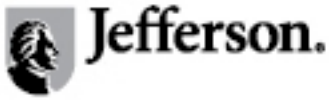

1-2020

Conjunctival Melanoma: Features Based on the Fitzpatrick Skin Type (FST) in 540 Patients at a Single Ocular Oncology Center

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Background: The Fitzpatrick skin type (FST) is a classification system for skin pigmentation that has been used to stratify risk for cutaneous melanoma; however, it has not yet been explored in the context of conjunctival melanoma. Herein, we examine FST and its association with the clinical features of conjunctival melanoma.

Methods: A retrospective review was conducted on 540 medical records of patients with pathologic diagnosis of conjunctival melanoma. The patients were categorized according to the FST classification based on their external facial photographs at presentation. This includes: Type I (white skin color), Type II (fair skin color), Type III (average skin color), Type IV (light-brown skin color), Type V (brown skin color), and Type VI (black skin color). Other clinical features (namely tumor characteristics, tumor location, and tumor color) were also noted.

Results: The FST included Types I (n=126, 23%), II (n=337, 62%), III (n=56, 10%), IV (n=8, 2%), V (n=12, 2%), and VI (n=1, <1%). Statistical analysis (FST I vs. FST II vs. FST III, IV, V, and VI) revealed FST I and II tumors had smaller tumor thickness (2.1 vs. 2.8 vs. 3.6 mm, p=0.01) and less eyelid involvement (13% vs. 13% vs. 28%, p=0.02).

Discussion: In this analysis, we found that the majority of patients with conjunctival melanoma are FST I or II; they also had smaller tumor thickness and less eyelid involvement than FST III, IV, V, and VI. Thus, patients with FST I and II should be considered a phenotype at risk for conjunctival melanoma and be observed accordingly.