

Spectrum of Chromosomal Aberrations in Peripheral Blood Lymphocytes of Gastrointestinal Tract (GIT) and Breast Cancer Patients

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ABSTRACT The aim of present study was to assess the spectrum of chromosomal aberrations in peripheral blood lymphocytes of sporadic Gastrointestinal tract (GIT) and Breast cancer patients. Ninety eight patients (56 GIT cancer and 42 breast cancer) and seventy seven unrelated healthy set of control individuals were investigated in the present study. Lymphocytes were cultured using standard protocol. In each case, 100 metaphases were screened for numerical as well as structural aberrations. Higher frequency of aberrant metaphases with chromosomal aberrations including gaps, breaks, terminal deletions, acentric fragments, double minutes, acrocentric associations, premature chromatid separations, pulverisations, polyploidy, loss and gain of chromosomes, ring chromosome and marker chromosomes were observed in cancer patients as compared to controls. A non-random involvement in aberrations of chromosomes harbouring genes implicated in tumorigenesis was observed in GIT as well as in breast cancer patients. Aberrations in peripheral blood lymphocytes (PBLs) can indicate the constitutional anomalies and understanding of molecular basis of chromosomal instability (CIN) phenotype can help in earlier diagnosis or prognosis.