

Supplementary Figure legends

Supplementary Figure 1. Distribution of the unweighted intraocular pressure polygenic risk score and association with primary open-angle glaucoma

Supplementary Figure 2. Receiver operating characteristic curves predicting primary open-angle glaucoma for unweighted polygenic risk scores

Supplementary Figure 3. Principal component analysis plot for white participants in the UK Biobank.

Dots represent participants who self-defined as white. The dots in blue represent white participants included in this study. The dots in grey are outliers with genetic ancestry at least six standard deviations from the means of the first two principal components (PC1 and PC2) and are removed from association analyses.

Supplementary Figure 4. Comparison of our intraocular pressure association results with two recent large-scale GWAS reports

The number of overlapping genome-wide significant SNPs between two recent large-scale IOP GWAS reports and our results are 42, 133, and 83 for Khawaja *et al.* 2018 vs. MacGregor *et al.* 2018, Khawaja *et al.* 2018 vs. our results, and MacGregor *et al.* 2018 vs. our results, respectively. If two estimates agree with each other perfectly, they would fall on the diagonal line.