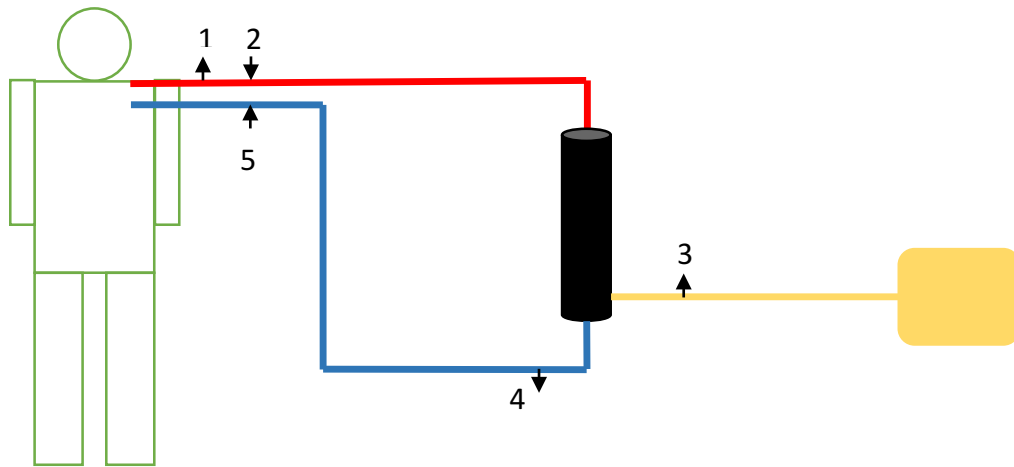


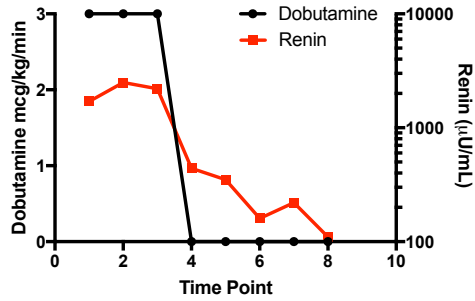
Supplementary Figure 1: Points of Sample Collection from CRRT Circuit



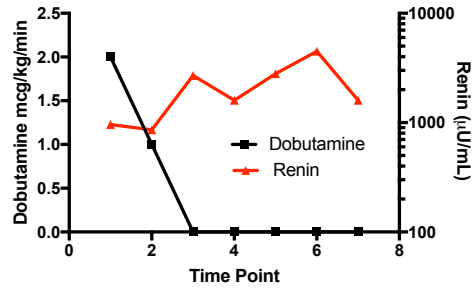
Arrowheads indicate entry/exit points to the CRRT circuit. 1) Pre-filter sampling-port, 2) pre-dilution and anti-coagulant entry-port, 3) effluent sampling-port, 4) post-filter sampling-port and 5) post-dilution entry-port.

Supplementary Figure 2: Relationship between Dobutamine Dose and Renin in Individual Patients

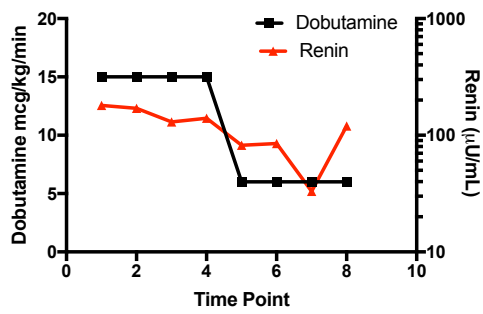
Patient 6 - Survived: Dobutamine and Renin



