

“Cervical cancer: Being informed saves lives.” Kelly M. Craig, April 18, 2007.

### **What is cervical cancer?**

For starters, the cervix is the lower part of a woman’s uterus that connects to the vagina. Cervical cancer usually begins in the lining of the cervix. Normal cervical cells can morph into pre-cancerous cells that may eventually lead to cancer. Luckily, this is a slow moving process. Doctors classify cervical cancer into two groups: squamous cell carcinoma and adenocarcinoma. Squamous cell carcinoma is more common and is found in the epithelia lining the cervix. The lesser occurring of the two, adenocarcinoma, is found in the glandular cells. [1] Cervical cancer is the second most common cancer occurring in women, with over 500,000 cases diagnosed world wide every year. [2] It is projected that in 2007 over 11,000 new cases will be diagnosed in the United States, and nearly 4,000 women will die from cervical cancer. [1]

### **Who is at risk for cervical cancer?**

Half of the women diagnosed with cervical cancer are between the ages of 35 and 55. However, women of all ages can be diagnosed with cervical cancer. There are several risk factors that can increase a woman’s chances of developing this disease. Human pappillomavirus (HPV) can greatly increase your risk of contracting cervical cancer. [1] HPV is a virus that causes genital warts (condylomata accuminata). HPV is extremely common. More than 20 million people in the U.S. alone have this sexually transmitted infection. [3] HPV is found in nearly 80 percent of cervical carcinomas. [2] There is currently no cure or treatment for HPV. Several factors can contribute to the contraction of HPV including: having sex at an early age, having many sexual partners, and having a partner who has had many sex partners. Another major risk factor is

smoking. Women who smoke are twice as likely as non-smokers to develop cervical cancer. Other risk factors for cervical cancer are: chlamydia, human immunodeficiency virus (HIV), women who are overweight or are lacking fruits and vegetables in their diet, women who have had multiple pregnancies, and women who were prescribed a hormonal drug called Diethylstilbestrol (DES) between 1941 and 1970. Also, women who have a family history of cervical cancer may have a higher chance of contracting the disease. [1]

### **Can cervical cancer be prevented?**

The best way to prevent cervical cancer is to avoid contracting HPV. Genital warts is a sign of HPV, but in many cases HPV has no visible symptoms at all. Many people are unaware that they even carry HPV. The most effective method of evading contraction of HPV is by limiting your number of sexual partners and by limiting sexual intercourse with someone who has had numerous sexual partners. Furthermore, condoms can reduce the rate of infection by 70 percent. Fortunately, new advances have been made in medicine, and a vaccine against HPV is available. Gardasil was approved for use by the Food and Drug Administration to vaccinate females against the four main strains of HPV: 6, 11, 16, and 18. [1] These four types of HPV account for 90 percent of genital warts. Two of the types of HPV (16 and 18) are present in 70 percent of cervical cancer cases. [4] Another way to prevent cervical cancer is to get screened for precancers. According to the American Cancer Society, it is recommended that women start getting screened for cervical cancer three years after first having sexual intercourse but no later than age 21. Pap tests should be done annually. Once a woman has turned 30 years old and has had 2 or 3 normal Pap tests in a row, she may choose to have

cervical cancer screenings every 2 to 3 years. Once a woman is 70 years of age and has had no abnormal Pap test results in the past 10 years, she may elect to stop getting tested for cervical cancer. [1]

### **Who should get the HPV vaccine?**

The vaccine is recommended for use in girls ages 11 and 12, but the age range is from age 9 to age 26. It is important to vaccinate the girls before they are sexually active as the vaccine is intended for use by people who do not have HPV. However, people with HPV could still get the injection in order to protect themselves from other strains of the virus. The most common side effect of the vaccine is soreness at the injection site. The vaccination set is completed after three separate injections. [4]

### **What happens if my Pap test is abnormal?**

Since a Pap test is only for screening and not diagnosing, further tests will have to be administered. Your doctor will usually do a colposcopy, in which the cervix is examined more closely using a tool called a colposcope. A variety of biopsies can also be performed including cervical biopsies, colposcopic biopsies, or cone biopsies. Your doctor can give you in depth information on what each of these procedures entails. Once the biopsies have been examined, a doctor has two ways of removing the precancerous cells. He will perform either a cryosurgery to freeze the abnormal cells, or a laser surgery to burn off the abnormal tissues. These treatments are almost always effective, but a follow up cancer screening will be needed. [1]

### **How is cervical cancer diagnosed?**

Cervical cancer does not usually have any signs until nearby tissues have been infected. The most common sign is abnormal vaginal bleeding. If cancerous cells are diagnosed after several tests, a doctor will likely use imaging studies to examine other areas of the body to check to see if the cancer has metastasized to other areas of the body. The doctor may use a chest X-Ray, a computed tomography (CT) scan, or magnetic resonance imaging (MRI). [1]

### **How is cervical cancer treated?**

There are a variety of treatments available for cervical cancer. One method is surgery. There are the more minor surgeries which isolate only the cancerous cells, and then there is the option of the removal of the uterus through a hysterectomy. The most radical type of surgery that is used on recurrent cervical cancer is a pelvic exenteration, which removes not only the uterus and lymph nodes, but also the bladder, rectum, vagina, and part of the colon. While everyday life will be different after having this surgery, many women go on to lead happy and productive lives. Another method of treatment for cervical cancer is radiation therapy, which uses high energy x-rays to kill cancer cells. A third option for cancer treatment is chemotherapy. Chemotherapy involves anticancer drugs that enter the bloodstream and travel to all areas of the body. All treatment forms may include unpleasant side effects, but they will disappear as soon as treatment is concluded. [1]

## **What is a likely prognosis for cervical cancer?**

Just as with all other diseases, there is no set prognosis for cervical cancer. It generally has a high 5-year survival rate of 92 percent for the earliest stage of invasive cervical cancer. This means that 92 percent of patients live at least 5 years after their cancer is diagnosed. [1]

### **Summary**

In summary, cervical cancer is caused by abnormal cell growth in the cervix. Human papillomavirus is a major cause of cervical cancer. HPV can be prevented by practicing safe sexual intercourse and by limiting the number of sexual partners one has. Annual Pap tests should be conducted by your doctor to monitor any growth of precancer cells. If precancer cells are detected, a biopsy should be done for a more comprehensive diagnosis. Once cervical cancer has been confirmed, there are a variety of treatments offered for patients. Cervical cancer is not a death sentence, and many people go on to live happy lives.

### **Where can I find more information?**

1. A Detailed Guide to Cervical Cancer. American Cancer Society Web Site. Available at: [http://www.cancer.org/docroot/CRI/content/CRI\\_2\\_4\\_1X\\_What\\_is\\_cervical\\_cancer\\_8.a.sp](http://www.cancer.org/docroot/CRI/content/CRI_2_4_1X_What_is_cervical_cancer_8.a.sp). Accessed April 18, 2007.
2. Cervical Cancer. Oncology Channel Web Site. Available at: <http://www.oncologychannel.com/cervicalcancer/>. Accessed April 18, 2007.
3. Torpy JM. Human papillomavirus infection. *JAMA*. 2007;297:912.

4. HPV Vaccine. National Cervical Cancer Coalition Web Site. Available at:  
<http://www.nccc-online.org/hpv-vaccine.php>. Accessed April 18, 2007.