Estimation of Cost of Tobacco Related Cancers

Report of an ICMR Task Force Study (1990-1996)

Estimation of Cost of Tobacco Related Cancers

Report of an ICMR Task Force Study (1990-1996)

Report by

G.K. Rath

Professor & Head,
Department of Radiation Oncology
Institute Rotary Cancer Hospital
All India Institute of Medical Sciences
Ansari Nagar, New Delhi 110029

Kishore Chaudhry

Deputy Director General
Indian Council of Medical Research
Ansari Nagar, New Delhi 110029

Indian Council of Medical Research
Ansari Nagar, New Delhi 110029
1999

Estimation of Cost of Tobacco Related Cancers
Highlights

A cohort of 195 patients of cancers of tobacco related sites, was followed up for a period of three years with no evidence of disease or till death, to determine their expenditure (medical as well as non-medical) on treatment of their disease; expenditure by the institution on their management; and loss of income due to their absenteeism or premature death. The study was a part of ICMR's task force project on cost of tobacco related diseases. The item wise expenditure made by the patients, their relatives/ friends, was recorded, under various headings, namely, consultation, investigations, treatment with different modalities, transport for the purpose, and any additional cost incurred for lodging and boarding. The information was also collected on actual loss of wages for treatment of the disease. Discounting at the rate of 10% per annum was used to convert all the expenditure by patients to 1990 level. The loss due to premature death was estimated based on the last income level and expected remaining age of the patient estimated from the standard life tables available for different areas of the country. The institutional cost was assessed from the records of the institution and the information on services used by the patient.

The patients in the cohort, spent an average of Rs. 17,965 (including loss of income due to absenteeism), with another Rs. 4,009 being contributed by the institution in the form of various services. The loss due to premature deaths amounted to Rs. 112,475. Thus, the total average cost due to a patient of tobacco related cancer diagnosed in 1990-91, was Rs. 134,449 (discounted at 1990 level).

Direct cost of a case of tobacco related cancer (by the patients and treating institution) amounted to Rs. 17,774 (Rs. 13,765 by the patient or their relatives, and Rs. 4009 by the treating institution). This category included expenditure on consultations, investigations, treatment, travel & lodging for treatment, and extra money spent for food during treatment time. Average indirect cost due to tobacco related cancers amounted to Rs. 116,675 (Rs. 4,120 due to absenteeism for treatment, and Rs. 112,475 due to loss of income due to premature death).

There was very little difference in expenditure by the patients on items related to direct medical treatment, according to different demographic attributes of the patients. The few exceptions where such differences were noted included a lower expenditure on chemotherapy among old patients; a higher expenditure by residents of Delhi on consultation and surgery; and higher expenses on radiotherapy on patients where the intent of treatment was curative. The direct non-medical expenditure (on travel, lodging, etc.) on treatment was influenced by personal characteristics of the patients, suggesting a variation in expenditure due to their paying capacities. Better occupation, greater distance of the hospital from the place of residence, younger age of the patient, and curative intent of treatment (probably influenced by longevity and higher degree of follow up) was associated with higher expenditure.

ICMR Project Advisory Committee

1. Dr. (Brig.) S.L. Chadha, Sita Ram Bhartiya Institute, New Delhi.
2. Dr. P.C. Gupta, Tata Institute of Fundamental Research, Mumbai.
3. Dr. S.K. Jain, Mool Chand Khairati Ram Hospital, New Delhi.
4. Dr. S. Krishnaswami, Christiam Medical College, Vellore.
5. Dr. S.P. Mukhopadhyay, Indian Public Health Association, Calcutta.
6. Dr. J.N. Pande, All India Institute of Medical Sciences, New Delhi.
7. Dr. K.S. Reddy, All India Institute of Medical Sciences, New Delhi.
8. Dr. L.D. Sanghvi, Ex. Epidemiologist, Cancer Research Institute, Mumbai.

Investigating Team

Department of Radiation Oncology, Institute Rotary Cancer Hospital All India Institute of Medical Sciences, New Delhi.

1. Dr. G.K. Rath, Professor & Head — Principal Investigator
2. Mr. Rajender Kumar, Sr. Physicist

Staff on the Project

1. Ms. Shukla Roy, Statistical Assistant (21.9.90 to 15.2.94)
2. Ms. Namita Srivastava, Statistical Assistant (18.2.94 to 31.1.96)
3. Mrs. Rachna Arora, Data Entry Operator (22.5.90 to 31.3.95)
4. Mr. Shiv Kumar, Field Investigator (2.5.90 to 30.12.93)
5. Mr. Raj Kamal Dubey, Field Investigator (2.5.90 to 31.3.95)
6. Ms. Padma Jolly, Social Worker (20.9.90 to 31.3.95)
7. Mr. Arvind Kumar, Field Worker (10.7.91 to 31.3.95)
8. Ms. Satyaveeri Devi, Field Investigator (30.12.93 to 31.1.96)
9. Ms. Urmil, Medico-Social Worker (18.5.90 to 1.1.91)
10. Ms. Priyadarshani, Medico-Social Worker (11.4.90 to 30.5.90)
11. Ms. Sudha Saxena, Social Worker (18.6.90 to 31.7.90)

Indian Council of Medical Research, New Delhi

1. Dr. Usha K. Luthra, Ex Additional Director General
2. Dr. C.R. Ramachandran, Ex Sr. Deputy Director General
3. Dr. Bela Shah, Sr. Deputy Director General
4. Dr. A.K. Prabhakar, Deputy Director General (Sr. Grade)
5. Dr. Kishore Chaudhry, Deputy Director General

Contents

Introduction and Review of Literature

Tobacco is responsible for an estimated 3 million annual deaths in the world during early 1990s, and with the current consumption trends it is expected to rise to 10 million annual deaths during the 2020s[1]. About 70% of these deaths are expected to occur in developing countries. Epidemiological studies and animal experiments have proved beyond doubt that tobacco is a major health hazard. Well conducted studies since 1950s on health hazards of tobacco, forced various governments to consider tobacco control activities. The most popular corrective action by the governments has been anti-tobacco community education. Other steps taken by some governments for tobacco control have been, ban on advertisements of tobacco products, tobacco free places for protection of non-smokers, increase in price of tobacco, etc. However, serious action to reduce the availability of tobacco has been avoided by all governments[2]. Not only does the production of tobacco continue unabated, but steps are also being taken for increase in production and productivity of tobacco. The most important reason for these contradictory actions are economic, i.e. tobacco's contribution to revenue and dependence of a large number of persons on its production, processing and sale.

The fear of loss of revenue is so deep rooted that even a country like USA is using taxpayers' money to subsidize the tobacco industry[3]. The annual subsidy for tobacco production by European Community was to the tune of 1,300 million ecu (equivalent to US $ 1,500 million). This amounts to 2,500 ecu (US $ 3,100) per minute, the annual amount being more than the total amount spent on tobacco subsidies by the US in the last 50 years[4]. The situation in developing countries is also not different. In India, the objectives of health departments for control of tobacco are in absolute contrast with the goals of agriculture agencies, which aim at promotion of tobacco production and promotion of tobacco marketing[5]. The revenue generated by tobacco and dependence of 5 to 7 million persons on tobacco is often considered a sufficient reason by the government to defer serious thought about tobacco's eradication.

Most health advocates believe that tobacco, instead of adding to GNP, is a drain on its resources. The indications about tobacco being a loss to a country's economy emerged due to the facts that tobacco induces more deaths before retirement age among users, compared to non-users; non-fatal tobacco illnesses create disability; tobacco users have increased absenteeism; and tobacco generates extra demand for medical care[6]. The production of

tobacco in a country is at the expense of reduced food production, and results in adverse economic and ecological effects, due to use of fuel for curing of tobacco.

Many developed countries have worked on the losses caused by smoking, because smoking is the predominant habit of tobacco use in these countries. Most studies have compared direct costs of tobacco use, which relate to payments (by patients, their relatives/ friends, government) for diagnosis and treatment of tobacco related diseases. A few studies have considered the indirect costs (loss of productivity, absenteeism, premature deaths, ecological effects, fires due to smoking, etc.) of tobacco while undertaking an elaborate exercise. A comparison of average lifetime medical costs in USA showed that costs among smokers exceed those of non-smokers by more than US $ 60,000[7]. The claims from a large insurance company in USA showed more admissions, longer average length of stay, higher average outpatient payment ($122 vs $75) and higher average insured payment ($1145 vs $762)[8]. The total financial cost of smoking for USA during the year 1990 was estimated at US $2.59 per pack of cigarette[9].

One of the earliest comparisons on economics costs and benefits of tobacco, in U.K., showed that an anticipated 20% reduction in smoking from 1973 to 1981 may result in an estimated £42 million increment to GNP, at 1973 values[10]. Many other studies have also concluded that tobacco causes more losses than benefits to the society[11-18]. An analysis of the economic consequences of smoking in Egypt in 1981/82, showed that the losses due to tobacco to the society amounted to 91% of the taxes raised during the same year[19]. Substantial losses have also been reported from other studies on costs due to tobacco[20-21].

No study on economics of tobacco in India has been carried out. However, many health activists felt that even in India, tobacco's costs outweigh its contribution to the nation. In order to generate the data on health care costs of the patients of tobacco related diseases, the Indian Council of Medical Research, New Delhi, initiated a project on estimation of cost of management of certain major tobacco related diseases, namely, cancers, coronary artery diseases, and chronic obstructive lung diseases. The present study was a part of this broad project. The data from this study is expected to help in computation of economics of tobacco in India.

The study was a part of ICMR's multicentric task force project on cost of tobacco related diseases. The diseases considered under the project included tobacco related cancers, coronary heart disease and chronic obstructive lung diseases. The estimation of cost of tobacco related cancers was carried out at the Institute Rotary Cancer Hospital (IRCH), All India Institute of Medical Sciences, New Delhi. The project component related to cost of coronary heart disease and chronic obstructive lung diseases was carried out at the Postgraduate Institute of Medical Education and Research, Chandigarh. The present report relates to the component on tobacco related cancers.

Objectives

1. To estimate the average cost of diagnosis and treatment of tobacco related cancers by the patients and their relatives/friends.

2. To determine variables which influence the expenditure by patients on treatment of their disease.

3. To estimate the average cost of diagnosis and treatment or tobacco related cancers by the institution.

4. To estimate the loss of productivity due to absenteeism as a result of the illness, for the patients and their relatives/ friends.

5. To estimate the loss of productivity due to death and disability due to tobacco related cancers.

Materials and Methods

Study Design

A cohort approach was adopted for assessment of the cost involved in management of tobacco related cancers. The patients were followed up for three years after registration at the hospital or till death, whichever occurred earlier. The data collected from patients included direct as well as indirect costs incurred by patients and their relatives. The institutional cost was assessed from the records of the institution.

Expenditure by patients and their relatives/ friends on treatment of tobacco related cancers

A cohort of 304 patients with cancers of tobacco related sites was established from the new patients reporting from October 1990 to September 1991, at Institute Rotary Cancer Hospital (IRCH), which is a specialized cancer hospital of All India Institute of Medical Sciences, New Delhi. The cohort included cases of cancers of the oral cavity (including gums), pharynx (excluding nasopharynx), larynx, and lungs. At the time of first contact, the patients were enquired about demographic details, the duration of the illness, the health agencies contacted by them for diagnosis and treatment of their illness (specific or non-specific). The item wise expenditure made by the patients, their relatives/ friends, was recorded, under various headings, namely, consultation, investigations, treatment with different modalities, travel for the purpose, and any additional cost incurred for lodging and boarding. The information was also collected on any loss of wages for treatment of the disease, or if the disease resulted in loss of job. Specially trained medico-social workers collected the information on a pre-tested proforma.

Efforts were made to collect data on all items which could have a bearing on costs related to cancers associated with tobacco use. Intangible costs caused by the disease like, pain, suffering, grief, social & emotional upsets, and annoyance & irritation among passive smokers, are important aspects for the patients as well as their relatives. However, due to inherent difficulties in their quantification, these components were not included in this study. Tertiary costs of tobacco use, like effect of soil erosion due to deforestation caused by the need for fuel for tobacco curing, costs for additional fire fighting capabilities because of fires caused by smoking, etc. are not directly related to tobacco related cancers, and were not considered in this study.

The patients were followed up till death or till a period of three years with no evidence of disease after enrollment in the study. The information on expenditure since the last contact, related to their illness was recorded by medico-social workers, at each of the follow up visit to the hospital, which was generally expected every 3 months. In case, the patient did not report at the time of his expected visit to the hospital, a letter (accompanied by a pre-paid postcard) was sent to him with a request to visit the hospital for follow up. If a reply was received from the patients' relatives indicating the patient's death or if the patient did not report, a visit to the patient's house was planned. For logistic reasons, house visits were limited to 257 patients living in Delhi and neighbouring areas (approximately 250 to 300 Km radius). The farthest areas covered for this purpose included Almora, Pithoragarh, Dehradun, Agra, Karnal, etc. The information on expenditure on the cost of treatment of tobacco related cancers, was elicited during the home visits. The information was collected from the patient, except in case of bad condition of the patient or the last enquiry after the patient's death. In the later circumstances, the information was collected from the patient's relatives. The information generally got collected after every three to six months. Leave used by the patient for treatment was not considered as loss of income, and this cost was collected only if the patient had actually lost his wages or income.

All the expenses or losses by the patients incurred during the study duration (including for the period before reporting to IRCH, which often was for diagnosis and non-specific treatment), were combined to provide the total expenses by the patients and their relatives/ friends. The initial information on expenditure by most patients was for the year 1990 or 1991. The procedure of discounting was adopted for the expenditure incurred by the patients (or their relatives/ friends) during later years. The rate of discounting used was 10%, because the annual increase in consumer price index in the country varied around 10%, during the period of study. However, the consumer price index itself was not used, because the items used for formulation of Indian consumer price index are quite different than the items under consideration in this study. The expenditure given in the report pertain to the year 1990. The total expenditure for the patients is from starting from the illness till death or till three years without evidence of disease after enrollment in the study, in case of surviving patients.

The information sought from the patients was on recall basis. The medico-social workers engaged in the study had information on the prevalent charges for various services provided to tobacco related cancers by the private hospital in the city. For every expenditure, the workers

asked about the place where the services were availed and thus checked if the expenses provided by the patients seemed logical. For example, in consideration of expenses on travel, the distance from the hospital and the mode of travel were guiding factors, the place of taking food helped in assessing the additional expenses on food, etc. In case of any apparent deviations in expenses, the patients were further probed to assess the reasons for variations.

The patients' records at the IRCH were frequently checked by the investigators to know the associated morbidities of the patients. The workers were aware of these morbidities and possibilities of expenses for these morbidiites. efforts were made to exclude the costs incurred on management of co-morbidities or any other chance morbidity. In case of any doubt about the action of any drug, the attending physician in the hospital were contacted to assess the facts. However, expenses on any complication arising due to the tobacco related cancer or as a complication of its treatment, were included in the study.

Expenditure by the Institution

Expenditure by various departments was determined by the investigations rather than the diagnosis of the patients. Thus, the data collection included, identification of various investigations and service activities undergone by the patients; the determination of unit cost of various investigations and other services needed by patients of tobacco related cancers; the charges paid by the patients for undertaking the investigations, etc.; and calculation of the excess expenses incurred by the institution in treating these patients. The details of investigations & other hospital services, and charges paid by them, were collected from the patients during interview.

Data was collected from various concerned departments of hospital, on the staff and the equipment available with them to perform the functions needed for treatment and investigations of tobacco related cancer cases. The reference institution being a teaching institution, the needed equipment (for example the number of microscopes in the department of pathology) and sometimes staff was in excess of the requirements for the specific work. Based on the quantum of investigations carried out, this number was reduced to an optimum level. For example the number of microscopes required was determined by assuming that one pathologist would be able to examine about 16 histo-pathology slides per day. The staff working on their postgraduate studies was not considered in the calculations. Thus, the quantum of expenditure is likely to be applicable for any set up in the country. The cost of the equipment was expected

to increase every year according to inflation. Thus, the annual cost of the equipment was calculated by dividing the purchase value by the expected life span of the equipment.

