

Understanding Cancer Situations Using GIS

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Abstract:

Cancer is a major health phenomenon and has been given more attention due to its rapidly increasing rates at the global level. The present study focuses on the distribution of cancer incidences in the western districts of Tamil Nadu, India using GIS. In order to locate the zones with high cancer risk and also to assess the environmental exposure, spatial technologies such as GIS (Geographical Information System) play a vital role. In this regard, cancer cases were collected from major oncology centres and have been geo-linked using ArcGIS 10.1 software to produce cancer distribution maps. The major cancer types that were observed during the study include breast, gynaecological, head and neck, gastrointestinal and respiratory cancers. Since the area under study is highly commercial, the risk factors could be enormous. Hence, the maps will help to predict the presence of certain airborne or waterborne exposures which may be carcinogenic and to link the conditions to cancer hotspot in GIS. It will also be more useful for the health professionals and doctors to give enhanced treatment measures for their patients as it gives a better understanding to the patient's exposure and residence. On the whole, the software capabilities will provide better solutions for various issues in the health industry through desktop health evaluation and monitoring.