

## Cervical Cancer Screening in Young Women: Saving Lives With Prevention and Detection

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The full but shortened life of Kristen Forbes is chronicled in the book *Love, Kristen*, written by her father as a tribute to his young, vivacious, fun-loving daughter (Forbes, 2009a). Kristen had just graduated from college when, in June 2007, she woke up one morning with a swollen right ankle. The following day, her entire right leg was swollen. At 21 years of age, the unlimited opportunities of life that are awarded to the majority of young women—rewards of college, a career, marriage, children, and a future filled with family and friends—came to a sudden halt for Kristen. By early July, she entered the frightening and uncertain world of cancer. On July 16, her gynecological oncologist found a mass in her pelvis. She was diagnosed with cervical cancer.

A patient, particularly a child or young adult, does not travel the cancer journey alone. As Kristen's personal story unfolded, her father expressed the grief and despair that the family experienced, particularly the despair of a parent whose loving daughter with a hopeful future is suddenly met with the pain, fear, and uncertainty that a cancer diagnosis and treatment brings. Kirk Forbes chronicled the journey that he, his wife, Kristen's siblings, and close friends shared as they traveled the cancer trajectory standing by her side. Oncology nurses understand when he expresses, "None of us, Dad, Mom, Megan, Kristen, or Eric, ever experienced a serious illness, injury, or hospitalization before this. It was a new experience for all of us. This type of battle consumes everyone's life . . . including caregivers. Everything else gets put on hold. Every waking moment we were focused on Kristen . . . her illness, treatment, medications, and future" (Forbes, 2009a, p. 15).

Kristen Forbes died from cervical cancer on June 1, 2009, at the age of 23. She left behind a deeply personal journal that has given readers the privilege of walk-

ing her journey beside her and of feeling the raw emotions of a young woman fighting for her life against all odds. Her father created an immeasurable gift by sharing Kristen's insightful messages and by creating the Kristen Forbes EVE Foundation (EVE stands for educate, vaccinate, and eradicate). More information about the book and the foundation can be found in Forbes (2009b).

### Background and Incidence

Cervical cancer is the second most common cancer among women worldwide (Cothran & White, 2002). The American Cancer Society (ACS) estimated that 11,270 cases of invasive cervical cancer were diagnosed in the United States in 2009, with an estimated 4,070 deaths (ACS, 2009a). On a positive note, incidence rates have decreased for Caucasian and African American women, and overall mortality rates also have declined because of prevention, screening, and early detection (ACS, 2009b). Because of the effectiveness of Papanicolaou (Pap) screening, pre-invasive lesions of the cervix are detected more often than invasive cancer (ACS, 2009b). The statistics demonstrate that, with proper measures, cervical cancer is preventable and treatable (Eggleston, Coker, Das, Corday, & Luchock, 2007). Evidence-based research has shown that correct screening procedures can reduce morbidity and mortality of cervical cancer (Ahmed et al., 2007; Blomberg, Ternstedt, Tornberg, & Tishelman, 2008; Eggleston et al.; Fylan, 1998; Glinde, Millen, Love, Pang, & Cameron, 2008; Meyskens & Tully, 2005; Sigurdsson, Sigvaldason, Gudmundsdottir, Sigurdsson, & Briem, 2009). Secondary prevention procedures address the promotional phase of carcinogenesis and focus on detecting precancers which can be managed by a variety of surgical and nonsurgical procedures (Meyskens & Tully); secondary prevention screening

procedures have contributed to a decrease in the yearly incidence of invasive cervical cancer.

Cervical cancer incidence declined from 10.2 to 8.5 per 100,000 women from 1998–2002 (Ahmed et al., 2007). The vaccination against human papillomavirus virus (HPV) types 6, 11, 16, and 18 (Gardasil®, Merck & Co., Inc.) is the primary preventive tool that can decrease the incidence of invasive cervical cancer.

### Screening Recommendations for Cervical Cancer

The U.S. Preventive Services Task Force (USPSTF) (2009a) cites the Pap test as the most effective way to screen for cervical cancer in women who have been sexually active and have a cervix (see Figure 1). ACS (2009b) also provides cervical screening guidelines (see Figure 2) and, although recommendations differ slightly, the Pap test is overwhelmingly supported as the most effective preventive measure for invasive cervical cancer if screening practices are followed as recommended. The American College of Obstetricians and Gynecologists also has issued recommendations (see Figure 3).

The U.S. Food and Drug Administration (FDA)-approved HPV vaccine is an additional preventive measure that complements the Pap test but does not substitute for screening (Merck & Co, Inc., 2009a). Therefore, nurses must understand both Pap screening and vaccine recommendations to educate girls in early adolescence, young adult women, and their parents. For young girls, the nurse can educate the mother or another guardian regarding the HPV vaccine; educational guidelines for mothers are provided by Merck & Co., Inc. (2009b).

Interventions to strengthen adherence to screening recommendations are