Hodgkin lymphoma survivors at high risk of second cancers
13 March 2017

Patients who are cured of Hodgkin lymphoma are at a high risk of developing a second type of cancer, particularly if they have a family history of the disease, a major new study reports.

People who survived Hodgkin lymphoma were 2.4 times more likely to develop a second cancer of any type compared with people the same age and sex in the general population - and this risk remained high 30 years after treatment.

But the risk was even greater in people who were treated for Hodgkin lymphoma and had a family history of those specific cancers.

Scientists found that patients treated for Hodgkin lymphoma were 3 and a half times more likely to develop lung cancer if they had a close relative with lung cancer when compared to those without.

And those with a family history of breast or bowel cancer had around a two-fold increased risk of developing that cancer themselves.

The findings could help doctors identify patients most at risk of second cancers who might benefit from new risk-adapted treatment strategies, currently being evaluated in clinical trials, or increased monitoring for signs of specific second cancers.

Scientists at The Institute of Cancer Research, London, along with researchers in Sweden and Germany, analysed data from 9,522 patients with Hodgkin lymphoma and 28,277 relatives of the patients.

The study is published in the prestigious Journal of Clinical Oncology today (Monday), and is funded by Cancer Research UK, German Cancer Aid and the Swedish Research Council.

Some 30 per cent of people who had Hodgkin lymphoma in the study had one or more first-degree relatives with cancer.

Those with a family history of cancer were 2.8 times more likely to get a second cancer compared with 2.2 times more likely in patients with no first-degree relatives with cancer. People with two or more first-degree relatives with cancer were 3.4 times more likely to develop a second cancer.

The most common second cancers were non-Hodgkin lymphoma, leukaemia and lung, breast, bowel and non-melanoma skin cancers.

The researchers also found that increased risk of second cancer was linked to the age at diagnosis for both women and men.

Women diagnosed with Hodgkin lymphoma under the age of 35 had a 14 per cent risk of developing breast cancer over the next 30 years, whereas for those over 35 at diagnosis the risk was only 3 per cent.

Study author Dr Amit Sud, Clinical Research Fellow
at The Institute of Cancer Research, London, said: "The vast majority of patients with Hodgkin lymphoma are cured with a combination of chemotherapy and radiotherapy. Our research has shown that these patients are at substantially increased risk of a second cancer later in life - and particularly if they have a family history of cancer.

"Younger women who have been treated with radiotherapy to the chest for Hodgkin lymphoma are already screened for breast cancer, but our study suggests that we should be looking at ways of monitoring survivors for other forms of cancer too, and potentially offering preventative interventions."

"After patients are cured, they no longer encounter oncologists, so it's important that other healthcare providers are aware of the increased risk to Hodgkin lymphoma survivors to improve early diagnosis of second cancers."

Professor Richard Houlston, Professor of Molecular and Population Genetics at The Institute of Cancer Research, London, said:

"As cure rates for cancer improve, we are increasingly thinking about the long-term health of survivors, and how we can personalise the care they receive to take into account their own individual risks.

"This major new study has tracked the health of people who have survived Hodgkin lymphoma over several decades in order to provide a comprehensive assessment of the long-term risk of cancer. The research gives us invaluable information which we can look to use to tailor monitoring, screening or preventative treatment."

Martin Ledwick, Cancer Research UK's head cancer information nurse, said:

"People with Hodgkin's lymphoma are at a greater risk of developing a second cancer, particularly in those who were treated with radiotherapy approach that was used a few decades ago. A family history of breast cancer adds to their risk. This study is the first to show that a family history of lung and bowel cancer also play a role.

"The research shows that a family history of lung cancer carries the highest risk, and as the risk hasn't decreased as treatment has changed to use less radiotherapy, there may be factors other than heredity, such as family smoking habits, that are influencing the risk."