

**Attendance Rate (2003-2005) of the Hungarian Organized, Nation-Wide
Cervical Cancer Screening Program**

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Abstract

Background: Organized nationwide screening programme for cervical cancer was introduced in Hungary in 2003. Women between the ages of 25 and 65 are invited by personal letter, and a 3-year screening interval has been applied.

Objectives: The aim of this study is to analyse both the annual and 3-year screening rate (attendance) of the organized programme.

Methods: The data derive from the financial database of the National Health Insurance Fund Administration (OEP) of Hungary covering the period of 2000–05. First, we calculated the annual screening rate; then we compared the 3-year screening rate of two periods: 2000–02 without and 2003–05 with the organized screening programme. Screening is defined with cytological examination of Papanicolau smear.

Results: The annual screening rate of women for all age groups varied between 15.5% and 16.8% during the 6 years between 2000 and 2005. The age-specific screening rate of women aged 25 to 64 years varied between 21.8 % and 24.3 % between 2000–05. The 3-year screening rate of women for all age groups was 31.4 % in 2000–02 and 32.9 % in 2003–05. The age-specific screening rate of women in the target population aged 25 to 64 years increased from 48.45% in 2000–02 without the organized screening programme to 52.65 % in 2003–05 following introduction of the organized screening programme.

Conclusions: Introduction of the organized cervical screening programme resulted in a 4.2% increase in screening rates in the target age group of women aged 45 to 64 years. In order to reduce cervical cancer mortality, the screening rate (attendance) must be increased.

**Comparative Study Between Pap Smear Cytology and FTIR Spectroscopy: A
New Tool for Screening for Cervical Cancer**

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Abstract

Aims: To evaluate Fourier Transform Infrared (FTIR) spectroscopy as a new tool for cervical cancer screening in comparison with cervical cytology.

Methods: Cervical scrapings were taken by cytobrush and placed in thinprep™ medium. The samples were dried over infrared transparent matrix. A beam of infrared light was directed at the dried samples at frequencies from 4,000 to 400 cm. The absorption data were produced using a Spectrum BX II FTIR spectrometer and were compared with the reference absorption data of known samples using FTIR spectroscopy software. FTIR spectroscopy was compared with cytology (gold standard).

Results: FTIR spectroscopy could differentiate normal from abnormal cervical cells in the 800 samples examined. FTIR spectroscopy showed different peaks for glycogens, proteins, carbohydrates, and nucleic acids for normal, LSIL, HSIL, and cancer. Sensitivity was 85%; specificity, 91%; positive predictive value, 19.5%; and negative predictive value, 99.5%.

Conclusion: This study suggests that FTIR spectroscopy could be used as an alternative method for screening for cervical cancer, particularly in countries where cytotechnologists and cytopathologists are limited.

Is It Possible to Increase the Participation of Women to Cervical Screening in France?

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Abstract

Background: Individual cervical screening with pap smears is the cause of the decrease in incidence of cervical cancer in France, but for the last 10 years the decrease is limited due to the persistence of unscreened women, generally from low socioeconomic levels or migrant populations.

Objective: Such an observation leads us to organize specific campaigns (2001, 2003, 2005) in Marseille, where the rate of such populations is high (37 to 45%).

Methods: Women without a pap smear for the last 2-3 years were individually invited to get it, free of charge. The evaluation of each campaign helps us to improve the next one. Changes from the first to the third were to increase the number of free screening services, send a second invitation to nonresponders, and organize local meetings with social workers.

Results: Among the 50,606 eligible women, participation rates were dramatically low but are evolving from 1.6% to 2.5% and 6.9% along the three campaigns.

Factors increasing participation are the second mailing of invitations, the gratuitousness of the screening process, the oral information delivered by social workers, and proximity of the places where the test is performed.

The rate of positive tests (all types of lesions) was successively: 2.9%, 2.5%, and 2.6%.

Conclusion: The organization of such campaigns needs to be followed to find better solutions to increase participation in cervical screening of such populations. We are now testing the feasibility of the HPV auto test.

