

# Human papillomavirus: The silent epidemic

By Barbara Cassani  
special writer

In the shadow of the current AIDS crisis lurks an equally tenacious virus.

It's infecting the national population at epidemic levels, yet evading the limelight of public recognition.

Its name is Human Papillomavirus, or HPV.

The National Institute of Allergy and Infectious Disease estimates that the virus afflicts 3 million Americans annually. However, three Seattle doctors put the infection rate at more than 12 million in a recent study published by Johns Hopkins School of Hygiene and Public Health.

Even that figure assumes current standard testing procedures detect only 50 percent of the infections caused by the virus.

Research began in the 1960s, when the virus was found in abnormal Pap smears, a cancer screening test for women. More recent research has produced even stronger evidence linking the virus to cancers of both male and female reproductive systems. It also can cause respiratory and laryngeal problems in children whose mothers have passed the virus to them at birth.

Despite almost three decades of research, there is an alarming public

ignorance about this quiet yet common virus.

A group of specialists in the suburban Detroit area are shedding some much needed light on HPV.

Working on HPV and its relationship to genital cancers are Richard Reid, a medical doctor and director of the Cervical and Vulvar Dysplasia Clinic of Sinai Hospital in Detroit; Samuel Rosenberg, a medical doctor with the departments of urology at Harper-Grace Hospitals, and Mitchell Greenberg, a medical doctor and clinical coordinator of the Richard Reid Foundation for Cervical Cancer Research, and Histopathology Associates, P.C., a pathology laboratory dealing extensively in HPV cases.

There are 58 known strains of HPV, only six have been implicated in cancers of the male and female reproductive systems. The relationship of HPV to cervical cancer in women has recently become even more clear.

"HPV is found in 95 percent of cervical cancers and the other 5 percent most likely are HPV types we haven't discovered yet," Reid said.

Although cancers of the penis and scrotum are still relatively rare, in the cases that have occurred, two HPV types were present in 50 per-

cent of the tumors biopsied. And even though the risk of HPV-related cancer is greater in women, the virus also poses a very real risk to men as well, Rosenberg said.

"We have seen cancer of the penis and one case of cancer of the scrotum in which we think HPV might be the cause, so it is a danger for a man to have an HPV infection, especially if they have a cancer-causing type of virus," said Rosenberg.

Although an HPV infection is presently incurable, not everyone who contracts an HPV infection will progress to cancer. In fact, few will. Gilbert Herman, a medical doctor and director of Histopathology Associates, said HPV has become one of the prototypes in studying the relationship between viruses and cancer.

"THE MORE WE learn about HPV, the more we understand how cancers are initiated and promoted," he said.

HPV seems to be an initiator. It gives a cell the potential to become cancerous.

"Whether it actually goes on to become cancer might take other factors. Smoking, bacterial infections and herpes increase the carcinogenic risk of HPV," said Herman.

Physicians believe the immune system plays an important role in

how an HPV infection will "take." People whose immune systems have been weakened from other treatment processes and/or diseases, such as AIDS, diabetes and chemotherapy, will be affected much more dramatically. Pregnant women also are at a much higher risk, according to Reid.

People have a certain amount of natural immunity toward the virus, according to Herman, who holds a doctorate in research. Biopsies have shown "a very strong host reaction" to the invading virus, he said.

"We see white blood cells and plasma cells there (in biopsies) which implies that antibodies are being made," Herman said. "In other words, the body is fighting off the virus."

But even with an immune system that is in good working condition, once you've contracted HPV, it's yours for life. The active stage of the virus — obvious, raised warts — isn't constant.

"WE DON'T know if we can make people non-infectious by treating them," Greenberg said. "We treat people because of their malignant potential. You can't cure it, if it persists for life, but we can drive it back into remission."

The specialists are using a new diagnostic tool, ViraPap, recently approved by the Food and Drug Administration. ViraPap is a nucleic acid probe that permits study of the virus' DNA (genetic makeup).

Use of the probe results in a more accurate diagnosis of the presence of HPV in patients who have an inobvious (not visible to the human eye in the form of a wart) infection.

The Johns Hopkins study reported that an additional 7 percent of HPV infections have been detected as a result of using such DNA probes.

It is believed that the inobvious level of the HPV infection is most likely responsible for the epidemic spread of the virus. Since the infection can't be seen at that stage, people don't realize they or their partner have it and don't take precautions to prevent its transmission to others.

"On a typical day, we will render a diagnosis on about 30 people who have just walked into either their urologist or gynecologist and found they have the inobvious HPV infection," Herman said.

"This means these people have the potential to develop condylomas (the raised, obvious warts) or dysplasia (a precancerous condition)," he said.

The ViraPap probe is used on patient biopsy specimens taken during urological or gynecological exams to determine if the HPV DNA is present.

THE PROBE was developed at Bethesda (Md.) Research Laboratories Life Technologies under the direction of Attila Lorincz, a chemist who holds a doctorate in research, worked exclusively with Reid. They were able to isolate the virus, then clone it by producing a mirror image of itself — the ViraPap probe.

Explaining how the probe works, Edna Elfant, a cell biologist for Histopathology, said the virus' genetic material is released from the tissue by using enzymes that digest the cells. If the HPV genetic material is present, the matching genetic material of the probe sticks to it. If no

## Among the researchers

Farmington Hills resident Dr. Samuel Rosenberg is an author and co-author of numerous publications related to Human Papillomavirus, or HPV. The researcher is a native of Mexico City, member of several local and national medical societies and has spoken on the subject of HPV and laser surgery techniques at conferences throughout the U.S. and Argentina.



