A 28-year-old woman presented to the emergency department with a 5-day history of bilateral blurry vision, eye redness, discharge, photophobia, and pain. She also reported rhinorrhea and lethargy. Her medical history included Leber congenital amaurosis treated with voretigene neparvovec (Luxturna; Spark Therapeutics) 8 years ago, and acute myeloid leukemia (AML) diagnosed 6 months prior to presentation treated with cytarabine and idarubicin. Her latest chemotherapy was 3 weeks before presentation, and a peripherally inserted central catheter (PICC) was removed 2 weeks ago. A complete blood cell count was ordered, revealing anemia, neutropenia, lymphocytopenia, and monocytopenia in the setting of recent chemotherapy. Blood cultures were drawn, and results were pending at the time of presentation.

Her ophthalmic examination showed visual acuity of 20/800 OD and 20/400 OS, decreased from her baseline of 20/200 OU. Intraocular pressures were 37 mm Hg OD and 31 mm Hg OS. Slitlamp examination revealed chemosis, conjunctival hyperemia, and microcystic corneal edema bilaterally. There were more than 20 cells per high-power field of 1 mm × 1 mm beam, with fibrin bilaterally and 2.5-mm hypopyon in the right eye and 2.7-mm hypopyon in the left eye (Figure 1). Posterior segment examination was limited because of corneal edema and anterior inflammation, but there were no vitreous opacities on B-scan ultrasonography.

What Would You Do Next?

1. Observe, as this is expected inflammation after voretigene neparvovec gene therapy
2. Perform pars plana vitrectomy
3. Obtain a sample of the hypopyon through anterior chamber paracentesis and inject intravitreal antibiotics
4. Await results from systemic laboratory tests and blood culture