treatment. Here, counsellor can play a very important role but he/she needs to be a person who is culturally sensitive and understands the various socio-cultural dimensions that affect a patient's experience of cancer. Apart from culturally-sensitive counselling, it is also important to give prosthetic options to help patients hide the bodily changes which are a matter of their concern.

• There is a need to involve the patients suffering from cancer in the decision-making process.

• There is a need to develop palliative care programmes in each and every hospital providing treatment for cancer.

• As most of the patients wish to die at home, development of home care services for patients suffering from cancer is very important as a part of palliative care programme. Ironically, the budget allocation and resources provided for the palliative care programme is very less which needs to be improved upon so as to provide better care to end-of-life patients and their families. A number of studies have also highlighted the need for development of home care services (Costantini et al., 1993; Conno et al., 1996; Yao et al., 2007).
• As patients try to search meaning behind their disease causation, some are able to see their illness as an opportunity or blessing. Others may see the illness as a punishment from God or a curse. By addressing spiritual and religious issues, health care providers can give patients the opportunity to reflect on and share their understanding of the illness or condition in the context of their life and beliefs.

• It is obvious that medical model of health care has failed to provide effective services in the cases of chronic diseases like cancer as medical procedures treat patient as the passive recipients of treatment and treat their “physical bodies” but the patient and their caregivers thinks in term of a “social bodies”. The understanding of these differences is very also important for effective health care system.

Based on the data collected from various secondary sources, the following suggestions are made to deal with the environmental problems in Punjab:

• Public campaign needs to be launched to make the public aware of cancer.

• No cancer survey has been carried out in Punjab after 2005 (Dainik Jagran, 2009). There is need to carry out an extensive survey to record the exact number of cancer cases so as to provide them adequate health care facilities.

• At the same time, but independently of the above, a systematic study of contamination of ground and surface water by agricultural (and industrial) activity as well as due to geological reasons needs to be undertaken at regular interval.

• Once reliable and independent data are available on cancers and on contamination of ground water in the Malwa belt, the question of the causes of cancers needs to be addressed.

• The Reverse Osmosis (RO) plants launched by the state government (for which residents pay 10 paisa for 1 litre of water) are effective in cleaning water but do not cover 100 per cent villages of Punjab. Thus, a full coverage by RO plants is required.

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• It would be more proper to take into account all the scientific studies made on burning of coal, fly ash, etc., before opting recklessly for thermal plants.

• It would be important to monitor pesticide use, to train farmers about controlled use of pesticides and proper disposal of pesticide tanks to fight the ills of pesticide overuse. Misra (2007) reported that a study was conducted by Punjab Agriculture University in Jalandhar and Moga to find out how aware farmers were about the implications of excessive use of pesticides. They found that only 28 per cent of them were unaware and 50 per cent did not follow the instructions written on pesticide containers.

All these findings highlight that despite considerable medical knowledge of risk factors and treatment modalities, possible socio-behavioural strategies for the prevention and control of cancer have not been adequately addressed, especially in the Indian patients. It can be concluded that understanding of socio-cultural dimensions and health care among patients suffering from cancer is very important to make the cancer treatment and palliative care more effective for the patients.

Above all, it is very important to understand the problems faced by patients suffering from cancer apart from focussing on what causes cancer. Too much emphasis on causes of cancer takes the focus away from those who are suffering. The studies should also focus on patients suffering from cancer as human beings, contributing members of society, part of a social network, as a part of family and not merely as subjects of scientific inquiry. The studies should involve a holistic approach combining medical/biological/physiological, psychological and socio-cultural factors in understanding the effects of cancer on patients and their families. This kind of approach may provide an effective health care system to the sufferers. It is important to work out policies for the easily accessible and affordable treatment for patients suffering from cancer within the state. Last but not the least anthropologists in general and medical anthropologists in particular can play a significant role because the anthropological studies are holistic and similarly suggestions made in the present study are also holistic.