

## Hormone replacement therapy linked to increased lung cancer risk

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Women aged 50 to 76 who take estrogen plus progestin may have an increased risk of lung cancer, according to a new study published in the pre-print online edition of the *Journal of Clinical Oncology*.

Although the risk is "duration-dependent," with women taking HRT for 10-plus years at greatest risk of developing [lung cancer](#), an acceptable length of HRT has yet to be determined, the researchers report.

While the risk of developing lung cancer for women using [estrogen plus progestin](#) HRT 10 years or longer was approximately 50 percent more than women not using HRT, this risk is actually quite small compared to the risk from smoking.

"Although HRT use has declined and is not recommended except for short-term treatment of menopausal symptoms, our results indicate millions of women may remain at risk of developing lung cancer," said Chris Slatore, M.D., principal investigator and an assistant professor of medicine (pulmonary and critical care medicine) in the Oregon Health & Science University School of Medicine, Portland Veterans Affairs Medical Center; and a member of the OHSU Knight Cancer Institute.

To conduct this research, Slatore and colleagues reviewed data collected from 2000 to 2002 in the Vitamins and Lifestyle Study in Washington state. They identified 36,588 peri- and postmenopausal participants aged 50 to 76 who met their study criteria and followed them for six years using the Seattle-Puget Sound Surveillance, Epidemiology and End

Results cancer registry.

At the end of the observation period, December 31, 2007, 344 of the participants had developed lung cancer. After adjusting for smoking, age and other factors that affect the risk of lung cancer, the researchers determined the use of estrogen and progestin for 10 or more years was associated with increased risk for lung cancer compared with no use of HRT. They also found duration of use was associated with an advanced stage of cancer at diagnosis.

Although the mechanisms underlying the association between HRT and lung cancer are still unknown, the researchers report that genetic and environment interactions likely play a role. They also suggest that estrogen plus progestin may lead to more aggressive disease or mask early symptoms, or HRT users may be less likely to see or receive medical care in a timely fashion.

"These findings may be useful in counseling [women](#) about their risk of developing lung cancer and prompt further research into the mechanisms underlying HRT and increased lung cancer risk," said Slatore.

Provided by Oregon Health & Science University

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