

## INVESTIGATION OF LUNG CANCER TO HUMAN ACTIVITIES IN SRI LANKA

M.A.K.K.P. Perera and K.R.R. Mahanama  
Department of Chemistry, University of Colombo

### Abstract

Indoor air pollution can be traced to prehistoric time when human first moved to temperate climate and it become necessary to construct shelter and use fire inside them for cooking warmth and light. Among the indoor pollutant sources, combustion sources are known to emit variety of hazardous pollutants causing numerous health impacts to living beings. Incomplete combustion of the biomasses often produces carcinogenic polycyclic aromatic hydrocarbons which have been found in the kitchens, fire places, smoking lounges as well as in the shrines having heavy incense sticks or candle burnings. In addition to indoor exposures, exposure of fine particles and fibers at the work place also have contributed to varies malignancies. This questionnaire-based survey was targeted to instigate the relation of lung cancer to human activities at home as well as conditions at the work place.

Cancer is an abnormal cell growth in body and it can be induced by various factors resulting from our living environment e.g. frequently, exposure to indoor air pollution. Among the known risk factors, for cancer are exposure to tobacco smoke, primary fuels (biomass, wood coal etc,) and working place environment.

Patients from Maharagama Cancer Hospital were surveyed over the period of April to August 2004. 128 patients who were treated for cancer contributed to the survey along with 128 non-cancer patient as controls. Primary analysis of the data by univariate analysis method suggests strong correlations for cancer with sex, working environment and smoking having  $p < 0.05$  and the correlation for the cancer with biomass smoke is poor.