

# Hormone therapy linked to better survival after lung cancer diagnosis in women

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Survival among people with lung cancer has been better for women than men, and the findings of a recent study indicate that female hormones may be a factor in this difference. The combination of estrogen plus progesterone and the use of long-term hormone therapy were associated with the most significant improvements in survival.

The study was designed to explore the influence of several reproductive and hormonal factors on overall survival of women with non-small cell lung cancer (NSCLC). After adjusting for stage of disease at diagnosis, treatment type (surgery or radiation), smoking status, age, race, and education level, the only factor studied that predicted survival after a diagnosis of NSCLC was use of [hormone therapy](#).

Among the 485 women, the median survival time was 80 months for women receiving hormone therapy and 37.5 months for women not receiving hormone therapy. Combined [estrogen](#) and progesterone was associated with a slightly higher median survival time (87.0 months) than estrogen alone (83.0 months). The findings of the study are published in the March issue of the International Association for the Study of Lung Cancer's journal, the *Journal of Thoracic Oncology (JTO)*.

The use of hormone therapy for 11 years or more was associated with significantly improved survival, and this finding remained significant among women who took either estrogen alone or estrogen plus progesterone and among women who had never smoked or were smokers.

"What has emerged from this study and other published findings is a complex relationship between hormone use and lung cancer outcomes, with variation in results based on years of use," says lead author Ann G. Schwartz, PhD, MPH, of Karmanos Cancer Institute, Detroit, MI, and an IASLC member.

Studies on the effect of hormone use on lung cancer survival have been limited, and the results have been inconsistent. Because of this, additional research is needed to evaluate the significance of long-term use of hormone therapy on outcomes in lung cancer, with better characterization of tumors in terms of expression of estrogen and progesterone receptors.

Dr. Schwartz adds, "There is more to learn about survival differences between men and women; hormone use may contribute to those differences. The largest impact on [lung cancer](#) outcomes will come from successful early detection and treatment."

**More information:** *Journal of Thoracic Oncology*  
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