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Protection against cervical cancer versus decreasing harms from screening — What would U.S. patients and clinicians prefer, and do their preferences matter?

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Abstract

The primary goal for many providers in the United States has been to deliver the level of protection against cervical cancer afforded by annual cervical cytology while improving screening test performance. Adoption of recent screening recommendations has been inconsistent and has created considerable consternation and confusion. This editorial addresses the perspective of U.S. patients and providers and how their preferences may run counter to current screening recommendations.

Keywords

Cervix; Screening; Cancer; HPV

Tota et al. demonstrate that HPV testing provides greater reassurance than cytology. They conclude also that the use of both screening methods concurrently (cotesting) is the most reassuring approach, but at substantial cost per cancer averted (Tota et al., 2017).

In the United States, many women and clinicians have preferred cytology alone or cotesting up to this time despite the cost, for the following reason: We believe that the aspirational goal of medical practitioners performing cervical cancer screening in the U.S. has long been to deliver the level of protection against cancer afforded by annual cervical cytology while improving screening test performance and management of abnormal results. This yearly screening interval was codified in the recommendations of the American College of Obstetrics and Gynecology (ACOG) (ACOG Practice Bulletin, 1995, 2003). If other approaches (such as HPV primary screening at 3 year intervals) can be demonstrated to provide the desired level of cancer protection, then they are more likely to be accepted into clinical practice.

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Since 2000, two significant revisions of screening recommendations have occurred with very different perspectives. The first, in 2004, offered a new option for screening, consisting of cervical cytology and high risk HPV testing (cotesting) at 3-year intervals (Wright et al., 2004). This option was adopted in Kaiser Permanente Northern California with little resistance from the patients and the physicians, because the explicit stated intention was to provide at least as much cancer protection as before, with fewer visits and tests, which has taken place.

The second revision, occurring in 2012 (Saslow et al., 2012), was dramatically different and less acceptable to many because it embraced the potential compromise of cancer protection without directly admitting this potential outcome. The 2012 guidelines recommended cytology at 3-year intervals or HPV and cytology cotesting every 5 years. A higher risk of cancer was permitted compared with the earlier guideline, in the interest of avoiding the harms and burdens of more frequent screening. Screening burden was estimated by numbers of colposcopic examinations performed, in the absence of a firmer measure of cost. This latter set of recommendations, despite endorsement by the American College of Obstetrics and Gynecology (ACOG, 2012), has not been widely adopted and has created considerable confusion and consternation among US providers.

From the women's perspective, the new recommendations appear to decrease service for the purpose of saving money for insurers, including Medicare and Medicaid and simply cutting costs at the expense of the patient. It is our impression that many U.S. women (and clinicians) reject the implicit claim that higher rates of colposcopy or even excision procedures of the cervix represent harms that can be balanced against prevention of invasive cancer. We believe that patients reject the argument that resources saved by their accepting more preventable cancer can be better spent on other health care priorities and is often viewed as naïve, paternalistic, and short-sighted. We and they consider it more plausible that the savings generated by less screening and more cancer will be applied to other concerns that the patients do not share.

In general, we believe that many women are not interested in assuming more cancer risk even if the harms are significant. The recent publication (Farrell et al., 2014) demonstrates this clearly: they assessed whether sixty women who had undergone surgery for early stage vulvar cancer including a complete inguinal lymphadenectomy, with a 73% postoperative lymphedema rate and significantly decreased quality of life, would have preferred a sentinel node dissection instead with a dramatic reduction in lymphedema rates in return for a small increase in the risk of cancer recurrence. *Even if that increase in risk of recurrence was <1%, most (>2/3) women including those with lymphedema expressed a preference for the more aggressive approach.* We believe that this study accurately reflects what we hear from women concerning cancer risk tradeoffs in general.

Resistance as clinicians to the new US recommendations is based on the fact that 5-year cotesting permits higher cancer risks after a single negative cotest (Gage et al., 2014) than 3-year cotesting. While multiple consecutive cotests at 5-year intervals may prove to be safer than modeling currently anticipates, we would prefer to maintain 3-year interval, with

cotesting or primary HPV screening and accept the additional number of colposcopies or cervical excisions needed to prevent a single cancer (Kinney et al., 2015).

The recent publication of Silver et al. confirms that the expected tradeoffs between sensitivity and specificity are still in operation at Kaiser (Silver et al., 2016). Most women who have been screened prior to the diagnosis of cervical cancer in KPNC have had preceding, minimally abnormal results (Castle, unpublished). Close followup of those abnormalities has resulted in more procedures, but less cancer, and less precancer per procedure over time. While driving the invasive cancer rates down by 3-year screening is “less efficient” than 5-year screening, we believe that most women and providers will reject exhortations for greater “efficiency” that permit more preventable cancers.

The task that we see is to increase “efficiency” only while maintaining cancer protection at the level afforded by annual cytology. A lower bar will not find favor with women or their providers, and will have to be enforced with punitive reimbursement limitations or risk widespread noncompliance.

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