The data was collected regarding the salaries of the staff, the proportion of time spent for carrying out that investigation/ service, the purchase value & annual maintenance of equipment, and cost of reagents/ consumables used for undertaking the investigation/ services. Cost of the general maintenance of the hospital was available for the entire institution. The unit cost for general maintenance was obtained by dividing it by the total number of patients served by the institution. The cost of building was not included in the calculation, as the services are expected to have remained even in the absence of tobacco related cancers (Even though one may argue that the size of the building could have been smaller, this aspect was not included in the calculations). The expenditure on OPD consultation was calculated by the amount of time (and thus proportionate salary) spent by the staff in OPD, and dividing this salary by the total number of OPD consultations. It was assumed that the time spent on consultation by the patients of tobacco related sites was similar to the time spent on consultation by other cancers or non-cancer patients. In case of any estimation, the lower expected value was used for calculation, thus, sticking to the principle of underestimation (in case of doubt) followed through out the study. As some of the services in the hospital are paid, the amount collected from the patients was subtracted from the institutional expenditure.

The data collected on institutional expenses for the year 1990-91 was destroyed by a virus in the hard disk of the computer. The data was subsequently collected for the year 1994-95. However comparison of the institutional expenses for radiotherapy for the years 1990-91 and 1994-95, showed that the expenses varied due to variations in the number of patients treated even with almost similar facilities. The comparison of expenses for radiotherapy (Rs. 7,111 for 1990-91, and Rs. 6,296 for 1994-95) indicated that the principle of discounting may not be applicable for this aspect. Thus, the exact estimated cost was used in the final calculation. The unit cost incurred by the institution on treatment of tobacco related cancers was applied to the institutional facilities availed by the patients in the study to obtain the institutional loss for treatment of the cases in the study cohort.

Loss due to Premature Death

The age of the patients of tobacco related cancers was compared with the life expectancy of individuals in India (prepared by the Registrar General of India). The difference between the

actual age at death and expectation of life at that age was used to compute the salary loss, savings of pension to the government or the organization (in case the patient was entitled to pension), loss of family pension. The following methodology was used to estimate the cost to the society due to premature death of a case of tobacco related cancer.

Cost = (Salary from age at death till productive age) +
(family pension till the age of life expectancy) -
(pension from age of 58 years till the age of life expectancy)

The retirement age in India is generally 58 years, and this was considered as the productive age for those in job, whereas for those engaged in business the remaining life expectancy was considered as the productive age. As the age of the spouse of the deceased person was not collected, the age of the deceased was used for calculation of the family pension. In India, the incidence of tobacco related cancers is higher among men than women; a higher proportion of men are working; and husbands are generally older than their wives. These facts suggest that there may be an underestimation of the cost of tobacco due to premature death of cases of tobacco related cancers.

The salary and pensions in India increase proportionate to inflation over the years. The last salary or pension level was taken into consideration for calculating the losses due to premature death. Since the data for future years (which would have required discounting to later years) was to be discounted to bring it to the base level (1990), the procedure of discounting on this aspect was not necessary.

Analysis

The data was analyzed using the computer package EPI INFO. The mean expenditure (or loss) and range of expenditure by patients and their relatives/ friends was calculated according to various item heads. Such expenditure (or loss) was measured according to various demographic or disease characteristics. The differences in expenditures (or losses) were tested for statistical significance by Kruskal Wallis test, as the distribution of the expenditure was not expected (confirmed for most of the items) to follow a normal distribution. The Kruskal Wallis test was performed on raw data by the package EPI INFO.

The utilization of the data may differ depending upon the requirements. In case the data is used for the purpose of calculation of total burden for the country or an area, the average expenditure (or loss) by patients with all the patients in denominator, would be relevant. This expenditure has been referred to as "mean" expenditure in the report. However, if the data is used to calculate the notional cost of treatment considering that all the patients are likely to receive treatment as per the current management protocols, the cost per patient with only the patients incurring the expenditure as denominator, would be required. This expenditure has been referred to as the "unit" expenditure in the report. The unit expenditure would be helpful in projecting the cost in different setup or at different time period.

Observations

Out of the planned 257 cases, follow up could be completed in 195 (76%) cases, i.e. they were followed up till death or three years without evidence of disease. The information on remaining patients was not possible due to wrong or incomplete addresses, assessed after a visit to the address provided as well to the nearest post office. Out of these 195 cases, 71 (36.4%) cases were surviving at the end of three years. The sitewise distribution of the 47 cases removed from follow up due to logistic reasons, 62 dropouts, 195 followed up cases, and the total patients registered at IRCH during the same year is at Table A1. The proportion of cases of lung cancer among the total patients that could be followed up was lower than the proportion of lung cancer cases registered at IRCH during the same period.

Expenditure by patients and their relatives/friends

Tables B1 to B15 present the mean expenditure and range of expenditure (with all patients considered in denominator) by patients in the study cohort. Tables C1 to C15 present the unit expenditure and range in various expenditure categories (mean expenditure with denominator as the patients incurring expenses in that expenditure category). The expenditure or costs as presented in these tables have been discounted to 1990 prices, with an annual discounting rate of 10%. The expenditure/ cost is for the period before reporting to the hospital and for a period of three years after enrollment or till death if the patient expired earlier.

The analysis of data from 195 patients shows that the patients spent an average of Rs. 17,965 (discounted to 1990 prices) for management of their illness (Table B1). The expenses included direct medical expenditure for treatment (consultation, investigation, and surgery, drugs, radiotherapy, hospitalization), direct non-medical expenses for treatment (travel to various health facilities, additional money spent for lodging & boarding), and indirect costs (loss of income) by the patients. The details of expenses incurred by the patients' relatives/friends was not ascertained, and has been included in indirect expenses for treatment (mean Rs. 746.1). The mean direct medical expenses by the patients for treatment amounted to Rs. 6249.7; the mean direct non-medical expenses for treatment were Rs. 7515.7; whereas the mean indirect cost due to loss of income due to illness was Rs. 4199.5. There was a tremendous variation in the expenditure. This was due not only to the personal characteristics, but also due to availability of certain services at no cost or subsidized cost, and due to the fact that treatment was not always availed by the patients.

Consultation and investigations formed 30.8% of the total direct medical expenses. Most of the patients were treated on ambulatory basis. Hospitalization was more often associated with surgical management and accounted for 8.3% of direct medical expenses. Most of the direct non-medical expenditure for the treatment was incurred on extra expenses for food (46.6%) and travel (36.8%). The expenses on lodging were comparatively small. This could be due to the fact that the patients from the city of Delhi did not spend on this item, and the patients from outside quite often stayed with some relative or friend.

As all the patients had incurred some expenditure or other, the total unit expenditure was equal to the total mean expenditure (Table C1). Consideration of the expenditure according to treatment modality revealed that the patients had spent the maximum for chemotherapeutic drugs (unit expenditure Rs. 9254.6), followed by surgery (unit cost Rs. 5858.4) and radiotherapy (unit cost Rs. 953.2). This is due to availability of radiotherapy and surgical facilities at no or subsidized cost. The unit expenditure of radiotherapy was very low due to the fact that most of the patients underwent radiotherapy at the study institute (which was not the case for other modalities of treatment), where the charges were a subsidized Rs. 750 for the entire course.

Expenditure in different age groups: The mean expenditure according to age was lower in persons aged 60 years or more. The difference was more pronounced among persons above 70 years of age. The difference in expenditure were however, statistically significant for total expenditure, chemotherapy, loss of income, extra expenditure on food and travel. The expenditure by relatives/ friends was higher for older patients, though the differences were not significant statistically (Table B2).

The statistical significance for chemotherapy and loss of income was lost if the unit expense for these items was considered (Table C2). Consideration of unit price showed that only the total expenditure and the expenses on extra food and travel were significantly different among persons above the age of 70 years. However, the sub-total of expenses other than food and travel, also showed a significantly lower expenditure among patients above 60 years of age ($p<0.002$). Thus, the data suggests that intensity of treatment (and thus, expenditure) was lower among older patients.

Expenditure according to Sex: The mean expenditure among women was significantly different only for loss of income due to the disease (Table B3). However, the statistical significance was lost when unit cost for this item was considered (Table C3), suggesting that the differences were due to a higher proportion of women belonging to category "house wife". Thus, sex does not influence expenditure for treatment.

Religion: Religion did not seem to influence the expenditure for treatment, whether considered as mean expenditure (Table B4) or as unit cost (Table C4).

Occupation: The mean as well as unit expenditure according to occupation was significantly different for total expenditure, extra food and travel (Tables B5 and C5), and was brought about mainly because of lower expenses among labourers. The differences in mean loss of income was also observed due to zero loss among housewives (Table B5), and comparison of expenses among the other occupation categories did not show any significant differences ($p>0.08$).

Education: The expenditure on many items seemed to be higher among educated, especially among educated up to college or above (Table B6 and Table C6). However, the differences were statistically significant only for travel expenses, whether considered as mean or unit expenditure. It was further observed that the occupation of patients in different educational groups differed significantly, with educated persons engaged in jobs, and illiterate patients were either labourers or housewife. A stratified analysis revealed that the mean expenditure on travel in different occupational categories did not differ significantly according to education. Thus, the data suggests that the differences observed on univariate analysis of expenditure on travel according to education, was due to confounding effect of occupation.

Tobacco Use: Differences were observed in mean loss of income and expenses on lodging for treatment in different tobacco use categories (table B7). However, unit cost among different tobacco use categories was not statistically different (Table C7), suggesting that the differences in mean expenditure were probably due to the confounding effect of other variables.

Place of Residence: The mean expenditure according to place of residence revealed that patients from outside Delhi spent more on food and lodging, but less on travel (Table B8). However, consideration in terms of unit expenditure showed significantly higher expenditure by

residents of Delhi on consultation, surgery and travel (Table C8). The extra expenses for food was higher for patients from outside Delhi.

Distance of Residence from Study Institution: The mean as well as unit expenditure for lodging, travel and total expenses, were significantly higher among patients coming for treatment from more than 500 Km. away (Tables B9 and C9). The mean expenditure by relatives increased with increase in distance of patients' residence from the study hospital both for Delhi as well as outside Delhi patients living within a distance of 500 Km (Table B9). However, the significance was lost when unit expenses by relatives were considered (Table C9).

A stratified analysis of the mean expenditure according to distance and mode of travel, revealed that the mean expenditure differed for patients traveling by train as well as according to distance. The data suggests that the distance of residence from the place of treatment has an independent effect on determination of expenditure on travel.

Similar stratified analysis of the mean expenditure on lodging in different occupational categories, did not reveal any significant difference in expenditure according to distance from the treating hospital, suggesting that the difference observed were due to the confounding effect of occupation.

Mode of Travel: The mean expenditure was high for those who could afford to travel by car or by air (Table B10), with significantly higher expenditure for consultation, food, and travel. Lower expenses were incurred by those traveling by bus or scooter/rickshaw as the costliest mode of travel. Unit cost consideration also showed similar results (Table C10), with differing expenses for investigations, relatives' expenses, food, lodging, travel, and total expenditure.

Survival Status: The surviving patients incurred a higher mean as well as unit expenditure on travel and extra food (Tables B11 and C11). Consideration of unit cost revealed a significantly higher loss of income for the expired patients as compared to those who survived. However, the loss of income within different occupational categories was not significantly different according to survival status, thus, suggesting it to be a function of occupation rather than survival status.

Site of the Disease: No significant differences in mean expenditure (Table B12) were observed for different sites of tobacco related cancers. Unit cost of relatives' expenses was higher for patients of cancer of larynx, while patients of pharyngeal cancer spent significantly higher money on lodging (Table C12), for which no specific explanation could be identified.

Stage of the Disease: The mean as well as unit expenditure was observed to be higher for the patients whose stage of disease could not be determined as they were already treated elsewhere (Tables B13 and C13). This was probably because of their contact with a larger number of hospitals/ doctors for treatment. Although difference were observed in mean total expenditure, for food and hospitalization, they did not show any trend with the disease stage. The difference in unit cost were observed for total cost and for food.

Intent of Treatment: Mean expenses were higher for patients receiving curative treatment, for radiotherapy, extra food, lodging, travel and total expenditure (Table B14). The difference in indirect expenses could be due to higher longevity and thus, greater follow up. Consideration of unit expenditure showed higher expenditure for surviving patients for loss of income, food, travel, and total expenditure (Table C14).

Expenditure before reaching Cancer Hospital: Patients in the cohort had spent an average of Rs. 1,978 (11% of the total expenditure) on diagnosis and treatment of their disease, before reaching the specialized cancer hospital (Table B15). Most of this expenditure was on consultation, and loss of income due to time taken off for this purpose. Only 3 patients had undergone specific treatment (2 radiotherapy and 1 chemotherapy) before reporting to cancer hospital (Table C15). The expenditure incurred before reporting to the hospital has also been included in the total costs reported in earlier tables.

Institutional Expenses on Treatment of Tobacco Related Cancers

The unit cost of investigations and other services generally required by the patients of tobacco related diseases, as well as the loss incurred by various departments of the institution in carrying out these functions is summarised in Table D1, while the details are at Tables D2 to D13. Radiotherapy services followed by surgery, incurred the highest unit cost as well as unit institutional loss. These costs have been calculated based on services provided to all cases of tobacco related cancers irrespective of their year of diagnosis and thus, represent the average annual loss to the institution for treatment of prevalent cases of tobacco related cancers.

The data on unit loss to the institution for treating tobacco related cancers and the information on institutional services utilised by the study cohort, was used to calculate the average loss to the institution for treating the patients on the study cohort. The excess expenses incurred for the patients of tobacco related cancers in the cohort are presented in the Table D14. The institution incurred an average expense of Rs. 4,009 on each of the patient of tobacco related cancers in the cohort (an average of Rs. 583 on investigations, and Rs. 3,426 on management). The maximum average expenditure on investigations was for biopsy followed by X-rays. The highest expenditure in management of these cases was for radiotherapy.

Loss due to Premature Death of Patients of Tobacco Related Cancers

A total of 63.6% (124 out of 195) of patients in the study cohort, expired during the study period. The loss of salary (and thus reduction in GNP) was observed for 81 patients (65.3%). The patients with pensionable job formed 31.5% (39 out of 124) of the expired patients. The average loss of salary, the savings to the government for pensions due to premature death, and government's (or the organization's) liability for family pension, have been presented as an average for all the expired patients, as a unit cost (for those incurring the loss or benefit), and as an average for the whole cohort (n=195), to facilitate interpretation by various workers (Table E1). The mean loss due to premature death in the entire cohort was Rs. 112,475.

Discussion

Follow up of 195 patients of tobacco related cancers was carried out for a period of three years or till death, to determine, (i) the expenses incurred by them or their relatives/ friends on treatment of their disease, from the onset of the disease till a period of three years after enrollment in the study; (ii) loss of income due to time spent on treatment; (iii) loss to GNP due to premature death of certain patients; and (iv) institutional expenditure on management of these patients. Data was also collected from the various connected departments of the institution where the study was carried out, to determine the expenses incurred by them on management of these patients. The determination of expenses by the patients as well as the institution was necessary in view of the current health care services pattern in India, wherein free services are available to patients from state run hospitals.

The study reveals that there was an average loss of Rs. 134,449 to the society on account of treatment of each patient of tobacco related cancers in the cohort, which were diagnosed during 1990-91. Most of this loss was due to their premature death (83.7%), which resulted in loss to the GNP. Other indirect loss was in the form of loss of income due to time spent on treatment of their illness (an average of Rs. 4,200 per patient). The direct expenses incurred on the patients amounted to an average of Rs. 17,774. These expenses were incurred by the patients, their relatives/ friends, and the government institution connected with their management. Of the direct expenditure on treatment, an average of Rs. 13,765 (77.4%) was spent by the patient or their relatives and an average of Rs. 4009 by the government institution. The break-up of direct expenditure showed that a mean sum of Rs. 10,258.6 was spent on items directly related for treatment, i.e. direct medical expenditure (Rs. 6249.7 by the patient and Rs. 4008.9 by the institution), whereas Rs. 7,515.4 were spent on non-medical items related to treatment of the illness i.e. direct non-medical expenses (expenditure by relatives, traveling for treatment, money spent on lodging and extra money spent on food during their visits to health care agencies).

