**Women May Resist Pap + HPV Testing**

**Clinical staff should discuss testing before patient is seen by the doctor.**

**ARTICLES BY SHERRY WOLKOWITZ**
San Francisco Bureau

**VANCOUVER, B.C. — In-**

Vancouver, B.C. — Women who eat their vegetables and take vitamins may have a better chance of avoiding or clearing human papillomavirus infection, Marc T. Goodman, Ph.D., said at the 22nd International Papillomavirus Conference.

Low serum levels of tocopherol (vitamin E) or retinol (vitamin A) may increase the risk for acquiring human papillomavirus (HPV) infection, according to preliminary data from a controlled study of micronutrients and HPV.

High serum levels of carotenoids may enhance clearance of HPV infection and avoid persistent infection, said Dr. Goodman of the University of Hawaii, Manoa.

The investigators analyzed data on 242 women who had complete records from at least four clinical visits, part of a larger longitudinal study at three clinics and two university-based health services. They categorized serum micronutrient levels as either low or high.

Women with low serum levels of vitamin E or A were twice as likely to develop incident HPV infection, compared with women with high levels of these nutrients, he said at the meeting, sponsored by the University of California, San Francisco.

A new HPV infection was found in 18% of women with low serum levels of β-tocopherol and α-tocopherol combined, compared with 9% of women with high levels of these nutrients.

HPV test results went from negative to positive from one visit to the next in 19% of women with low levels of retinol and 10% of those with high serum levels.

Incident HPV infection at one visit persisted in a positive HPV test at the next clinical visit in 20% of women with high serum levels of high-risk human papillomavirus that are abundant in green, leafy vegetables.

HPV persisted in 31% of women with low levels of these carotenoids, a 60% increased risk with low serum levels.

HPV persisted in 22% of women with high levels of β-cryptoxanthin (a carotenoid found in a variety of tropical fruits and nectarines), compared with 38% of women with low levels of this nutrient, who had a 70% increased risk for persistence.

The risk for HPV persistence doubled with low levels of α-carotene and was 60% higher with low levels of lycopene, compared with having high levels of these nutrients.

Dr. Goodman speculated that the differences might be related to the antioxidant functions of these nutrients, or to the interface between cytokine levels and local levels of HPV.

“We know that the micronutrient levels do enhance the immune response,” he said.

Intracellular signaling might play a role. A variety of nutrients affect the genes associated with transcription. It’s also possible that antioxidants could directly affect HPV viral load and cell proliferation, he added.

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**Dietary Carotenoids May Defend Women Against HPV Infection**

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**HPV Typing May Ease Cervical Lesion Angst**

**VANCOUVER, B.C. — Low-grade squamous intraepithelial lesions were likely to regress in women older than 30 years who were not infected with types of human papillomavirus associated with a high risk for cervical cancer, a longitudinal study found.**

Of 412 women with untreated cervical intraepithelial lesions (LSIL), only women who tested positive for high-risk human papillomavirus (HPV) de- veloped cervical intraepithelial neoplasia grades 2 or 3 (CIN 2/3) during 2 years of follow-up, said Christine C. Clavel, Ph.D., at the 22nd International Papillomavirus Conference.

HPV testing is approved in the United States to help triage women with Pap results showing atypical squamous cells of undetermined significance, or as an adjunct to Pap smears for screening women older than age 30.

The study suggests that it also might be helpful by allowing a longer interval between follow-ups in women with LSIL and a negative HPV test, said Dr. Clavel of the University of Reims (France) Hospital Center.

At baseline, 87% of the 412 women and 80% of those older than 35 years tested positive for high-risk HPV types.

Colposcopy and biopsies found 21 cases of CIN 2/3 at baseline and an additional 12 cases during the 2-year follow-up, all in women who initially tested posi- tive for high-risk HPV, she said at the conference, sponsored by the University of California, San Francisco.

Half of the high-risk HPV in- fections cleared over a median of 9 months in the cohort as a whole and in the subset of women older than age 45 with LSIL.

Cytologic lesions cleared over time in 66% of the total cohort and in 68% of women older than age 45. "There was a significant cor- relation observed between an ini- tial negative high-risk HPV test, the regression of cytologic lesions, and the absence of CIN 2/3 in follow-up," she said.

Women with LSIL who tested negative for high-risk HPV might safely be followed 12 months later by repeat cytology and HPV testing, she said. This would in- clude approximately 13% of all women with LSIL, 20% over age 35 with LSIL, or 24% of women over age 45 with LSIL.

In women older than 45 years, misclassification of LSIL increas- es and leads to a decrease in de- tection of LSIL at colposcopy; she noted.

Using HPV testing plus Pap smears to follow HPV-negative women with LSIL could signifi- cantly reduce the number of women sent to colposcopy, com- pared with follow-up using cytol- ogy alone, Dr. Clavel said.