An 81-year-old White woman noted decreased vision in her left eye for 6 months. She was referred to the Ocular Oncology Service, Wills Eye Hospital, Philadelphia, Pennsylvania, for suspected choroidal melanoma. She disclosed a history of macular degeneration in both eyes and retinal detachment in the left eye that was treated 35 years previously. Medical history revealed cutaneous basal cell carcinoma and squamous cell carcinoma, both treated surgically.

On examination, visual acuity was 20/50 OD and 20/400 OS. External examination showed posterior-chamber intraocular lenses in both eyes and conjunctival scarring in the left eye from circumferential scleral buckle surgery with no visible extraocular tumor. Fundus evaluation showed macular drusen in the right eye and a pale optic disc with geographic macular atrophy in the left eye, explaining her visual acuity of 20/400 OS. In addition, a shallow circumferential buckle effect and an inferotemporal mass measuring 15.0 × 10.0 mm in basal dimension and 9.1 mm in thickness (Figure, A) were seen in the left eye. The mass appeared elevated, amelanotic with overlying retinal vasculature, and with chorioretinal atrophy. No retinal detachment or breaks were seen. By ultrasonography the mass was echolucent (Figure, A inset). Magnetic resonance imaging (MRI) revealed a T1, T2-hypointense shallow circumferential band in the left eye. In addition, there was an inferotemporal nodular mass in the left eye showing T1 (gadolinium) hypointense, T2-hyperintense features, underlying the encircling buckle, and with adjacent subtle delineation. There was no enhancement with gadolinium (Figure, B).

What Would You Do Next?

1. Whole-body positron emission tomography scan
2. Fine-needle aspiration biopsy
3. Plaque radiotherapy
4. Observation