Treatment schedules of patients of tobacco related cancers remain the same irrespective of their tobacco habit status. This fact was also noted while comparing the expenditure on treatment by tobacco users and non-users. As the aetiological aspects of the tobacco related cancers was not under consideration in this study, the comparison of expenditure according to different tobacco habit types was not considered.

The expenditure on treatment by the patient indicated very little differences in expenses on items directly related to medical treatment. The few exceptions where such differences were noted included a lower expenditure on chemotherapy among old patients; a higher expenditure by residents of Delhi on consultation and surgery; and higher expenses on radiotherapy on patients where the intent of treatment was curative. Since, the role of chemotherapy in management of tobacco related cancer sites is not fully established, a decision by the relatives of old patients for declining chemotherapy seems to be logical in India's social circumstances. Excess expenditure by Delhi residents on consultation and surgery may probably have been influenced by the availability of services (government and private) near the place of residence. Excess expenditure on radiotherapy by patients treated with curative intent is also understandable, as many patients in higher stage of illness may not opt for radiotherapy. Generally, it seems that the expenditure on direct treatment has been similar and was not influenced by the personal characteristics indicating patients' paying capabilities.

The direct non-medical expenditure on treatment on the other hand seemed to be influenced by personal characteristics of the patients', suggesting a variation in expenditure due to their paying capacities. A higher expenditure appeared to be influenced by occupation, higher distance of the hospital from their place of residence, younger age of the patient, and curative intent of treatment. The differences according to curative intent of treatment seems to be a function of higher longevity and thus, a need for higher follow up. In a mid-term analysis, it was observed that surviving patients incurred less expenditure than those who expired early[22]. This difference was lost by the end of the study, probably due to higher follow up period of surviving patients and thus, higher expenditure. Differences observed in expenditure according to sex and education seemed to be due to confounding effect of occupation. No association in expenditure was observed according to different religions, tobacco habit, survival status, site & stage of the disease.

The existing facilities for treatment of cancers in India, especially with regard to radiotherapy, force the patients to travel long distance. The distance from the treating hospital (especially distance of more than 500 Km) had a significant effect on direct non-medical expenditure by the patients of tobacco related cancers. The initially selected cohort included 47 cases residing far away from Delhi (more than 300 Km) and their active follow up was difficult due to logistic reasons. Since basic characteristics of these patients did not differ significantly

from the others, it was decided not to follow these patients up. However, the patients who visited the hospital as per doctors' advice were included in the analysis. Due to non-inclusion of distant cases in the study, the overall cost is expected to be an under-estimation of actual cost of management. The data also suggests an increase in expenditure due to prolonged follow up of surviving patients. Thus, establishment of nearby treatment facilities is likely to help in reduction of direct non-medical expenses by the patients.

As a rule the study decided to underestimate any expenditure if there was a need for estimation of certain expenditure. For example, while assessing the average life of equipment used in the host institution, higher side of the expected life was used. Consideration of wife's age as equal to the husband's age (which is generally not the case in India) for calculation of loss due to family pension, the use of first recorded salary as the last salary of the patient before death, are some other examples of underestimation. It was assumed that the contribution of every patient to GNP was equivalent to the salary earned by them. However, this may be an underestimation while calculating the loss to the society due to pre-mature death, since the value of contribution of a person's work to GNP is generally more than the salary. The expenditure on the treatment has been considered only for a period of three years. However, for all the cases of cancer a follow up for at least five years is suggested, before a patient can be considered as cured.

One may consider a recall period of 3 to 6 months to be long, but it was not possible to carry out more frequent interviews due to logistic reasons. Some recall bias may be likely for certain expenditure categories like additional expenses on food, travel, lodging, etc., but these are likely towards understatement rather than overstatement. Thus, any bias due to this factor would again conform to the principle of underestimation of costs. Thus, the estimates can safely be considered as the minimum expenditure (or loss to the society) for treatment of tobacco related cancers.

It may be argued that every expenditure or activity would add to the GNP. However, society always considers certain items as desirable and others as undesirable. Therefore, even though items like expenditure on travel adds to GNP, this activity for the purpose of treatment of tobacco related cancers has been considered as an undesirable expenditure, and thus a wastage or loss to the nation.

While calculating the institutional expenses, it was realized that the concerned institution was a teaching institute and thus incurred more routine expenses than a general hospital. However, during calculation only the necessary equipment and staff for the purpose was considered, and thus, the results are applicable for the entire country.

The study presents the expenditure on a cohort of patients of tobacco related cancer sites, diagnosed at a specialized cancer hospital in Delhi during 1990-91. All the costs and expenditure (which were incurred during 1990 to 1995) were discounted to 1990 prices using 10% rate of discounting. However, it was observed from actual data that discounting was not practical for institutional expenses. Thus, discounting was limited only to the expenses incurred by the patients. All other costs and expenses, whether by the institution or the loss of income, etc., were considered as such, irrespective of the year in which they were incurred.

The results present the expenditure as per the current management practices of treatment of these cancers. Thus, the expenditure is likely to change in future due to changes in paying capacity of patients, the management practices by the clinicians. The policy of the hospitals for treatment influences whether the patient or government bears the cost. In the present cohort, most of the cost for chemotherapy was borne by the patients, whereas radiotherapy cost was mainly borne by the institute. It is of importance that the mean expenditure may change if all the patients were treated with curative intent. In the study cohort, a significantly higher proportion of patients presenting in stage IV were treated with palliative intent.

Only about 7% of the cases in the cohort were diagnosed at stage 1, whereas 75% cases were in stage 3 or 4. This is quite similar to the national picture, wherein most of cases are detected at late stages. Differences were observed in site distribution of the sample, especially in terms of lower number for lung cancer. However, the data does not indicate any significant differences in expenditure according to site. Since the cost of lung cancer cases was higher than most other cancer sites, correction for low proportion of lung cancer cases, would only result in higher cost for the overall sample. Due to limited availability of facilities for treatment of cancer cases at smaller hospitals, most of the cases get their treatment at medical colleges/ major hospitals, as happened with the cohort under study. Thus, the cost estimates as observed in the study may be applicable for estimation of the cost of tobacco related cancers at national level, as the minimum cost estimates.

Despite certain limitations in generalization of the cost at national level, the present data are the only reliable data available on the subject in the country and should provide a fairly good estimation of cost due to tobacco related cancers. It is thus, useful as a guide to the loss due to tobacco related cancers at national level. The number of incident cases of cancers attributable to their tobacco habits has been estimated as 108,000 for the entire country for the year 1987[23]. If the incident cases of cancers due to tobacco is considered to be the same for the year 1990, the loss to the nation due to treatment of these cases would amount to approximately Rs. 14.52 billion for the year 1990.

Acknowledgements

We sincerely thank Indian Council of Medical Research for sponsoring the study. This project was conceived as a truly collaborative effort between various departments of IRCH, AIIMS, New Delhi, concerned with management of cancer patients and we sincerely acknowledge their contribution and for their continued support for this effort. The useful suggestions of Dr. Tessa Tan Torres and Dr. P.S.S. Sundar Rao on the draft final report are also acknowledged.

References

1. Peto R. and Lopez A.D. Worldwide mortality from current smoking pattern. In: The Global War - Proceedings of the seventh World Conference on Tobacco and Health. Eds. B. Durston and K. Jamrozik. Health Department of Western Australia, Perth, 1990; p66-8.

2. Chaudhry K. Economics of tobacco. ICMR Bulletin, May 1985; 25 (5): 55-60.

3. Warner KE. The tobacco subsidy: does it matter? Journal of the National Cancer Institute, 1988; 80: 81-3.

4. Joossens L and Raw M. Tobacco and the European common agriculture policy. Br J Addict, 1991; 86: 1191.

5. Chaudhry K. Control or promotion - the paradox. Tobacco Control (SAARC Edition), 1994; 1: 41-6.

6. WHO. Controlling the smoking epidemic. Geneva, WHO Technical report Series no. 636, 1979.

7. U.S. Department of Health and Human Services. Smoking and Health in the Americas. A 1992 report of the U.S. Surgeon General, in collaboration with the Pan American Health Organization. Atlanta, Ga, U.S. Department of Health and Human Services, Public Health Services, Centre for Disease Control and prevention, Office on Smoking and Health, 1992; DHHS Publication No. (CDC) 92-8421.

8. Penner M and Penner S. Excess insured health care costs from tobacco using employees in a large group plan. Journal of Occupational Medicine, 1990; 32: 521-3.

9. Smoking related deaths and financial costs: estimates for 1990. Rev. ed. Washington D.C.: Office of Technology Assessment, In: MacKenzie TD, Bartecchi CE, and Schrier RW. The human costs of tobacco use (part II). The New England Journal of Medicine, 1994; 330: 975-80.

10. Smoking and Health: A study of the effects of a reduction in cigarette smoking on mortality and morbidity rates, on health care and social security expenditure and on productive potential. London, Her Majesty's Stationery Office, 1973, quoted in Controlling the Smoking Epidemic, WHO Technical Report Series no 636, WHO Geneva, 1979.

11. Forbes WM and Thomson ME. Estimating economic benefits and losses associated with cigarette smoking. Canadian Journal of Public Health, 1983; 74: 183-90.

12. Forbes WM and Thomson ME. Estimating the health care costs of smokers. J Canadian Medical Association, 1982; 127: 831-2.

13. Atkinson AB and Meade TW. Methods and preliminary findings in assessing the economic and health services consequences of smoking, with particular reference to lung cancer. J R Stat Soc, 1974; 137: 297-612.

14. Atkinson AB and Townsend JL. Economic aspects of reduced reduced smoking. Lancet, 1977; 2: 492-4.

15. Garner DW. Cigarette and law reform. Emory Law Journal, 1977; 27: 269-335.

16. Kristein MM. Economic issues in prevention. Preventive Medicine, 1977; 6: 252-64.

17. National Commission on Smoking and Public Policy. A National Dillemma: Cigarette Smoking or the Health of Americans. New York, American Cancer Society, 1978.

18. Jin S, Lu B, Yan D, Fu Z, Jiang Y, and Li W. Smoking related health costs in China (1988-89). In: Tobacco and Health. Ed. Slama K. Proceedings of the ninth World conference on Tobacco and Health, 1994, Plenum Press, New York, 1995; 555-7.

19. Sherif O. Ten years after legislation. In: In: The Global War - Proceedings of the seventh World Conference on Tobacco and Health. Eds. B. Durston and K. Jamrozik. Health Department of Western Australia, Perth, 1990; 157-63.

20. Phillips D, Kawachi I, and Tilyard M. The costs of smoking revisited. NZ Med J, 1992; 105: 240.

21. Silverforesen L, Nygren A, and Bolinder G. The Swedish Society of Medicine"s and The Folksam Group's action programme against the use of tobacco. In: The Global War - Proceedings of the seventh World Conference on Tobacco and Health. Eds. B. Durston and K. Jamrozik. Health Department of Western Australia, Perth, 1990; 324-6.

22. Rath GK and Chaudhry K. Cost of Management of Tobacco Related Cancers in India - Preliminary Results. In: Tobacco and Health. Ed. Slama K. Proceedings of the 9th World Conference on Tobacco and Health, Paris. Plenum Press, New York. 1994; 559-64.

23. Notani P, Jayant K, and Sanghvi LD. Assessment of Morbidity and Mortality Due to Tobacco Usage in India. In: Tobacco and Health - The Indian Scene. Eds. Sanghvi LD and Notani P. UICC Geneva and Tata Memorial Centre, Bombay, 1989; 63-78.

Table A1
Sitewise Distribution of Cases of Tobacco Related Cancers in the Cohort in comparison with All Cases seen during the Year at IRCH

Site	Dropped due to Logistics	Dropouts	Followed up	IRCH Cases
Mouth (ICD 140 141,143-145)	23 (48.9)	35 (56.5)	93 (47.7)	396 (35.3)
Oropharynx & Hypopharynx	16 (34.0)	12 (19.4)	47 (24.1)	160 (14.3)
Larynx	8 (17.0)	8 (12.9)	45 (23.1)	246 (21.9)
Lung	0	7 (11.3)	10 (5.1)	320 (28.5)
All Sites	**47 (100%)**	**62 (100%)**	**195 (100%)**	**1,122 (100%)**

Figures in parenthesis denote percentage.

Table B1
Mean and Range of Expenditure by all Patients of Tobacco Related Cancers

	Expenditure in Rupees (Mean & Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Mean (n=195)	952.0	974.0	523.0	1,566.2	811.2	906.6	516.7	746.1	3,500.3	503.2	2,766.1	4,199.5	17,964.8
Range	0-27,298	0-45,846	0-9,091	0-45,455	0-97,744	0-18,227	0-74,915	0-15,048	0-46,902	0-9,727	0-46,059	0-125,547	179-281,264

Table B2
Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Age

AGE GROUP (Years)	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
19 TO 39 (n=21)	1,740.6 0-18,595	1,331.2 0-10,140	715.9 0-5,000	3,835.1 0-45,455	82.7 0-909	1,325.5 0-9,114	194.1 0-3,030	664.5 0-3,600	3,364.7 0-14,531	439.5 0-2,573	3,076.5 17-17,128	4,228.0 0-18,723	20,998.2 800-98,436
40 TO 49 (n=49)	1,531.9 0-27,298	828.6 0-5,836	667.2 0-6,161	1,366.9 0-31,240	664.3 0-12,397	979.7 8-6,574	32.4 0-826	846.9 0-9,911	2,812.1 0-12,837	390.7 0-7,820	2,615.6 276-11,636	5,851.5 0-38,160	18,587.1 1,529-84,563
50 TO 59 (n=63)	584.6 0-4,921	1,566.5 0-45,846	402.4 0-3,574	1,631.0 0-27,397	1848.9 0-97,744	1,033.3 0-18,227	1,501.5 0-74,915	666.4 0-4,959	4,412.2 0-46,902	732.3 0-9,727	3,619.9 27-46,059	5,265.7 0-125,547	23,264.6 466-281,264
60 TO 69 (n=44)	711.4 0-6,912	295.9 0-2,727	562.7 0-9,091	1,253.0 0-18,046	30.2 0-1,000	634.5 0-4,691	7.5 0-318	651.9 0-14,120	3965.2 0-32,397	378.5 0-9,091	2,189.1 56-11,807	1,948.7 0-14,400	12,628.6 565-59,132
70+ (n=18)	326.6 0-1,644	537.1 0-2,727	231.1 0-750	0.0	337.6 0-2,273	440.7 0-1,586	11.5 0-116	1,076.4 0-15,048	1,204.2 0-5,533	386.7 0-5,891	1,235.8 0-5,794	1,439.3 0-12,000	7,226.8 179-46,789
All Ages (n=195)	**952.0 0-27,298**	**974.0 0-45,846**	**523.0 0-9,091**	**1,566.2 0-45,455**	**811.2 0-97,744**	**906.6 0-18,227**	**516.7 0-74,915**	**746.1 0-15,048**	**3,500.3 0-46,902**	**503.2 0-9,727**	**2,766.1 0-46,059**	**4,199.5 0-125,547**	**17,964.8 179-281,264**
p Kruskal Wallis	0.844147	0.172550	0.528926	0.026281	0.281180	0.174153	0.072840	0.763139	0.033859	0.020570	0.013097	0.002719	0.000739

