

PREDICTIVE MARKERS OF RESPONSE TO ADJUVANT TREATMENT IN LOCALLY ADVANCED OVARIAN CANCER

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Background and Importance

Along with mutations in the BRCA genes and homologous recombination deficiency, the rate of CA-125 biomarker clearance during the first cycles of chemotherapy is emerging as an indicator of chemosensitivity in ovarian cancer. The validated indicator for this clearance rate, **KELIM** (CA-125 ELIMination Rate Constant K), has demonstrated its prognostic value for the benefit obtained after treatment in several clinical trials.

Aim and Objectives

 Our objective was to **validate the KELIM score** in clinical practice in patients with ovarian cancer treated with adjuvant chemotherapy and to determine whether the KELIM score is predictive of progression-free (PFS) and overall survival (OS).

Materials and Methods

 Patients with **stage III** ovarian cancer who had received **adjuvant chemotherapy following cytoreductive primary surgery** at our center from January 2014 to January 2024.

✗ Patients treated in the recurrent setting were excluded.

Kaplan-Meier survival analyses was performed for **PFS** and **OS**.

KELIM was calculated, using a **validated formula** (<https://www.biomarker-kinetics.org/CA-125>), based on **CA-125 values** during each treatment cycle within the first 100 days of chemotherapy.

At least **three values** were required.

the obtained score was considered

favorable (KELIM ≥1) → high chemosensitivity

unfavorable (KELIM <1) → low chemosensitivity

Results

N=43

- ✓ Mean age: 60 years.
- ✓ Median follow-up: 4.98 years.

- ✓ 56.1% had a **favorable KELIM score**.
- ✓ In those patients where **BRCA** status was available, there was a mutation in 20.7%.
- ✓ 88.5% of patients had an **optimal surgical cytoreduction**.
- ✓ **Bevacizumab** was added to chemotherapy in 25% of patients.

An **unfavorable KELIM score** was associated with a non-statistically significant **lower** estimated median **PFS** (6.00 vs 7.66 years, $p=0.167$) and **OS** (6.37 vs 8.06 years, $p=0.126$) as compared to a favorable KELIM.

Conclusion and Relevance

Patients with ovarian cancer treated with adjuvant chemotherapy with a calculated KELIM score <1 were more likely to have a lower PFS and lower OS when compared to patients with a KELIM score ≥1.

