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# CERVICAL CANCER SCREENING IN THE CZECH REPUBLIC

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## BACKGROUND

Cervical cancer prevention in the Czech Republic (CR) had a very auspicious start. Cytological diagnosis of atypical cells of cervix uteri by the Papanicolaou method was introduced very early – in 1947. In 1966 the Czech National Health Law was passed which guaranteed women a yearly preventive examination by a gynaecologist, which included a Pap test. This preventive examination has been considered as an equivalent of screening for cervical cancer and therefore the screening of cervical carcinoma in CR has been opportunistic since that time. Despite a very high frequency of screening visits and a historically wide age range, the incidence of CC (cervical cancer) has not changed in the last 34 years. The reasons for this situation include: the low test coverage of Czech women (35% at the most), the absence of accredited cytology laboratories, the lack of national registries for any aspect of screening and the lack of evaluation mechanisms of the screening process. In 2004, there were 1,033 new cases of cervical carcinoma and 394 women died from this disease in the CR. The highest incidence of cervical cancer occurs in the 45–49-age category (1–3).

## RECOMMENDATIONS

In July 2004, the third committee established by the Ministry of Health (MH) published recommendations that included a 1-year screening interval with classical cytology as the primary screening test and HPV detection for the triage of borderline findings

up to 4% of the volume of Pap smears for each laboratory. The recommended age range was 25–60 and insurance companies were supposed to send invitation to women. If the woman did not respond, the invitation was supposed to be repeated in 2 years. The basic requirement for the cytological laboratory to be able to apply for accreditation was a minimum volume of 15, 000 cervical smears per year (4). Originally, the screening was expected to start in July 2006, but it had not begun.

In September 2007, identical recommendations for cervical cancer screening program were published by the MH (5). In February 2008, the MH of the CR announced the onset of organized screening program. The press report announced the following information: 1. The process of the accreditation of the cytological laboratories based on strict criteria, including the annual amount of cytological smears analyzed is ongoing and the list of selected laboratories will be regularly updated. Only those laboratories selected by the MH will be reimbursed by the insurance companies for the analyses of the cytological smears completed during preventive medical examinations. 2. Insurance companies will invite women 25–60 years of age who will not have had cervical smear completed within the last two years. Should they not respond, they will be invited again the following year. However, the start of the invitation process and the number of insurance companies participating in this process has not been specified. 3. A new screening code for cervicovaginal screening smear has been defined and it is planned that the expected increase in the volume of cervicovaginal smears performed once the organized program starts will be reimbursed. 4. The cytological laboratories are obligated to keep evidence of the analyses of the screening smears. While these steps are certainly crucial, a complex plan for the establishment of the national screening registry has not yet been prepared. Without this registry, evaluation of the program

performance will not be possible. Despite EU Recommendations, the screening interval in the Czech guidelines is still 1-year (6).

## HPV TESTING

HPV detection is recommended in the MH recommendations only for the triage of borderline findings up to 4% of the volume of Pap smears for each laboratory (4, 5). Even though HPV detection is reimbursed by the insurance companies the test is expensive and the rules are not very clear and therefore it is not widely used by gynecologists. On the other hand, there are 30 routine laboratories performing HPV detection, 21 using the Hybrid Capture 2 test and 9 laboratories using the PCR based methods which are regularly participating in the External Quality Assurance (EQA) program. The EQA in medical microbiology in the Czech Republic is well organized. It is coordinated by the Accreditation Department of the Centre of Epidemiology and Microbiology (AD-CEM) of the National Institute of Public Health in Prague. EQA for HPV has been available in the Czech Republic since 2000 and it is prepared by the National Reference Laboratory for Papillomaviruses (NRL PV). Since 2004 NRL PV itself has been successfully participating in EQA for HPV offered by Instand (WHO Collaborating Centre for Quality Assurance and Standardization in Laboratory Medicine). As has been shown for other programs, the EQA for HPV has proved to be useful, helping to improve the accuracy of analyses and contributing to the standardization of methods of HPV DNA testing. EQA for HPV has been well received by routine laboratories, demonstrated by a high number of these institutions voluntarily participating in EQA (7).

## VACCINATION

Two vaccines are available in the Czech Republic, Silgard (Merck&Co.) since December 2006 and Cervarix (GSK) since September 2007. In 2006, the Working group for HPV vaccination (WGHPVV) under the Czech Medical Society of JEP was established and this committee issued the recommendation for the vaccination against HPV in the Czech Republic. Deputies of all medical societies, with the exception of the representatives of the Czech Gynecological and Obstetrical society (CGOS), agreed on the need to implement the routine vaccination for girls at the age of 13. The CGOS, however, would recommend the routine vaccination only on the condition that an organized screening program in the Czech Republic is established (8). This recommendation was sent to the MH in December 2006 but so far, there has been no response. Several insurance companies provide partial reimbursement (18-107 EUR, the price of the three doses is approximately 375 EUR) for the vaccination of girls from 12–13 to 15–18 years

of age. Several other recommendations for vaccination against HPV were issued by the Professional Association of Pediatric Practitioners, CGOS (9), Czech Vaccinology Society (9) and the National Reference Laboratory for Papillomaviruses (10).

## CONCLUSIONS

Cervical screening program in the CR has been opportunistic since 1966. In 2008, the Ministry of Health announced the start of an organized program. The guidelines issued in 2007, however, are the same as in 2004 and they include 1-year screening interval and no plan for the establishment of the screening registry. HPV testing is widely available in the CR. There are about 30 laboratories which are performing HPV detection and participate in the system of External Quality Control. However, the test is rarely used because of its price.

The vaccination against HPV has been available in the CR since 2006/2007. The distribution is based on the individual basis and partly reimbursed by the insurance companies. The recommendation issued in 2006 by the WGHPVV was sent to the MH but there has been no response so far.

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