

# Researchers find new clues to risk of Hodgkin lymphoma

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A long-term study of twins has led University of Southern California (USC) researchers to find potential links between Hodgkin lymphoma and levels of an immune response protein (interleukin-12).

"We found that lower levels of the protein interleukin-12, involved in fighting intracellular infections, increases susceptibility to young adult Hodgkin lymphoma," says Wendy Cozen, D.O., M.P.H, associate professor of preventive medicine at the Keck School of Medicine of USC. "

Cozen is lead author on the study entitled, "Interleukin-2, interleukin-12, and interferon- $\gamma$  levels and risk of young adult Hodgkin lymphoma," published in the April 1 issue of the journal, *Blood*.

The study is accompanied by an editorial entitled "Hodgkin twins: double good, double trouble," by Richard F. Ambinder of the Johns Hopkins School of Medicine.

The work is based on patient populations found in the International Twin Study and California Twin Program, unique registries of twin pairs developed and maintained in the Department of Preventive Medicine at USC.

Hodgkin lymphoma is the most common type of cancer among young women and the second most common type among young men. But while the 5-year survival rate is high compared to that of other cancers, the treatment may cause complications later in life.

According to Cozen, this study, along with a previous one her group published in 2007, provides the first clear evidence that individual differences in immune response (via cytokine secretion) may lead to the development of Hodgkin lymphoma.

"We previously showed that there is a substantial genetic risk for adolescent and young adult Hodgkin lymphoma, and that another immune response protein (interleukin-6) was related to risk," says Cozen. "We are pursuing the hypothesis that variations in genes control the secretion of these immune response proteins (cytokines) predicting Hodgkin lymphoma risk."

Eventually, based on the group's current work, researchers may be able to develop novel treatments to correct the abnormal immune response thereby offering alternatives to current therapy.

Source: University of Southern California

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