

# Researchers study childhood melanoma characteristics

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Melanoma, newly diagnosed in more than 76,000 Americans in 2011, is the most common and dangerous form of skin cancer. Melanoma is rare in children, accounting for 1 to 4 percent of all melanoma cases and just 3 percent of pediatric cancers. Just as adult cases of melanoma are increasing, pediatric melanoma is rising at the rate of 1 to 4 percent per year.

The physicians and staff at Moffitt [Cancer Center](#) have a special interest in melanoma and related conditions occurring in childhood, and recently published results of their experience with cases of pathologically confirmed childhood melanoma. They found evidence that the disease manifests differently in children than in adults, particularly with regard to the likelihood and significance of lymph node [metastases](#). Metastases to the [lymph nodes](#), particularly the sentinel nodes, were found more frequently in children with melanoma than would be expected in adults with the same stage of disease, yet with aggressive surgical and [medical treatment](#), stage-for-stage the survival in children was better than expected for adults.

The study is published in the August issue of the [Annals of Surgical Oncology](#).

"We really don't know why young children are getting melanoma, although for older children the [risk factors](#) – fair skin, [sun exposure](#) and especially sunburns – are similar to those in adults. Children with melanoma have higher rates of metastases to sentinel lymph nodes than

adults, but they tend to do very well with [aggressive treatment](#)," said senior study author Vernon K. Sondak, M.D., chair of the Department of Cutaneous Oncology at Moffitt and an expert in the treatment of melanoma in children and adults. "There is suggestive evidence that the biology of melanoma in children, particularly young children, may be quite different than in adults. Importantly, the diagnosis of melanoma in children can be quite difficult, and consultation with an expert pathologist is often necessary to be sure that we are in fact dealing with melanoma and not some type of atypical mole. Our most recent study focused only on patients where our pathologist verified that melanoma was present, atypical tumors were excluded."

In this study, Moffitt researchers and colleagues at the University of South Florida and All Children's Hospital retrospectively reviewed 126 patients who were diagnosed with melanoma before age 21. One aspect of the study was to determine outcomes of childhood cases of melanoma where the patient had [sentinel lymph nodes](#) positive for metastases. The sentinel lymph node directly drains the skin where the primary tumor arose and is almost always the first node affected as a melanoma spreads. Primary tumor characteristics that may predict sentinel lymph node metastases in pediatric patients have not been extensively studied. Sentinel lymph node biopsies were performed in 62 cases, with 18 having a positive node. In the other 64 cases where a sentinel lymph node biopsy was not performed, the reasons were usually because the stage of the melanoma was not appropriate for the procedure.

"We observed a 29 percent positive sentinel lymph node rate," said Sondak, noting that the rate fell within the 25 to 40 percent rate found by other studies done in children, but higher than the 12 to 15 percent rate typically found in studies in adult melanoma. "We found that patients with positive SLN had significantly thicker melanomas when compared with SLN negative patients."

The researchers also found that pediatric melanoma patients with positive SLN had significantly worse recurrence-free survival and melanoma-specific survival rates. However, although lymph node metastases are seen at a higher rate in children, survival is comparable to – or even better than – what has been reported for adults with melanoma. According to Sondak, as the incidence of pediatric melanoma rises, it is important to gain a better understanding of the unique clinical characteristics of melanoma in children.

"We feel that most pediatric patients with clinically localized melanomas should be offered sentinel lymph node biopsies," concluded Sondak and his co-authors. "It is also noteworthy that a significant number of recurrences and [melanoma](#)-related deaths are seen more than five years after initial diagnosis. Thus, long-term follow-up is necessary as these children become young adults. Most of all, our study should remind people how important it is to protect children from the sun and from sunburn, starting from birth."

**More information:** [www.springerlink.com/content/8...2681023/fulltext.pdf](http://www.springerlink.com/content/8...2681023/fulltext.pdf)

Provided by H. Lee Moffitt Cancer Center & Research Institute

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