Clinical Characteristics of Patients Presenting with Uveal Melanoma Metastasis: A Multicenter, International Study

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Purpose:

To analyze the ocular and systemic finding from patients presenting with uveal melanoma metastasis.

Methods:

Design & Setting: The American Joint Committee on Cancer - Ocular Oncology Task Force (AJCC-OOTF) comprising of 10 ophthalmic oncology centers from 4 different continents developed an internet enabled registry for sharing uveal melanoma data.

Participants: Patients diagnosed with uveal melanoma metastasis at presentation from April 1, 2001 to April 1, 2011.

Interventions: Diagnostic studies including ophthalmic and physical examination, radiographic imaging and hematologic surveys.

Main Outcome(s) and Measure(s): Clinical features; tumor thickness, largest basal diameter, extrascleral extension (ESE) and intraocular tumor location were assessed for significant risk for metastasis at presentation

Results:

3610 patients with primary uveal melanomas and complete records were entered into the AJCC-OOTF registry. Of those, 1.9%, n=69/3610 presented with clinical metastasis (Group A) whereas 98.1%, n=3541/3610 did not (Group B). Group A primary tumors originated in the choroid 79.7%, n=55/69, ciliary body 15.9%, n=11/69 and iris melanoma 4.4%, n=3/69. According to the 8th edition, American Joint Committee on Cancer (AJCC) T-stage, the Group A tumors were classified as T1 in 8 (11.6%), T2 20 (29.0%), T3 24 (34.8%) and T4 in 17 (24.6%). According to Node-staging, there were 13.0%, n=9/69 N1a. Metastasis (M-staging) based on the largest diameter of the largest metastasis was reported in 58.8%, n=40/69. Of these, there were M1a 35%, n=14/40, M1b 62.5%, n=25/40 and M1c 2.5%, n=1/40. Further, differentiation between groups A and B were based on tumor thickness, largest basal diameter, ESE and intraocular location. Group A sites of metastasis included: liver 91.3%, n=63/69, lung 15.9%, n=11/69, regional lymph node 13.0%, n=9/69, bone 8.7%, n=6/69, brain 5.8%, n=4/69, and subcutaneous tissue 4.3%, n=3/69. Additional sites of metastasis were found in 1 patient each (1.4%, n=1/69) included abdominal lymph nodes, mediastinal lymph nodes, and spleen. Multi-organ metastases were noted in 31.9%, n=22/69.

Conclusions:

The presence of ciliary body origin, large tumor thickness and largest basal diameter and ESE were significantly higher in patients who presented with uveal melanoma metastasis. Though the liver was the most common site of metastases, multiorgan involvement supports whole-body screening of high-risk patients.