Interferon not beneficial for most stage III melanoma

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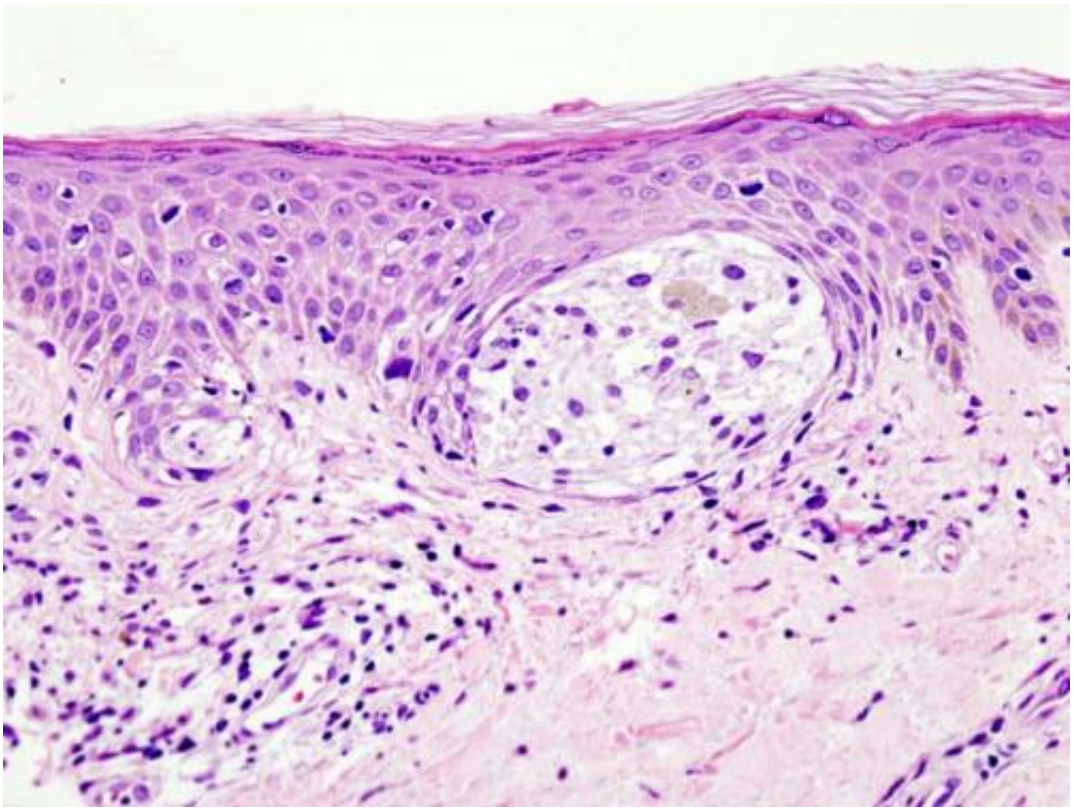

Melanoma in skin biopsy with H&E stain—this case may represent superficial spreading melanoma. Credit: Wikipedia/CC BY-SA 3.0

Final results for the Sunbelt Melanoma Trial, published online this month in the *Journal of Clinical Oncology*, show that thanks to current diagnostic techniques, most stage III melanoma patients do not benefit from treatment with interferon. Kelly McMasters, M.D., Ph.D., the Ben

A. Reid, Sr., M.D. Professor and Chair of the Hiram C. Polk, Jr., M.D. Department of Surgery at the University of Louisville, was the principal investigator and initiated the trial.

The first of more than 3600 trial participants were enrolled in 1997. Patients with small amounts of melanoma detected in a single lymph node were either treated with high-dose interferon therapy or simply observed. The patients, representing 79 institutions across North America, were followed for up to 10 years to determine long-term outcomes in terms of disease-free survival and overall survival.

Interferon was approved by the FDA in 1995 as a therapy for melanoma based on a study of patients with multiple large, palpable lymph nodes involved with cancer. However, the development of sentinel lymph node (SLN) biopsy in the 1990s made it possible for physicians to detect microscopic amounts of cancer in lymph nodes that could not be detected by hand.

Patients in the Sunbelt Trial were those with melanoma detected in a single lymph node by SLN biopsy. They were considered stage III because of the presence of melanoma in the lymph nodes, but the smaller amounts of cancer detected meant they had lower risk of cancer recurrence than previous stage III patients. McMasters, director of the Multidisciplinary Melanoma Clinic and associate director of the James Graham Brown Cancer Center at UofL, said the trial also studied patients with an even smaller amount of cancer in the lymph nodes, detected only at the molecular level using polymerase chain reaction (PCR).

"We started the Sunbelt Melanoma Trial to determine whether interferon therapy was warranted in this relatively lower risk group of stage III patients," McMasters said. "What we found was that there was no evidence that interferon was necessary or helpful for this substantial

group of melanoma patients. That saves many patients the toxicity and expense of interferon therapy, which is like having the flu, only worse, for a whole year. While the study did not quite meet its accrual goals and was underpowered to detect very small differences in survival, there was not even a trend for improvement in survival with interferon. Based on these findings, it would be hard to recommend interferon therapy for patients with minimal cancer in just one lymph node."

McMasters said that in practice today, most patients have the smaller level of cancer detected in the lymph nodes.

While interferon is still one of the two FDA-approved drugs for adjuvant therapy for high-risk melanoma, McMasters believes options now in the pipeline and further research into the molecular behavior of cancer cells will reveal more advantageous treatments for those with limited lymph node metastases.

"Newer studies of melanoma adjuvant therapy using immune checkpoint agents, such as PD-1 inhibitors, show much promise," McMasters said. "I think more work needs to be performed to understand the significance of molecular detection of melanoma cells in the lymph nodes and in the circulating bloodstream. We now suspect that melanoma, as with other cancers, routinely sheds cancer cells into the lymphatic system and bloodstream, and that a small minority of these cells that have the ability to evade the immune system, attach, invade, develop their own blood supply and grow, will become metastatic tumors."

Provided by University of Louisville