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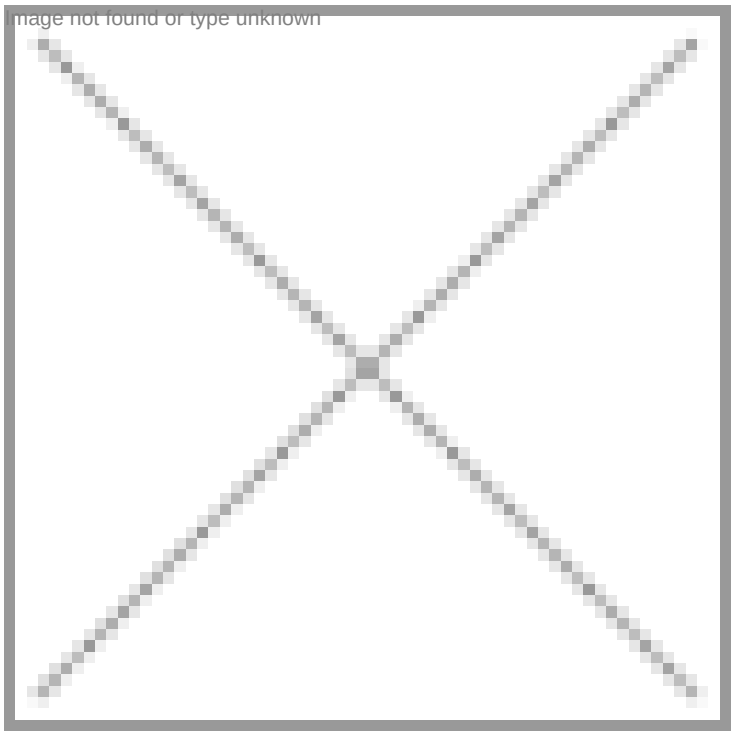
Hodgkin lymphoma therapy may lead to other cancers

27 August 2013 | News | By BioSpectrum Bureau



Singapore: Hodgkin lymphoma survivors, who received certain radiation and chemotherapy regimens, were at increased risk of subsequently developing stomach cancer, according to a study by scientists at the National Cancer Institute (NCI), which is part of the National Institutes of Health (NIH).

While the cure rate for this disease is high, there is a risk of developing secondary malignancies, such as breast cancer, lung cancer and stomach cancer. Past studies have linked Hodgkin lymphoma radiation and chemotherapy treatments with stomach cancer risk, but those studies have been limited in scope.

In order to better understand the relationship between Hodgkin lymphoma treatments and subsequent stomach cancer risk, Dr Lindsay M Morton, NCI Division of Cancer Epidemiology and Genetics, and her colleagues analyzed data from the Netherlands, Denmark, Finland, Norway, Sweden, the US and Canada. Their analyses included nearly 20,000 survivors of the disease who were diagnosed between 1953 and 2003.

Out of the 17,477 Hodgkin lymphoma cases examined, the researchers identified 89 survivors who later developed stomach cancer. The scientists obtained detailed information on treatments from patient medical records, which were then used to estimate radiation doses to the stomach and to calculate the doses and types of chemotherapy that were used to treat the survivors' Hodgkin lymphoma.

By comparing the treatments received by the survivors, who developed stomach cancer, with the treatments received by survivors, who did not develop stomach cancer, the investigators were able to determine the risks of developing stomach

cancer from the treatment for Hodgkin lymphoma.

Their analysis showed that the risk of stomach cancer increased with increasing doses of radiation to the stomach. Patients who received the highest radiation doses had a risk of stomach cancer nearly threefold greater than patients who received the lowest doses.

Further, the risks associated with radiation were even higher for survivors, who also received the alkylating agent procarbazine, a type of chemotherapy known to cause damage to DNA. Stomach cancer risks were highly dependent on the doses of both radiation and procarbazine. This study is the first to provide clear evidence of a strong interaction between chemotherapy and radiotherapy on risk of subsequent stomach cancer.