



HEALTHCARE WORLD

Best Practices for Healthcare Industry Leaders **MAGAZINE**

www.healthcare-world.com

SPRING/SUMMER 2009 \$4.95

TECHNOLOGY FOCUS BY ALAN DORICH

Helping Make Better Choices

With the increasingly diverse U.S. population, Logical Images strives to help medical professionals make better diagnoses.

For physicians, the ability to make a diagnosis from visual cues can make all the difference in a patient's health. But with the growing diversification of the U.S. population, what happens when doctors are unable to be sure that they've made the right one?

For Rochester, N.Y.-based Logical Images Inc., a constant goal is to make sure that doctors make those right decisions. The company is a developer of visual medical technology and resources to improve diagnostic accuracy, medical education and patient knowledge.

"Today, Logical Images has the most comprehensive digital medical image library, with over 50,000 images, including all age ranges and skin types," co-founder and Chief Medical Officer Dr. Art Papier says. "With more than 100 physicians creating, contributing, critiquing and updating the library on a regular basis, Logical Images helps elevate diagnostic accuracy, enhance medical education and heighten patient knowledge."

Proper Support

A practicing dermatologist and associate professor of dermatology and medical informatics at the University of Rochester College of Medicine in New York, Papier says he founded the company with Dr. Lowell Goldsmith in 1999. Goldsmith is the current dean emeritus of the University of Rochester College of Medicine and professor of dermatology at the University of North Carolina.

"During the 1990s, when Kodak first announced film digitalization technology and later digital photography, Dr. Goldsmith and I recognized the need to move visible light imagery from slide carousels and print

photographic atlases to decision support and database computer technology," Papier remembers.

"We realized that primary care physicians had an ongoing need for much richer information around visual diagnosis, and began thinking about how images and the cases they derive from could be stored and turned into powerful diagnostic tools at the point of patient care," he continues. Today, Logical Images meets that need with VisualDx, a visual diagnostic decision-support system.

"Physicians in fast-paced clinics, emergency rooms and hospitals often have to make quick decisions with incomplete data," Papier says. "VisualDx is available at the point of care to help accurately diagnose diseases using distinct visual clues and symptoms."

Clinical users of VisualDx will often have computers in or near exam rooms, he says. "If they are unsure of the differential diagnosis; they typically enter the type of skin lesion - including eye or oral problems - and its location," he says.

"Some clinicians will do a search based on one patient finding, such as a drug eruption, if they are concerned that a patient's medication might be causing the problem," he continues. "They can search by medication and immediately view pictures of both serious and non-serious adverse reactions, instead of one large 'drug rash' category."

In this example, he says, a clinician might ordinarily lump unique features into a common explanation, such as fungal infection. "In contrast, with VisualDx, a clinician would have access to specialty information and details

about drug reactions that they would never have from memorization," he says.

Enabling Recovery

One example of VisualDx helping physicians make the right diagnosis, Papier says, was when one of its users in a South Carolina emergency room saw a child who complained of a sore throat. "When he first evaluated the patient, the child did not appear ill, but the mother said that the child had recently developed skin lesions," Papier says.

"Dr. William Finn examined the skin lesions and felt they did not look consistent with a streptococcal-induced rash," Papier continues. "He checked VisualDx by searching for a streptococcal infection and did not see pictures that were consistent with his patient."

Instead, Finn looked at pictures of meningi-

coccal-related rashes. He noticed a consistency and ordered blood cultures and started empiric IV antibiotics. "The blood cultures confirmed acute meningococemia and after hospitalization, the child fully recovered," Papier says. "Dr. Finn is an astute physician, but recounted how the pictures themselves underscored the potential urgency of the situation."

Improving Identification

A problem that Logical Images has sought to solve is the under-representation of ethnicities in medical resources, Papier says. In October 2006, "We published a paper in the *Journal of the American Academy of Dermatology* that looked at pictures of skin disease on both dark and light skin," he says.

"We found that dark skin is consistently

under-represented in our literature," he says. "We have gone to great lengths to represent diseases in light and dark skin types, because many diseases look very different when occurring in a deeply pigmented individual."

"For example, one of the most important skin signs of bleeding underneath the surface is very difficult to diagnose in darkly pigmented people," he says.

"In light-skinned people, this bleeding appears red against light skin, while in dark skin, people bleeding below the skin surface usually appears brown or very dark brown," Papier says.

To help clients make more informed decisions, "We are continually adding diagnoses, images and database relationships to the VisualDx product," Papier says. "Though we cover the skin, eye, oral and genital mucosa

areas, we see opportunities to use graphics and other patterns to aid in diagnosis."

Recently, Logical Images released its latest version of VisualDx, VisualDx 6.04. In addition, the company has developed www.visualdxhealth.com, which is a site focused on providing health information to consumers.

"In 2008, VisualDxHealth was nominated as one of the top-five health sites in consideration for a Webby award, and has been recognized by the *New York Times* as a top health site," Papier says.

"VisualDxHealth uses visuals to help consumers relate to what they are actually seeing on their skin, in turn, helping them make better healthcare choices," Papier adds. To find out more information, call 1-800-357-7611. ■

