New Pap Test Technologies Embark On Shifting Seas

They've gotten the patents, conducted the clinical trials, and most have already received U.S. Food and Drug Administration approval. Now comes the hard part. Marketing campaigns are the next crucial step for companies betting millions of dollars that their new technologies can become a routine part of the 50 million Pap tests performed annually in the United States.

Up to now, Pap testing has been a relatively low-tech procedure: The physician smears cervical cells on a slide, which is then sent to a laboratory where a cytotechnician uses a microscope to look for abnormalities. Ten percent of all negative slides are re-examined by a pathologist — a federally mandated quality control measure.

New technologies could affect each step in this process. On the market or almost there are two new ways of preparing slides, two automated microscope instruments to help in examining slides, three automated slide readers to re-examine negative slides, and two devices to aid in viewing the cervix as an adjunct to the Pap test.

Innovations Emerge

Most of the new technologies are very new. Four have received FDA clearance for marketing claims in just the past 18 months and two are expected to go before the FDA this spring (see sidebar).

Will these innovations become part of routine practice? There are still too many unknowns to make predictions, said expert observers. Pricing, reim-
bursement, and the roles of the devices in Pap testing are all in a state of flux. But what does seem certain is that acceptance will be a critical issue over the next few years as physicians, laboratories, and third-party payers begin to sort through data and advertising claims and to grapple with public health issues that have surfaced as the technologies enter the market.

So far, sales of the new devices appear modest. The Health Care Financing Administration estimates that there are about 3,200 laboratories in the United States that process Pap tests, and according to company reports, only a small number have purchased the new technologies.

But this picture could change rapidly as new marketing campaigns get under way. In January, for example, Cytolyte Corp. in Boxborough, Mass., hired more than 50 salespeople to start calling on physicians, laboratories, and third-party payers in "a traditional pharmaceutical sales and marketing approach," according to company president Patrick Sullivan. Cytolyte is marketing Thin-Prep®, one of the new ways to create slides by putting down a thin, even layer of cells. Thin-layer slide preparation is designed to replace the conventional smear, which can be more difficult to read.

Pap Plus Speculoscopy®, which allows a magnified visual examination of the cervix, will also be the focus of a major campaign beginning this month, said Mary Nagle, director of medical services for The Trylon Corp., Torrance, Calif., which developed speculoscopy. The most visible of the marketing campaigns so far has come from Neuromedical Systems, Inc. in Suffern, N.Y. NSI is advertising Pap-net®, its automated system for rescreening negative slides, in consumer publications.

More Than Competition

As the new technologies come on the market they are encountering more than competition. A public health debate is also brewing: "The real question for the country is not how to make the Pap test more accurate; it's how to reach the people who are not getting Pap tests," said Mark H. Stoler, M.D., associate director of the cytology laboratory at the University of Virginia Health Science Center, Charlottesville, and an active member of the American Society of Clinical Pathologists.

Many of the companies are promoting their products as ways to reduce the number of false negatives in conventional Pap testing. But pathologists and others say that false negatives on Pap tests are not a major problem in cervical cancer screening. They argue that cervical cancer grows so slowly that even if cancerous cells are missed one year, there is still time to treat them when they show up on a subsequent test.
Moreover, they say, the marketing and publicity surrounding new technologies could be frightening women by over-emphasizing the significance of false negative Pap tests and undermining their faith in routine testing.

"The biggest reason for a false negative is not having a Pap test," said Victor Savino, M.D., chair of public affairs for the College of American Pathologists. The National Cancer Institute’s Mark Schiffman, M.D., also expressed concern about marketing that “might prey on the anxieties of the worried well instead of attempting to reach high-risk women.”

This month, CAP is launching a public education campaign to promote the importance and reliability of annual Pap tests. A group of cytopathology professional organizations, the Cytology Education Consortium, has a similar campaign under way.

Cost Issues

Pathologists also say that the added costs of the new technologies could keep women from getting annual tests. While costs vary, the use of just one new product can add anywhere from a few cents to $50 per test, sometimes doubling the cost of a conventional Pap smear. Third-party reimbursement for conventional Pap testing runs from about $6 (Medicare) to about $40 according to Cytex estimates; average reimbursement is about $17, said Sullivan.

Companies respond to the issue of increased costs by arguing that the new technologies will make it possible to safely increase the intervals between Pap tests. By making the Pap test more accurate, the technologies will eliminate the need for annual testing, said Fred Kostelecky, president of National Testing Laboratories, Fenton, Mo. NTL has developed cervicography, a technique that provides magnified “photographic projection slides” of the cervix that are scrutinized by NTL’s expert evaluators.

Cytex’s Sullivan also argued that ThinPrep® could save healthcare dollars in the long run. Cytex has data showing that its thin-layer slide technique saves money by cutting down on unusable Pap smears and by catching high-risk abnormalities sooner, he said.

NSI, which makes the automated reader Papnet®, defends marketing that increases women’s awareness of new technologies. Andrew Panagy, NSI’s vice president for marketing and sales, said that its focus groups showed that advertising boosted awareness of the importance of screen-

The New Pap Technologies: Where They Stand

Company officials provided the following information about their products:

**AcCell 2000®**, an automated microscope device to aid in examining slides, has been on the market since May 1996. About 100 AcCell systems, made by Accumed International in Manchester, Mass., are in use worldwide.

