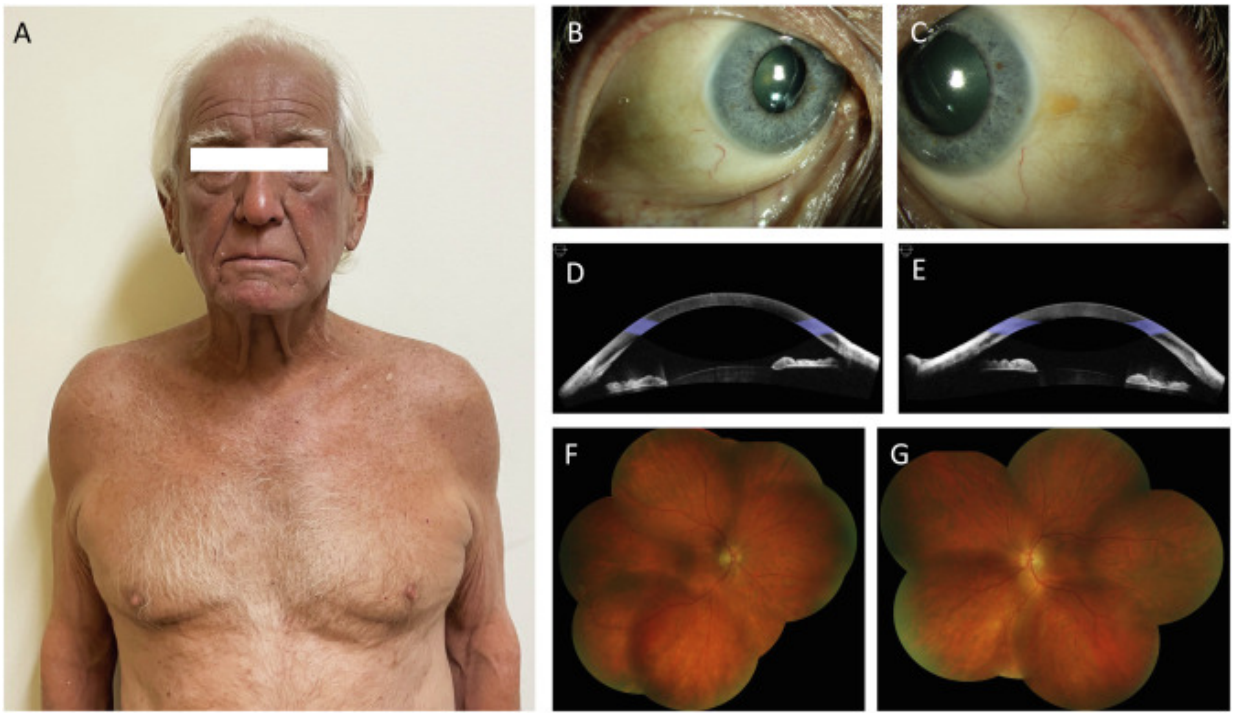
Bilateral conjunctival melanosis in diffuse melanosis cutis and metastatic melanoma



A 75-year-old white male was known to have metastatic melanoma (MM) to the liver, spine, spleen, and adrenal glands. He presented with blue-grey discoloration of the skin of the face, trunk, and mucous membranes as well as melanuria (Fig. 1A). In search of the primary melanoma, ophthalmology was consulted. The patient did not have any ocular complaints. Slit-lamp examination showed diffuse bilateral conjunctival pigmentation (Fig, 1B, C). Anterior-segment optical coherence tomography and gonioscopy did not detect melanotic or amelanotic lesions in the iris or ciliary body (Fig. 1D, E). Dilated fundus examination, documented with widefield imaging, did not

identify any suspicious choroidal lesions (Fig. 1F, G). The differential diagnosis for bilateral conjunctival pigmentation in white includes MM, nevi, primary acquired melanosis, conjunctival argyrosis, and siderosis. In this patient, the pigment is presumably located in melanophages of the substantia propria, causing this characteristic blue-grey skin appearance. In contrast, primary acquired melanosis and nevi are found in the epithelium and (or) subepithelium with melanocytes that can migrate over time into the substantia propria. This case is a very rare occurrence of conjunctival melanosis in a patient with diffuse melanosis cutis and MM. Diffuse melanosis cutis is recognized as a rare complication of advanced MM and a poor prognostic factor. The patient remained clinically stable after 12 cycles of pembrolizumab over 8 months. Although infrequent, choroidal melanoma needs to be ruled out in patients with diffuse melanosis cutis and neoplasia.

Figure 1Multimodal imaging of the patient at presentation. (A) Photograph of the patient's face and upper trunk. Anterior segment photography of the (B) right and (C) left eye. Anterior chamber wide-angle optical coherence tomography of the (D) right and (E) left eye. Ultra-widefield retinal images of the (F) right and (G) left eye.