Dr. Samuel Rosenberg

HPV is present, the probe washes away.

"The ViraPap procedure is another bit of information the clinician needs to know," Greenberg said. "It screens for the seven most common HPV types. If the ViraPap is positive, viral typing should then be done to specify exactly which HPV type is present."

The basic ViraPap screening costs \$50. If viral typing is included, the total cost is \$120. Currently, neither the ViraPap or the viral typing are covered by most health insurances.

Depending on the level of infection, the chronic nature of the virus frequently requires treatments, such

as weekly applications of a 5-FU (cream), laser surgery for advanced or stubborn warts, or Interferon injections.

With the ViraPap probe, better screening technology for HPV infections is now available. However, some HPV exposed individuals will slip through even this comprehensive screening by ignoring basic preventive measures (use of condoms, limiting sexual partners and exams at regular intervals).

For that group of people, the risk of developing cancer and/or other complications from an HPV infection is much greater.

## Band's May concert is A Family Affair

The Farmington Community Band proudly presents "A Family Affair," honoring senior citizens and the handicapped, at 3 p.m. Sunday, May 7, in the Harrison High School auditorium.

The annual program will have residents from 15 area nursing homes as special guests. Seniors from throughout the community are encouraged to attend.

"We are especially grateful for the help and cooperation of so many organizations who give of their time to make this concert possible," said band director Paul Barber.

The concert is given in coopera-

tion with the Farmington Public Schools and the Farmington Area Arts Commission. Nardin Park Boy Scout Troop 389 will provide assistance to the honored guests. Lloyd Smith will be coordinating Kiwanis Club volunteers who serve as bus chaperones.

The concert is designed for the family. Music will include selections from "The Sound of Music," famous father and son compositions by Johann Strauss and many other favorites.

In keeping with tradition, homemade goodies will be served to all. Admission is complimentary.

## She is Perfect Teen

Chrysoula Mello has been crowned Miss Perfect Teen of Michigan. She is the daughter of Mr. and Mrs. James Mello, a member of Holy Cross Greek Orthodox Church in Farmington Hills and a student at Mercy High School.

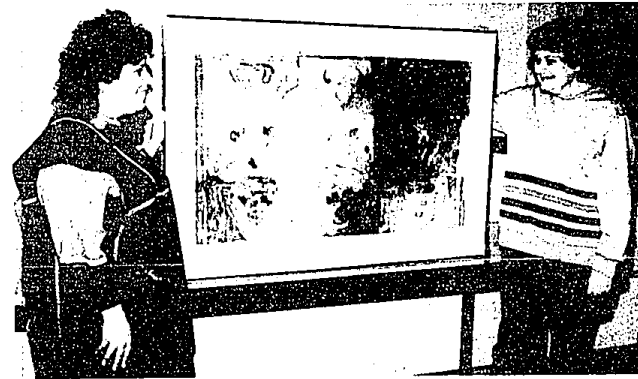
She is an active member of the church's youth organization and a teacher's assistant in the Sunday School program.

Chrysoula will represent Michigan in the national Perfect Teen Pageant in North Carolina this fall.

## Registration open for tots

Nardin Park Community Nursery School is a non-profit state licensed accredited nursery school for 3- and 4-year-olds. Openings are still avail-

able for the 1989-1990 school year. For information call Carol Skirczynski at 553-0812.



Jury Linda Mendelson (at left) compliments Judy Gresser on her work called "Masks," which won first prize in Farmington Artists Club's spring show.

## 'Masks' wins for Judy Gresser

Of the 100 works of Farmington Artists Club members that went up for judging this month, Judy Gresser took the first prize for "Masks."

Jury Linda Mendelson called the work "spiritual."

"It breathes. It lives. There is a sense of light-luminosity. There is a wonderful use of color, line, grids, a tactile sense of all combines to create a very mystical image," Mendelson said.

Second place went to Gwen Tomkow for "Dunes Patterns." Third place was taken by Edie Jopple for "Painter's Holiday." Fourth place went to Tom Hall for "Books."

The works are all on display now in the club's spring exhibit, which continues through Saturday in Nardin Park United Methodist Church, 11 Mile west of Middlebelt.

Show hours are 10 a.m. to 3 p.m. today and Friday and 10 a.m. to 3

p.m. Saturday. Admission is free. Refreshments are complimentary.

GUESTS ARE invited to place a vote for their favorite painting in the show and will be asked to buy a raffle ticket to help support the Farmington Art Foundation, the service arm of the club.

Works of original art, donated by members of the club, will be raffled off at the end of the exhibit. The money raised will support the Picture Lady Program, an art enrichment program in the elementary schools, and the painting classes given free to seniors in cooperation with Farmington Hills Department of Special Services.

The Farmington Artists Club was formed by five artists in 1985 to provide an arena for growth and development of member artists and to

stimulate interest in the creative arts in the community.

The Farmington Art Foundation was instituted in 1973 to provide programs for the education of art in the community.

In addition to the works in the spring show's juried gallery, another several hundred will be on display for purchase.

Mendelson said of the exhibit, "This show is full of very unique imagery. Subject matter is handled with insight. I'm impressed with the techniques that are utilized by the artists."

"I feel fortunate to have seen this body of work."

Mendelson gave honorable mentions to Evarista Samra, Connie Lucas, Jeanne Orment, Lena Massara, Alice Nichols, Eileen Bibby and Donna Vogelheim.



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