

# Scientists map risk of premature menopause after cancer treatment

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(Medical Xpress)—Women treated for the cancer Hodgkin lymphoma will be able to better understand their risks of future infertility after researchers estimated their risk of premature menopause with different treatments.

The findings, set out in the *Journal of the National Cancer Institute*, are based on the experience of more than 2,000 young women in England and Wales treated for the cancer over a period of more than 40 years.

Previous research has suggested that women with Hodgkin lymphoma who receive certain types of chemotherapy or radiotherapy are at increased risk of going through the menopause early – but there was insufficient information to provide patients with detailed advice.

But the new study, led by scientists at The Institute of Cancer Research, London, provides precise estimates of risk for women depending on which treatment types and doses they received and at what [age](#) - allowing doctors to give them detailed advice about their risks of future infertility.

The research was largely funded by Breakthrough Breast Cancer and involved researchers from across the UK at more than 50 universities and hospitals.

The research team followed-up 2,127 women who had been treated for Hodgkin lymphoma in England and Wales between 1960 and 2004, and

who had been aged under 36 at the time. All had received treatment with chest radiotherapy, sometimes alongside other treatments.

Some 605 of the women in the study underwent non-surgical menopause before the age of 40. This was a large enough number for the researchers to estimate accurate risks of menopause at different ages, depending on the mixture and doses of treatments they received and the age they received them.

The researchers produced a risk table which could help improve the advice that clinicians are able to give to women who have undergone treatment for the disease. Several of the treatments caused a sharp increase in premature menopause risk.

For example, a woman who had received six or more cycles of a standard chemotherapy regimen in her late 20s, but without receiving radiotherapy to the pelvic area, had a chance of around 18 per cent of undergoing menopause by the age of 30, or 58 per cent by age 40.

Overall, risk of premature menopause was more than 20-fold raised after ovarian radiotherapy, and also after some specific chemotherapy regimens. Risk of menopause by age 40 was 81 per cent after receiving ovarian radiotherapy at an overall dose of 5 or more Grays, and up to 75 per cent after chemotherapy, depending on the type, although only one per cent after receiving a chemotherapy regimen called ABVD.

Study leader Professor Anthony Swerdlow, Professor of Epidemiology at The Institute of Cancer Research, London, said:

"Hodgkin lymphoma often affects younger women, and although fortunately most survive the disease, treatments including certain types of chemotherapy and pelvic radiotherapy can lead to [premature menopause](#).

"We hope our study will help women to understand better, in consultation with their doctors, their risks of future infertility following treatment for this malignancy. By looking in a much larger group of women than previous studies of this type, we were able to produce age and treatment specific risk estimates that we hope will be of practical use to individual [women](#). I'm extremely grateful to the patients and doctors who made it possible for us to produce this information."

Provided by Institute of Cancer Research

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