

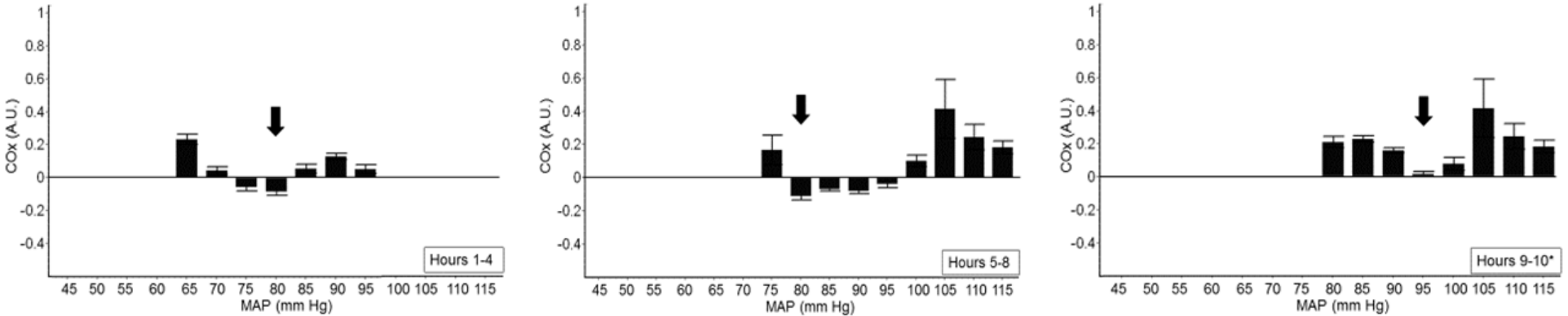
Supplemental Table Hemodynamic and respiratory parameters

Pt no.	Intubated	PaO ₂	PaCO ₂	Hemoglobin (g/dl)	Temperature (°C)	Cardiovascular supportive infusion
1	-	70	30	6.3	34.4	NE, VP
2	+	66	42	9.2	38.5	NE
3	+	124	45	8.3	35.6	NE
4	-	64	52	10.9	38.0	NE, AMIO
5	+	69	32	5.4	38.4	NE
6	-	108	37	8.4	35.8	NE

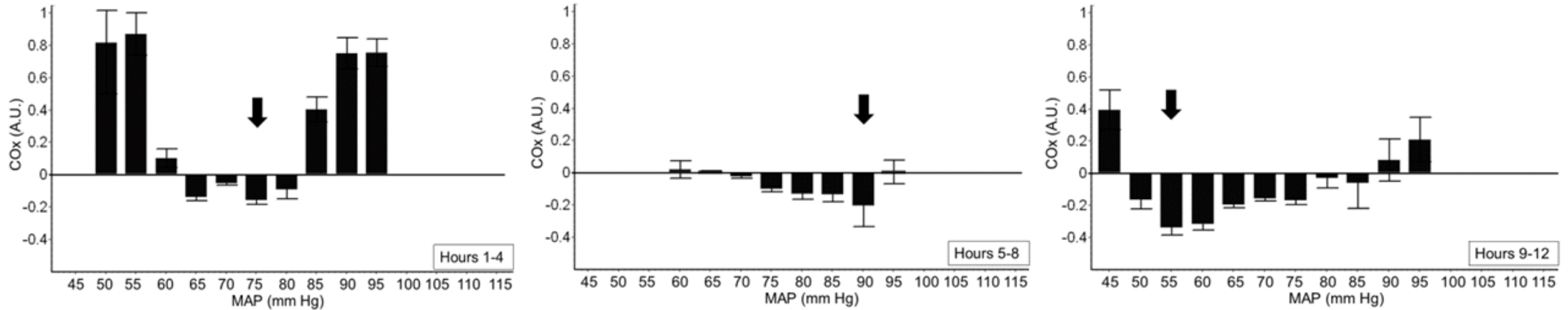
AMIO = amiodarone. *NE* = norepinephrine. *PaCO₂*= arterial partial pressure of carbon dioxide (average value during measurements). *PaO₂*= arterial partial pressure of oxygen (lowest recorded value during measurements). *VP* = vasopressin.

Supplemental Figures Autoregulation curves for six patients with averaged cerebral oximetry index (COx) values sorted by arterial blood pressure in three sequential 4-hour periods. Optimal blood pressure (MAP_{OPT}), defined as the mean arterial pressure (MAP) associated with the most robust autoregulation (lowest COx), was identified in each 4-hour period (*arrows*). Error bars represent the standard error of the mean.

