Supplemental Figure 1. Fundus photographs (left), infrared reflectance (IR, middle), and spectral domain optical coherence tomography (SD-OCT, right) images from a 47-year-old woman with a blood pressure of 230/118 mmHg. Multiple cotton wool spots and retinal hemorrhage around the optic disc and major retinal arterioles are apparent. Hard exudates and round yellowish fluid accumulation around the macula (arrow) are also seen on fundus photographs. In IR images, arterial narrowing (white arrowheads) is prominent. Cotton wool spots and hard exudates (black arrowhead) show hyper-reflectance, but yellowish fluid accumulation is represented as a round area with IR hyporeflectance. The SD-OCT images show subretinal or intraretinal fluid (indicated by arrow) and hyper-reflective inner retinal dots (black arrowheads), which correspond to hard exudates in fundus photographs. In the vertical lines in the right SD-OCT images, corresponding to horizontal lines in the IR images, thickened retinal nerve fiber layer is shown. The retinal nerve fiber layer also had irregular reflectance.
**Supplemental Figure 2.** Temporal change in subfoveal choroidal thickness (bar) and mean arterial pressure (dot) in 13 eyes that were followed over the long-term (≥12 months). At month 1, both subfoveal choroidal thickness and mean arterial pressure reached a plateau, demonstrating temporal correspondence. Error bars indicate 95% confidence intervals.
**Supplemental Figure 3.** Visual outcomes in patients with severe hypertension. (Left) Best-corrected visual acuities (BCVA) gradually improved after blood pressure was controlled. (Right) As BCVA improved, the frequency of eyes with a BCVA worse than 20/40 decreased from 15 eyes (35.7%) at baseline to 3 eyes (7.1%) at the final visit. Error bars denote the upper bound of 95% confidence intervals. LogMAR = logarithm of the minimum angle of resolution.