CERVICAL CANCER: SCREENING AND PREVENTION

Catch it, Kill it and before it kills you

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TIME CANCER

How to tell the hype from the hope

A SPECIAL REPORT

TIME

THERE IS NEW AMMUNITION IN THE WAR AGAINST CANCER. THESE ARE THE BULLETS.

Revolutionary new pills like GLEEVEC combat cancer by targeting only the diseased cells. Is this the breakthrough we've been waiting for?
General Awareness of HPV

- Kaiser Family Foundation survey results, 2000:
  - 70% unable to name cause of cervical cancer
  - 76% had never heard of HPV

- KFF youth / young adult survey 2003
  - 60% of teens / young adults do not know ‘STDs can cause some kinds of cancer’

- U of South Florida, 2003:
  - 22% of women ‘had any knowledge about HPV’
  - Majority of at-risk adolescent women lacked HPV knowledge; no recall from sex ed
Education in the Context of Awareness
What is the female reproductive tract?

- Vulva
- Vagina
- Cervix
- Uterus
- Fallopian tubes
- Ovaries
What is the cervix?

- Opening of the uterus (womb) into the vagina
- Two cell types present (squamous and glandular)
- Cervical cancers tend to occur where the two cell types meet

Source: TAP Pharmaceuticals, “Female Reproductive Systems.”
What is cervical cancer?

- It is a cancer of the female reproductive tract.
- It is the most common cause of cancer death in the world where Pap tests are not available.
- It is the easiest gynecologic cancer to prevent through screening.
Reduction in Cervical Cancer Mortality due to PAP Screening Test

Cervical cancer deaths under age 75 that would have occurred without screening

British deaths up to 2000

Start of national screening programme in 1988

Projected future mortality with improvements in screening
New cancer diagnoses in the U.S.

2003 Statistics:

- Breast: 211,300
- Uterus (womb): 40,100
- Ovary: 25,400
- Cervix: 12,200
- Vulva: 4,000

Source: American Cancer Society.
How common is cervical cancer?

- 500,000 women worldwide die of cervical cancer annually
- 50-60 million women in the U.S. have a Pap test each year
- 3-5 million women in the U.S. have an abnormal result
- 12,200 new cervical cancers diagnosed in the U.S. per year
- 4,100 deaths from cervical cancer in the U.S. per year

Most cervical cancer can be prevented
What causes cervical cancer?

The central cause of cervical cancer is human papillomavirus (HPV):

- HPV is sexually transmitted
- The HPV detected today could have been acquired years ago
- There are many different types of HPV
  - **Low-risk types can cause warts**
  - **High-risk types can cause precancer and cancer of the cervix**
How common is HPV?

- Most men and women who have had sex have been exposed to HPV

- More than 75% of sexually active women tested have been exposed to HPV by age 18-22
If I have HPV, does it mean I will get cancer?

- **NO!**

- In most cases HPV goes away

- Only women with persistent HPV (where the virus does not go away) are at risk for cervical cancer
Progression in HPV Induced Cervical Cancer

Age:

- 15-25
- 25-35
- 35-55

HPV infection -> Persistent HPV infection -> Low grade CIN -> High grade CIN -> Invasive cancer

Immunologic factors: Sex partners, Nutrition, smoking

Co-carcinogens
Cervical Cancer: Progression

Low-grade SIL/CIN1  Moderate/CIN2  High-Grade SIL/CIN3

Carcinoma In Situ  Invasive cancer

*Henbregenter, PNAS 1996*
Who is at risk?

- Women who have ever had sex
- Women who have had more than one partner
- Women whose partner(s) has had more than one sexual partner
- Women with other sexually transmitted diseases
Who is at risk?

- Women who do not have Pap tests
- Women with immune problems
  - Steroid medications
  - Transplanted organs
  - Chemotherapy
  - HIV
- Women who smoke
How do I lower my risk?

- Delay onset of sexual activity
- Know your sexual partner
- Do not smoke
- Maintain a healthy diet and lifestyle
- Practice safe sex

Get your Pap test!!!
What is a Pap test?

- A test which collects cells from the surface of the cervix and looks for any abnormal cells
- Abnormal cells can be treated before cervical cancer develops
- When cancer is detected early, it is easier to treat
When do I need my first Pap test?

