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The Menopause Society™
Leading the Conversation

New Model Predicts Risk of Deep Vein Thrombosis in Patients With Epithelial Ovarian Cancer

New study confirms reliability of nomogram prediction model based on multiple factors, including body mass index, hypertriglyceridemia, tumor stage, and platelet count

CLEVELAND, Ohio (June 11, 2025)—Nomograms have a strong reputation as reliable predictive models that simplify statistical prediction models and guide personalized treatment to formulate preventive measures for various diseases. Through a new study, a nomogram was developed and validated to predict the risk of patients with epithelial ovarian cancer developing deep vein thrombosis. Results of the study are published online today in *Menopause*, the journal of The Menopause Society.

Although ovarian cancer is not one of the more common types of cancer (especially compared with breast or lung cancer), it is serious. It is the fifth-leading cause of cancer death for women and becomes more common as women age, especially past the age of 65. Epithelial ovarian cancer accounts for more than 90% of ovarian cancer cases. Its symptoms, especially in the earlier stages, are hard to detect and often go unnoticed, which partially explains the high mortality rate.

Common symptoms experienced as the disease progresses include abdominal bloating and reduced appetite—symptoms that can often be mistaken for less serious causes. Because of the lack of specificity of symptoms, most patients are diagnosed at an advanced stage, which significantly limits their treatment options and contributes to poor prognoses.

Currently, standard treatment for this form of cancer involves surgery and chemotherapy, which can increase the risk of postoperative complications contributing to compromised patient survival rates. One major risk is deep vein thrombosis, a condition in which blood abnormally clots deep in the veins and, if left untreated, can break into smaller clots that travel to the lungs (pulmonary embolism), causing difficulty breathing, reduced oxygen supply to the body, and ultimately respiratory failure.

Being able to identify factors that increase the risk of deep vein thrombosis is crucial for early prevention. Nomograms, as predictive models, simplify statistical prediction models into clear graphics, generating numerical probabilities of clinical events tailored to individual patients. This helps provide personalized treatment for patients and assists clinicians in formulating preventive measures. Despite their utility, limited research exists regarding the use of nomograms for predicting deep vein thrombosis in patients with endothelial ovarian cancer. That is why researchers in a new study sought to develop and validate a nomogram prediction model applicable to this situation.

After tracking 429 patients, of which 116 (27%) developed deep vein thrombosis, the researchers concluded that age, body mass index, hypertriglyceridemia, tumor stage, tumor grade, CA125 level, platelet count, and fibrinogen level were significant independent risk factors for patients with endothelial ovarian cancer developing deep vein thrombosis. The nomogram constructed with these factors

demonstrated good predictive performance and clinical utility in predicting the risk of deep vein thrombosis within this targeted patient population.

Study results are published in the article "Construction of a nomogram prediction model for deep vein thrombosis in epithelial ovarian cancer."

"Ovarian cancer is often diagnosed at a late stage and can be extremely aggressive, requiring extensive surgery and long courses of chemotherapy. Although these treatments reduce cancer burden, they are associated with significant risks. Identifying strategies and protocols to minimize or prevent treatment-related complications is essential to optimizing patient outcomes and quality of life," says Dr. Monica Christmas, associate medical director for The Menopause Society.

For more information about menopause and healthy aging, visit www.menopause.org.

The Menopause Society is dedicated to empowering healthcare professionals and providing them with the tools and resources to improve the health of women during the menopause transition and beyond. As the leading authority on menopause since 1989, the nonprofit, multidisciplinary organization serves as the independent, evidence-based resource for healthcare professionals, researchers, the media, and the public and leads the conversation about improving women's health and healthcare experiences. To learn more, visit menopause.org.