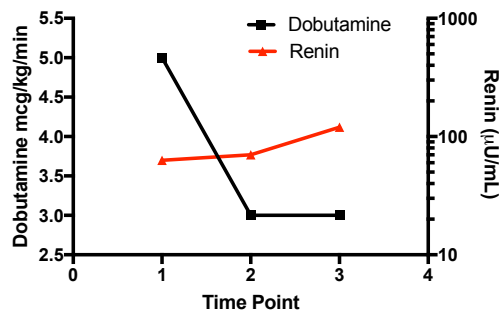
Patient 9 - Died: Dobutamine and Renin



Patient 15 - Died: Dobutamine and Renin

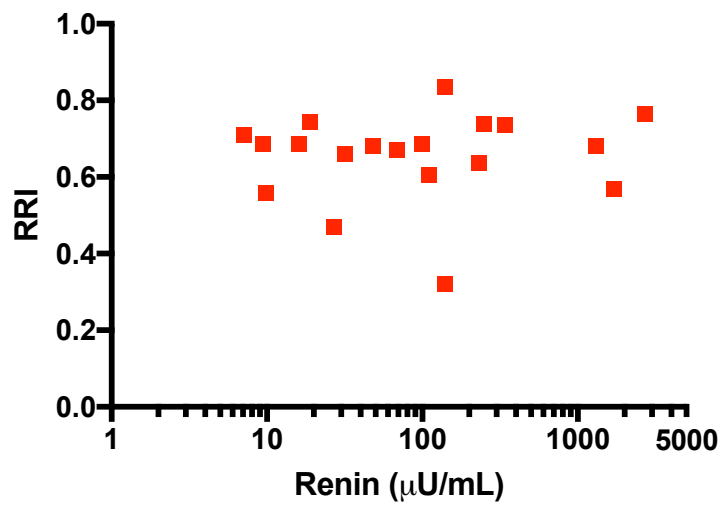


Patient 16 - Died: Dobutamine and Renin



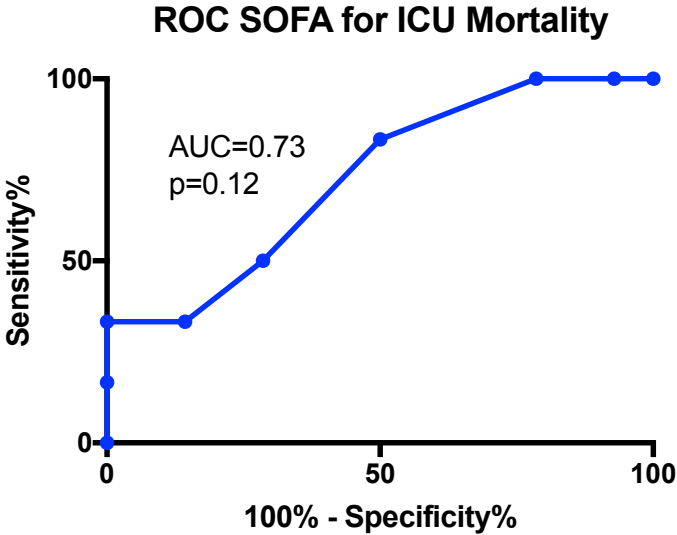
Supplementary Figure 3: Relationship Between RRI and Renin

