

### MODERN EDUCATIONAL SYSTEM AND INNOVATIVE TEACHING SOLUTIONS



# PROGNOSTIC FACTORS IN PATIENTS WITH TRIPLE-NEGATIVE BREAST CANCER

# Ramizkhanova Maftunakhon Iskandarkhonovna Muratova Munojat Muratovna

Scientific Supervisor:

**Keywords:** triple-negative breast cancer, prognosis, BRCA mutations, Ki-67, pathological complete response, socio-behavioral factors, survival.

**Relevance.** Triple-negative breast cancer (TNBC) accounts for about 15–20% of all breast cancer cases and is characterized by an aggressive course. The absence of estrogen, progesterone, and HER2 receptor expression excludes the use of hormonal and anti-HER2 therapy, which limits treatment effectiveness. According to GLOBOCAN (2024), the five-year survival rate for TNBC is 65–70%, whereas for luminal subtypes it reaches up to 90%. The highest risk of recurrence (35–40%) is observed during the first 3 years.

**Objective.**To identify the main clinical, morphological, molecular, and sociobehavioral prognostic factors in patients with TNBC.

# Materials and Methods.

We examined 42 patients with triple-negative breast cancer who received treatment at the Tashkent City Branch of the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology over a period of 6–8 months. All patients underwent clinical and laboratory examinations, morphological verification of the diagnosis, and assessment of the main prognostic factors: tumor size, lymph node status, Ki-67 proliferation index, BRCA mutations, as well as socio-behavioral factors (stress, smoking, obesity, low physical activity).

# **Prognostic and Risk Factors:**

- Clinical: large tumor size, lymph node involvement, age <40 years.
- **Morphological:** low degree of differentiation, high proliferation index (Ki-67 >40%).
- **Molecular-genetic:** BRCA1/2 mutations (in 15–20% of patients), which increase sensitivity to platinum-based therapy and PARP inhibitors.
- **Therapeutic response:** achievement of pathological complete response (pCR) after neoadjuvant chemotherapy is associated with 5-year survival rates of up to 85–90%.
- **Socio-behavioral:** chronic stress, smoking, alcohol use, obesity, and low physical activity are factors that worsen the course and increase the risk of recurrence.

### Conclusion.

The prognosis of TNBC is determined by a combination of factors: from disease stage and biological characteristics of the tumor to the patient's lifestyle. Considering both clinical and social aspects makes it possible not only to individualize therapy but also to expand rehabilitation approaches, thereby improving long-term survival outcomes.



## MODERN EDUCATIONAL SYSTEM AND INNOVATIVE TEACHING SOLUTIONS



# **REFERENCES**

- 1. Bianchini G., Balko J.M., Mayer I.A., et al. Triple-negative breast cancer: challenges and opportunities. *Nat Rev Clin Oncol.* 2024.
- 2. Dent R., Trudeau M., Pritchard K.I., et al. Triple-negative breast cancer: clinical features and patterns of recurrence. *Clin Cancer Res.* 2007.
- 3. Foulkes W.D., Smith I.E., Reis-Filho J.S. Triple-negative breast cancer. *N Engl J Med*. 2010.
- 4. Sharma P. Biology and management of patients with triple-negative breast cancer. *Oncologist*. 2016.
- 5. Chida Y., Hamer M., Wardle J., Steptoe A. Do stress-related psychosocial factors contribute to cancer incidence and survival? *Nat Clin Pract Oncol.* 2008.
  - 6. GLOBOCAN 2024. Breast Cancer Facts & Figures.







