## Supplemental table 1. Number of eyes with IOP increase at each time point

|             | Total | 1wk FU | 1mo FU | 3mo FU | 6mo FU | 1yr FU |
|-------------|-------|--------|--------|--------|--------|--------|
| No. of eyes | 14    | 0      | 5      | 5      | 3      | 1      |

No=number, FU=follow up, wk=week, mo=month, yr=year.

**Supplemental table 2.** Association between IOP increase and inferior TISA750

| Independent variables        | OR   | 95%CI         | P value |
|------------------------------|------|---------------|---------|
| Age, year                    | 1.05 | (0.95, 1.16)  | 0.345   |
| Gender, with male as control | 0.14 | (0.03, 0.72)  | 0.018   |
| AL, mm                       | 0.61 | (0.11, 3.34)  | 0.568   |
| i_TISA750, μm²#              | 0.99 | (0.95, 1.02)  | 0.432   |
| PD, mm                       | 1.24 | (0.49, 3.15)  | 0.649   |
| ACW, mm                      | 3.24 | (0.11, 91.76) | 0.491   |
| IT750, μm                    | 1.01 | (1.00, 1.03)  | 0.117   |
| LV, mm                       | 0.05 | (0.00, 7.00)  | 0.240   |

<sup>#</sup>TISA750\*1000 was used to better present the result.

AL=axial length, TISA750= trabecular-iris space area 750 $\mu$ m from scleral spur, PD=pupil diameter, ACW=anterior chamber width, IT750= iris thickness 750 $\mu$ m from scleral spur, LV= lens vault

**Supplemental table 3.** Association between IOP increase and superior TISA750

| Independent variables        | OR   | 95%CI         | P value |
|------------------------------|------|---------------|---------|
| Age, year                    | 1.05 | (0.94, 1.16)  | 0.395   |
| Gender, with male as control | 0.09 | (0.01, 0.52)  | 0.008   |
| AL, mm                       | 0.44 | (0.07, 2.73)  | 0.375   |
| s_TISA750, μm²#              | 0.98 | (0.94, 1.03)  | 0.409   |
| PD, mm                       | 0.91 | (0.25, 3.34)  | 0.882   |
|                              |      | (0.07,        |         |
| ACW, mm                      | 2.82 | 106.86)       | 0.576   |
| IT750, μm                    | 1.02 | (0.99, 1.04)  | 0.138   |
| LV, mm                       | 0.20 | (0.00, 36.01) | 0.545   |

#TISA750\*1000 was used to better present the result.

AL=axial length, TISA750= trabecular-iris space area 750μm from scleral spur, PD=pupil diameter, ACW=anterior chamber width, IT750= iris thickness 750μm from scleral spur, LV= lens vault

**Supplemental table 4.** Association between IOP increase and nasal TISA750

| Independent variables        | OR   | 95%CI         | P value |
|------------------------------|------|---------------|---------|
| Age, year                    | 1.07 | (0.97, 1.18)  | 0.206   |
| Gender, with male as control | 0.16 | (0.03, 0.79)  | 0.024   |
| AL, mm                       | 0.54 | (0.09, 3.16)  | 0.491   |
| n_TISA750, μm²#              | 0.99 | (0.96, 1.01)  | 0.252   |
| PD, mm                       | 1.27 | (0.49, 3.32)  | 0.625   |
| ACW, mm                      | 2.48 | (0.08, 76.09) | 0.604   |
| IT750, μm                    | 1.01 | (1.00, 1.03)  | 0.155   |
| LV, mm                       | 0.07 | (0.00, 6.36)  | 0.244   |

<sup>#</sup>TISA750\*1000 was used to better present the result.

AL=axial length, TISA750= trabecular-iris space area 750 $\mu$ m from scleral spur, PD=pupil diameter, ACW=anterior chamber width, IT750= iris thickness 750 $\mu$ m from scleral spur, LV= lens vault

**Supplemental table 5.** Association between IOP increase and temporal TISA750

| Independent variables        | OR   | 95%CI         | P value |
|------------------------------|------|---------------|---------|
| Age, year                    | 1.09 | (0.97, 1.21)  | 0.138   |
| Gender, with male as control | 0.16 | (0.03, 0.72)  | 0.018   |
| AL, mm                       | 0.87 | (0.19, 3.96)  | 0.855   |
| t_TISA750, μm²#              | 0.98 | (0.96, 1.00)  | 0.046   |
| PD, mm                       | 1.22 | (0.47, 3.18)  | 0.686   |
| ACW, mm                      | 1.77 | (0.07, 43.10) | 0.725   |
| IT750, μm                    | 1.01 | (0.99, 1.03)  | 0.210   |
| LV, mm                       | 0.06 | (0.00, 5.39)  | 0.220   |

<sup>#</sup>TISA750\*1000 was used to better present the result.

AL=axial length, TISA750= trabecular-iris space area 750 $\mu$ m from scleral spur, PD=pupil diameter, ACW=anterior chamber width, IT750= iris thickness 750 $\mu$ m from scleral spur, LV= lens vault