Scatter Plot of RRI and Renin

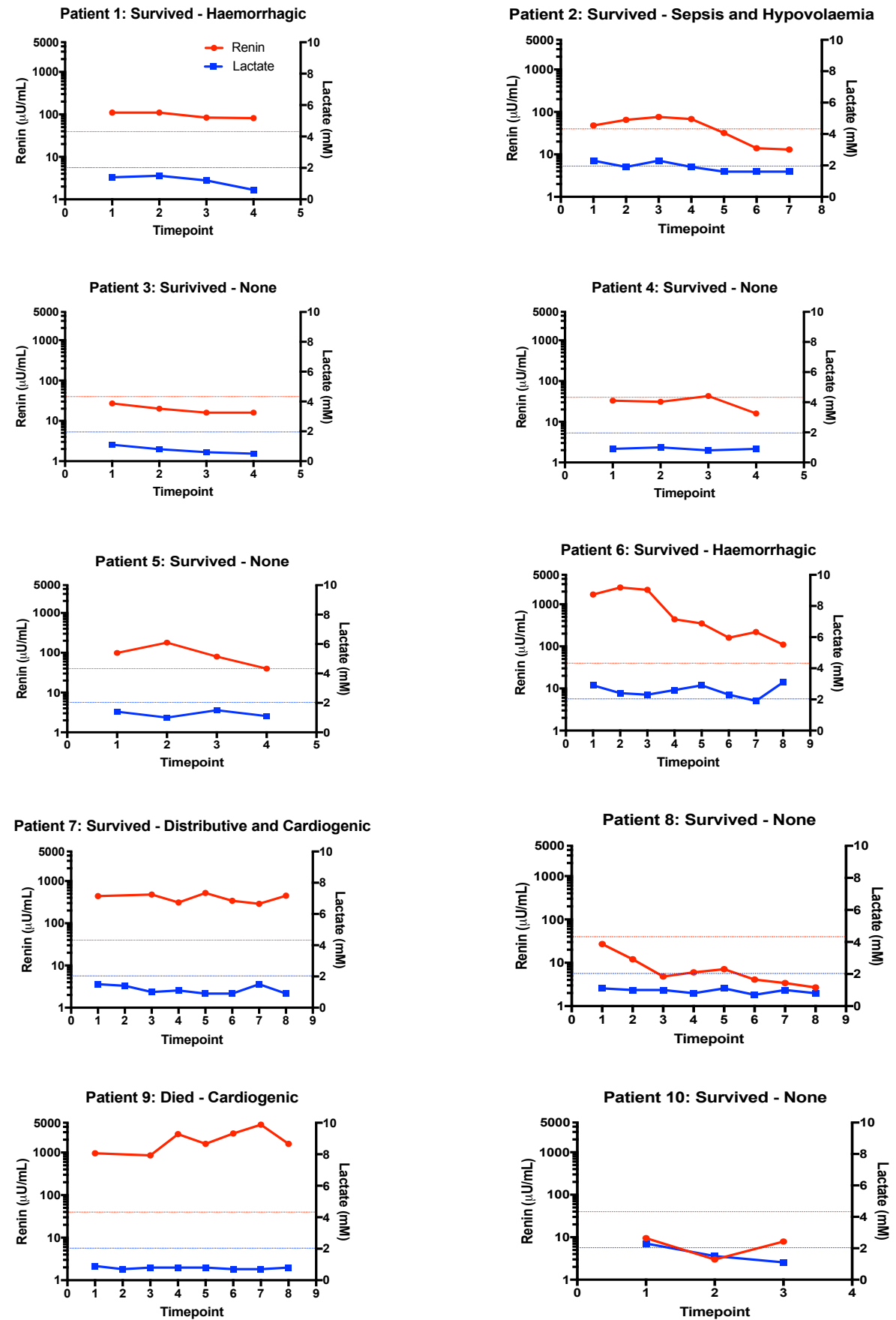


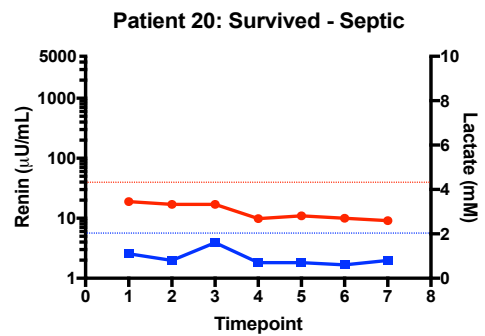
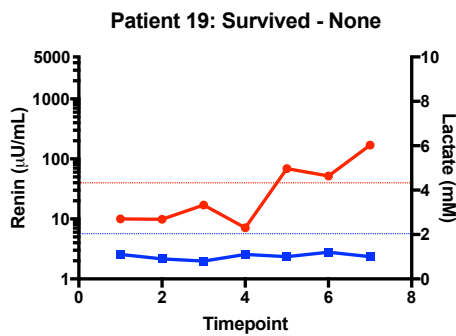
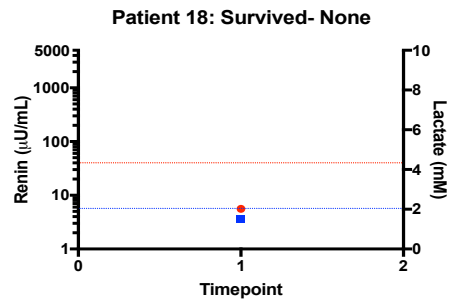
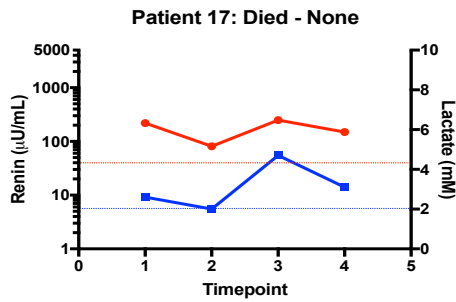
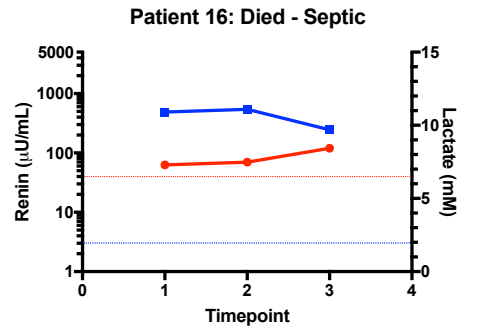
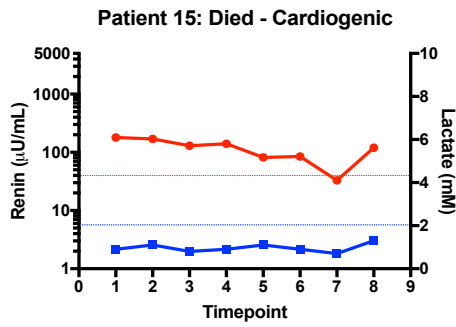
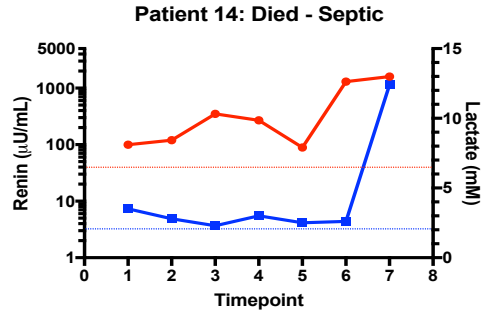
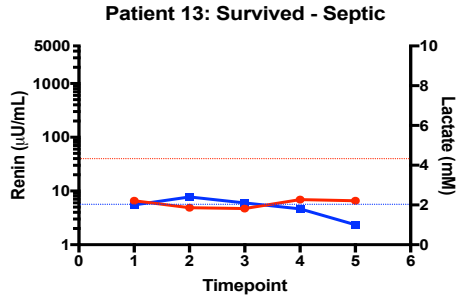
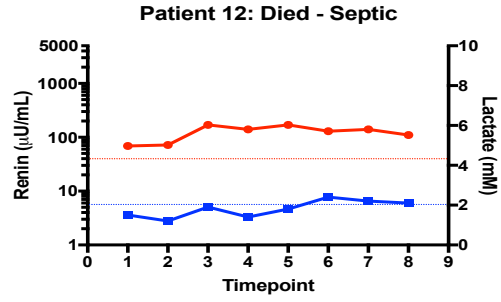
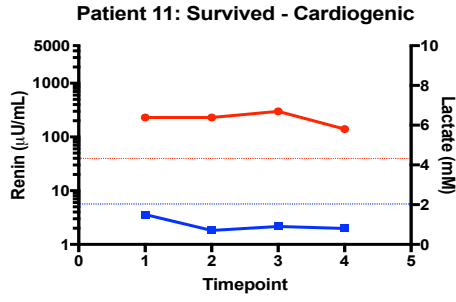
R=0.09, p=0.7