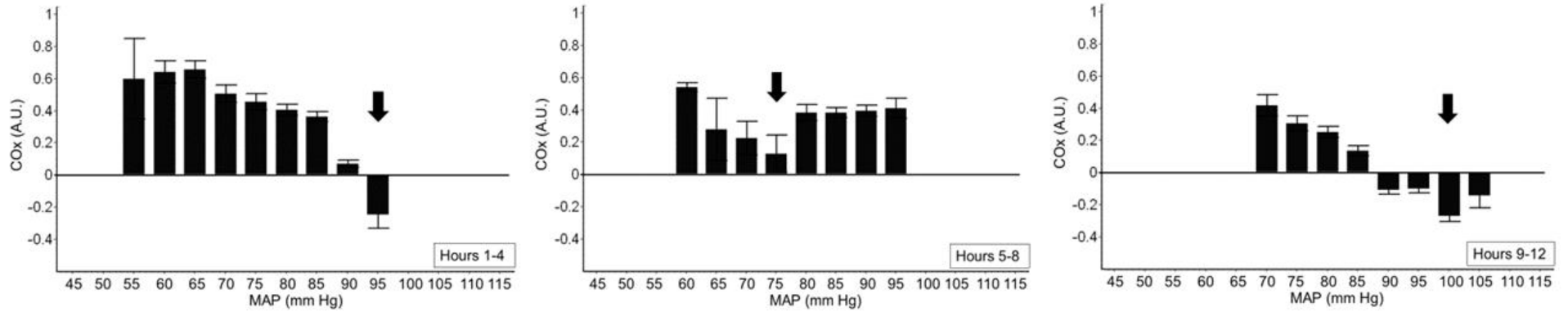
Patient 1 69-year-old patient with *C. Difficile* colitis. MAP_{OPT} at 80 mmHg (hours 1-8) and 95 mmHg (hours 9-10). *Monitoring time only 10 hours due to arterial line removal.



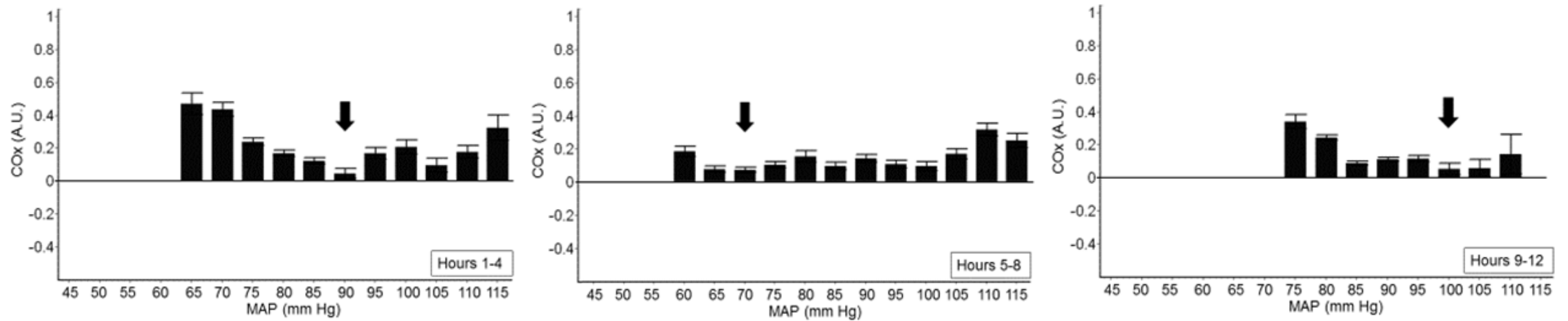
Patient 2 71-year-old patient with urosepsis. MAP_{OPT} at 75 mmHg (hours 1-4), 90 mmHg (hours 5-8), and 55 mmHg (hours 9-12).



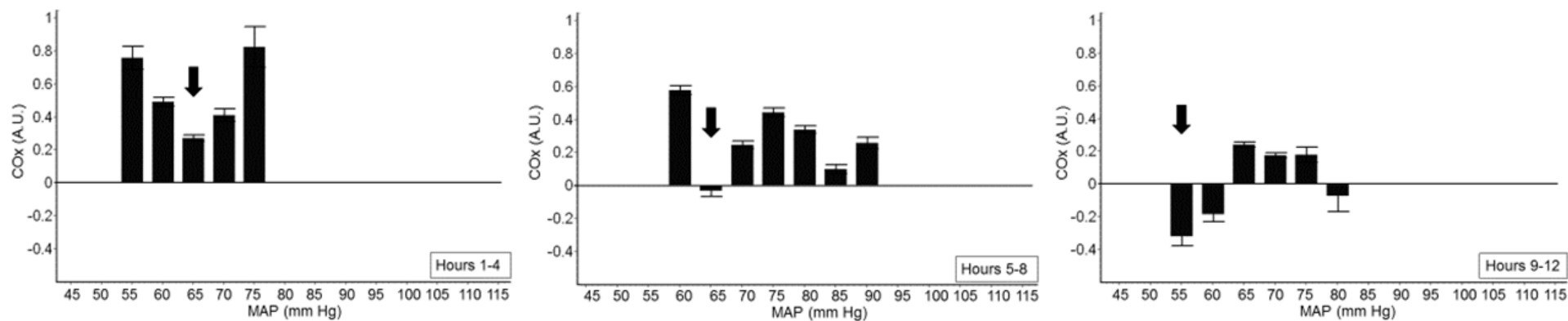
Patient 3 71-year-old patient with pulmonary Nocardiosis. MAP_{OPT} at 95 mmHg (hours 1-4), 75 mmHg (hours 5-8), and 100 mmHg (hours 9-12).



Patient 4 58-year-old patient with *Group B Streptococcus* bacteremia and rhinovirus. MAP_{OPT} at 90 mmHg (hours 1-4), 70 mmHg (hours 5-8), and 100 mmHg (hours 9-12).



Patient 5 54-year-old patient with Methicillin-resistant Staphylococcus aureus (MRSA) bacteremia. MAP_{OPT} at 65 mmHg (hours 1-8) and 55 mmHg (hours 9-12).



Patient 6 76-year-old patient with a pericystic abscess. MAP_{OPT} at 115 mmHg (hours 1-4), 100 mmHg (hours 5-9), and 100 mmHg (hours 9-12).

