A 74-year-old man with a history of primary open-angle glaucoma and trabeculectomy presented with a giant pigmented superior fornixmass (A). Vision was hand motion with normal intraocular pressure. Examination showed pigmented satellite lesions (B), an irregularlythickened iris (C), and anterior chamber cell. Exenteration was performed. Pathology showed primary acquired melanosis with atypia at thetrabeculectomy site and melanoma located within the conjunctival substantia propria, cornea, angle structures, and uveal tract (D, arrows).The tumor exhibited a mutation in NRAS but no alterations in GNAQ or GNA11 genes.