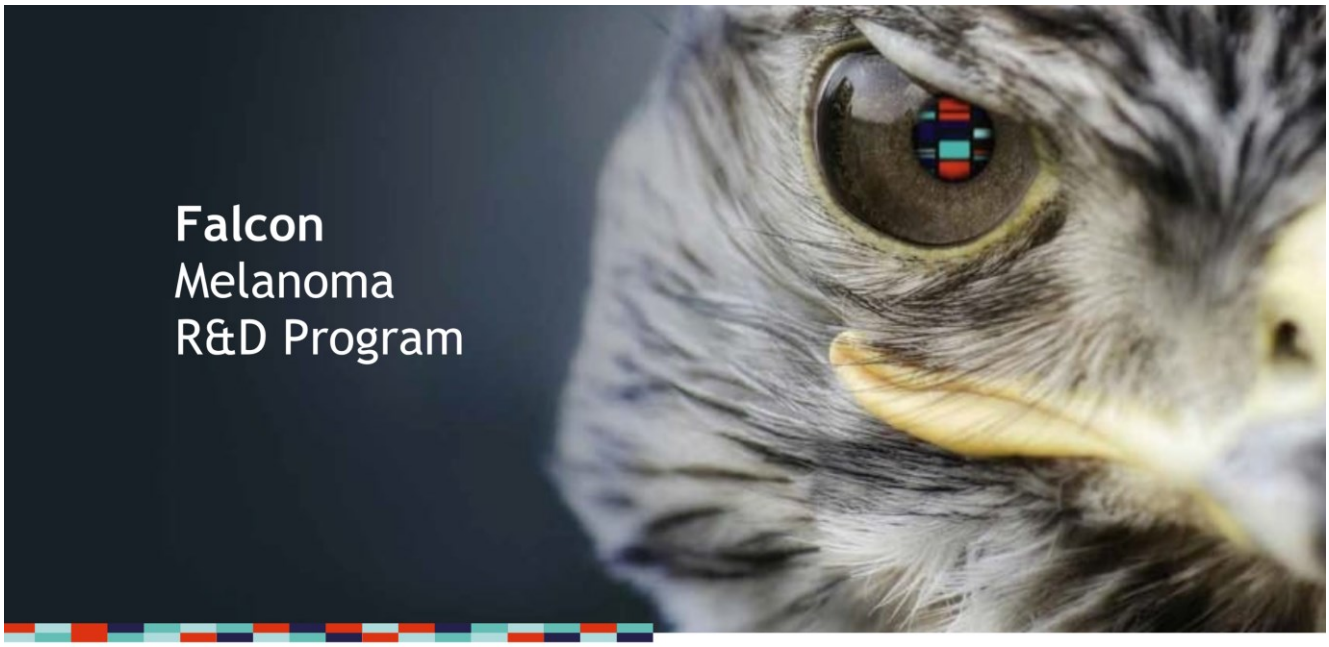

Merlin

Cutaneous melanoma patients with minimal SN tumor burden: CP-GEP (Merlin Assay) may guide decision-making beyond nodal assessment

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Abstract

Nodal pathological assessment via sentinel lymph node biopsy (SLNB) is important for primary cutaneous melanoma risk-stratification. The prognosis of patients with minimal sentinel node (SN) tumor burden - defined by the Rotterdam Criteria as a tumor burden of 0.1 mm or less - can be diverse. Therefore, optimal treatment of patients with minimal SN tumor burden is subject of an ongoing debate. CP-GEP assesses the risk of SLNB metastasis at diagnosis. Specifically, CP-GEP considers patient age at diagnosis, Breslow thickness and expression of eight genes in the primary tumor. Combination of these variables results in either of two risk labels: CP-GEP Low Risk or High Risk. Previously, we also investigated prognostic performance of CP-GEP in four independent cohorts from the US, the Netherlands, and Sweden totaling 1684 patients, 79 of whom had minimal SN tumor burden. The proportion of patients with minimal SN tumor burden was comparable between cohorts, 3-5%. We found that patients with minimal SN tumor burden from Sweden had a relapse risk comparable to SLNB positive patients, whereas Dutch and American patients had a relapse risk comparable to SLNB negative patients. We speculate that this discrepancy is caused by differences in histopathologic workup of SN. Of the 79 patients with minimal SN tumor burden, we observed recurrences in 2/17 (11.8%) CP-GEP Low Risk patients versus 19/62 (30.6%) recurrences in CP-GEP High Risk patients at a median follow-up time of 5.6 years. Further analysis of CP-GEP in larger cohorts is required to confirm observed trends.