

Study shows new treatment pathway to prevent and treat endometrial cancer recurrence

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In a new study led by Yale Cancer Center, researchers demonstrate sex hormones and insulin growth factors are associated with recurrence risk of endometrial cancer. The findings suggest endocrine-targeted therapies and an assessment of biomarkers in hormone and insulin signaling

pathways may be useful in the prevention and treatment of endometrial cancer recurrence. The study is a collaboration with researchers at the University of Hawaii and The International Agency for Research on Cancer (IARC) and is published online today in the journal *Cancer Epidemiology Biomarkers and Prevention*.

"These findings are very encouraging," said Gloria Huang, MD, Associate Professor of Obstetrics, Gynecology & Reproductive Sciences at Yale School of Medicine, [gynecologic oncologist](#) at the Smilow Cancer Hospital Care Center in Greenwich, CT, and co-senior author of the study. "Women who are diagnosed with more advanced stages of endometrial [cancer](#) have a substantially higher risk of recurrence and death."

About 67,000 new cases of endometrial cancer are diagnosed every year in the United States. The disease starts when cells in the endometrium, the inner lining of the uterus, begin to grow out of control.

Researchers analyzed [blood serum](#) and endometrial tumor samples from several hundred women who participated in Gynecologic Oncology Group (GOG)-0210, a multi-institutional cooperative group study which prospectively followed women for up to 10 years following their initial surgical treatment for endometrial cancer. The focus was on women with the most common type of endometrial cancer, endometrioid adenocarcinoma, who were at risk for recurrence due to higher stage at presentation (Stages II to IV).

Study results showed a recurrence in 280 patients (34%) during a median of 4.6 years of follow-up. Estrogen-receptor positivity, insulin receptor positivity, and circulating insulin-like growth factor-I were inversely associated with recurrence risk.

Circulating estradiol hormone and positivity for phosphorylated

IGF1R/IR (pIGF1R/pIR), the activated form of cellular receptors for insulin-like growth factors and insulin were associated with increased recurrence risk.

"Moving forward, we've begun a multi-center trial, which is currently open and enrolling patients at sites nationwide to evaluate the efficacy of a combination endocrine therapy for treating endometrial cancer [recurrence](#)," said Huang. "The therapy combines two oral medications to simultaneously block the endocrine pathways identified in this study. We hope that this research serves as the gateway to more effective and less toxic treatment options for women with advanced stage or recurrent endometrial cancer."

More information: Melissa A. Merritt et al. Sex Hormone, Insulin and Insulin-like Growth Factor in Recurrence of High Stage Endometrial Cancer. *Cancer Epidemiology Biomarkers and Prevention*. (2021) [DOI: 10.1158/1055-9965.EPI-20-1613](https://doi.org/10.1158/1055-9965.EPI-20-1613)

Provided by Yale University

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