

## Menopausal hormone therapy with estrogen and progesterin linked to increased risk of death in women

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Researchers have shown that use of hormone therapy with estrogen plus progesterin increases the risk of dying from non-small cell lung cancer (NSCLC) in women with the disease. Lung cancer is the leading cause of cancer death in US women.

These findings, presented at the American Society of Clinical Oncology (ASCO) 2009 meeting, are based on secondary analyses from the Women's Health Initiative, a randomised, placebocontrolled clinical trial evaluating the health effects of conjugated equine estrogen (CEE) plus medroxyprogesterone acetate (MPA) in 16,608 mostly healthy postmenopausal women.

Previous research suggested that hormones play a role in non-small cell lung cancer because women tend to have higher survival rates than men and respond better to certain therapies. However, this is the first study to examine a specific correlation in a randomised clinical trial setting.

"Many women entering menopause have symptoms that make them consider hormone therapy," said Dr. Rowan Chlebowski, a medical oncologist at the Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center and the study's lead author. "We already know that combined hormone therapy has more risks than benefits, including a higher risk of stroke and breast cancer, the most common cancer in US women. The link we describe between hormone therapy with CEE plus MPA and death from non-small cell lung cancer should influence discussions between physicians and women considering hormone therapy use, especially for those with a smoking history."

This study looked at non-small cell lung cancer incidence and mortality during 5.6 years of intervention with hormone therapy or placebo and 2.4 years of additional follow-up. While there was no significant difference in NSCLC incidence between the two randomised groups, mortality after a NSCLC diagnosis was significantly higher in the combined hormone therapy group: women in the hormone therapy group were 61 per cent more likely to die from non-small cell lung cancer than women in the placebo group (67 versus 39 deaths, respectively).

The researchers noted that the magnitude of the mortality risk of CEE plus MPA use in current smokers raises particular concerns. The researchers report that one in 100 current smokers in the trial using combined hormone therapy experienced an avoidable death from non-cell lung cancer during the eight years of this study. The mortality rate was 3.4 per cent among smokers in the hormone therapy group, versus 2.3 per cent among smokers in the placebo group over the 7.9 year study period.

Researchers noted that study strengths include the randomised, double-blind study design and the large, ethnically diverse population; limitations include the secondary nature of the analyses as these findings were not a primary objective of the trial. The researchers suspect their finding will prompt reconsideration of the risk-to-benefit balance of combined hormone therapy use for menopause symptoms and prompt further studies, both preclinical and clinical, on hormonal effects in NSCLC.