

Rare skin tumor responds better to treatment than melanoma

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University of Michigan Health System researchers have published new data to help answer two dreaded questions: "Is it cancer?" and "What type of treatment should I have?"

Cancer is the primary concern when abnormal skin lesions are detected. Macroscopic and microscopic features of a lesion usually provide clues about whether it is benign or malignant. However, the distinction is not always clear-cut, and doctors are faced with the question of how to best treat such patients.

The quandary is especially pronounced in atypical spitzoid tumors (ASTs), a rare proliferation of pigmented skin cells. ASTs have many features of melanoma, a potentially deadly form of skin cancer. ASTs tend to appear in patients who are much younger than the age when skin cancer traditionally occurs, which makes determining whether the lesion is malignant or benign even more difficult.

The new research, led by the University of Michigan Multidisciplinary Melanoma Program and published in the journal *Cancer*, suggests that ASTs behave differently from other types of melanoma. This finding could eventually lead to fundamental changes in the way ASTs are treated.

"As patients with AST appear to do better than conventional melanoma after similar treatment, we are now able to provide some reassurance to concerned parents and loved ones about the implications of the

diagnosis," says lead study author Mathew Ludgate, MBChB, FRACP, assistant professor in the U-M Multidisciplinary Melanoma Program.

Although ASTs are rare, the U-M Multidisciplinary Melanoma Program has considerable experience as a preeminent national referral center. ASTs are an increasing challenge for physicians, as the number of ASTs diagnosed throughout the country appears to be increasing for unknown reasons. The researchers focused on long-term outcomes of ASTs to formulate improved evidence-based treatment guidelines.

Doctors generally treat patients with AST similar to malignant melanoma by surgically removing the lesion and in many cases also with a sentinel lymph node biopsy. The sentinel lymph node biopsy involves the removal and evaluation of one or a few lymph nodes nearest the skin lesion to determine whether the skin lesion has spread to the lymph nodes.

Ludgate and his team analyzed U-M's unique comprehensive melanoma database that has been collecting data for almost two decades for all cases of ASTs of uncertain biological potential between 1994 and 2007. Data were examined to learn the clinical features of a patient, whether the patient underwent a lymph node biopsy and the histological features of the tumor.

Of the 67 patients in the study, 57 had undergone wide excision and sentinel lymph node biopsy, and 27 biopsies were positive.

All 27 of AST patients with positive sentinel node biopsy are alive and disease-free at an average of about 44 months follow-up, researchers note.

"If AST were a form of melanoma, we would expect that at least some of the patients would have had the AST recur throughout the body by

this time" Ludgate explains. "This study provides evidence that although ASTs have some features of melanoma microscopically, they do not behave as aggressively."

These findings can be interpreted in three ways, Ludgate says. "The first is that AST is not cancer at all, but has some ability to spread. The second possibility is that because ASTs often occur in younger people with intact immune systems, the body is able to successfully fight off the beginnings of metastatic disease. The third possibility is that AST is potentially deadly but removal of the primary AST lesion and the sentinel lymph node biopsy is curative."

Each of these possibilities is considered in the treatment strategy developed collectively as a result of this study. One result of this new strategy is that not every patient with AST must undergo a complete lymph node dissection or treatment with interferon-alpha after a positive sentinel lymph node biopsy, depending on the degree of lymph node involvement and the age of the patient. This is important as complete lymph node dissection is a more extensive surgery than a sentinel lymph node biopsy alone, and has considerable more risk of long term side effects.

Given the difficulty determining whether AST is benign or malignant, Ludgate notes, the melanoma team plans to "identify the molecular profile of ASTs to further characterize the true behavior of these tumors."

Source: University of Michigan

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