

Role of HPV Testing in Cervical Cancer Screening

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Cervical cancer screening

- A model of translational success in epidemiology
- Epidemiologic research has changed how medicine is practiced
- Many issues still remain to be solved



Screening Guidelines

- Age to begin
- Age to stop
- Screening interval
- Screening tests and combinations of tests
- Integration of vaccination and screening



Age to begin screening

~3 years after the onset of vaginal intercourse/no later than age 21



Age to begin screening: Data needs

- Should all women start screening at age 21 regardless of sexual history?
- What is the risk of missing important precancers if all females start screening at age 21?
- Does screening before age 21 have any impact on precancer and cancer rates?
- If screening starts at age 21 for average risk women, are there any groups of high-risk girls who should start screening earlier?



Age to stop screening

Age 65-70 and older with ≥ 3 consecutive normal/negative Paps and no abnormal cytology within the last 10 years



Age to stop screening: Data needs

- What are the harms associated with continuing screening after age 65-70?
- Is there evidence to support the use of HPV testing at age (60, 65 or 70) to aid in decision-making regarding discontinuation of screening?
- What is the risk of precancer or cancer in a woman who tests negative for HPV at age 65 or 70 and discontinues screening?



Age to stop screening: Data needs

- Under what circumstances, if any, should continuation of screening in older women be recommended (e.g. new partner), and if so, is there an age at which screening absolutely should be discontinued?
- Should we recommend *against* screening older women?



Screening interval

Annual screening with conventional cytology OR every 2 years with liquid cytology;

At or after age 30 and with 3 consecutive normal results, “may” screen every 2-3 years



Screening interval: Data needs

- Should we revisit the evidence for annual screening before age 30?
- What are the harms of annual screening with cytology?
- Under what circumstances, if any, should annual screening be supported?
- Should we recommend *against* annual screening?



Screening tests: HPV testing

For women aged 30 and over, as an alternative to cervical cytology testing alone, cervical screening may be performed every three years using conventional or liquid-based cytology combined with a test for DNA from high-risk HPV types. Frequency of combined cytology and HPV DNA testing should NOT be more often than every three years.



HPV testing: Data needs

- What are the performance characteristics of HPV co-testing and how do they compare to those of cytology alone?
- Should co-testing be recommended as the preferred method? What is the optimal screening interval?
- What are the risks and harms of extending the screening interval for HPV co-testing beyond 3 years?
- What are the benefits, harms and risks of HPV testing with triage to cytology or some other test?



HPV testing: Data needs

- Should we encourage FDA consideration of HPV testing (alone) as a primary screening test? What additional evidence is needed?
- Is there a role for genotype-specific HPV testing in primary cervical screening?
- What is the appropriate management recommendation for women who are HPV positive and cytology negative?



Integration of vaccination and screening

HPV vaccinated women should follow the same guidelines as unvaccinated women



Integration of vaccination and screening: Data needs

- Should young women who are at or approaching screening age follow different screening recommendations if they were vaccinated against HPV? Note: currently such women would have been vaccinated at ages 15-26, or girls vaccinated at ages 10-13 who are sexually active.
- What are the risks of different screening recommendations (e.g. delayed age to start, extended screening interval) for women who received less than the full 3 doses of vaccine?



Conclusions

- Epidemiologic research has greatly impacted cervical cancer screening and policy
- Many data gaps still exist
- Changes in screening are expected in the coming years, with more focus on HPV testing and integration with vaccines