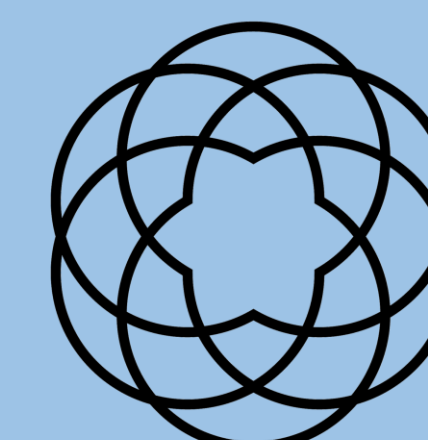


Health benefits and cost-effectiveness of early cervical cancer diagnosis in Bulgaria



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OBJECTIVES: Cervical cancer (CC) is the second most common cancer among women aged between 15 and 44 in Europe. Annually, nearly 325.3 million women over the age of 15 are at risk of developing CC. Each year approximately 61 072 women are diagnosed with cervical cancer and 25 829 die from the disease. The primary objective of this study was to evaluate the health benefits of early CC diagnosis in Bulgaria.

METHODS: An excel model was developed and health benefit data (Quality-adjusted life years - QALYs) from a CC screening programme were modelled. The approach of PAP tests every 3 years with triage of ASC-US patients (HPV DNA test) was analysed. A comparative analysis of the health benefits of early diagnosis of PCOS (stage I/II) versus late diagnosis (advanced disease, stage III/IV) was conducted. A comparative evaluation of the cost-effectiveness of early diagnosis of RMS (stage I/II) versus diagnosis of a patient with advanced RMS (stage III/IV) was performed. In a patient with early-stage CC, the following medical activities for disease control were costed: need for hysterectomy and radiotherapy/brachytherapy. In a patient with advanced disease, the cost of control includes the administration of platinum-based therapy with/without bevacizumab and medical activities for hysterectomy.

RESULTS: Early CC diagnosis is crucial for maximizing treatment options, improving survival rates, and minimizing the impact of the disease on overall health and well-being. It highlights the importance of cervical cancer prevention programs and routine gynaecological examinations for early detection and intervention.

	Cost of disease management, BGN	Difference in costs, BGN	QALYs	Difference in QALYs	ICUR, BGN/QALY
Early-stage disease management	3 641,37	-64 098,86	25,64	24,29	Dominates
Late-stage disease management	67 740,23		1,36		

Fig. 1 ACER/QALY of early-stage diagnosis vs late-stage diagnosis

CONCLUSION: Early CC diagnosis is crucial for maximizing treatment options, improving survival rates, and minimizing the impact of the disease on overall health and well-being. It highlights the importance of cervical cancer prevention programs and routine gynaecological examinations for early detection and intervention.