Table B3
Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Sex

SEX	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Men (n=162)	941.3 0-27,298	1,075.3 0-45,846	469.9 0-6,161	1,623.5 0-45,455	928.3 0-97,744	930.8 0-18,227	613.2 0-74,915	800.7 0-15,048	3,490.0 0-46,902	519.6 0-9,727	2,747.4 0-46,059	4,869.4 0-125,547	19,009.5 179-281,264
Women (n=33)	1,004.1 0-7,773	476.5 0-2,959	783.9 0-9,091	1,284.8 0-21,156	236.2 0-4,959	787.7 0-6,574	43.2 0-826	478.1 0-3,600	3,551.1 0-32,396	422.6 0-9,091	2,857.7 17-14,326	910.6 0-10,849	12,836.6 466-59,132
Both Sexes (n=195)	**952.0** **0-27,298**	**974.0** **0-45,846**	**523.0** **0-9,091**	**1,566.2** **0-45,455**	**811.2** **0-97,744**	**906.6** **0-18,227**	**516.7** **0-74,915**	**746.1** **0-15,048**	**3,500.3** **0-46,902**	**503.2** **0-9,727**	**2,766.1** **0-46,059**	**4,199.5** **0-125,547**	**17,964.8** **179-281,264**
p Kruskal Wallis	0.777065	0.404552	0.590511	0.759844	0.417020	0.847029	0.770186	0.912818	0.810083	0.768977	0.699651	0.000033	0.086206

Table B4

Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Religion

RELIGION	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Hindu (n=164)	955.1 0-27,298	1,060.6 0-45,846	580.2 0-9,091	1,670.1 0-45,455	932.4 0-97,744	970.8 0-18,227	573.0 0-74,915	660.3 0-15,048	3,215.8 0-32,397	457.8 0-9,091	2,818.5 17-46,059	4,218.1 0-125,547	18,112.6 179-281,264
Muslim (n=23)	573.8 0-3,223	431.8 0-3,014	243.1 0-750	789.6 0-9,011	189.0 0-2,484	483.7 13-1,748	257.3 0-3,719	1,489.3 0-14,120	6,113.2 33-46,902	1,001.8 0-9,727	2,918.3 94-11,636	5,471.3 0-38,160	19,962.1 1,690-71,720
Others (n=8)	1,975.4 0-7,772	756.6 0-3,346	155.0 0-620	1,667.5 0-13,340	113.6 0-909	806.8 0-3,068	109.6 0-826	370.1 0-1,818	1,821.7 0-6,455	0.0	1,254.9 0-2,411	162.5 0-1,000	9,193.6 1,300-21,420
All (n=195)	**952.0 0-27,298**	**974.0 0-45,846**	**523.0 0-9,091**	**1,566.2 0-45,455**	**811.2 0-97,744**	**906.6 0-18,227**	**516.7 0-74,915**	**746.1 0-15,048**	**3,500.3 0-46,902**	**503.2 0-9,727**	**2,766.1 0-46,059**	**4,199.5 0-125,547**	**17,964.8 179-281,264**
p Kruskal Wallis	0.266651	0.325606	0.022411	0.828834	0.977316	0.500054	0.565434	0.092024	0.312459	0.249760	0.506452	0.064917	0.203774

Table B5
Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Occupation

OCCUPATION	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Job (Government) (n=51)	764.5 0-6,425	948.6 0-10,140	507.6 0-6,161	1,578.2 0-31,240	206.7 0-2,818	834.0 0-5,891	85.7 0-3,030	655.6 0-15,048	4,984.8 0-46,902	415.8 0-5,891	2,779.7 0-17,128	5,533.7 0-125,547	19,294.9 990-131,397
Job (Private) (n=22)	990.9 0-6,912	1,238.1 0-9,917	363.4 0-682	1,671.0 0-27,397	4,730.5 0-97,744	1,391.2 16-18,227	3,574.3 0-74,915	801.9 0-4,959	3,735.8 0-20,482	605.9 0-7,511	5,171.8 384-46,059	6,021.1 0-26,608	30,295.9 2,828-281,264
Business (n=28)	1,231.9 0-18,595	2,227.9 0-45,846	505.9 0-2,273	2,360.7 0-45,455	435.4 0-9,091	1,023.6 0-9,114	227.4 0-3,636	889.9 0-9,911	3,093.2 0-10,245	352.6 0-3,636	3,119.3 165-28,849	4,872.1 0-38,160	20,339.9 2,881-125,526
Agriculture (n=20)	827.9 0-4,168	818.6 0-4,909	297.5 0-682	1,228.6 0-15,274	723.2 0-12,397	888.4 0-5,365	90.5 0-909	923.9 0-4,760	3,684.7 0-20,616	456.6 0-2,779	2,629.7 174-11,807	4,786.0 0-18,723	17,355.6 565-55,816
Skilled Labour (n=26)	1,350.3 0-27,298	614.5 0-5,836	486.0 0-5,000	1,316.5 0-16,364	42.3 0-1,000	682.6 0-6,356	0.0	856.2 0-14,120	1,053.4 0-3,923	517.0 0-9,727	1,223.1 27-5,522	2,475.9 0-13,955	10,617.8 179-39,820
Unskilled Labour (n=22)	608.7 0-4,532	344.4 0-2,374	552.6 0-6,014	2,567.0 0-18,046	451.9 0-6,849	707.9 0-4,050	370.5 0-5,785	960.4 0-8,265	2,635.2 0-8,602	800.0 0-7,820	2,008.5 17-11,636	4,895.8 0-34,746	16,902.9 664-71,720
House Wife (n=26)	972.7 0-7,773	461.7 0-2,959	892.4 0-9,091	260.6 0-5,455	225.7 0-4,959	919.0 0-6,574	54.8 0-826	293.5 0-1,984	3,864.7 0-32,397	520.8 0-9,091	2,612.5 166-9,366	0.0	11,078.4 466-59,132
All (n=195)	**952.0 0-27,298**	**974.0 0-45,846**	**523.0 0-9,091**	**1,566.2 0-45,455**	**811.2 0-97,744**	**906.6 0-18,227**	**516.7 0-74,915**	**746.1 0-15,048**	**3,500.3 0-46,902**	**503.2 0-9,727**	**2,766.1 0-46,059**	**4,199.5 0-125,547**	**17,964.8 179-281,264**
p Kruskal Wallis	0.654460	0.424417	0.537657	0.488329	0.651218	0.945931	0.226098	0.106812	0.010292	0.374932	0.031900	0.000000	0.022166

Table B6
Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Education

EDUCATION	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Illiterate (n=47)	1,173.0 0-27,298	569.0 0-4,972	544.4 0-6,014	583.8 0-9,011	394.9 0-6,849	768.9 0-6,574	176.6 0-5,785	1,334.1 0-14,120	2,305.8 0-8,602	501.2 0-9,727	1,993.1 17-7,434	3,965.8 0-38,160	14,310.6 466-47,743
Just Literate (n=35)	383.9 0-2,803	434.3 0-3,152	302.8 0-909	987.8 0-13,340	161.1 0-2,484	349.3 0-1,575	149.3 0-3,719	325.8 0-3,295	3,464.0 0-20,616	243.1 0-2,223	2,258.1 40-14,326	2,276.1 0-11,570	11,335.8 179-30,977
Primary School (n=19)	570.7 0-4,550	453.6 0-1,886	945.3 0-9,091	1,074.0 0-18,046	172.7 0-2,273	871.7 38-4,691	109.2 0-1,875	430.5 0-2,293	1,980.2 0-6,198	327.7 0-2,256	1,306.8 56-4,574	3,526.0 0-18,723	11,768.3 664-27,670
Middle School (n=35)	868.5 0-7,773	1,988.4 0-45,846	504.5 0-5,000	1,033.2 0-16,364	873.4 0-12,397	952.1 0-6,356	171.6 0-3,636	698.9 0-4,959	3,707.1 0-32,397	1,017.2 0-9,091	3,797.3 83-28,849	5,291.9 0-34,746	20,904.1 1,542-125,526
Secondary School (n=31)	1,698.2 0-18,595	1,195.6 0-6,198	592.0 0-6,161	4,914.8 0-45,455	1.3 0-41	1,295.5 0-9,114	30.8 0-500	454.5 0-2,740	4,767.9 0-46,902	280.8 0-4,432	2,570.5 174-8,643	3,873.2 0-36,240	21,675.1 565-98,436
College (n=28)	827.7 0-4,920	1,168.0 0-10,140	422.8 0-682	1,230.8 0-15,274	3,574.5 0-97,744	1,370.6 0-18,227	2,792.9 0-74,915	880.7 0-15,048	4,920.3 0-20,482	554.6 0-5,891	4,616.3 0-46,059	6,449.0 0-125,547	28,808.0 1,300-281,264
All (n=196)	**952.0 0-27,298**	**974.0 0-45,846**	**523.0 0-9,091**	**1,566.2 0-45,455**	**811.2 0-97,744**	**906.6 0-18,227**	**516.7 0-74,915**	**746.1 0-15,048**	**3,500.3 0-46,902**	**503.2 0-9,727**	**2,766.1 0-46,059**	**4,199.5 0-125,547**	**17,964.8 179-281,264**
p Kruskal Wallis	0.427562	0.307671	0.459631	0.188265	0.279142	0.193944	0.657938	0.810609	0.721240	0.917713	0.047310	0.221599	0.224890

Table B7
Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Tobacco Use

TOBACCO USE	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
No (n=43)	1,247.6 0-7,773	1,954.0 0-45,846	824.3 0-9,091	2,222.2 0-31,240	441.1 0-9,091	844.8 0-6,574	193.0 0-3,636	908.0 0-15,048	3,114.0 0-32,397	497.5 0-9,091	3,352.6 0-28,849	2,793.2 0-36,240	18,392.2 466-125,526
Past (n=81)	918.5 0-18,595	761.0 0-9,917	347.9 0-2,273	1,688.6 0-45,455	1,606.3 0-97,744	1,041.8 0-18,227	1,067.4 0-74,915	598.2 0-6,527	3,020.4 0-20,482	474.0 0-9,727	2,649.8 17-46,059	5,046.0 0-125,547	19,219.9 179-281,264
Yes (n=71)	811.0 0-27,298	623.5 0-5,836	540.4 0-6,014	1,029.1 0-16,364	128.2 0-2,068	789.7 0-6,356	84.5 0-2,200	816.9 0-14,120	4,281.7 0-46,902	539.9 0-7,820	2,543.6 40-14,326	4,085.5 0-34,746	16,274.2 212-71,720
All (n=195)	**952.0 0-27,298**	**974.0 0-45,846**	**523.0 0-9,091**	**1,566.2 0-45,455**	**811.2 0-97,744**	**906.6 0-18,227**	**516.7 0-74,915**	**746.1 0-15,048**	**3,500.3 0-46,902**	**503.2 0-9,727**	**2,766.1 0-46,059**	**4,199.5 0-125,547**	**17,964.8 179-281,264**
p Kruskal Wallis	0.372502	0.770482	0.328178	0.614301	0.992259	0.974868	0.523523	0.987877	0.262596	0.022881	0.492460	0.019698	0.360876

Table B8
Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Place of Residence

PLACE OF RESIDENCE	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Delhi (n=51)	1,120.9 0-18,595	2,134.9 0-45,846	795.7 0-9,091	2,239.9 0-45,455	2,342.3 0-97,744	1,389.6 0-18,227	1,576.6 0-74,915	699.4 0-14,120	2,699.9 0-20,482	91.0 0-3,308	2,886.5 0-46,059	3,221.8 0-36,240	21,198.3 466-281,264
Outside Delhi (n=144)	892.1 0-27,298	562.8 0-10,140	426.5 0-6,014	1,327.6 0-27,397	268.9 0-12,397	735.5 0-6,574	141.3 0-5,785	762.7 0-15,048	3,783.8 0-46,902	649.2 0-9,727	2,723.5 27-17,128	4,545.8 0-125,547	16,819.7 179-131,397
All (n=195)	**952.0 0-27,298**	**974.0 0-45,846**	**523.0 0-9,091**	**1,566.2 0-45,455**	**811.2 0-97,744**	**906.6 0-18,227**	**516.7 0-74,915**	**746.1 0-15,048**	**3,500.3 0-46,902**	**503.2 0-9,727**	**2,766.1 0-46,059**	**4,199.5 0-125,547**	**17,964.8 179-281,264**
p Kruskal Wallis	0.302165	0.078561	0.099465	0.866600	0.522459	0.314267	0.303597	0.693829	0.004632	0.000007	0.000890	0.333840	0.123817

Table B9

Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Distance from IRCH

DISTANCE (Km)	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Residents of Delhi													
1 TO 9 (n=10)	280.6 0-1,000	1,490.6 0-4,972	1,655.4 0-9,091	3,124.0 0-31,240	0.0	878.3 0-4,691	30.6 0-256	63.8 0-638	2,324.0 0-18,403	330.8 0-3,308	1,427.4 17-6,434	5,293.1 0-36,240	16,898.4 800-84,563
10 TO 29 (n=36)	909.8 0-7,773	2,406.8 0-45,846	610.6 0-3,574	1,042.7 0-18,046	3,318.2 0-97,744	1,407.0 0-18,227	2,216.2 0-74,915	829.3 0-14,120	3,024.6 0-20,482	37.0 0-818	3,106.9 0-46,059	2,878.8 0-21,087	21,787.9 466-281,264
30 TO 49 (n=5)	4,320.9 0-18,595	1,465.6 0-6,198	409.1 0-682	9,090.9 0-45,455	0.0	2,286.8 100-9,114	63.6 0-318	1,035.0 413-2,727	1,113.2 0-4,546	0.0	4,218.2 56-10,339	1,549.2 0-5,842	25,552.5 664-98,436
All Residents of Delhi (n=51)	**1,120.9 0-18,595**	**2,134.9 0-45,846**	**795.7 0-9,091**	**2,239.9 0-45,455**	**2,342.3 0-97,744**	**1,389.6 0-18,227**	**1,576.6 0-74,915**	**699.4 0-14,120**	**2,699.9 0-20,482**	**91.0 0-3,308**	**2,886.5 0-46,059**	**3,221.8 0-36,240**	**21,198.3 466-281,264**
p Kruskal Wallis	0.362169	0.714207	0.519415	0.816653	0.146665	0.637120	0.976708	0.003318	0.072433	0.769695	0.565115	0.994757	0.964242
Outside Delhi Residents <50 (n=22)	2,235.9 0-27,298	274.5 0-2,035	417.0 0-2,479	2,518.5 0-27,397	264.8 0-4,959	962.4 0-6,574	7.5 0-165	329.6 0-2,740	2,514.9 0-8,282	135.3 0-2,223	2,017.3 27-8,643	9,178.8 0-125,547	20,856.6 695-131,397
50 TO 99 (n=25)	790.9 0-6,912	740.8 0-4,698	372.7 0-750	678.4 0-9,865	168.5 0-2,484	500.3 0-1,982	184.2 0-3,719	332.1 0-4,134	3,171.1 0-12,399	98.4 0-752	2,017.2 40-6,314	3,280.0 0-26,608	12,334.6 212-39,681
100 TO 249 (n=40)	660.6 0-4,914	670.5 0-10,140	325.0 0-909	841.9 0-15,274	225.4 0-6,849	621.6 0-3,068	146.0 0-3,030	1,163.1 0-15,048	5,480.4 0-46,902	516.9 0-9,091	2,535.9 94-17,128	3,237.9 0-14,400	16,425.1 179-59,132
250 TO 499 (n=29)	455.3 0-1,601	514.4 0-3,575	352.7 0-682	939.4 0-13,340	111.7 0-1,927	480.9 0-4,050	31.3 0-909	368.1 0-2,746	2,514.6 0-11,279	490.7 0-4,432	2,533.1 316-5,106	3,319.0 0-38,160	12,111.2 565-44,490
500+ (n=28)	709.9 0-4,532	526.9 0-2,374	703.3 0-6,014	2,067.2 0-16,364	586.7 0-12,397	1,194.0 50-6,356	315.5 0-5,785	1,324.0 0-8,265	4,218.5 224-12,837	1,898.0 0-9,727	4,374.1 489-11,636	5,174.6 0-34,746	23,092.6 2,881-71,720
All Outside Delhi Residents (n=144)	**892.1 0-27,298**	**562.8 0-10,140**	**426.5 0-6,014**	**1,327.6 0-27,397**	**268.9 0-12,397**	**735.5 0-6,574**	**141.3 0-5,785**	**762.7 0-15,048**	**3,783.8 0-46,902**	**649.2 0-9,727**	**2,723.5 27-17,128**	**4,545.8 0-125,547**	**16,819.7 179-131,397**
p Kruskal Wallis	0.960831	0.618249	0.963472	0.635692	0.938989	0.149051	0.244219	0.022971	0.272168	0.000005	0.000825	0.126340	0.009324

