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New Guidelines for Screening of Cervical Cancer Around the World

Mojgan Karimi Zarchi,[1,*] and Soraya Teimoori[2]

[1]Gynecology Department, Faculty of Medicine, Shahid Sadoughi University of Medical Sciences, Yazd, Iran
[2]Young Researchers and Elites Club, Faculty of Medicine, Islamic Azad University, Yazd, Iran

[*]*Corresponding author*: Mojgan Karimi Zarchi, Gynecology Department, Shahid Sadoughi Hospital, Safaeie, Yazd, Iran. E-mail: drkarimi2001@yahoo.com

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Dear Editor,

The American Cancer Society (ACS) estimates that 12,990 women will be diagnosed with invasive cervical cancer and 4120 women will die from the disease in 2016. Cervical cancer incidence and mortality rates have declined since the introduction of the Papanicolaou (Pap) smear in the mid-20th century, and the rates continue to decline (1).

The aim of this study was to answer some clinical management questions such as:

When should screening begin? What tests should be performed for screening? How is HPV testing validated around the world and in Iran? At what age is it appropriate to discontinue screening? When is it appropriate to discontinue screening for women who have had a total hysterectomy?

1. Collection guidelines 2012 - 2016 for cervical cancer screening

The most common screening tests introduced by WHO are Pap test, HPV testing, and visual inspection with acetic acid (VIA). In this plan, it recommends that women who test positive on both the first and the second tests should be treated; however, if the first test is positive but the second one is negative they need to be followed-up. There are many unanswered questions about women aged 20 - 35 years, and women over the age of 50, and about the optimal intervals of follow-up after treatment (2, 3).

2. Vaccine

Almost the same accuracy has been obtained in different tests. However, mRNA testing with the APTIMA® (Gen-Probe Inc., San Diego, CA, USA) has the same sensitivity and it is more specific in comparison with HC2. Although HC2 is more sensitive in low-grade squamous intraepithelial lesions (LSIL) triage, it is significantly less sensitive compared to repeated cytology (3).

Choosing women with the highest risk of CIN3+ is possible by the help of DNA detection of HPV types 16 and/or 18, or RNA detection of the five most carcinogenic HPV types. Nevertheless, these markers have less sensitivity and negative predictive value in comparison with full-range high-risk HPV (hrHPV) testing (4).

There is a considerably less cumulative incidence of CIN3+ and cancer in women with the age of 30 or more, who have negative hrHPV DNA compared to women who are cytological negative. There is a little difference in cumulative risk of CIN3+ or cancer between women with double negative cytology and HPV and those with only negative HPV (5).

The clinically validated tests in primary screening include HC2, GP5+/6+ PCR (Polymerase chain reaction), cobas® 4800 PCR (Roche Molecular System Inc., Alameda, CA, USA) and Real-Time PCR (Abbott Molecular, Des Plaines, IL, USA). The specificity of primary HPV-based screening is low and this can be compensated by appropriate algorithms involving reflex cytology and/or HPV genotyping for HPV16 or 18 (4).

3. HPV in IRAN

We do not have a large study about the validity of HPV testing. In addition, we do not know if the tests can evaluate any infection or persistent disease in infected women.

The multicenter studies are needed. We do not have effective screening programs and a major problem in Iran is that the efficacy of Pap test is low and hence, increasing incidence of cervical cancer particularly advanced cervical cancer in future is expected (6).

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Footnotes

Authors' Contribution: None declared.

Table 1. ACS/ASCCP/ASCP/2016 Cervical Cancer Recommendation Screening

Population age, (year)	Screening Method
21	No need for screening
21 - 29	Cytology alone (no HPV) testing every 3 y
30 - 65	Cytology and HPV contesting every 5 y
	Cytology alone every 3 y Acceptable
65 and older	No need for screening
	In case of histology of CIN2 and Screen for 20 years after diagnosis
Post hysterectomy	No need for screening if the following criteria are met:
	1- Cervix removed
	2- No history of CIN2 in the past 20 y
	3- No history of cervical cancer
Post HPV vaccine	Follow age-specific recommendations (same as unvaccinated women)

Abbreviations: ACS: American Cancer Society; ASCCP: American Society for Colposcopy and Cervical Pathology; ASCP: American Society for Clinical Patholog

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