- Three years after the onset of sexual intercourse
- No later than age 21
How often do I need a Pap test?

- Every year until age 30

- After age 30, if you have only had normal results, you may have them every two to three years after discussion with your physician and evaluation of your risk factors.
I feel fine, so why do I need a Pap test?

- A Pap test can find treatable changes of the cervix (precancer) before you have a symptom or notice a problem.

- Once a problem is symptomatic, it is harder to treat.
Why do I need to keep getting tested?

- The test is not perfect
- Changes (abnormalities) may occur since the last test
- It may take many years for changes to develop or be detected
- Your risk changes if you have new partners
What is the best time to have a Pap test?

- Schedule your Pap when you are not having a menstrual period
- It is best to abstain from intercourse and avoid use of tampons or douches for two days before your Pap test
Is there an age when I can stop having Pap tests?

The American Cancer Society recommends that screening stop at age 70, if three or more recent tests are normal, and there have been no abnormal results in the last 10 years.
What is new in screening and prevention?

- Liquid cytology-thin layer cytology

- Combination of HPV test and Pap is now available for women 30 years of age and older

- Pap test computer reviews

- Vaccines for HPV currently being tested
Abnormal Pap test – How common is it?

- 12,200 cancers
- 300,000 HSIL
- 1.25 million LSIL
- 2-3 million ASC
- 50-60 million women screened
Incidence of Cervical Precancer in US and China

United States
- HSIL among all women (60 million) tested for PAP is 0.5%

P.R. China
- HSIL among 8497 women (27-56) tested for PAP in Shangxi is 4.4%*

What happens if I have an abnormal Pap test?

- **ASC-US management options:**
  - HPV testing
  - Repeat Pap
  - Colposcopy

- **ASC-H, LSIL, HSIL, AGC, AIS, cancer**
  - Colposcopy
  - Possibly endometrial biopsy for AGC
  - AIS / cancer: referral to gynecologic oncologist
What is a colposcopy?

Colposcopy:
- Use of a magnifying instrument
- Application of a vinegar-like solution onto the cervix
- See abnormalities that can’t be seen with the naked eye
- Feels like getting a Pap test, but lasts longer

Source: This is a copyrighted image of the California Family Health Council, Inc. and may not be reproduced in any way without the expressed written permission of the California Family Health Council. California Department of Health Services "What You Should Know if your Pap Test is Abnormal" - Your Colposcopy Exam, Donna Bell Sanders (Education Programs Associates 1995; Campbell, CA).
What is a cervical biopsy?

Biopsy:
- Removal of a small piece of tissue from the cervix
- May feel like getting a Pap test or like a menstrual cramp that lasts a few seconds

Source: A. DeCherney and M. Pernoll, Current Obstetric and Gynecologic Diagnosis and Treatment (The McGraw-Hill Companies, Inc.) 586.
What does the biopsy result mean?

- Mildly abnormal (CIN I)
  - observation preferred
- More abnormal (CIN II)
  - treatment
- Precancer (CIN III)
  - treatment
- Cancer
  - Gynecologic oncology consultation
What are the treatment options for CIN?

- LEEP
- Laser
- Cryotherapy
- Cone Biopsy
- In special circumstances a hysterectomy may be recommended
What is a cervical conization?

- Conization:
  - Removes a cone-shaped piece of tissue
  - Often allows for diagnosis and treatment
  - Performed with local anesthesia in the office or under general anesthesia in the operating room

Source: TAP Pharmaceuticals, “Female Reproductive Systems.”
Cervical cancer: What is the chance of survival after treatment?

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<th>FIGO Stage</th>
<th>5-Year Survival</th>
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<tr>
<td>Stage I</td>
<td>81-96%</td>
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<tr>
<td>Stage II</td>
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<td>Stage III</td>
<td>35-50%</td>
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<tr>
<td>Stage IVA</td>
<td>15-20%</td>
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What is an HPV test?

- A test sometimes used to determine if you need further evaluation
- Cells are collected just like a Pap test
- It checks for high-risk HPV
A New Matrix: The ‘DNA Pap’

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<th>Pap -</th>
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Get Your PAP Tested!

Get Your HPV Status Tested!!

Catch it. Kill it

Before it kills you!!!