Table B10
Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Mode of Travel

COSTLIEST MODE OF TRAVEL	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Scooter (n=40)	1,190.4 0-18,595	695.3 0-6,198	389.1 0-750	2,121.8 0-45,455	89.1 0-1,001	834.5 0-9,114	48.1 0-826	283.5 0-2,727	2,534.7 0-14,085	150.3 0-2,223	1,907.7 0-8,643	2,643.9 0-26,608	12,888.3 466-98,436
Car (n=16)	1,244.7 0-4,921	4,585.0 0-45,846	1,057.6 0-9,091	1,282.2 0-9,243	6,734.0 0-97,744	2,177.0 13-18,227	5,130.4 0-74,915	599.3 0-4,134	7,880.9 0-46,902	112.0 0-818	6,866.3 391-46,059	11,184.7 0-125,547	48,854.1 3,011-281,264
Bus (n=76)	495.3 0-6,912	731.0 0-5,836	463.0 0-6,161	958.3 0-31,240	292.7 0-6,849	614.3 0-5,891	68.6 0-3,719	599.5 0-14,120	3,181.3 0-32,397	347.7 0-9,091	1,647.1 27-10,339	3,102.8 0-36,240	12,501.5 179-84,563
Train (n=61)	1,243.7 0-27,298	543.3 0-4,698	552.4 0-6,014	1,935.9 0-27,397	403.7 0-12,397	973.5 0-6,574	189.1 0-5,785	1,295.2 0-15,048	3,218.4 0-12,837	1,045.9 0-9,727	3,576.9 90-14,326	4,789.8 0-38,160	19,768.0 565-71,720
Air (n=2)	2,293.9 38-4,550	27.3 9-46	309.9 0-620	4,545.5 0-9,091	0.0	1,251.3 436-2,066	0.0	0.0	8,489.6 4,275-12,704	50.0 0-100	4,926.0 3,254-6,598	3,100.0 0-6,200	24,993.4 20,454-29,533
All (n=195)	**952.0 0-27,298**	**974.0 0-45,846**	**523.0 0-9,091**	**1,566.2 0-45,455**	**811.2 0-97,744**	**906.6 0-18,227**	**516.7 0-74,915**	**746.1 0-15,048**	**3,500.3 0-46,902**	**503.2 0-9,727**	**2,766.1 0-46,059**	**4,199.5 0-125,547**	**17,964.8 179-281,264**
p Kruskal Wallis	0.025764	0.351351	0.797749	0.184411	0.830565	0.341868	0.042594	0.037200	0.050845	0.004652	0.000011	0.713057	0.000378

Table B11

Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Survival Status

SURVIVAL STATUS	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Expired (n=124)	1,134.4 0-27,298	1,166.0 0-45,846	493.4 0-9,091	1,897.8 0-45,455	1,161.7 0-97,744	970.3 0-18,227	767.4 0-74,915	757.0 0-14,120	2,730.4 0-32,397	474.8 0-9,727	2,648.7 17-46,059	4,627.1 0-125,547	18,829.2 179-281,264
Living (n=71)	633.3 0-4,914	638.7 0-10,140	574.8 0-6,014	986.9 0-16,364	198.9 0-6,849	795.3 0-6,356	78.8 0-3,030	727.1 0-15,048	4,844.9 0-46,902	552.8 0-7,820	2,971.1 0-17,128	3,452.7 0-34,746	16,455.3 1,300-71,720
All (n=195)	**952.0 0-27,298**	**974.0 0-45,846**	**523.0 0-9,091**	**1,566.2 0-45,455**	**811.2 0-97,744**	**906.6 0-18,227**	**516.7 0-74,915**	**746.1 0-15,048**	**3,500.3 0-46,902**	**503.2 0-9,727**	**2,766.1 0-46,059**	**4,199.5 0-125,547**	**17,964.8 179-281,264**
p Kruskal Wallis	0.725665	0.160520	0.215731	0.424059	0.938736	0.838050	0.120345	0.566758	0.000193	0.221035	0.013676	0.979062	0.199976

Table B12
Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Site of Disease

SITE OF DIASEASE	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Mouth (n=93)	861.2 0-18,595	1,270.3 0-45,846	522.0 0-9,091	2,005.4 0-45,455	1,552.1 0-97,744	1,029.0 0-18,227	902.7 0-74,915	824.1 0-14,120	3,044.8 0-20,616	455.2 0-9,727	3,089.4 0-46,059	3,778.4 0-38,160	19,334.6 212-281,263
Oro- & Hypopharynx (n=47)	1,116.6 0-27,298	683.4 0-4,972	596.4 0-6,161	1,703.0 0-31,240	140.1 0-3,802	703.2 0-4,050	203.1 0-5,785	240.4 0-2,967	4,765.3 0-46,902	591.5 0-9,091	2,105.5 17-3,114	3,201.2 0-36,240	16,049.6 179-84,563
Larynx (n=45)	928.3 0-6,912	597.9 0-10,140	457.0 0-6,014	357.1 0-13,340	105.9 0-1,927	849.9 0-5,365	78.7 0-3,030	1,209.7 0-15,048	3,267.6 0-14,531	587.5 0-7,511	2,807.2 27-17,128	3,545.4 0-26,608	14,792.1 695-57,869
Lung (n=10)	1,128.2 0-6,425	1,276.2 0-3,014	484.7 0-750	2,279.2 0-21,156	248.4 0-2,484	979.5 0-5,891	371.9 0-3,719	311.7 0-2,000	2,838.5 0-11,279	156.1 0-909	2,679.4 168-8,643	15,751.4 0-125,547	28,505.1 3,011-131,397
All (n=195)	**952.0 0-27,298**	**974.0 0-45,846**	**523.0 0-9,091**	**1,566.2 0-45,455**	**811.2 0-97,744**	**906.6 0-18,227**	**516.7 0-74,915**	**746.1 0-15,048**	**3,500.3 0-46,902**	**503.2 0-9,727**	**2,766.1 0-46,059**	**4,199.5 0-125,547**	**17,964.8 179-281,264**
p Kruskal Wallis	0.365560	0.073132	0.139921	0.088997	0.587247	0.874963	0.844463	0.196052	0.871404	0.871736	0.984927	0.646545	0.858005

Table B13
Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Stage of Disease

STAGE OF DISEASE	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
1 (n=14)	851.7 0-4,914	1,128.8 0-10,140	510.2 0-750	1,957.0 0-27,397	338.3 0-2,273	692.0 0-2,192	283.1 0-3,030	273.7 0-2,740	3,491.5 0-14,531	140.2 0-752	3,209.3 489-17,128	3,471.8 0-13,699	16,347.6 4,705-57,869
2 (n=26)	890.6 0-6,425	389.2 0-2,373	954.7 0-6,014	1,873.3 0-21,156	3.8 0-100	1,010.0 13-6,356	0.0	1,855.7 0-15,048	5,419.1 0-46,902	950.5 0-7,511	2,772.9 27-9,502	4,893.6 0-26,608	21,013.5 695-54,582
3 (n=42)	901.4 0-7,773	726.2 0-3,196	529.9 0-6,161	1,313.7 0-31,240	487.1 0-6,849	764.5 0-6,574	179.6 0-3,719	954.5 0-9,911	3,854.4 0-14,085	329.6 0-2,779	2,143.4 0-7,164	4,195.5 0-36,240	16,379.8 800-84,563
4 (n=104)	946.1 0-27,298	1,186.6 0-45,846	353.5 0-2,273	1,506.7 0-45,455	1,277.3 0-97,744	887.1 0-18,227	830.9 0-74,915	413.5 0-3,600	2,752.0 0-20,616	466.5 0-9,727	2,973.5 40-46,059	3,098.7 0-38,160	16,692.4 179-281,264
Not Classifiable (n=9)	1,588.8 0-4,168	1,121.7 0-2,727	1,223.6 0-9,091	1,936.1 0-9,243	5.1 0-46	1,830.2 67-5,891	315.2 0-2,200	1,146.8 0-6,527	4,965.3 0-32,397	1,010.1 0-9,091	2,566.2 669-7,434	16,065.3 0-125,547	33,774.2 6,418-131,397
All (n=195)	**952.0 0-27,298**	**974.0 0-45,846**	**523.0 0-9,091**	**1,566.2 0-45,455**	**811.2 0-97,744**	**906.6 0-18,227**	**516.7 0-74,915**	**746.1 0-15,048**	**3,500.3 0-46,902**	**503.2 0-9,727**	**2,766.1 0-46,059**	**4,199.5 0-125,547**	**17,964.8 179-281,264**
p Kruskal Wallis	0.395431	0.567004	0.129942	0.494924	0.128424	0.097857	0.029941	0.348657	0.001410	0.230969	0.384924	0.364112	0.006684

Table B14
Mean and Range of Expenditure by Patients of Tobacco Related Cancers according to Intent of Treatment

INTENT OF TREATMENT	Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Curative (n=134)	1,143.9 0-27,298	743.3 0-10,140	628.6 0-9,091	1,739.5 0-45,455	1,063.5 0-97,744	1,033.9 0-18,227	691.9 0-74,915	807.5 0-15,048	4,510.0 0-46,902	609.5 0-9,727	3,131.1 0-46,059	3,337.9 0-34,746	19,440.6 800-281,264
Palliative (n=61)	530.4 0-6,425	1,480.7 0-45,846	291.2 0-6,161	1,185.3 0-31,240	256.8 0-9,091	627.0 0-5,365	131.9 0-3,719	611.2 0-6,527	1,282.3 0-7,200	269.7 0-7,511	1,964.2 0-28,849	6,092.2 0-125,547	14,723.1 179-131,397
All (n=195)	**952.0 0-27,298**	**974.0 0-45,846**	**523.0 0-9,091**	**1,566.2 0-45,455**	**811.2 0-97,744**	**906.6 0-18,227**	**516.7 0-74,915**	**746.1 0-15,048**	**3,500.3 0-46,902**	**503.2 0-9,727**	**2,766.1 0-46,059**	**4,199.5 0-125,547**	**17,964.8 179-281,264**
p Kruskal Wallis	0.063156	0.824350	0.000027	0.173270	0.061651	0.234887	0.547033	0.522973	0.000000	0.004930	0.000040	0.577086	0.000059

Table B15
Mean and Range of Expenditure by Patients of Tobacco Related Cancers Before Reporting to Hospital

	Expenditure in Rupees (Mean & Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
(n=195) Mean	318.8	52.7	26.8	25.6	0.0	427.1	21.8	58.0	25.5	146.8	628.3	193.8	1,977.7
Range	0-5,000	0-2,100	0-5,000	0-5,000		0-5,900	0-2,000	0-2,000	0-4,000	0-6,400	0-14,400	0-12,000	0-20,900

Table C1
Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers

	Unit Expenditure in Rupees (Mean & Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Mean	1,271.4	1,123.8	953.2	9,254.6	5,858.4	955.6	3,875.4	2,020.8	3,771.1	1,464.6	2,780.4	7,582.4	17,964.8
Range	1-27,298	8-45,846	442-9,091	55-45,455	41-97,744	5-18,227	14-74,915	15-15,048	30-46,902	15-9,727	17-46,059	20-125,547	179-281,264
n	146	169	107	33	27	185	26	72	181	67	194	108	195

Note: Unit expenditure was calculated for each of the items, for the patients incurring some expense on that expenditure item.

Table C2
Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers according to Age

AGE GROUP (Years)	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
19 TO 39	2,811.8 10-18,595 n=13	1,471.3 10-10,140 n=19	1,073.9 442-5,000 n=14	11,505.3 1,127-45,455 n=7	578.8 100-909 n=3	1,391.7 16-9,114 n=20	1,358.5 318-3,030 n=3	1,395.4 120-3,600 n=10	3,532.9 33-14,531 n=20	922.9 15-2,573 n=10	3,076.5 17-17,128 n=21	5,222.8 136-18,723 n=17	20,998.2 800-98,436 n=21
40 TO 49	1,924.7 1-27,298 n=39	944.2 9-5,836 n=43	1,089.7 620-6,161 n=30	13,395.3 673-31,240 n=5	4,650.3 909-12,397 n=7	979.7 8-6,574 n=49	310.7 41-826 n=5	2,964.3 75-9,911 n=14	3,062.1 41-12,837 n=45	1,595.4 32-7,820 n=12	2,615.6 276-11,636 n=49	8,960.1 94-38,160 n=32	18,587.1 1,529-84,563 n=49
50 TO 59	783.7 1-4,921 n=47	1,701.5 8-45,846 n=58	768.1 620-3,574 n=33	6,850.3 55-27,397 n=15	10,589.1 41-97,744 n=11	1,103.3 5-18,227 n=59	6,756.6 46-74,915 n=14	1,825.3 150-4,959 n=23	4,711.3 40-46,902 n=59	1,537.9 50-9,727 n=30	3,619.9 27-46,059 n=63	9,214.9 20-125,547 n=36	23,264.6 466-281,264 n=63
60 TO 69	948.6 25-6,912 n=33	361.6 9-2,727 n=36	1,031.6 620-9,091 n=24	9,188.8 70-18,046 n=6	665.3 331-1,000 n=2	697.9 29-4,691 n=40	165.9 14-318 n=2	1,509.8 15-14,120 n=19	4,255.3 50-32,397 n=41	1,514.0 25-9,091 n=11	2,189.1 56-11,807 n=44	5,716.2 546-14,400 n=15	12,628.6 565-59,132 n=44
70+	419.9 41-1,644 n=14	743.6 10-2,727 n=13	693.2 682-750 n=6	- - n=0	1,519.1 826-2,273 n=4	466.6 10-1,586 n=17	103.3 91-116 n=2	3,229.1 83-15,048 n=6	1,354.7 30-5,533 n=16	1,740.2 45-5,891 n=4	1,308.4 40-5,794 n=17	3,238.5 200-12,000 n=8	7,226.8 179-46,789 n=18
All Ages	**1,271.4 1-27,298 n=146**	**1,123.8 8-45,846 n=169**	**953.2 442-9,091 n=107**	**9,254.6 55-45,455 n=33**	**5,858.4 41-97,744 n=27**	**955.6 5-18,227 n=185**	**3,875.4 14-74,915 n=26**	**2,020.8 15-15,048 n=72**	**3,771.1 30-46,902 n=181**	**1,464.6 15-9,727 n=67**	**2,780.4 17-46,059 n=194**	**7,582.4 20-125,547 n=108**	**17,964.8 179-281,264 n=195**
p Kruskal Wallis	0.224522	0.326764	0.776240	0.631117	0.158710	0.382290	0.203744	0.161761	0.025723	0.817442	0.025781	0.249036	0.000739

Table C3
Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers according to Sex

SEX	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Male	1,239.8 1-27,298 n=123	1,235.5 8-45,846 n=141	865.0 442-6,161 n=88	9,392.9 55-45,455 n=28	6,265.9 41-97,744 n=24	972.9 5-18,227 n=155	4,515.1 14-74,915 n=22	2,198.6 69-15,048 n=59	3,769.2 30-46,902 n=150	1,503.2 15-9,727 n=56	2,764.5 27-46,059 n=161	7,810.4 20-125,547 n=101	19,009.5 179-281,264 n=162
Female	1,440.7 75-7,773 n=23	561.5 10-2,959 n=28	1,361.4 620-9,091 n=19	8,480.0 1,127-21,156 n=5	2,598.4 909-4,959 n=3	866.5 27-6,574 n=30	356.5 50-826 n=4	1,213.7 15-3,600 n=13	3,780.2 124-32,397 n=31	1,267.7 25-9,091 n=11	2,857.7 17-14,326 n=33	4,293.0 136-10,849 n=7	12,836.6 466-59,132 n=33
All Ages	**1,271.4 1-27,298 n=146**	**1,123.8 8-45,846 n=169**	**953.2 442-9,091 n=107**	**9,254.6 55-45,455 n=33**	**5,858.4 41-97,744 n=27**	**955.6 5-18,227 n=185**	**3,875.4 14-74,915 n=26**	**2,020.8 15-15,048 n=72**	**3,771.1 30-46,902 n=181**	**1,464.6 15-9,727 n=67**	**2,780.4 17-46,059 n=194**	**7,582.4 20-125,547 n=108**	**17,964.8 179-281,264 n=195**
p Kruskal Wallis	0.653741	0.427849	0.552128	0.920005	0.486988	0.792856	0.393688	0.450850	0.704409	0.492996	0.740022	0.365620	0.086206

