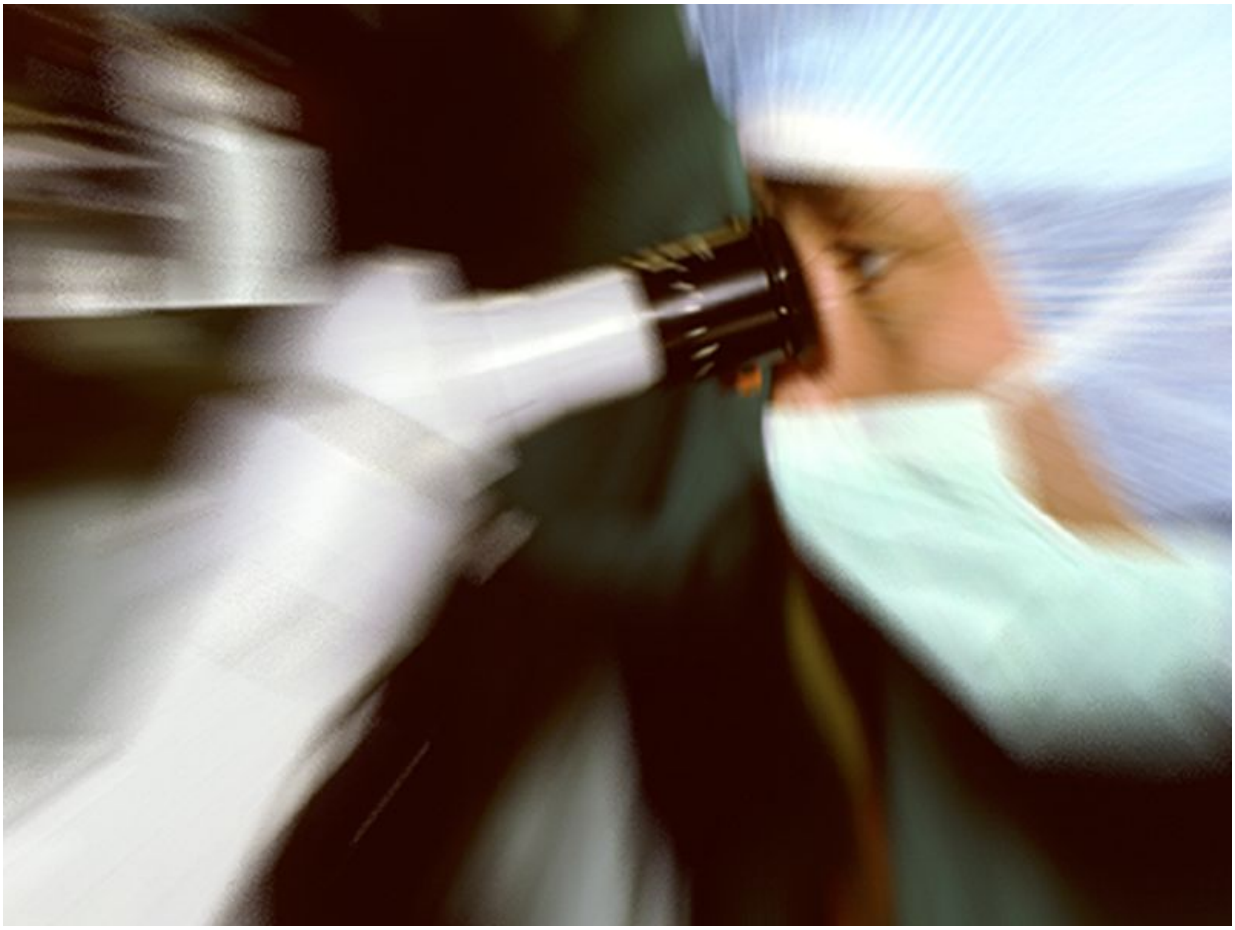
Unique molecular features for vulvar, vaginal melanomas

January 17 2017



(HealthDay)—Vulvar and vaginal melanomas (VVMs) have unique

molecular features as compared to nongynecologic melanoma (NGM), according to a study published online Dec. 27 in *Cancer*.

Jane Y. Hou, M.D., from the Columbia University College of Physicians and Surgeons in New York City, and colleagues compared molecular profiles between VVM and NGM subtypes in order to identify novel, targetable biomarkers. A total of 2,304 malignant melanoma samples were reviewed.

Fifty-one VVMs were compared with 2,253 malignant NGMs (2,127 cutaneous, 105 mucosal, and 21 acral melanomas). The researchers found that B-Raf proto-oncogene serine/threonine kinase (*BRAF*) was the most frequently mutated gene in VVMs (26 percent), compared with 8.3 percent of mucosal NGMs. Fewer VVMs than NGMs had a variant within the valine codon 600 domain in *BRAF*-mutated tumors (50 versus 82.1 percent). VVMs had the highest *KIT* mutation rate (22 percent), compared with 3 and 8.8 percent in cutaneous and mucosal melanoma subtypes, respectively. VVMs rarely had *NRAS* mutations, compared with cutaneous and acral melanoma subtypes (25.9 and 40.6 percent, respectively). VVMs frequently expressed PD-L1 and PD-1 (56 and 75 percent, respectively), while they rarely had PI3KCA pathway mutation and expression of estrogen receptor/progesterone receptor. Wild-type KIT VVMs were more likely to express molecular markers suggestive of platinum resistance (ERCC1), alkylating sensitivity (MGMT), and anthracycline sensitivity (TOP2A), compared with VVMs that had KIT mutations.

"The unique molecular features of VVM render this disease a distinct subtype of melanoma," the authors write.

One author disclosed being an employee of Caris Life Sciences.

More information: Full Text (subscription or payment may be

required)