**AutoPrep® and AutoSCREEN®**, a thin-layer slide preparation method and an automated screener, will go to the FDA for approval “before summer,” made by Auto-Cyte, Inc., in Elon College, N.C.

**Autopap®,** an automated reader made by Neopath in Redmond, Wash., received FDA approval in fall 1995. By the end of 1996, 52 of the devices were in customer hands. Neopath has contracts with each of the three largest laboratories in the United States, and one of them, Smithkline Beecham, has purchased 19 Autopap® readers. Laboratories use the device to select negative slides for rescreening.

**Cervicography**, developed by National Testing Laboratories in Fenton, Mo., creates enlarged photographs of the cervix to be read by NTL’s expert evaluators as an adjunct to Pap testing. Several hundred U.S. physicians use cervicography.

**Papnet®,** an automated reader, received FDA clearance in fall 1995. Neuromedical Systems Inc., Suffern, N.Y., runs a central facility to rescan slides with PapNet, typically at the physician’s or patient’s request. Customers more than quadrupled to about 200 laboratories at the end of 1996.

**Pathfinder®,** an automated microscope device to aid in examining slides, is made by CompuCyte, Inc., in Cambridge, Mass.; it went on the market about a year ago.

**Speculoscopy**, developed by The Trylon Corp., Torrance, Calif., and distributed through Pharmacia Upjohn, is a magnified visual exam of the cervix using a light at the end of a speculum. The screening test, Pap Plus Speculoscopy®, received FDA clearance in 1995. Its official market launch is this month in six cities.

**ThinPrep®,** a thin-layer slide preparation method, developed by Cytex Corp. in Boxborough, Mass., received FDA approval last year. Cytex had trained about 75 laboratories by the end of 1996 and about 350 instruments were in the field.

— Caroline McNeil
ing and increased women’s motivation to get a Pap test.

While this debate gathers steam, third-party payers are beginning to conduct their own assessments of the new technologies. Blue Cross/Blue Shield of Massachusetts and United Health Care have said they will cover the cost of ThinPrep®, and Blue Cross/Blue Shield of Ohio and New York’s MagnaCare cover Papnet®. The Blues’ national trade group, the Blue Cross and Blue Shield Association, plans to issue its own evaluation of Autopap®, Papnet®, and ThinPrep® this summer, said Claudia Bonnell, an association consultant in Washington, D.C.

Another unknown is the impact of products that have not yet entered the market. AutoCyte, Inc., in Elon College, N.C., in which Hoffman LaRoche is the major shareholder, has both a thin-layer slide preparation method and an automated slide reader that it plans to market as a package.

The company will submit AutoPrep® and AutoSCREEN® to the FDA sometime before this summer, according to Ernest Knesel, AutoCyte’s executive vice president. Because Hoffman LaRoche owns several large laboratories, the entry of this automated system could have an important impact on market dynamics.

Pricing is another factor subject to change. Increased competition as well as volume purchases by managed care organizations could bring down costs.

In addition, the cost of colposcopy, the gold standard in cervical cancer detection, may also be coming down, noted Diane Solomon, M.D., at NCI.

Colposcopy is usually reserved for suspected dysplasia in this country because of its expense. But managed care and the increasing number of nurse colposcopists are bringing down its costs, Solomon said, and that could have an impact on the market for the newer technologies. In Europe, colposcopy can cost as little as $10, she noted, and is sometimes used as an adjunct to Pap test screening.

All these factors — marketing strategies, pricing, reimbursement, new products and new roles for existing products — make for a volatile and unpredictable situation. “Everything’s changing — the issues, the arguments — everything will be different a year from now,” said Stoler.

How the market develops for the new technologies will depend on many things, agreed Schiffman, including economics and local needs. The ideal outcome, he said, would be greater accuracy in Pap testing that frees up resources for other public health needs. “That was the real goal of developing new technologies,” he said. “Whatever happens, it has to jibe with that vision.”

— Caroline McNeil

NCI, US TOO Join Forces to Reach Men About Prostate Cancer

The National Cancer Institute and US TOO International, the largest men’s cancer organization worldwide, recently formed a partnership to educate men ages 50 and older, and those 40 and older who are at high risk for prostate cancer, about all aspects of the disease.

Their joint initiative will include prostate cancer symposia for health professionals and members of the public in several cities. They also plan new decision-making tools, such as interactive software to help men sort through the complexities of prostate cancer management.

The partnership calls for NCI to provide the latest scientific information available, and for US TOO to get the information to men and their families.

Henry Porterfield, US TOO’s chair and chief executive officer, said his organization will build on the NCI partnership by embarking on initiatives with the corporate sector and non-profit community. The goal, he said, is for all men diagnosed with prostate cancer to have access to information that will allow them to make informed decisions about screening and about treatment options.

Richard D. Klausner, M.D., NCI’s director, agreed, adding that “more and more men today are being screened for prostate cancer, and our concern is that they are unaware of their treatment options and the benefits and risks associated with the different treatments.”

US TOO has 10,000 members in more than 550 chapters in the United States.

— John Burklow