Table C4

Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers according to Religion

RELIGION	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Hindu	1,283.8 1-27,298 n=122	1,216.4 8-45,846 n=143	981.0 442-9,091 n=97	9,444.8 55-45,455 n=29	6,648.7 41-97,744 n=23	1,027.1 5-18,227 n=155	4,271.1 14-74,915 n=22	1,933.6 75-15,048 n=56	3,469.6 30-32,397 n=152	1,272.6 15-9,091 n=59	2,818.5 17-46,059 n=164	7,686.2 20-125,547 n=90	18,112.6 179-281,264 n=164
Muslim	733.2 49-3,223 n=18	496.5 12-3,014 n=20	698.9 682-750 n=8	6,053.9 2,727-9,011 n=3	1,449.1 46-2,484 n=3	483.7 13-1,748 n=23	2,959.5 2,200-3,719 n=2	2,634.9 69-14,120 n=13	6,113.2 33-46,902 n=23	2,880.0 50-9,727 n=8	2,918.3 94-11,636 n=23	7,865.0 635-38,160 n=16	19,962.1 1,690-71,720 n=23
Others	2,633.9 500-7,773 n=6	1,008.8 18-3,346 n=6	619.8 620-620 n=2	13,340.0 - n=1	909.1 - n=1	922.0 248-3,068 n=7	438.2 50-826 n=2	987.0 15-1,818 n=3	2,428.9 955-6,455 n=6	- - n=0	1,434.2 259-2,440 n=7	650.0 300-1,000 n=2	9,193.6 1,300-21,420 n=8
All Ages	1,271.4 1-27,298 n=146	1,123.8 8-45,846 n=169	953.2 442-9,091 n=107	9,254.6 55-45,455 n=33	5,858.4 41-97,744 n=27	955.6 5-18,227 n=185	3,875.4 14-74,915 n=26	2,020.8 15-15,048 n=72	3,771.1 30-46,902 n=181	1,464.6 15-9,727 n=67	2,780.4 17-46,059 n=194	7,582.4 20-125,547 n=108	17,964.8 179-281,264 n=195
p Kruskal Wallis	0.064612	0.132395	0.157697*	0.636251	0.865265	0.176403	0.216609	0.706611	0.845168	0.363418	0.818606	0.109450	0.203774

* The test for significance does not include values of "other" religions, as the variance in this category was zero.

Table C5
Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers according to Occupation

OCCUPATION	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Job Government	1,053.8 1-6,425 n=37	1,051.7 8-10,140 n=46	835.0 442-6,161 n=31	10,061.1 673-31,240 n=8	1,171.2 100-2,818 n=9	905.0 34-5,891 n=47	728.7 41-3,030 n=6	3,039.7 200-15,048 n=11	5,409.0 30-46,902 n=47	1,247.5 32-5,891 n=17	2,835.3 58-17,128 n=50	12,828.1 300-125,547 n=22	19,294.9 990-131,397 n=51
Job Private	1,282.3 32-6,912 n=17	1,297.1 9-9,917 n=21	666.3 620-682 n=12	12,253.7 2,727-27,397 n=3	26,017.7 41-97,744 n=4	1,391.2 16-18,227 n=22	39,316.8 3,719-74,915 n=2	1,960.3 254-4,959 n=9	4,109.4 100-20,482 n=20	1,666.2 50-7,511 n=8	5,171.8 384-46,059 n=22	8,831.0 413-26,608 n=15	30,295.9 2,828-281,264 n=22
Business	1,567.9 22-18595 n=22	2,712.3 29-45,846 n=23	786.9 620-2,273 n=18	13,220.0 3,636-45,455 n=5	4,063.3 826-9,091 n=3	1,102.3 13-9,114 n=26	909.7 14-3,636 n=7	1,916.6 150-9,911 n=13	3,331.1 409-10,245 n=26	987.3 64-3,636 n=10	3,119.3 165-28,849 n=28	7,180.0 200-38,160 n=19	20,339.9 2,881-125,526 n=28
Agriculture	919.8 10-4168 n=18	909.6 9-4,909 n=18	661.1 620-682 n=9	8,190.6 55-15,274 n=3	7,232.5 2,068-12,397 n=2	935.2 29-5,365 n=19	452.3 64-909 n=4	1,679.9 69-4,760 n=11	3,878.7 40-20,616 n=19	761.0 45-2,779 n=12	2,629.7 174-11,807 n=20	5,982.4 413-18,723 n=16	17,355.6 565-55,816 n=20
Skilled Labour	2,194.3 1-27298 n=16	726.2 12-5,836 n=22	1,053.0 682-5,000 n=12	6,845.7 70-16,364 n=5	550.0 100-1,000 n=2	682.6 10-6,356 n=26	n=0	2,226.2 75-14,120 n=10	1,141.2 33-3,923 n=24	2,688.3 182-9,727 n=5	1,223.1 27-5,522 n=26	3,786.7 94-13,955 n=17	10,617.8 179-39,820 n=26
Unskilled Labour	787.7 49-4532 n=17	420.9 10-2,374 n=18	1,215.8 620-6,014 n=10	8,067.8 218-18,046 n=7	1,988.3 460-6,849 n=5	741.6 5-4,050 n=21	2,716.8 165-5,785 n=3	2,112.9 455-8,265 n=10	2,898.8 93-8,602 n=20	2,933.5 15-7,820 n=6	2,008.5 17-11,636 n=22	5,668.8 20-34,746 n=19	16,902.9 664-71,720 n=22
House Wife	1,331.1 75-7773 n=19	571.6 14-2,959 n=21	1,546.8 620-9,091 n=15	3,388.4 1,322-5,455 n=2	2,933.9 909-4,959 n=2	995.6 27-6,574 n=24	356.5 50-826 n=4	954.0 15-1,984 n=8	4,019.2 124-32,397 n=25	1,504.5 25-9,091 n=9	2,612.5 166-9,366 n=26	n=0	11,078.4 466-59,132 n=26
All Ages	**1,271.4 1-27,298 n=146**	**1,123.8 8-45,846 n=169**	**953.2 442-9,091 n=107**	**9,254.6 55-45,455 n=33**	**5,858.4 41-97,744 n=27**	**955.6 5-18,227 n=185**	**3,875.4 14-74,915 n=26**	**2,020.8 15-15,048 n=72**	**3,771.1 30-46,902 n=181**	**1,464.6 15-9,727 n=67**	**2,780.4 17-46,059 n=194**	**7,582.4 20-125,547 n=108**	**17,964.8 179-281,264 n=195**
p Kruskal Wallis	0.996374	0.798341	0.018928	0.971472	0.407550	0.705081	0.198491	0.553660	0.002058	0.834494	0.024605	0.084275	0.022166

Table C6
Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers according to Education

EDUCATION	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Illiterate	1,621.5 1-27,298 n=34	685.8 10-4,972 n=39	1,112.4 620-6,014 n=23	3,920.0 1,127-9,011 n=7	3,093.0 46-6,849 n=6	840.5 8-6,574 n=43	2,074.7 41-5,785 n=4	3,300.1 75-14,120 n=19	2,408.3 33-8,602 n=45	1,811.9 25-9,727 n=13	1,993.1 17-7,434 n=47	5,824.7 136-38,160 n=32	14,310.6 466-47,74 n=47
Just Literate	516.8 15-2,803 n=26	542.9 14-3,152 n=28	706.5 620-909 n=15	8,643.7 218-13,340 n=4	1,409.9 402-2,484 n=4	359.6 5-1,575 n=34	746.4 14-3,719 n=7	877.3 15-3,295 n=13	3,565.9 50-20,616 n=34	607.7 15-2,223 n=14	2,258.1 40-14,326 n=35	4,686.0 20-11,570 n=17	11,335.8 179-30,977 n=35
Primary School	903.6 10-4,550 n=12	478.8 9-1,886 n=18	1,282.9 620-9,091 n=14	10,202.9 2,360-18,046 n=2	1,093.9 100-2,273 n=3	871.7 38-4,691 n=19	518.8 46-1,875 n=4	908.9 455-2,293 n=9	2,351.5 30-6,198 n=16	1,037.6 100-2,256 n=6	1,306.8 56-4,574 n=19	8,374.2 1,500-18,723 n=8	11,768.3 664-27,670 n=19
Middle School	1,125.9 25-7,773 n= 27	2,174.8 9-45,846 n=32	882.9 442-5,000 n=20	7,232.2 70-16,364 n=5	3,821.3 727-12,397 n=8	980.1 16-6,356 n=34	1,201.2 116-3,636 n=5	2,038.6 120-4,959 n=12	3,931.8 41-32,397 n=33	2,738.5 182-9,091 n=13	3,797.3 83-28,849 n=35	7,717.3 94-34,746 n=24	20,904.1 1,542-125,526 n=35
Secondary School	2,024.8 20-18,595 n=26	1,235.5 9-6,198 n=30	1,079.5 620-6,161 n=17	15,235.9 55-45,455 n=10	41.3 - n=1	1,338.7 50-9,114 n=30	318.2 136-500 n=3	1,280.8 200-2,740 n=11	5,096.8 40-46,902 n=29	791.5 32-4,432 n=11	2,570.5 174-8,643 n=31	8,004.5 331-36,240 n=15	21,675.1 565-98,436 n=31
College	1,103.6 1-4,921 n=21	1,486.6 8-10,140 n=22	657.7 620-682 n=18	6,892.3 1,636-15,274 n=5	20,017.0 100-97,744 n=5	1,535.1 34-18,227 n=25	26,066.8 256-74,915 n=3	3,082.3 182-15,048 n=8	5,740.3 220-20,482 n=24	1,553.0 63-5,891 n=10	4,787.3 396-46,059 n=27	15,047.6 300-125,547 n=12	28,808.0 1,300-281,264 n=28
All Ages	**1,271.4 1-27,298 n=146**	**1,123.8 8-45,846 n=169**	**953.2 442-9,091 n=107**	**9,254.6 55-45,455 n=33**	**5,858.4 41-97,744 n=27**	**955.6 5-18,227 n=185**	**3,875.4 14-74,915 n=26**	**2,020.8 15-15,048 n=72**	**3,771.1 30-46,902 n=181**	**1,464.6 15-9,727 n=67**	**2,780.4 17-46,059 n=194**	**7,582.4 20-125,547 n=108**	**17,964.8 179-281,264 n=195**
p Kruskal Wallis	0.572371	0.709381	0.050844	0.642816	0.421254	0.067956	0.409612	0.088931	0.575051	0.065217	0.031934	0.576732	0.224890

Table C7

Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers according to Tobacco Use

TOBACCO USE	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Non-user	1,625.7 20-7,773 n=33	2,471.2 14-45,846 n=34	1,471.7 620-9,091 n=25	10,617.2 1,127-31,240 n=9	3,161.2 826-9,091 n=6	931.5 13-6,574 n=39	1,037.4 50-3,636 n=8	2,440.2 150-15,048 n=16	3,433.4 83-32,397 n=39	2,377.0 32-9,091 n=9	3,432.4 342-28,849 n=42	7,506.7 200-36,240 n=16	18,392.2 466-125,526 n=43
Past Users	1,240.0 1-18,595 n=60	880.6 9-9,917 n=70	722.5 620-2,273 n=39	9,769.8 55-45,455 n=14	11,828.2 41-97,744 n=11	1,096.0 8-18,227 n=77	8,645.7 14-74,915 n=10	1,615.0 15-6,527 n=30	3,306.1 40-20,482 n=74	1,535.8 25-9,727 n=25	2,649.8 17-46,059 n=81	9,289.3 136-125,547 n=44	19,219.9 179-281,264 n=81
Users	1,086.5 1-27,298 n=53	681.0 8-5,836 n=65	892.3 442-6,014 n=43	7,306.9 673-16,364 n=10	909.9 46-2,068 n=10	812.6 5-6,356 n=69	750.4 46-2,200 n=8	2,230.8 69-14,120 n=26	4,470.6 30-46,902 n=68	1,161.7 15-7,820 n=33	2,543.6 40-14,326 n=71	6,043.1 20-34,746 n=48	16,274.2 212-71,720 n=71
All Ages	**1,271.4 1-27,298 n=146**	**1,123.8 8-45,846 n=169**	**953.2 442-9,091 n=107**	**9,254.6 55-45,455 n=33**	**5,858.4 41-97,744 n=27**	**955.6 5-18,227 n=185**	**3,875.4 14-74,915 n=26**	**2,020.8 15-15,048 n=72**	**3,771.1 30-46,902 n=181**	**1,464.6 15-9,727 n=67**	**2,780.4 17-46,059 n=194**	**7,582.4 20-125,547 n=108**	**17,964.8 179-281,264 n=195**
p Kruskal Wallis	0.166548	0.068158	0.493188	0.672481	0.101645	0.890404	0.844807	0.696474	0.433760	0.871452	0.383120	0.586344	0.360876

Table C8

Unit Expenditure and Range of Expenditure by Patients Tobacco Related Cancers according to Place of Residence

PLACE OF RESIDENCE	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Delhi	1,905.5 1-18,595 n=30	2,532.1 9-45,846 n=43	1,229.7 620-9,091 n=33	12,692.5 70-45,455 n=9	14,931.9 909-97,744 n=8	1,507.9 46-18,227 n=47	8,934.0 41-74,915 n=9	1,877.3 15-14,120 n=19	3,059.8 40-20,482 n=45	1,159.8 15-3,308 n=4	2,944.2 17-46,059 n=50	6,319.7 136-36,240 n=26	21,198.3 466-281,264 n=51
Outside Delhi	1,107.5 1-27,298 n=116	643.2 8-10,140 n=126	829.9 442-6,014 n=74	7,965.3 55-27,397 n=24	2,037.9 41-12,397 n=19	767.5 5-6,574 n=138	1,197.3 14-5,785 n=17	2,072.2 69-15,048 n=53	4,006.4 30-46,902 n=136	1,483.9 25-9,727 n=63	2,723.5 27-17,128 n=144	7,982.8 20-125,547 n=82	16,819.7 179-131,397 n=144
All Ages	1,271.4 1-27,298 n=146	1,123.8 8-45,846 n=169	953.2 442-9,091 n=107	9,254.6 55-45,455 n=33	5,858.4 41-97,744 n=27	955.6 5-18,227 n=185	3,875.4 14-74,915 n=26	2,020.8 15-15,048 n=72	3,771.1 30-46,902 n=181	1,464.6 15-9,727 n=67	2,780.4 17-46,059 n=194	7,582.4 20-125,547 n=108	17,964.8 179-281,264 n=195
p Kruskal Wallis	0.031702	0.008823	0.752238	0.935560	0.027385	0.127280	0.829281	0.085692	0.013514	0.915693	0.001608	0.470176	0.123817

Table C9
Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers according to Distance

