

Utilizing meta-analysis of tumor marker blood test kinetics in ovarian cancer patients

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Patient prognosis and treatment response prediction are key factors in treating ovarian cancer, which is characterized by the lowest survival rate among gynecological cancers. Consequently, there is strong demand for

a more reliable prognostic marker.

Addressing this need, a research team from the Gynecological Cancer Center at Korea University Guro Hospital conducted a comprehensive meta-analysis of 27 published studies encompassing 14,444 patients with epithelial ovarian cancer. They employed the ELIMination rate constant K (KELIM) to analyze integrated [progression-free survival](#) and overall survival rates.

The research is [published](#) in the *International Journal of Gynecologic Cancer*.

The analysis revealed that patients categorized within the favorable KELIM score group exhibited a 50% lower rate of both recurrence and survival risk compared to those in the unfavorable score group. Moreover, the results from this study determined that KELIM could predict [treatment response](#) to PARP inhibitors and bevacizumab, an angiogenesis inhibitor, regimens that are utilized frequently today.

KELIM is a novel methodology grounded in mathematical modeling that has the potential to predict patient responses to cancer treatment as well as assess recurrence and survival risks. This methodology is particularly advantageous for patients as it has been shown to have high accuracy rates in predicting treatment responses and prognoses. Additionally, the costs associated with employing KELIM are minimal, potentially making it a highly accessible and valuable tool in oncological care.

Prof. Hyun-Woong Cho of the Korea University Guro Hospital Gynecological Cancer Center (Department of Obstetrics and Gynecology), the lead author of this study, commented, "The findings indicate that employing KELIM in ovarian cancer treatment could be instrumental in predicting treatment responses. This has significant implications for formulating treatment strategies, potentially including

the use of anticancer drugs and targeted therapies."

Prof. Myeong Cheol Lim, the lead researcher of this study, stated, "The future application of KELIM in the treatment of actual [ovarian cancer](#) patients holds the promise of achieving precision medicine, enabling personalized treatment approaches tailored to individual patient needs."

More information: Ji Hyun Kim et al, Prognostic value of CA125 kinetics, half-life, and nadir in the treatment of epithelial ovarian cancer: a systematic review and meta-analysis, *International Journal of Gynecologic Cancer* (2023). [DOI: 10.1136/ijgc-2023-004825](https://doi.org/10.1136/ijgc-2023-004825)

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