



ASSESSMENT OF THE ECONOMIC AND SOCIETAL IMPACT OF CERVICAL CANCER TREATMENT IN BULGARIA

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INTRODUCTION:

Cervical carcinoma remains a critical public health concern in Bulgaria, associated with significant morbidity, mortality, and economic burden. Recent therapeutic advances have improved survival and quality of life, especially when treatment starts in earlier stages. While clinical benefits are well documented, the broader societal economic impact of cervical cancer treatment in Bulgaria has not been fully quantified. This analysis aimed to assess the societal and economic impact by estimating total quality-adjusted life years (QALYs) gained and converting them into economic value using GDP per working individual.

RESULTS:

The total health benefit from cervical cancer treatment was estimated at 8,200 QALYs for working-age patients. Economic impact was calculated by multiplying total QALYs gained by GDP per working individual, resulting in an added value of EUR 399,733,778 to the national economy. Treatment costs were also considered: early-stage therapy averaged EUR 1,861 per patient, while advanced-stage treatment cost EUR 34,635 per patient.

HEALTH AND ECONOMIC OUTCOMES



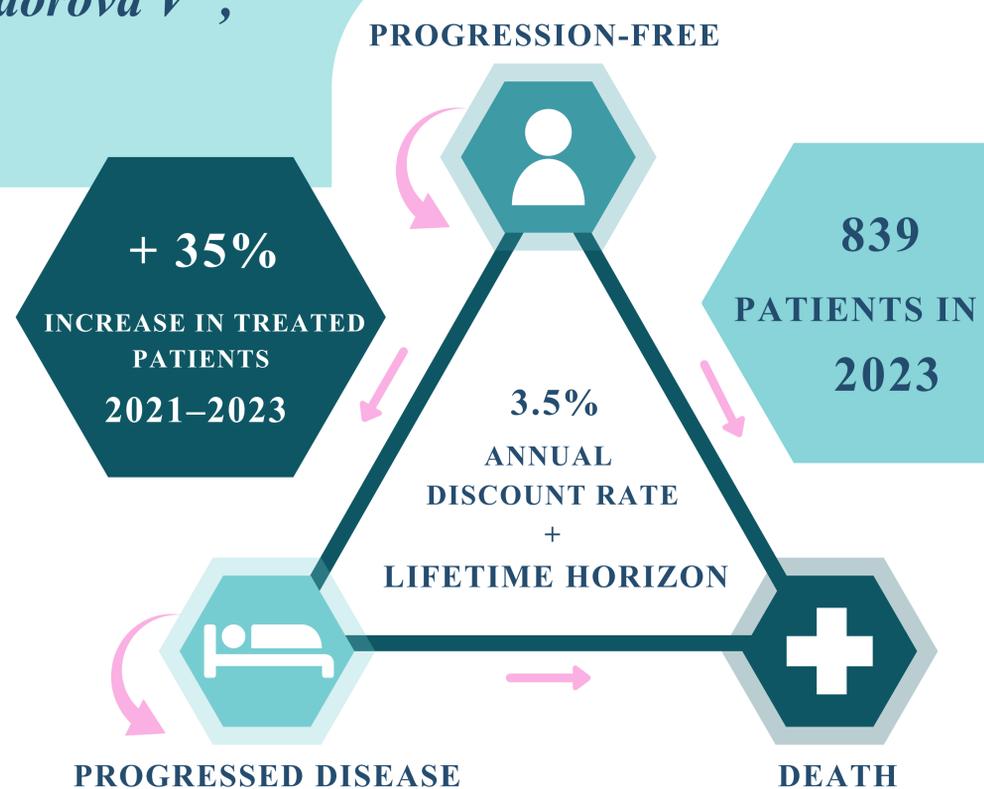
GDP CONTRIBUTION: **€399.7 MILLION**



EARLY: **€1,861 PER PATIENT**
ADVANCED: **€34,635 PER PATIENT**



HEALTH BENEFIT:
8,200 QALYS GAINED (WORKING-AGE PATIENTS)



METHODS:

Using clinical efficacy data, a partitioned survival model with a lifetime horizon and 3.5% annual discount rate was developed. The model is adaptable to other countries with similar data availability. Estimated average QALY gain was 12.98 per patient for early-stage and 1.36 per patient for advanced-stage treatment. According to National Health Insurance Fund (NHIF) data, the number of treated patients increased by 35% between 2021 and 2023, reaching 839 individuals in 2023. Analysis focused on working-age patients.

CONCLUSIONS:

These results highlight the dual value of cervical cancer treatment: delivering meaningful health benefits while contributing to national economic productivity. Early diagnosis and timely access to effective therapies should remain key public health priorities in Bulgaria.

