
The prognostic performance of a gene expression profiling assay covering 15 genes was assessed in a prospective, multicenter study. Primary posterior uveal melanomas were assigned to classes 1 (low metastatic risk) and 2 (high metastatic risk) prognostic categories. The assay had a high technical success rate and provided a highly significant improvement in rates of prognostic accuracy over clinical tumor, node, and metastasis classification.


The authors of a prospective, interventional case series set out to determine whether select clinical prognostic factors for metastatic uveal melanoma were prognostically significant in multivariate models that incorporated a gene expression profile class of tumor cells. Gene expression profile class was the strongest prognostic factor for metastatic death, followed by tumor larger basal diameter, thickness, and intraocular tumor location. This study also showed that larger basal diameter and gene expression profile class of tumor were both independent prognostic factors for metastasis and metastatic-related death.


Some class 1 uveal melanomas tumors are known to metastasize. Among class 1 tumors, the most significant predictor of metastasis was PRAME messenger RNA expression. The 5-year actuarial rate of metastasis was 0% for class 1 (PRAME+), 38% for class 1 (PRAME−), and 71% for class 2 tumors. The rate of median metastasis-free survival for patients with class 1 (PRAME+) tumors was 88 months compared with 32 months for patients with class 2 tumors. PRAME expression was associated with SF3B1 mutations and larger tumor diameter. The study findings suggested that PRAME is an independent prognostic biomarker in uveal melanoma; therefore, its presence is associated with an increased risk of metastasis in patients with class 1 or disomy 3 tumors.


This retrospective, clinicopathologic study sought to review the fine cytopathological features and immunohistochemistry of eyelid sebaceous carcinoma. The authors concluded that immunohistochemistry can make a significant contribution to the diagnosis of sebaceous carcinoma, and that p53 and vesicular granular adipophilin positivity could reliably supplement routine microscopic diagnosis of infiltrative tumors and could be used in paraffin sections, thereby obviating the oil red O staining of frozen sections.


The diagnosis of sebaceous carcinoma, which is an uncommon malignant epithelial neoplasm with a predilection for the periorcular region, can be difficult to discern upon the initial presentation of a patient because the condition can clinically and histopathologically resemble other common benign and malignant epithelial lesions. A diagnosis of sebaceous carcinoma is made by confirmation of sebaceous differentiation of neoplastic cells; however, its recognition may be sometimes difficult and may require ancillary studies. The results of this study suggest that adipophilin represents a sensitive and reliable marker for diagnosing sebaceous carcinoma. Including various epithelial markers in the panel could also be of help if adequately used.


In this study, researchers evaluated the outcomes of treatment regimens used for primary vitreoretinal lymphoma for the prevention of subsequent central nervous system lymphoma (CNSL). Therapy to prevent CNSL included ocular radiotherapy, ocular chemotherapy, or both (group A); extensive systemic treatment (group B); and a combination of ocular and extensive treatment (group C). CNSL developed in 32% of group A, 43% of group B, and 39% of group C. The 5-year cumulative survival rate was lower in those with CNSL compared with those without CNSL (68%).
and was similar among all treatment groups. The most common adverse event was acute renal failure. The researchers of this study were unable to prove that use of systemic chemotherapy could prevent CNSL.


Primary vitreoretinal lymphoma (PVRL) commonly masquerades as posterior uveitis and has a unique tropism for the retina and central nervous system (CNS). More than 15% of patients with primary CNS lymphoma develop intraocular lymphoma, usually occurring in the retina, vitreous, or both areas. Conversely, 65% to 90% of patients with PVRL develop CNS lymphoma. PVRL is most often diagnosed using both histology to identify lymphoma cells in the vitreous or retina and immunohistochemistry to indicate monoclonality. Optimal therapy for PVRL has not yet been defined, but it is sensitive to radiotherapy and exhibits high responsiveness to intravitreal methotrexate or rituximab. Although systemic chemotherapy alone can result in high response rates in patients with PVRL, a high relapse rate is seen in this population.


Grossniklaus evaluated the immunohistochemical and histological findings of uveal melanoma that metastasizes to the liver. Stage 1 metastases were identified in the sinusoidal spaces of 90% of study patients; these metastases were avascular and lacked mitotic activity. Stages 2 and 3 metastases were found in all study patients. Immunohistochemical stains were positive for S100 or HMB45 in all tumors. Overall, stage 1 metastases outnumbered stage 2 metastases (which outnumbered stage 3 metastases). The mean vascular density and mitotic index increased from stage 2 to stage 3 metastases. The architecture of stage 2 metastases mimicked the surrounding hepatic parenchyma, whereas stage 3 metastases exhibited either lobular or portal growth patterns.


This study was conducted so researchers could characterize the differentiating histopathological and immunophenotypic features of reactive lymphoid hyperplasia (RLH) and follicular lymphoma of the ocular adnexa. Microscopic analysis with immunohistochemical staining can be reliably used to distinguish RLH from follicular lymphoma. The researchers noted that an undescribed “multifocal RLH” syndrome must be distinguished from follicular lymphoma. Conjunctival RLH can usually be managed surgically without radiotherapy, but “multifocal RLH” required systemic treatment in 2 of 3 patients. Follicular lymphoma requires systemic chemotherapy if discovered beyond stage 1E.


In this retrospective, multicenter, observational trial, European researchers collected comprehensive data on choroidal and ciliary body melanoma in children in order to determine whether children younger than 18 years of age, those of the male sex, and those without ciliary body involvement have a more favorable survival prognosis than young adults 18 to 24 years of age, those of the female sex, and those with ciliary body involvement. By multivariate analysis, being a young adult, having a higher tumor, node, and metastasis stage, and being of the female sex independently predicted less favorable rates of survival. Ciliary body involvement and cell type were not associated with rates of survival.