DISTANCE (Km)	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Residents of Delhi <10	467.6 1-1,000 n=6	1,656.2 10-4,972 n=9	4,138.4 620-9,091 n=4	31,239.6 n=1	n=0	1,097.8 200-4,691 n=8	152.8 50-256 n=2	638.0 n=1	2,905.0 41-18,403 n=8	3,308.3 n=1	1,427.4 17-6,434 n=10	10,586.2 136-36,240 n=5	16,898.4 800-84,563 n=10
10 to 29	1,637.7 50-7,773 n=20	2,888.2 14-45,846 n=30	845.4 620-3,574 n=26	5,362.7 70-18,046 n=7	14,931.9 909-97,744 n=8	1,489.8 46-18,227 n=34	13,297.0 41-74,915 n=6	2,296.6 15-14,120 n=13	3,202.6 40-20,482 n=34	443.6 15-828 n=3	3,195.6 83-46,059 n=35	5,757.5 300-21,087 n=18	21,787.9 466-281,264 n=36
>30	5,401.1 41-18,595 n=4	1,832.0 9-6,198 n=4	681.8 682-682 n=3	45,454.5 n=1	n=0	2,286.8 100-9,114 n=5	318.2 n=1	1,035.0 413-2,727 n=5	1,855.4 413-4,546 n=3	n=0	4,218.2 56-10,339 n=5	2,581.9 413-5,842 n=3	25,552.5 664-98,436 n=5
All Delhi Residents	**1,905.5 1-18,595 n=30**	**2,532.1 9-45,846 n=43**	**1,229.7 620-9,091 n=33**	**12,692.5 70-45,455 n=9**	**14,931.9 909-97,744 n=8**	**1,507.9 46-18,227 n=47**	**8,934.0 41-74,915 n=9**	**1,877.3 15-14,120 n=19**	**3,059.8 40-20,482 n=45**	**1,159.8 15-3,308 n=4**	**2,944.2 17-46,059 n=50**	**6,319.7 136-36,240 n=26**	**21,198.3 466-281,264 n=51**
p Kruskal Wallis	0.312871	0.847318	0.248468	0.118442		0.799383	0.496585	0.932374	0.326115	0.179712	0.565858	0.507599	0.964242
Patients residing outside Delhi <50	3,279.4 20-27,298 n=15	317.8 9-2,035 n=19	833.9 620-2,479 n=11	13,851.9 218-27,397 n=4	1,942.1 41-4,959 n=3	1,008.2 13-6,574 n=38	165.3 n=1	1,450.4 546-2,740 n=5	2,766.4 146-8,282 n=20	496.2 32-2,223 n=6	2,017.3 27-8,643 n=22	15,533.4 932-125,547 n=13	20,856.6 695-131397 n=22
50 TO 99	898.7 20-6,912 n=22	881.9 8-4,698 n=21	655.6 442-750 n=14	5,653.7 673-9,865 n=3	1,403.9 727-2,484 n=3	543.8 34-1,982 n=28	921.0 46-3,719 n=5	1,383.8 83-4,134 n=6	3,303.3 375-12,399 n=24	351.3 50-752 n=7	2,017.2 40-6,314 n=25	6,833.4 94-26,608 n=12	12,334.6 212-39681 n=25
100 TO 249	777.1 15-4,914 n=34	766.3 12-10,140 n=35	684.3 620-909 n=19	6,734.8 1127-15,274 n=5	1,803.1 100-6,849 n=5	654.3 8-3,068 n=23	1,167.8 116-3,030 n=5	2,736.7 69-15,048 n=17	6,089.4 33-46,902 n=36	1,723.1 63-9,091 n=12	2,535.9 94-17,128 n=40	5,631.1 200-14,400 n=23	16,425.1 179-59132 n=40
250 TO 499	528.2 1-2,803 n=25	596.7 9-3,575 n=25	681.8 682-682 n=15	5,448.7 55-13,340 n=5	1,079.6 402-1,927 n=3	498.0 5-4,050 n=28	909.1 n=1	1,186.1 75-2,746 n=9	2,604.5 30-11,279 n=28	889.4 45-4,432 n=16	2,533.1 90-14,326 n=29	8,020.8 331-38,160 n=12	12,111.2 565-44490 n=29
500+	993.8 50-4,532 n=20	567.4 14-2,374 n=26	1312.8 620-6,014 n=15	8,268.8 2360-16,364 n=7	3,285.7 46-12,397 n=5	1,194.0 50-6,356 n=21	1,767.0 14-5,785 n=5	2,317.1 120-8,265 n=16	4,218.5 224-12,837 n=28	2,415.6 25-9,727 n=22	4,374.1 489-11,636 n=28	6,585.8 20-34,746 n=22	23,092.6 2881-71720 n=28
All Persons Residing Outside Delhi	**1,107.5 1-27,298 n=116**	**643.2 8-10,140 n=126**	**829.9 442-6,014 n=74**	**7,965.3 55-27,397 n=24**	**2,037.9 41-12,397 n=19**	**767.5 5-6,574 n=138**	**1,197.3 14-5,785 n=17**	**2,072.2 69-15,048 n=53**	**4,006.4 30-46,902 n=136**	**1,483.9 25-9,727 n=63**	**2,723.5 27-17,128 n=144**	**7,982.8 20-125,547 n=82**	**16,819.7 179-131,397 n=144**
p Kruskal Wallis	0.577824	0.629810	0.993321*	0.762913	0.967023	0.243568	0.842148	0.608772	0.233663	0.045050	0.000825	0.980216	0.009324

* Patients from distance group 250 to 499 Km category were not included in testing for statistical significance, since all of them incurred an expenditure of Rs. 681.0 and variance was 0.

Table C10
Unit Expenditure and Range of Expenditure by Patients Tobacco Related Cancers according to Mode of Travel

COSTLIEST MODE OF TRAVEL	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Scooter	1,831.4 1-18,595 n=26	842.8 8-6,198 n=33	676.7 620-750 n=23	21,218.5 218-45,455 n=4	890.7 826-1,001 n=4	953.7 71-9,114 n=35	385.1 116- 826 n=5	944.9 75-2,727 n=12	2,816.3 40-14,085 n=36	751.5 32-2,223 n=8	1,956.6 17-8,643 n=39	4,406.5 94-26,608 n=24	12,888.3 466-98,436 n=40
Car	1,531.9 50-4,921 n=13	5,643.1 41-45,846 n=13	1,692.1 620-9,091 n=10	6,838.6 3636-9,243 n=3	35,914.8 909-97,744 n=3	2,177.0 13-18,227 n=16	13,681.0 50-74,915 n=6	1,917.9 150-4,134 n=5	9,006.8 224-46,902 n=14	448.0 25-818 n=4	6,866.3 391-46,059 n=16	22,369.3 3620-125,547 n=8	48,854.1 3,011-281,264 n=16
Bus	723.9 1-6,912 n=52	817.0 9-5,836 n=68	879.7 442-6,161 n=40	7,282.9 70-31,240 n=10	2,022.1 41-6,849 n=11	639.6 8-5,891 n=73	651.9 41-3,719 n=8	1,822.5 15-14,120 n=25	3,405.3 33-32,397 n=71	1,100.9 15-9,091 n=24	1,647.1 27-10,339 n=76	6,046.5 20-36,240 n=39	12,501.5 179-84,563 n=76
Train	1,431.5 10-27,298 n=53	625.3 9-4,698 n=53	1,021.2 620-6,014 n=33	7,872.8 55-27,397 n=15	2,736.2 46-12,397 n=9	1,006.5 5-6,574 n=59	1,647.5 14-5,785 n=7	2,633.5 120-15,048 n=30	3,384.9 30-12,837 n=58	2,126.6 64-9,727 n=30	3,576.9 90-14,326 n=61	8,116.1 413-38,160 n=36	19,768.0 565-71,720 n=61
Air	2,293.9 38-4,550 n=2	27.3 9-46 n=2	619.8 n=1	9,090.9 n=1	n=0	1,251.3 436-2,066 n=2	n=0	n=0	8,489.6 4275-12,704 n=2	100.0 n=1	4,926.0 3254-6,598 n=2	6,200.0 n=1	24,993.4 20,454-29,533 n=2
All Ages	**1,271.4 1-27,298 n=146**	**1,123.8 8-45,846 n=169**	**953.2 442-9,091 n=107**	**9,254.6 55-45,455 n=33**	**5,858.4 41-97,744 n=27**	**955.6 5-18,227 n=185**	**3,875.4 14-74,915 n=26**	**2,020.8 15-15,048 n=72**	**3,771.1 30-46,902 n=181**	**1,464.6 15-9,727 n=67**	**2,780.4 17-46,059 n=194**	**7,582.4 20-125,547 n=108**	**17,964.8 179-281,264 n=195**
p Kruskal Wallis	0.261834	0.043365	0.402503	0.559682	0.367744	0.236300	0.445077	0.029384	0.029115	0.014864	0.000014	0.058259	0.000378

Table C11

Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers according to Survival Status

SURVIVAL STATUS	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Expired	1,545.8 1-27,298 n=91	1,326.4 9-45,846 n=109	971.1 442-9,091 n=63	10,231.8 55-45,455 n=23	8,473.9 41-97,744 n=17	1,019.7 10-18,227 n=118	4,758.2 14-74,915 n=20	1,955.7 75-14,120 n=48	2,996.2 30-32,397 n=113	1,509.6 15-9,727 n=39	2,648.7 17-46,059 n=124	8,827.0 136-125,547 n=65	18,829.2 179-281,264 n=124
Surviving	817.5 10-4,914 n=55	755.8 8-10,140 n=60	927.6 620-6,014 n=44	7,006.9 673-16,364 n=10	1,412.0 46-6,849 n=10	842.8 5-6,356 n=67	932.6 50-3,030 n=6	2,151.0 15-15,048 n=24	5,058.6 33-46,902 n=68	1,401.8 54-7,820 n=28	3,013.5 94-17,128 n=70	5,701.0 20-34,746 n=43	16,455.3 1,300-71,720 n=71
All Ages	**1,271.4 1-27,298 n=146**	**1,123.8 8-45,846 n=169**	**953.2 442-9,091 n=107**	**9,254.6 55-45,455 n=33**	**5,858.4 41-97,744 n=27**	**955.6 5-18,227 n=185**	**3,875.4 14-74,915 n=26**	**2,020.8 15-15,048 n=72**	**3,771.1 30-46,902 n=181**	**1,464.6 15-9,727 n=67**	**2,780.4 17-46,059 n=194**	**7,582.4 20-125,547 n=108**	**17,964.8 179-281,264 n=195**
p Kruskal Wallis	0.847863	0.209453	0.658104	0.953140	0.087459	0.747926	0.542733	0.738004	0.000398	0.597771	0.007939	0.028498	0.199976

Table C12

Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers according to Site of Disease

SITE OF DISEASE	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Mouth	1,144.2 10-18,595 70	1,458.5 9-45,846 81	1,032.9 442-9,091 47	9,325.0 673-45,455 20	9,021.6 41-97,744 16	1,099.9 5-18,227 87	6,996.0 41-74,915 12	1,965.3 69-14,120 39	3,254.8 33-20,616 87	1,322.8 15-9,727 32	3,123.0 40-46,059 92	6,630.0 20-38,160 53	19,334.6 212-281,264 93
Oro- & Hypopharynx	1,499.5 1-27,298 35	729.9 9-4,972 44	904.3 620-6,161 31	8,893.4 55-31,240 9	1,316.5 46-3,802 5	718.5 10-4,050 46	1,193.3 46-5,785 8	869.0 15-2,967 13	5,090.2 30-46,902 44	2,138.4 273-9,091 13	2,105.5 17-7,434 47	6,269.0 94-36,240 24	16,049.6 179-84,563 47
Larynx	1,193.5 20-6,912 n=35	768.8 8-10,140 n=35	934.8 620-6,014 n=22	8,033.7 2727-13,340 n=2	952.7 100-1,927 n=5	910.7 13-5,365 n=42	708.2 14-3,030 n=5	3,202.2 273-15,048 n=17	3,501.0 40-14,531 n=42	1,555.0 45-7,511 n=17	2,807.2 27-17,128 n=45	6,647.7 200-26608 n=24	14,792.1 695-57,869 n=45
Lung	1,880.3 50-6,425 n=6	1,418.0 25-3,014 n=9	692.4 620-750 n=7	11,396.1 1636-21,156 n=2	2,483.5 n=1	979.5 80-5,891 n=10	3,719.0 n=1	1,039.1 200-2,000 n=3	3,548.2 224-11,279 n=8	312.2 25-909 n=5	2,679.4 168-8,643 n=10	22,502.0 561-125547 n=7	28,505.1 3,011-131,397 n=10
All Ages	**1,271.4 1-27,298 n=146**	**1,123.8 8-45,846 n=169**	**953.2 442-9,091 n=107**	**9,254.6 55-45,455 n=33**	**5,858.4 41-97,744 n=27**	**955.6 5-18,227 n=185**	**3,875.4 14-74,915 n=26**	**2,020.8 15-15,048 n=72**	**3,771.1 30-46,902 n=181**	**1,464.6 15-9,727 n=67**	**2,780.4 17-46,059 n=194**	**7,582.4 20-125,547 n=108**	**17,964.8 179-281,264 n=195**
p Kruskal Wallis	0.0984030	0.153512	0.245467	0.840396	0.472417	0.844982	0.365679	0.035012	0.974656	0.022348	0.978526	0.902307	0.858005

Table C13
Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers according to Stage of Disease

STAGE OF DISEASE	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
1	1,192.4 42-4,914 n=10	1,317.0 55-10,140 n=12	649.3 442-750 n=11	27,397.3 n=1	1,183.9 727-2,273 n=4	745.2 60-2,192 n=13	991.0 91-3,030 n=4	1,277.3 412-2,740 n=3	3,760.1 226-14,531 n=13	392.7 182-752 n=5	3,209.3 489-17,128 n=14	5,400.6 200-13,699 n=9	16,347.6 4,705-57,869 n=14
2	1,218.8 1-6,425 n=19	421.6 9-2,373 n=24	1,379.0 620-6,014 n=18	12,176.6 1322-21,156 n=4	100.0 n=1	1,010.0 13-6,356 n=26	n=0	4,386.2 75-15,048 n=11	5,870.7 562-46,902 n=24	1,901.0 32-7,511 n=13	2,772.9 27-9,502 n=26	8,482.2 864-26,608 n=15	21,013.5 695-54,582 n=26
3	1,081.6 10-7,773 n=35	824.3 8-3,196 n=37	1,011.6 620-6,161 n=22	11,034.8 1636-31,240 n=5	2,273.3 41-6,849 n=9	823.3 27-6,574 n=39	1,077.6 41-3,719 n=7	2,227.2 15-9,911 n=18	3,948.4 33-14,085 n=41	865.1 50-2,779 n=16	2,195.7 17-7,164 n=41	6,076.3 20-36,240 n=29	16,379.8 800-84,563 n=42
4	1,311.9 1-27,298 n=75	1,402.4 9-45,846 n=88	706.9 620-2,273 n=52	7,834.9 55-45,455 n=20	11,069.6 100-97,744 n=12	941.4 5-18,227 n=98	7,201.3 14-74,915 n=12	1,194.6 69-3,600 n=36	2,920.5 30-20,616 n=98	1,516.1 15-9,727 n=32	2,973.5 40-46,059 n=104	6,445.3 94-38,160 n=50	16,692.4 179-281,264 n=104
Not Classifiable	2,042.7 100-4,168 n=7	1,262.0 14-2,727 n=8	2,753.1 620-9,091 n=4	5,808.3 2727-9,243 n=3	45.5 n=1	1,830.2 67-5,891 n=9	945.5 136-2,200 n=3	2,580.3 200-6,527 n=4	8,937.5 904-32,397 n=5	9,090.9 n=1	2,566.2 669-7,434 n=9	28,917.5 1,855-125,547 n=5	33,774.2 6,418-131,397 n=9
All Ages	**1,271.4 1-27,298 n=146**	**1,123.8 8-45,846 n=169**	**953.2 442-9,091 n=107**	**9,254.6 55-45,455 n=33**	**5,858.4 41-97,744 n=27**	**955.6 5-18,227 n=185**	**3,875.4 14-74,915 n=26**	**2,020.8 15-15,048 n=72**	**3,771.1 30-46,902 n=181**	**1,464.6 15-9,727 n=67**	**2,780.4 17-46,059 n=194**	**7,582.4 20-125,547 n=108**	**17,964.8 179-281,264 n=195**
p Kruskal Wallis	0.419995	0.292493	0.235249	0.400067	0.236346	0.199358	0.959066	0.308930	0.001235	0.346682	0.394089	0.547905	0.006684

Table C14
Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers according to Intent of Treatment

