**Appendix A.** **Equations of Regional Pressure Drop at Baseline for Patient #1 and #2**

There are 12 regional pressure drops:

 PRECr = Paortic – Pvenous – QRCCARRCCA (A1)

 PROPr = PRECr - QRICA1RRICA1 (A2)

 PRMCr = PROPr - QRICA2RRICA2 (A3)

 PRACr = PRMCr - QRACA1RRACA1 (A4)

 PLACr = PRACr - QACoARACoA (A5)

 PLMCr = PLACr + QLACA1RLACA1 (A6)

 PLOPr = PLMCr + QLICA2RLICA2 (A7)

 PLECr = PLOPr + QLICA1RLICA1 (A8)

 PICEr = Paortic – Pvenous – QRVARRVA – QBAIRBAI (A9)

 PSCEr = PICEr – QBARBA (A10)

 PLPCr = PSCEr – QBASRBAS (A11)

 PRPCr = PLPCr – QRPCA1RRPCA1 (A12)