Mortality trends of breast and cervical cancers in Poland during the first decade of the national population screenings.

Based on data of National Cancer Registry

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1. Background & Introduction

In many European countries breast and cervical screenings were implemented in the 90's or earlier. Following the EC recommendations (2003) in Poland screenings on the population level were implemented in 2006. Published CONCORD-3 results disclosed that in Poland is no sufficient increase in cancer survival, neither breast nor cervical cancer. The detailed report on the health effect of screening has not been published yet. Therefore we decided to analyse the mortality trends in the first decade since the screening was implemented in Poland.

2. Material & Methods

Based on the published data by the National Cancer Registry, we calculated mortality trends in breast and cervical cancers. We applied Joinpoint Regression Analysis and calculated APC (Annual Percentage Change) for the period of 2000-2015.

3. Results & Discussion

Contrary to our expectation breast cancer mortality trend was steadily and significantly increasing since 2010-15: ASR(E) = 1,5% per year (fig. 1); crude rate APC =1.3% per year in 2000-12 and accelerated later up 4.4%. Cervical cancer mortality was steadily decreasing the whole analysed period of time on average -2.5% per year (fig. 2); crude rate APC = -2.53% per year). The national screening programme could effect in a slight increase in the 5-year cancer survival from 2000-14: in breast cancer about 5.3% and in cervical cancer about 3.5% as it was presented in CONCORD-3 study.

A possible explanation of the increase in breast cancer mortality could be an large increase of number of patients due to early detection, including national screening, and eldering of the population. That could overload the healthcare system and adversely affect access to treatment. To countervail this problem in 2015 the so-called 'fast oncological patient pathway' (DiLO) was implemented by law. The decreasing mortality trend in cervical cancer in Poland seems to be related to natural trends in Europe, therefore, the influence of the screening is difficult to assess.

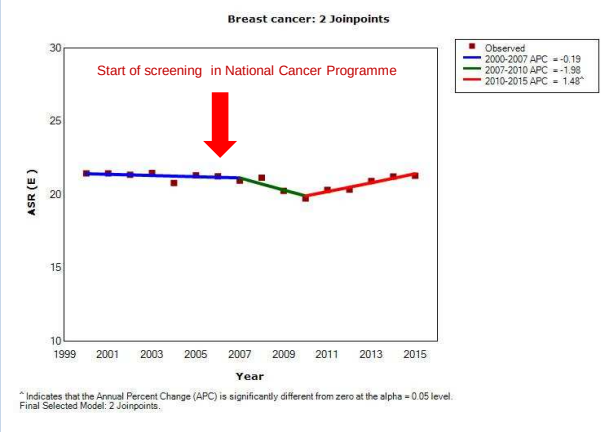

Figure.1. Age-standardised mortality rate (ASR) and annual percent change (APC) of patients diagnosed with breast cancer in Poland in 2000-2015

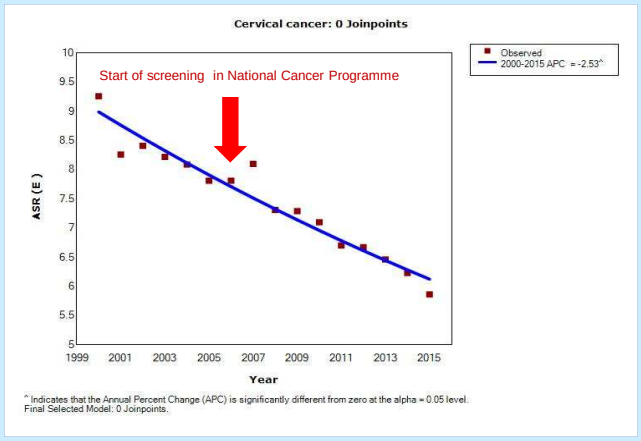

Figure.2. Age-standardised mortality rate (ASR) and annual percent change (APC) of patients diagnosed with cervical cancer in Poland in 2000-2015

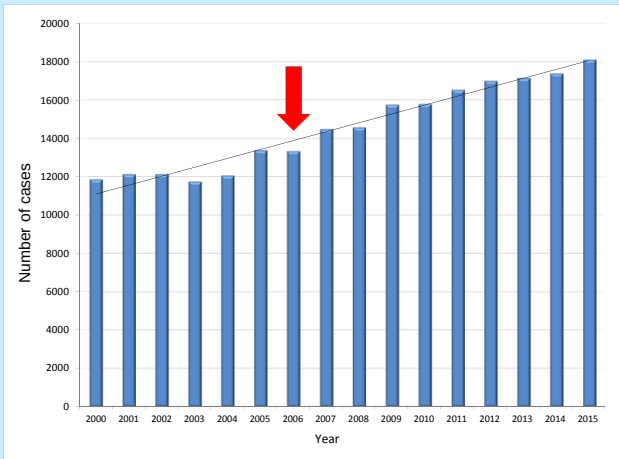

Figure.3. Number of breast cancer cases diagnosed with breast cancer in Poland in 2000-2015

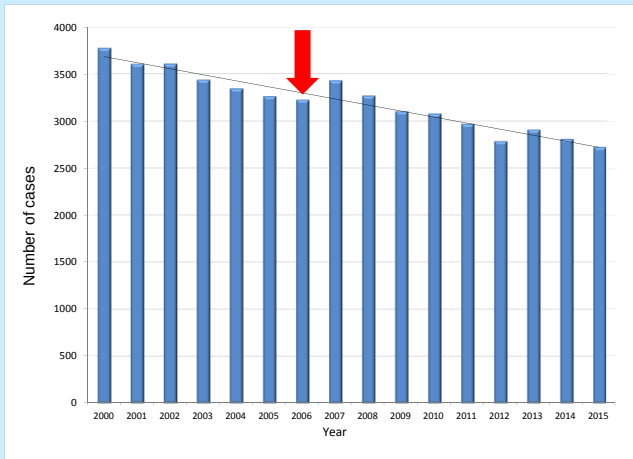

Figure.4. Number of cervical cancer cases diagnosed with cervical cancer in Poland in 2000-2015

Table 1. Age-standardised 5-year net survival (NS;%) of adults diagnosed with breast and cervical cancer in Poland in 2000-2014.

Period of diagnosed	Cancer			
	breast		cervix	
	NS	95% CI	NS	95% CI
2000-2004	71.3	70.7-71.9	51.6	50.8-52.5
2005-2009	74.7	74.2-75.2	54.4	53.6-55.3
2010-2014	76.5	76.1-77.0	55.1	54.2-55.9

4. Conclusions

The unambiguous evaluation of health effectiveness of screening programmes in Poland is difficult in the present situation. Clearly, results does not meet the expectations.

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