INTENT OF TREATMENT	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Curative	1,473.8 1-27,298 n=104	837.0 8-10,140 n=119	946.4 442-9,091 n=89	8,965.3 70-45,455 n=26	6,196.1 41-97,744 n=23	1,082.3 5-18,227 n=128	4,879.6 50-74,915 n=19	2,081.0 15-15,048 n=52	4,721.4 30-46,902 n=128	1,512.4 15-9,727 n=54	3,154.7 17-46,059 n=133	5,590.9 20-34,746 n=80	19,440.6 800-281,264 n=134
Palliative	770.3 10-6,425 n=42	1,806.5 9-45,846 n=50	986.9 620-6,161 n=18	10,328.9 55-31,240 n=7	3,916.3 1,818-9,091 n=4	671.0 10-5,365 n=57	1,149.6 14-3,719 n=7	1,864.3 83-6,527 n=20	1,475.8 40-7,200 n=53	1,265.7 32-7,511 n=13	1,964.2 27-28,849 n=61	13,272.4 1,500-125,547 n=28	14,723.1 179-131,397 n=61
All Ages	1,271.4 1-27,298 n=146	1,123.8 8-45,846 n=169	953.2 442-9,091 n=107	9,254.6 55-45,455 n=33	5,858.4 41-97,744 n=27	955.6 5-18,227 n=185	3,875.4 14-74,915 n=26	2,020.8 15-15,048 n=72	3,771.1 30-46,902 n=181	1,464.6 15-9,727 n=67	2,780.4 17-46,059 n=194	7,582.4 20-125,547 n=108	17,964.8 179-281,264 n=195
p Kruskal Wallis	0.172563	0.494135	0.362222	0.964872	0.108352	0.299355	0.259558	0.580114	0.000000	0.136091	0.000025	0.009586	0.000059

Table C15
Unit Expenditure and Range of Expenditure by Patients of Tobacco Related Cancers Before Reporting to Hospital

	Unit Expenditure in Rupees (Mean and Range)												
	Consultation	Investigations	Radiotherapy	Chemotherapy	Surgery	Other Drugs	Hospitalization	Relatives' Expenditure	Extra Food	Lodging	Travel	Income Loss	Total
Mean	501.3	342.2	2,610	5,000		563.2	850.0	282.6	620.8	213.6	2,450.4	1,643.2	2,191.2
Range	1-5,000	15-2,100	220-5,000			10-5,100	50-2,000	20-2,000	10-4,000	2-5,400	50-14,400	90-12,000	3-20,900
n	124	30	2	1	0	139	5	40	8	134	50	23	176

Note: Unit expenditure was calculated for each of the items, for the patients incurring some expense on that expenditure category.

Table D1
Institutional Expenditure on Treatment of Tobacco Related Cancers

Department	Expenditure on Each Activity (Rs)	Loss on Each Activity (Rs.)
Radiotherapy	7,084.02	6,295.84
ENT Surgery	1,163.0	1,113.0
Surgery at IRCH	4,276.64	4,276.64
Chemotherapy at IRCH	110.8	110.8
Anaesthesia	721.22	721.22
Radiodiagnosis X-ray	134.20	126.70
CT Scan	1,316.99	942.1
Ultrasound	210.87	85.87
Mammography	491.8	491.8
Endoscopy	826.3	826.3
Biochemistry Sugar	15.9	15.9
Urea	16.1	16.1
Haematology Blood Counts	26.85	26.85
Pathology Biopsy/Cytolody	148.91	142.31
General Maintenance	83.47	83.47
OPD expenses	4.35	3.35

Table D2
Estimated Institutional Expenditure for Treatment of Tobacco Related Cancers in the Department of Radiotherapy (1994-95)

Item	Amount
Total no. of patients treated	1,827
Purchase value of equipment	Rs. 87.5 million
Average life of equipment	15 years
Annual cost of equipment	Rs. 5,833,300
Annual salaries of staff	Rs. 5,359,200
Annual cost of maintenance of machines	Rs. 750,000
Annual cost of consumables	Rs. 1,000,000
Total expenditure by the institution	Rs. 12.9425 million
Money collected from patients	Rs. 1.44 million
Deficit for institution for radiotherapy	Rs. 11.5025 million
Institutional radiotherapy expenditure (per patient)	Rs. 7084.02
Institutional loss on radiotherapy (per patient)	**Rs. 6,295.84**

Table D3
Estimated Institutional Expenditure for ENT Surgery for Treatment of Tobacco Related Cancers (1994-95)

Item	Amount
Total no. of Surgeries	20,567
Purchase value of equipment	Rs. 100,000
Average life of equipment	10 years
Annual cost of equipmet	Rs. 10,000
Annual maintenance & consumables	Rs. 12,000
Annual salaries of staff	Rs. 2.302 million
Total expenses on ENT surgery work	Rs. 2.324 million
Money received from patients	Rs. 1.028 million
Deficit for institution	Rs. 1.296 million
Kitchen expenses per stay (10 days)	Rs. 1,050 /patient
Average cost of a ENT surgery to institution	Rs. 1,163
Average loss on a ENT surgery to institution	Rs. 1,113

Table D4
Estimated Institutional Expenditure for Surgery at IRCH for Treatment of Tobacco Related Cancers (1994-95)

Item	Amount
Total no. of Surgeries	428
Cost of equipment	Rs. 530,000
Average life of equipment	1 to 15 years
Annual cost of equipmets	Rs. 97,000
Annual maintenance	Negligible
Annual cost of consumables	Negligible
Annual salaries of staff	Rs. 1.602 million
Annual salary for surgery work	Rs. 1.362 million
Total expenses on Surgery work	Rs. 1.459 million
Money received from patients	Rs. 78,000
Deficit for institution	Rs. 1.381 million
Kitchen expenses per patient	Rs. 1,050
Average cost of a Surgery to institution	Rs. 4,458.88
Average loss on a Surgery to institution	Rs. 4,276.64

Table D5
Estimated Institutional Expenditure for Chemotherapy at IRCH for Treatment of Tobacco Related Cancers (1994-95)

Item	Amount
Number of chemotherpies	6,062
Cost of equipments	Nil
Annual salaries of staff	Rs. 1.84 million
Annual salary for chemotherapy	Rs. 1.84 million
Total salary of staff for day care chemotherapy	Rs. 626,000
Money received from patients	Nil
Deficit for institution	Rs. 626,000
Average cost of a chemotherapy to institution	Rs. 110.8
Average loss on a chemotherapy to institution	Rs. 110.8

Table D6
Estimated Institutional Expenditure on Anaesthesia for Treatment of Tobacco Related Cancers (1994-95)

Item	Amount
Total no. of Anaesthesias	74,228
Purchase value of equipment	Rs. 36.3 million
Average life of equipment	7 years
Annual cost of equipmet	Rs. 5,186,000
Annual maintenance of equipment	Rs. 1.45 million
Annual cost of consumables	Rs. 37.114 million
Annual salaries of staff	Rs. 9.785 million
Annual salary for anaesthesia work	Rs. 9.785 million
Total expenses on anaesthesia work	Rs. 53.535 million
Money received from patients	Nil
Deficit for institution for anaesthesia	Rs. 53.535 million
Average cost of an anaesthesia to instituion	Rs. 721.22
Average institutional loss on an anaesthesia	Rs. 721.22

Table D7

Estimated Institutional Expenditure for Investigations of Tobacco Related Cancers in the Department of Radiodiagnosis (1994-95)

Item	Amount
Plain X-rays	
Total no. of patients	178,034
Plain X-rays	151,456
Cost of equipment	Rs. 37.0 million
Average life of equipment	10 years
Annual cost of equipment	3.7 million
Annual maintenance	Rs. 925,000
Annual cost of consumables	Rs. 11.0 million
Annual salaries of staff in department	Rs. 7.998 million
Annual salary for X-ray work (58.76%)	Rs. 4.7 million
Total expenses on X-ray work	Rs. 20.325 million
Money received from patients for plain X-rays	Rs. 1.136 million
Deficit for institution for X-rays	Rs. 19.189 million
Average cost of an X-ray to Institution	Rs. 134.20
Average loss for an X-ray to Institution	Rs. 126.70
CT Scan	
Total no. of CT scans	5,281
Purchase value of equipment	Rs. 40.0 million
Average life of equipment	10 years
Annual cost of equipment	Rs. 4.0 million
Annual cost of maintenance of equipment	Rs. 2.0 million
Annual cost of consumables	Rs. 300,000
Annual salary of staff in the department	Rs. 7.998 million
Annual salary of staff for CT work (8.19%)	Rs. 655,000
Total expenses on CT scan work	Rs. 6.955 million
Money received from CT patients	Rs. 1.98 million
Deficit for institution for CT scan	Rs. 4.975 million
Average cost of a CT scan to institution	Rs. 1316.99
Average loss on a CT scan to institution	Rs. 942.1

Continued.....

Table D7 (continued)
Estimated Institutional Expenditure for Investigations of Tobacco Related Cancers in the Department of Radiodiagnosis (1994-95)

Item	Amount
Ultrasound	
Total no. of Ultrasounds	12112
Purchase value of equipment	Rs. 3.2 million
Average life of equipment	10 years
Annual cost of equipment	Rs. 0.32 million
Annual maintenance	Rs. 0.08 million
Annual cost of consumables	Rs. 0.65 million
Annual salaries of staff	Rs. 7.998 million
Annual salary for Ultrasound work (18.8%)	Rs. 1.504 million
Total institutional expenses on Ultrasound	Rs. 2.554 million
Money received from ultrasound patients	Rs. 1.514 million
Deficit for institution for ultrasound	Rs. 1.04 million
Average cost of an ultrasound to the institution	Rs. 210.87
Average loss on an ultrasound to the institution	Rs. 85.87
Mammography	
Total number of mammograms	122
Purchase value of the equipment	0.5 million
Average life of equipment	10 years
Annual cost of euipment	Rs. 0.05 million
Annual cost of maintenance	Nil
Annual cost of consumables	Rs. 10,000
Staff salary for mammography work	Negligible
Total expenses on mammography work	Rs. 50,000
Money received from patients	Nil
Average cost of a mammogram to institution	Rs. 491.8

Table D8
Estimated Institutional Expenditure for Endoscopy at IRCH (1994-95)

Item	Amount
Total no. of Endoscopies	783
Purchase value of equipment	Rs. 4.5 million
Average life of equipment	10 years
Annual cost of equipment	Rs. 450,000
Annual maintenance	Nil
Annual cost of consumables	Nil
Annual salaries of staff	Rs. 1.159 million
Annual salary for Endoscopy work (17%)	Rs. 197,000
Total expenses on Endoscopy work	Rs. 647,000
Money received from patients	Nil
Deficit for institution	Rs. 647,000
Average cost of an endoscopy to institution	Rs. 826.3
Average loss on an endoscopy to institution	Rs. 826.3

Table D9

Estimated Institutional Expenditure for Investigation of Tobacco Related Cancers in the Department of Biochemistry (1994-95)

Item	Amount
Blood Sugar	
Total no. of Blood sugars tests	10,400
Purchase value of equipment	Rs. 1,200,000
Proportionate purchase value of equipment for blood sugar estimation (13%)	Rs. 156,000
Average life of equipment	8 years
Annual cost of equipmets for blood sugar	Rs. 19,500
Annual maintenance for blood sugar	Rs. 3,000
Annual cost of consumables	Rs. 50,000
Annual salaries of staff in department	Rs. 714,000
Annual salary for Blood sugar work (13%)	Rs. 92,820
Total expenses on Blood sugar work	Rs. 165,320
Money received from patients	Nil
Deficit for institution for blood sugar	Rs. 165,320
Average institution cost of a Blood sugar	Rs. 15.90
Average loss to institution for a Blood sugar	Rs. 15.90
Blood Urea	
Total no. of Blood Urea tests	12,000
Purchase value of equipment	Rs. 1,200,000
Proportionate purchase value of equipment for blood urea estimation (15%)	Rs. 180,000
Average life of equipment	8 years
Annual cost of equipment for blood urea	Rs. 22,500
Annual maintenance for blood urea (15%)	Rs. 3,600
Annual cost of consumables	Rs. 60,000
Annual salaries of staff	Rs. 714,000
Annual salary for Blood Urea work (15%)	Rs. 107,100
Total expenses on Blood Urea work	Rs. 193,200
Money received from patients	Nil
Deficit for Institution for Blood urea	Rs. 193,200
Average cost of a Blood Urea to institution	Rs. 16.10
Average loss to institution for a Blood Urea	Rs. 16.10

Table D10

Estimated Institutional Expenditure in the Department of Haematology for Blood Counts

Item	Amount
Total no. of investigations	25,000
Cost of equipment	Rs. 700,000
Average life of equipment	7 years
Annual cost of equipment	Rs. 100,000
Annual maintenance & consumables	Rs. 350,000
Annual salaries of staff	Rs. 714,000
Annual salary spent for CBCs work (31%)	Rs. 221,340
Total institutional expenses on CBCs work	Rs. 671,340
Money received from patients	Nil
Deficit for institution for CBC	Rs. 671,340
Average cost of a CBC to institution	Rs. 26.85
Average loss on a CBC to institution	Rs. 26.85

Table D11
Estimated Institutional Expenditure on Biopsy/Cytology in the Department of Pathology (1994-95)

Item	Amount
Total no. of biopsies and cytologies	35,423
Purchase value of equipment	Rs. 1.05 million
Average life of equipment	30 years
Annual cost of equipment	Rs. 35,000
Annual maintenance of equipment	Rs. 0.125 million
Annual cost of consumables	Rs. 0.35 million
Annual salaries of staff	Rs. 5.358 million
Total expenses on biopsies	Rs. 5.868 million
Expenses for routine histopathology (89.9%)	Rs. 5.275 million
Money received from patients	Rs. 0.234 million
Deficit for institution for histopathology	Rs. 5.041 million
Average cost of a biopsy/cytology to the institution	Rs. 148.91
Average loss for a biopsy/cytology to the institution	Rs. 142.31

Table D12
Estimated Institutional Expenditure for General Maintenance (1994-95)

Item	Amount
Total expenditure on general maintenance	Rs. 131.8 million
Number of patients seen	1,579,087
Average cost of general maintenance	Rs. 83.47

Table D13
Estimated Expenditure for OPD Patients (1994-95)

Item	Amount
Total number of OPD cases seen	1,492,832
Staff salary for for OPD work	Rs. 6,494,900
(100% for staff for OPD, 1/3rd for senior residents and faculty)	
Receipt from patients (Re. 1/ new patient)	Rs. 524,000
Deficit for institution for OPD work	Rs. 5,970,900
Average expenditure for an OPD patient	Rs. 4.35
Average loss for an OPD patient	Rs. 4.00

Table D14
Institutional Loss for Various Management Activities for the Patients of Tobacco Related Cancers in the Cohort

Item	Average Loss (Rs.)
Investigations	
X-rays	166.98
CT Scan	159.43
Biopsy	186.10
Ultrasound	5.72
Haemogram	28.23
LFT/RFT	16.35
Endoscopy	12.71
Special X-rays	5.2
Bonescan	2.6
Total Investigations	**583.32**
Management	
Radiotherapy	3,196.35
Anaesthesia	36.99
ENT Surgery	45.66
General Surgery	43.86
Chemotherapy	15.91
General Maintenance	83.47
OPD Expenses	3.35
Total Management	**3,425.59**
Total Loss	**4,008.91**

Table E1
Loss to GNP due to Death of Patients of Tobacco Related Cancers

	Loss of salary (Rupees)	Savings on Pension (Rupees)	Loss of Family Pension (Rupees)	Total Loss (Rupees)
Expired Patients (n=124)				
ean Loss/ Saving	172,471.9	65,263.6	69,668.1	176,876.5
nge	0-4,128,000	0-1,128,600	0-880,560	-369,360 to 4,128,000)
pired Patients incurring Loss (Unit Cost)				
ean Loss	264,031.1	207,504.6	221,508.9	238,398.8
nge	14,400 to 4,128,000	42,300 to 1,128,600	27,936 to 880,560	-369,360 to 4,128,000
	81	39	39	92
tire Cohort (n=195)				
an	109,674	41,501	44,302	112,475.3
nge	0-4,128,000	0-1,128,600	0-880,560	-369,360 to 4,128,000