

Supplemental raw data of TABLE 1.

Aneurysmal shapes and hemodynamic features of three groups.

Group-A; Bleb (Yes), Contact (Yes), Group-B; Bleb (No), Contact (Yes), Group-C; Bleb (No), Contact (No).

| Group | No | Bleb | Contact | Age/Sex | Location of | Width | Depth | Aspect | Surface | Volume | WSS-p | WSS-d | NWSS |
|---------------|----|------|---------|-------------------|-------------|-----------|-----------|-----------|--------------------|--------------------|-----------|-----------|-----------|
| | | | | | Aneurysms | (mm) | (mm) | Ratio | (mm ²) | (mm ³) | | | |
| A | 1 | Yes | Yes | 68/F | Rt ICPC | 7.02 | 2.91 | 0.42 | 67.53 | 66.84 | 5.20 | 0.60 | 0.12 |
| | 2 | Yes | Yes | 63/F | AComA | 6.11 | 5.11 | 0.84 | 112.74 | 146.99 | 2.70 | 1.12 | 0.41 |
| | 3 | Yes | Yes | 72/F | AComA | 4.97 | 3.13 | 0.63 | 48.95 | 42.01 | 2.68 | 1.54 | 0.57 |
| | 4 | Yes | Yes | 58/M | AComA | 6.55 | 9.09 | 1.39 | 222.15 | 285.83 | 6.89 | 1.70 | 0.25 |
| | 5 | Yes | Yes | 75/F | Rt ICPC | 8.38 | 7.43 | 0.89 | 200.31 | 305.37 | 2.81 | 1.07 | 0.38 |
| | 6 | Yes | Yes | 49/F | Rt ICPC | 2.61 | 1.21 | 0.46 | 9.91 | 4.29 | 3.07 | 2.81 | 0.92 |
| | 7 | Yes | Yes | 58/M | Lt ICPC | 3.25 | 1.84 | 0.56 | 21.25 | 11.86 | 2.52 | 1.80 | 0.71 |
| | 8 | Yes | Yes | 74/F | AComA | 4.88 | 5.73 | 1.17 | 88.14 | 86.87 | 2.38 | 0.98 | 0.41 |
| | 9 | Yes | Yes | 68/F | Lt MCA | 4.01 | 5.84 | 1.46 | 102.13 | 107.58 | 2.34 | 0.26 | 0.11 |
| | 10 | Yes | Yes | 66/M | Rt ICPC | 5.65 | 9.90 | 1.75 | 270.13 | 439.66 | 1.39 | 0.45 | 0.32 |
| | 11 | Yes | Yes | 75/F | AComA | 4.44 | 2.98 | 0.66 | 41.92 | 35.52 | 1.94 | 1.58 | 0.81 |
| | 12 | Yes | Yes | 50/M | AComA | 6.52 | 4.68 | 0.72 | 122.28 | 151.86 | 2.66 | 0.98 | 0.37 |
| | 13 | Yes | Yes | 61/F | AComA | 6.24 | 4.91 | 0.79 | 184.03 | 243.38 | 3.18 | 1.34 | 0.42 |
| | 14 | Yes | Yes | 70/F | BA-tip | 9.36 | 4.36 | 0.47 | 163.78 | 250.87 | 3.27 | 1.12 | 0.34 |
| Ave±SD | | - | - | 64.79±8.65 | - | 5.71±1.87 | 4.94±2.55 | 0.87±0.42 | 118.23±79.69 | 155.64±130.89 | 3.07±1.39 | 1.24±0.64 | 0.44±0.24 |
| Mdn | | - | - | 67.00 | - | 5.88 | 5.88 | 0.75 | 107.43 | 127.29 | 2.69 | 1.12 | 0.40 |

