Cervical Cancer Screening Interval

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Cervical cancer is preventable, but it is the second most common gynecologic cancer worldwide and the third most common cancer in women in the United States (American College of Obstetricians and Gynecologists [ACOG], 2003). Approximately 11,070 new cases and 3,870 deaths from cervical cancer occurred in 2008 in the United States (American Cancer Society [ACS], 2008). The incidence and mortality rates of cervical cancer are higher among women who do not obtain regular cervical cancer screening (ACS; Centers for Disease Control and Prevention, 2005).

Cervical cancer screening with the Papanicolaou (Pap) smear has been identified as an effective method of prevention (Berman, 2006; Camillo, 2006; Farley, McBroom, & Zahn, 2005; Feldman, 2003; Sirovich, Feldman, & Goodman, 2008; Solomon, Breen, & McNeel, 2007). The Pap smear detects precancerous lesions, for which effective treatments exist (Brink, Snijders, Meijer, Berkhof, & Verheijen, 2006; Feldman; Miller et al., 2003; Valdespino & Valdespino, 2006). The five-year survival rate for localized cervical cancer is 92%, whereas women with invasive cervical cancer have a five-year relative survival rate of only 72% (ACS, 2008). However, the relative survival rate is 100% if precancerous lesions are detected and treated (ACS).

A clinician recommendation is one of the strongest predictors of adherence with Pap smear testing (Markovic, Kesic, Topic, & Matejic, 2005; Ruffin, 2003). Yet despite the recommendations depicted in Table 1, Pap smear intervals are inconsistent among clinicians. Some clinicians have extended the screening interval among 35-year-old women with three documented negative Pap smears (Murphy, Schwarz, & Dyer, 2008), whereas other clinicians admit to uncertainty regarding Pap smear interval (Feldman, 2003; Shell & Tudiver, 2004) and continued annual Pap smear testing among low-risk women (Murphy et al.; Saint, Gildengorin, & Sawaya, 2005; Sawaya et al., 2003). Low-risk women are those who comply with regular cervical cancer screening, have no history of cervical cancer, and are not immunocompromised (Feldman).

The purpose of this article is to review the optimal screening interval for low-risk women who are 30 years of age or older and have an intact cervix. That age group is of particular interest because, although cervical cancer is diagnosed most commonly in the fifth decade of life, the average age of diagnosis is 47 years, and approximately half of the cases are diagnosed in women who are younger than 35 years of age (Waggoner, 2003).

Paradigm Shift

High-risk human papillomavirus (HPV) has been implicated in abnormal Pap smear results (Vo et al., 2004) and in cervical cancer (Denny & Wright, 2005; Merck & Co., Inc., 2006; Waggoner, 2003) (see Figure 1). Infection with HPV may be transient (ACOG, 2003; Berman, 2006; Goldie, Kim, & Wright, 2004; Sykes, Reddy, & Peddie, 2005) or persistent (Brink et al., 2006). Additionally, a long latency period occurs between infection with the virus and cervical cancer (Berman; Sirovich et al., 2008; Waxman, 2004).

Newer liquid-based cytologic tests (e.g., ThinPrep®, Cytyc Corporation; Sure Path™, BD Diagnostics) that facilitate HPV testing are in use (Walling, 2003). They may be used alone or in conjunction with cytology (Denny & Wright, 2005). The newer tests are more sensitive than the regular or conventional Pap smear (Biscotti et al., 2005; Mariani, 2004; Mayrand et al., 2007).

Literature Review

A literature review for 2003–2008 was conducted to determine evidence-based practice recommendations regarding optimal cervical cancer screening intervals for women 30 years or older with an intact cervix. Nonexperimental studies are used in the discussion because no randomized clinical trials are available to assist in determining cervical cancer screening intervals (Van den Akker-van Marle, van Ballegooijen, & Habbema, 2003; Sirovich et al., 2008). The reviewed studies did not provide the required evidence because: (a) most studies involved triennial cervical cancer screening using predominantly the conventional Pap smear with or without three previous consecutive negative results, and (b) only

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