



Abbreviation	Explanation
ACT	Activated Clotting Time
ACP	Antegrade Cerebral Perfusion
CARR	Controlled Aortic Root Reperfusion
CPB	Cardiopulmonary Bypass
CRRT	Continues Renal Replacement Therapy
CUF	Conventional Ultrafiltration
DHCA	Deep Hypothermic circulatory arrest
ECMO	Extracorporeal membrane oxygenation
IABP	Intra Aortic Balloon Pump
MUF	Modified Ultrafiltration
PBUF	Pre Bypass Ultrafiltration
PIPV	Post Infusion Pump Volume
RAP	Retrograde Autologous Priming
RCP	Retrograde cerebral Perfusion
TPM	Temporary Pacemaker
VAVD	Vaccum Assist Venous Drainage
VAD	Ventricular assist devices
X Clamp	Cross Clamp
ZBUF	Zero Balanced Ultrafiltration

$BSA = Wt(kg) * Height(cm)$
$CPB \text{ Flow} = CI * BSA$
$CI = CO / BSA$
$SVR = (MAP - CVP / CO) * 80$
$O_2 \text{ capacity} = (1.34)(Hb) + (0.003)(PO_2)$
$O_2 \text{ content} = (1.34)(Hb)(SaO_2 \text{ OR } SvO_2) + (0.003)(Po_2)$
$CPB \text{ } O_2 \text{ consumption} = (aO_2 - vO_2)(Q)(10)$
$CPB \text{ } O_2 \text{ transfer} = [(SaO_2 - SvO_2)(1.34)(Hb)(Q)(10)] / 100$
$VO_2 = (SaO_2 - SvO_2)(1.34)(Hb) + (PaO_2 - PvO_2)(0.003)$
$VO_2 = Q(C_{a-v})O_2$
$(C_{a-v})O_2 = 1.34 * Hb + P_{(a-v)}O_2$
$CPB \text{ Hct} = (Pre \text{ op Hct} * PBV) / (PBV + CPB \text{ Prime Volume})$
$Red \text{ Blood Cell} = Patient \text{ blood Volume} * pre \text{ CPB Hct}$
$System \text{ Volume} = Patient \text{ blood volume} + prime \text{ volume}$