HPV Prevalence and Rescue of Unscreened Women for Cervical Cancer (CaCx) in the Opportunistic Screening in Catalonia (Spain)

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Abstract

Background: In Spain, cervical cancer (CaCx) has a low incidence (7 per 1,000,00) and screening is opportunistic. A protocol of screening for CaCx is being implemented to increase coverage and reach a 3-year interval between screening cytologies. Human papillomavirus (HPV) DNA detection is included in the screening protocol by following strict criteria.

Objectives: We report on the prevalence of HPV in ASC-US diagnoses, post-treatment supervisions of lesions (PTL), inadequate screening history (ISH), and the capture of women over age 40 with ISH.

Methods: The target population is women 25–65 years old (over 2 million). HPV data are provided through specific petitions for the purpose of the study. HPV DNA is performed using Hybrid Capture (HC2). Data for the captured women with inadequate screening are provided for 3 out of 7 health regional counties, including a total of 167,584 women aged 40–88. Women with no prior screening history or with a cytology more than 5 years before are offered a HPV DNA detection as adjuvant to the cytology.

Results: During the first year, a total of 7,583 women were tested for HPV, of which 57.3% followed the protocol recommendations. HPV+ tests were found in 5.7% of ISH, 43.2% of ASC-US, and 19.5% of CPT. Among 167,584 women over 40, 627 had ISH (0.37%); 35 of these 625 women were HPV+ (5.58%) and 13 (2.07%) had cytological anomalies, 7 being HPV+.

Conclusions: The implementation of the protocol has been successful and has been able to identify women at increased risk to develop CaCx.

Assembly of a WHO Global HPV Laboratory Network

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Abstract

To contribute to improving quality of laboratory services for effective surveillance and monitoring of HPV vaccination impact, WHO has initiated a global HPV LabNet. The LabNet tasks are to facilitate implementation of standardized, state-of-the-art HPV laboratory methods by introducing international standards, proficiency testing reagents/methods, standard operating procedures, and quality assurance (QA) programs in order to make results comparable across laboratories worldwide. The LabNet is also intended to form the basis for development of a global network for HPV surveillance by using standardized and harmonized laboratory methodologies in order to provide sound data to policymakers.

The LabNet is composed of 2–3 global reference laboratories (GRL) and 1–2 regional reference laboratories (RRL) in each WHO region. The GRL provide coordination of the network, lead development of QA programs, and perform confirmatory testing of samples from regions. The GRL also oversee the HPV prevalence and vaccination impact worldwide through collaboration with RRL. RRL implement QA programs in their regions, investigate HPV prevalence in the regions in collaboration with national laboratories, and provide training to national laboratories. Eventually, a formalized global HPV laboratory network will provide HPV surveillance and vaccination impact evaluation in an internationally harmonized way.

Effective HPV surveillance programs will be an essential component of appropriately implemented HPV vaccination programs. Such surveillance should be based on internationally standardised and quality-assured laboratory methods in order to make results comparable across laboratories in the world.

Randomized Control Trial of HPV Testing in Primary Cervical Cancer Screening

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Abstract

Background: Human papillomavirus (HPV)-based cervical screening is known to increase sensitivity for detection of high-grade cervical intraepithelial neoplasia (CIN). Randomized trials of longitudinal efficacy are required to assess whether these gains represent over-diagnosis or a protective effect.

Methods: A total of 12,527 women, aged 32–38, attending population-based invitational screening in Sweden were randomized 1:1 to HPV test and cytology (intervention arm) or cytology only (control arm). HPV-positive women were invited for a second HPV test at least 1 year later, and women with type-specific persistent infections were then invited to colposcopy. A similar number of random double-blinded procedures were performed in the control arm. Women were followed with comprehensive registry-based follow-up during a mean of 4.1 years. Relative rates of CIN grade 2 or worse (CIN2/CIN3+) due to enrollment screening and subsequent screening were calculated.

Results: The intervention arm had a 51% (95% CI: 13–102) increase of CIN2/CIN3+ at enrollment screening which at subsequent screening was followed by a 42% (95% CI: 4–76) reduction of CIN2/CIN3+ and a 47% reduction of CIN3+ (95% CI: 2–71). Women with persistent HPV infection remained at high risk of CIN2/CIN3+ after referral to colposcopy.

Conclusion: HPV-based cervical screening of women in their mid-30s results in protection against CIN2/CIN3+ in subsequent screening.