

## **An evidence of black box within cancer patient: epigenomic hard drive (EHD) imprinting**

**Nilesh Kumar Sharma and Pritish Nilendu**  
Dr. D Y Patil University, India

Several genetic and epigenetic theories are proposed to explain the intricacies of life and death. However, several questions still remain unsettled with reference to the death event particularly of the living tissue in case of cancer patients such as destination of cancer cells after the biological death of patients. Cancer can display the intent to communicate with the external environment after the biological death of patient. Do they carry some special information in the form of coding that helps them to survive? To explain such queries in cancer field, we propose to investigate epigenomic hard drive (EHD) as a recording and storage of global epigenetic events in cancerous and non-cancerous tissue of cancer patients specifically with reference to before and after biological death. Several research models and methodologies such as *in vitro* 3-D tumor model, clinical tumor tissue before and after biological death, genetic, epigenetic and proteomics assays. In the context of EHD study, authors use specific epigenetic tools such as assessment of DNA methylation, histone code signature, small RNAs as signaling messengers on cancerous and non-cancerous tissue during and after biological death of cancer patients. Our preliminary observations support that there are potential differences in the epigenetic signature of before and after biological death cancer tumor tissue samples. The translational values lie in the prospects of understanding unique set of small molecules secreted from tumor cells as communication tools in case of virus infected carcinoma tissue patients and their leaching out potentials to the environments and as antidote for another type of cancer model.

nilesh.sharma@dpu.edu.in