

ACOG Recommendations and Guidelines for Cervical Cancer Screening and Management

[Announcer] This podcast is presented by the Centers for Disease Control and Prevention. CDC – safer, healthier people.

[Dr. Saraiya] Welcome to this CDC program on cervical cancer screening. I'm your host, Dr. Mona Saraiya. With me today by phone is Dr. Alan Waxman, a professor of obstetrics and gynecology at the University of New Mexico. Dr. Waxman worked for the Indian Health Service for over 25 years, and he has been instrumental in leading colposcopy training of both mid-level and physician providers at the Indian Health Service. He chairs the ACOG Committee for the Underserved and he serves as an advisor to the National, New Mexico, and the Navajo Breast and Cervical Cancer Early Detection Program. He's going to talk to us about several case studies for cervical cancer screening and management. Welcome to the show, Dr. Waxman.

[Dr. Waxman] Well thank you very much Mona, I'm happy to be here.

[Dr. Saraiya] Dr. Waxman, let's start with the first case. Let's say we have a 36 year-old woman, G2 P2 who presents for her routine gynecology exam. She's had three Pap tests in the past five years, and her most recent Pap test was last year about this time. And all Pap tests have been negative. What will you do at this visit?

[Dr. Waxman] This woman doesn't need any cervical cancer screening at this visit. Certainly, I will do all of the other health maintenance things that I would do in a routine gynecology exam, including detailed history. I would probably also check several metabolic parameters, such as her thyroid function. I would probably check her for diabetes since I have a population that has a high rate of diabetes. She's a bit young for a mammogram, but she doesn't need a Pap test or any other screening at this time. She's had three negatives in the past five years; her risk of cervical cancer or a premalignant condition of the cervix is very, very low.

[Dr. Saraiya] Is this what ACOG recommends for women over 30 years of age?

[Dr. Waxman] ACOG recommends for women over 30 years of age, who've had three consecutive repeat Paps in a relatively short period of time, such as five years, that the next Pap – the next cytology screening, which is a Pap test, be done in two to three years. So this has only been one year.

[Dr. Saraiya] And Dr. Waxman, can you tell us what studies support this practice?

[Dr. Waxman] There have been multiple studies going back decades, showing that the efficacy of screening at annual intervals in a well screened woman over 30—really, the efficacy is no better than screening at two or three years, and that it's not cost-effective. One of the first ones to be published was back in the mid-1980s in the British Medical Journal in which they looked at a population, mostly from Northern Europe, but there were some North American and United States groups that participated. They looked at a cohort of women aged 35 to 64, and using mathematical modeling estimated the protection of cervical cancer that these women would have

if they had their Pap test at intervals of one, two, three, five, and 10 years. They had all had a starting negative Pap test, which kind of takes out many of the prevalent cancers and high grades that would've been picked up otherwise. They found that if a woman had a Pap test at one-year intervals (annual Pap testing), the Pap would give her 93.5 percent protection against cervical cancer, and over the 30-year period she'd have 30 Pap tests. If she had her Pap test at two-year intervals, the protection goes from 93 and a half down to 92 and a half—not much difference. Now she is getting 15 Paps. Three-year intervals: about 91 percent protection; now she's getting 10 Pap tests over this 30-year period. If she delays it to five years, then the efficacy, the sensitivity decreases to 83.6 percent and that's quite a drop. So my medical students, when I present them with this data, they always ask the question, 'Well, what's the big deal? Pap test is cheap, what difference does it make whether she gets 30 or 15 or 10?' The answer lies in who's paying for it. If you are the nation of Sweden, for instance, or the United States Breast and Cervical Cancer Program, and you've got thousands of women, if you're providing 30 Pap tests for those women versus 10 Pap tests for those women over a 30-year period with very little difference in efficacy, that's a lot of money that could be used to screen additional women.

[Dr. Saraiya] I understand that there's actually been a landmark study of women in our own National Breast and Cervical Cancer Screening Program about this specific issue. Can you tell us about this?

[Dr. Waxman] That study was published in the New England Journal of Medicine in 2003, and they looked at a large cohort of women, I believe there were about 700,000 women who'd been enrolled in the Breast and Cervical Cancer Program. What was special about this program was that they looked specifically at the, first of all, at whether each additional Pap test did in fact offer more protection, and they found two things from this part of the analysis. One was that as women get older, as they are being screened, their risk of cancer and high-grade dysplasia decreases. It also showed that for each age cohort, with each succeeding number of negative Pap tests, the risk of CIN3 went down. For instance, in a 30 to 44 year age group, they looked at women who entered the program with no previous Pap test in the program. They found that 0.74 percent—that's, 7.4 per 1,000 women—had CIN3 or worse. If they looked at those women who'd had one previous negative Pap in the program, the percentage went from 0.74 to 0.20; two previous negative Paps in the program, it declined to .11; and three or more negative Paps in the program, it declined to 0.04. If they moved up to an older age group, those with one negative Pap in the program had 0.11 percent CIN3 or worse; those who had three or more negative Paps in the program had 0.02 percent CIN3 or worse. So with each succeeding number of negative Paps, the protection goes up. Again, to do an annual Pap in this group would cost money and yet would not prevent much in the way of cancer.

[Dr. Saraiya] So, Dr. Waxman, according to this study, are we missing cancers by this recommendation of screening?

[Dr. Waxman] In fact, there have been several studies that have shown that if you do screen every year, you are going to pick up more cancers than if you screen every three years, let's say. And I suspect that if you did a Pap test every six months or every six weeks, you'd probably pick up even more cancers. The question is, at what cost? So, in this study, they did an analysis very similar to the one that I discussed earlier from the 1980s. They use computer modeling now,

using a Markov model, to determine the risk to a hypothetical cohort of 100,000 women. So, the question they asked was, if you took these women who'd had three or more negative Pap tests, how many cancers would you miss if you screen them every three years instead of every year? And in fact, in the 30 to 44 age group, you'd miss three cancers per 100,000 women. In the 45 to 59 age group, you'd miss one cancer per 100,000 women. Well, you know, if that's my mother or my sister, that's one very important cancer. On the other hand, we're spending a lot of money to find that one cancer, money that could perhaps be used better to screen other women.

[Dr. Saraiya] What does that mean in terms of the number of procedures to diagnose each of these cancers?

[Dr. Waxman] Well, for instance, to pick up each of these cancers in the 30 to 44 age group, you'd have to do an additional 69,665 Pap tests, plus an additional 3,861 colposcopies. To diagnose this one cancer in a 45 to 59 year age group, you'd have to do 209,000 Pap tests and 11,500 additional colposcopies. Now, that's a lot of money. I don't know. It's not for me to say whether each additional cancer is worth spending that much additional funding. But comparing that to other tests that we do, and looking at cost-effectiveness, this is beyond the range of what's generally considered cost-effective. The other thing is that many of these cancers that are missed—and again, we're talking about one to three per 100,000 women—would probably be picked up at a subsequent visit and probably at a very early and treatable stage.

[Dr. Saraiya] Well, Dr. Waxman, thank you so much for sharing this important information with us.

[Dr. Waxman] Thank you, Mona.

[Announcer] For the most accurate health information, visit www.cdc.gov or call 1-800-CDC-INFO, 24/7.