Seeing below the skin: Advanced tools to diagnose cancer

January 7 2013, by Maureen Mcguire

(Medical Xpress)—Worried about all the time you spent in the sun during your teen years? There's good reason, says Dr. Jane M. Grant-Kels, chair of the Department of Dermatology at the University of Connecticut Health Center.

"Sunlight is the ultimate carcinogen. There's nothing good that comes from any type of tanning or prolonged sun exposure," she says.

At UConn Health Center, dermatologists use a range of technologies to track and visualize changes within the skin, including changes on the cellular level.

Recently, UConn Health Center became the only dermatology practice in the region to introduce the use of MelaFind, a computer-aided technology that allows dermatologists to see below the skin, evaluate lesions in 3D imaging and determine if a biopsy is necessary.

"This is an amazing technology that allows us to look through the skin and identify the telltale signs of melanoma. With this technology, we can save patients from needless biopsies. Ultimately, that is easier on patients, as even a small incision can result in pain, scarring or embarrassing bandages," Grant- Kels adds.

UConn Health Center also uses confocal microscopy, which visualizes through layers of skin, using light beams to see deep within horizontal layers and detect changes on a cellular level.

"Any tool that helps us to diagnose skin cancer early, especially melanoma, is a wonderful benefit to patients. These technologies also help us create a baseline so we can track the growths and look for changes," Grant-Kels says. "We are very pleased to share our new technologies with the community. "

Early detection is key

"All types of skin cancer are serious, though melanoma is the most deadly," Grant-Kels explains, noting that early detection is critical.

She advises people who are at risk for skin cancer to be screened regularly by a board-certified dermatologist who can recognize signs of problematic changes in the skin.

In addition to the new technologies, UConn Health Center dermatologists use other tools to detect early signs of cancer such as digital mole mapping and full body digital imaging to help capture and track changes in the skin of patients who are at risk for skin cancer. In addition, UConn dermatologists use hand-held microscopes, known as dermatoscopes, which allow doctors to look through the skin and determine if a biopsy is needed.

If a biopsy is needed or cancer is found, help is available. "If a patient undergoes a biopsy, we are committed to providing answers in a personal and timely fashion," Grant-Kels adds, noting that UConn Health Center has an on-site dermatopathology lab to evaluate biopsies. If melanoma is detected, the dermatology department is part of a multispecialty melanoma center that includes a team of experts.

"Patients with melanoma, in one appointment, are seen by the entire team. We have a complete range of services and best of all, their care is coordinated," Grant-Kels says.

Provided by University of Connecticut