

New computer program helps Danbury doctors

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Common skin diseases -- eczema, acne, poison ivy -- are relatively easy to figure out.

But leprosy?

Dr. Dino Messina, a general practitioner at Danbury Hospital's Seifert and Ford Community Health Center, had a woman come to the Main Street clinic recently. She told him she'd been diagnosed with leprosy in her home in Brazil, where the disease is more prevalent.

But how was Messina to know for sure?

Luckily, he has an increasingly useful computer program -- Visual DX -- to help him. He was able to search "leprosy" in the program and find images of the disease that matched the lesions on her arm.

He was then able to send her to Danbury Hospital's Infectious Disease Department for antibiotic treatment.

"We don't see a lot of leprosy," he said. "But she said she had leprosy and we were able to confirm it."

"This has been very useful," he said of Visual DX. "Some people think it's just cookbook medicine. But it allows us to make a faster diagnosis, rather than taking 15 minutes or so looking through a textbook."

It's also a good teaching tool for the residents who work in the clinic -- they can see the rash, or the lesion, or the insect bite on the patient, then clearly see the pictures on the computer screen. And it's also helpful in explaining to the patient what's wrong with them .

"You can look at the rash on the patient's hand, find the same rash in the computer," said Dr. William Gemmell, vice chairman of the

Department of Emergency Medicine at Danbury Hospital. "The patient can say 'My God. That's me.' "

Gemmell said Visual DX is especially valuable in places like emergency departments, because it's available on all the computer monitors. That does away with running around, trying to find a textbook someone might have picked up a half-hour ago and moved across the room.

"The book could also be 10 years old," Gemmell said.

The Visual DX software -- which Messina said is now available to all doctors in the area affiliated with Danbury Hospital -- has been developed by the company Logical Images Inc. of Rochester, N.Y.

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Dr. Art Papier, co-founder of Logical Images and its chief scientific officer, said the company has a logical beginning as well.

"I'm a dermatologist," he said "And Kodak (which has its headquarters in Rochester) moved into digital imaging. So we started using digital imaging for diagnosis very early on."

Papier is an associate professor of dermatology at the University of Rochester School of Medicine. But he has also taught infomatics -- the study of gathering, storing, and retrieving information.

In the 1990s, he said, he helped design CD-Roms for textbooks in dermatology. That, in turn, led to the Visual DX software.

The system works well because it allows doctors to move it in several directions to make a diagnosis. They can search for a specific disease -- basal cell carcinoma, for example. They can also type in a patient's symptoms to see what that might yield.

"You can search for rash and joint pain," Gemmell said. "Then you can search for rash and joint pain and fever. It will take each symptom search the data base, and give you images of what the disease might be. If you type in 'red vesicles' it will search for that. You can see a pyramid of possibilities -- light skin, dark skin, child's skin, old skin."

They can also search for a patient's country of origin to see if some skin diseases are more common there. Or, if the patient is a world traveler, they can see if the patient might have picked something up in a foreign land.

"You can type in Thailand, and see what information that will get you," Papier said.

Because the program has thousands of images, it can also help make doctors when they're looking at uncommon manifestations of a common illness.

For example, patients with Lyme disease often have one bull's-eye rash around the tick bite.

Messina said he recently had a patient with several smaller rashes. But the diagnosis pointed to Lyme disease. So did Visual Dx, which showed Messina images of multiple Lyme rashes caused by one tick bite.

The software is also helpful at clinics like Seifert & Ford, because it sees many patients from many different countries, and with many different skin tones. A case of psoriasis might look one way on white skin, and another on brown, or yellow or black skin.

And Messina said, it helps the Seifert & Ford staff to make as many diagnoses in-house as possible.

"Our patients are poor, needy, underinsured, uninsured," Messina said. "The dermatologists in the city are very helpful about seeing our patients. But we try to help them here as much as possible."