| | | | | | | | | | | | | | |
|----------|-------|--------|-----|--------------------|--------------------|-----------|-----------|-----------|--------------|--------------|-------------|-----------|-----------|
| | 99%CI | - | - | 58.83-70.74 | - | 4.43-7.00 | 3.18-6.69 | 0.59-1.16 | 63.37-173.09 | 65.53-245.75 | 2.12-4.03 | 0.80-1.68 | 0.27-0.60 |
| B | 15 | No | Yes | 77/F | AComA | 4.20 | 3.00 | 0.70 | 45.20 | 36.30 | 2.86 | 1.02 | 0.36 |
| | 16 | No | Yes | 53/M | AComA | 3.70 | 2.70 | 0.40 | 32.60 | 22.20 | 3.30 | 2.10 | 0.64 |
| | 17 | No | Yes | 39/F | Rt AChor | 3.20 | 1.20 | 0.40 | 12.60 | 5.90 | 3.20 | 2.60 | 0.81 |
| | 18 | No | Yes | 49/F | Rt MCA | 4.30 | 2.80 | 0.70 | 41.93 | 32..6 | 2.60 | 1.70 | 0.65 |
| | 19 | No | Yes | 67/F | Rt MCA | 3.50 | 3.40 | 1.00 | 35.65 | 25.70 | 3.20 | 2.00 | 0.63 |
| | 20 | No | Yes | 78/F | Rt MCA | 2.90 | 3.10 | 1.10 | 37.77 | 25.60 | 11.70 | 9.70 | 0.83 |
| | 21 | No | Yes | 63/M | Rt MCA | 6.30 | 2.60 | 0.40 | 50.10 | 48.60 | 4.50 | 3.40 | 0.76 |
| | 22 | No | Yes | 73/F | Rt MCA | 3.30 | 1.20 | 0.40 | 13.53 | 7.30 | 8.80 | 3.90 | 0.44 |
| | 23 | No | Yes | 78/F | Lt MCA | 4.01 | 5.84 | 1.46 | 102.13 | 107.58 | 2.30 | 0.30 | 0.13 |
| | 24 | No | Yes | 67/F | Lt MCA | 4.50 | 2.70 | 0.60 | 43.20 | 42.30 | 13.50 | 10.40 | 0.77 |
| | 25 | No | Yes | 60/M | Lt MCA | 4.00 | 2.10 | 0.50 | 24.20 | 16.00 | 1.30 | 0.70 | 0.54 |
| | 26 | No | Yes | 48/F | Lt MCA | 3.50 | 2.20 | 0.60 | 24.89 | 15.80 | 2.00 | 0.60 | 0.30 |
| | 27 | No | Yes | 67/F | Lt MCA | 4.40 | 4.00 | 0.90 | 64.06 | 57.70 | 12.80 | 6.20 | 0.48 |
| | | Ave±SD | - | - | 63.00±12.58 | - | 3.99±0.85 | 2.83±1.20 | 0.70±0.33 | 40.60±23.43 | 34.25±28.12 | 5.54±4.46 | 3.43±3.35 |
| | Mdn | - | - | 67.00 | - | 4.00 | 2.70 | 0.60 | 37.77 | 25.65 | 3.20 | 2.10 | 0.63 |
| | 99%CI | - | - | 54.01-71.99 | - | 3.38-4.60 | 1.98-3.69 | 0.47-0.94 | 23.87-57.34 | 14.16-54.34 | 2.36-8.73 | 1.04-5.82 | 0.41-0.72 |
| | 28 | No | No | 77/M | AComA | 3.60 | 1.40 | 0.40 | 15.80 | 9.30 | 7.00 | 7.50 | 1.07 |
| | 29 | No | No | 53/M | AComA | 4.00 | 1.60 | 0.40 | 20.20 | 11.60 | 2.00 | 2.30 | 1.15 |
| | 30 | No | No | 66/M | AComA | 4.80 | 1.70 | 0.40 | 26.40 | 17.40 | 1.80 | 2.90 | 1.61 |
| | 31 | No | No | 71/F | AComA | 2.30 | 1.00 | 0.40 | 7.23 | 3.10 | 11.60 | 10.30 | 0.89 |
| | 32 | No | No | 47/M | AComA | 2.20 | 0.40 | 0.20 | 4.21 | 2.00 | 3.80 | 5.40 | 1.42 |
| | 33 | No | No | 65/F | AComA | 2.90 | 0.90 | 0.30 | 8.80 | 3.40 | 7.10 | 17.70 | 2.49 |

