

**TABLE S1. Calculated geometric, hemodynamic and wall parameters for control (CTL) and PAH patients.**

**CONTROLS**

| # | MPA        | Prox. PA | Elastic Modulus E (Kpa) | MPA  |           | Rt (mmHg x min/l) | Ct (ml/mmHg) | MPA Back Flow |
|---|------------|----------|-------------------------|------|-----------|-------------------|--------------|---------------|
|   | TAWSS (Pa) |          |                         | RAC  | ED D (mm) |                   |              |               |
| 1 | 1.87       | 3.03     | 40                      | 0.59 | 22.0      | 3.99              | 0.467        | -             |
| 2 | 2.31       | 3.42     | 70                      | 0.41 | 23.0      | 2.91              | 0.850        | -             |
| 3 | 1.56       | 2.12     | 75                      | 0.45 | 28.0      | 3.64              | 1.280        | -             |
| 4 | 0.98       | 1.31     | 75                      | 0.40 | 25.0      | 5.29              | 0.030        | -             |
| 5 | 0.95       | 1.37     | 80                      | 0.42 | 25.0      | 4.79              | 0.980        | -             |

**PAH**

| # | MPA        | Prox. PA | Elastic Modulus E (Kpa) | MPA  |           | Rt (mmHg x min/l) | Ct (ml/mmHg) | MPA Back Flow (ml) |
|---|------------|----------|-------------------------|------|-----------|-------------------|--------------|--------------------|
|   | TAWSS (Pa) |          |                         | RAC  | ED D (mm) |                   |              |                    |
| 1 | 0.93       | 1.48     | 120                     | 0.23 | 26.0      | 6.16              | 0.158        | 1.59               |
| 2 | 1.15       | 1.84     | 120                     | 0.28 | 29.0      | 6.50              | 0.004        | 0.35               |
| 3 | 0.69       | 1.15     | 275                     | 0.26 | 36.0      | 8.79              | 0.096        | 1.26               |
| 4 | 1.49       | 1.66     | 320                     | 0.21 | 31.0      | 6.14              | 0.077        | 2.56               |
| 5 | 0.56       | 0.71     | 375                     | 0.14 | 33.0      | 11.15             | 0.262        | 2.26               |
| 6 | 0.61       | 0.85     | 550                     | 0.11 | 37.5      | 7.28              | 0.280        | 6.23               |

**MPA=Main pulmonary artery, Prox. PA= proximal pulmonary arteries, RAC=relative area change, EDD= end diastolic diameter, Rt=total distal resistance, Ct= total distal compliance,**