| | | | | | | | | | | | | | |
|---------|--------|----|-------------|-------------|-----------|-------------|-------------|-------------|--------------|-------------|-----------|------------|-----------|
| C | 34 | No | No | 73/F | Lt AChor | 2.80 | 0.80 | 0.30 | 7.90 | 3.10 | 7.90 | 19.40 | 2.46 |
| | 35 | No | No | 67/F | Rt MCA | 3.40 | 2.20 | 0.70 | 25.20 | 16.60 | 10.30 | 9.40 | 0.91 |
| | 36 | No | No | 61/F | Rt MCA | 4.10 | 1.60 | 0.40 | 21.17 | 12.80 | 2.60 | 4.10 | 1.58 |
| | 37 | No | No | 61/F | Rt MCA | 2.60 | 1.00 | 0.40 | 8.21 | 4.30 | 5.90 | 7.70 | 1.31 |
| | 38 | No | No | 74/F | Rt MCA | 3.70 | 0.70 | 0.20 | 13.62 | 6.17 | 1.70 | 2.04 | 1.20 |
| | 39 | No | No | 68/F | Lt MCA | 3.20 | 2.30 | 0.70 | 23.50 | 15.30 | 3.70 | 6.90 | 1.86 |
| | 40 | No | No | 72/M | Lt MCA | 3.30 | 1.20 | 0.40 | 13.00 | 9.10 | 7.70 | 9.00 | 1.17 |
| | 41 | No | No | 71/F | Lt MCA | 2.70 | 1.00 | 0.40 | 8.74 | 5.10 | 6.30 | 12.50 | 1.98 |
| | 42 | No | No | 74/F | Lt MCA | 3.30 | 1.80 | 0.60 | 17.80 | 10.40 | 2.20 | 1.00 | 0.45 |
| | 43 | No | No | 72/F | BA-tip | 5.00 | 1.60 | 0.30 | 28.07 | 18.60 | 1.90 | 1.60 | 0.84 |
| | 44 | No | No | 60/F | BA-tip | 42.00 | 64.00 | 1.52 | 63.72 | 57.18 | 3.10 | 0.80 | 0.26 |
| | 45 | No | No | 70/M | BA-tip | 3.70 | 2.40 | 0.60 | 24.31 | 15.60 | 1.30 | 1.80 | 1.38 |
| | Ave±SD | - | - | 66.78±7.85 | - | 5.53±9.13 | 4.87±14.77 | 0.48±0.30 | 18.77±13.53 | 12.28±12.48 | 4.88±3.18 | 6.80±5.55 | 1.34±0.60 |
| | Mdn | - | - | 69.00 | - | 3.35 | 1.50 | 0.40 | 16.80 | 9.85 | 3.75 | 6.15 | 1.25 |
| | 99%CI | - | - | 62.01-71.54 | - | -0.01-11.08 | -4.10-13.83 | 0.30-0.66 | 10.56-26.99 | 4.70-19.86 | 2.95-6.81 | 3.43-10.17 | 0.97-1.70 |
| Overall | | | | | | | | | | | | | |
| Ave±SD | - | - | 65.07±9.57 | - | 5.14±5.83 | 4.30±9.35 | 0.67±0.38 | 56.02±62.98 | 63.19±96.69 | 4.51±3.31 | 4.10±4.56 | 0.83±0.59 | |
| Mdn | - | - | 67.00 | - | 4.00 | 2.40 | 0.60 | 28.07 | 18.60 | 3.10 | 2.00 | 0.71 | |
| 99%CI | - | - | 61.39-68.74 | - | 2.90-7.38 | 0.71-7.89 | 0.52-0.81 | 31.84-80.20 | 26.06-100.32 | 3.24-5.78 | 2.34-5.85 | 0.61-1.06 | |

AChorA=anterior choroidal artery; AComA= anterior communicating artery;

Ave=mean; BA-tip=the tip of the basilar artery; CI=confidence interval; IC-PC=internal carotid-posterior communicating artery; Lt= left; MCA=middle cerebral artery;

Mdn=median; NWSS=normalized wall shear stress; Rt= right; SD=standard deviation;
WSS= wall shear stress; WSS-p=WSS at parent artery; WSS-d=WSS at aneurysmal
dome; All data=mean \pm standard deviation.