Supplementary Figure 4: Receiver-Operator Curve for SOFA as a Predictor of ICU Mortality



Supplementary Figure 5: Renin and Lactate Over Time for Individual Patients





Patient enrolment number, whether they died or survived their ICU-admission and the type of circulatory shock they had is indicated on each graph. Renin is plotted on the left Y-axis on a logarithmic scale; lactate is plotted on the right Y-axis on a linear scale. The laboratory defined upper limit of normal for renin is demarcated with a red dotted line, while that of lactate is demarcated with a blue dotted line on each graph.

Supplementary Table 1: Patient Characteristics

Patient No.	Age	Sex	Admission Diagnosis	AKI Stage*	CRRT	CKD I-III#	Shock	HT	SOFA	Meds.	Survived	Number of Samples~
1	66	F	Haemoperitoneum	1	N	N	HH	Y	6	-	Y	4
2	65	F	Aspiration Pneumonia	3	N	N	S	Y	4	BB	Y	7
3	49	M	Acute Renal Failure	3	N	Y	N	N	6	ARB	Y	4
4	60	F	Mesenteric Art. Bypass	0	N	N	N	Y	5	-	Y	4
5	73	F	Post-CABG	1	N	N	N	Y	7	BB	Y	4
6	55	F	Liver Transplant	3	Y	N	HH	N	8	-	Y	8
7	76	M	Post Neo-Bladder	3	Y	Y	C+D	Y	5	ACEi	Y	8 (7)
8	54	M	SAH Fischer IV	0	N	N	N	N	7	-	Y	8
9	62	M	Post-CABG	0	N	N	C	N	6	-	N	8 (7)
10	61	M	Polytrauma	2	N	N	HH	N	6	BB	Y	3
11	76	M	Ao Valve Replacement	2	N	Y	C	N	4	-	Y	4
12	47	M	Septic Shock	3	N	N	S	N	7	-	N	8
13	61	M	Septic Shock	1	N	Y	S	N	5	ACEi, BB	Y	5
14	57	F	Septic Shock/Cirrhosis	3	Y	Y	S	N	6	-	N	7
15	55	M	Cardiogenic Shock	3	Y	N	C	N	5	-	N	8
16	68	M	Septic Shock	3	Y	N	S	Y	9	-	N	3
17	75	M	PCP Pneumonia	0	N	N	N	Y	12	ACEi	N	4
18	32	F	Post-Neurosurgery	0	N	N	N	N	3	-	Y	1
19	25	M	Polytrauma	0	N	N	N	N	5	-	Y	7
20	79	M	Urosepsis	3	N	N	S	Y	8	Spiro	Y	7

Y=yes, N=No. * AKI stage was defined according to KDIGO guidelines. #CKD I-III was defined according to KDIGO guidelines. ~Figures in parenthesis in the “Number of Samples” column indicate the number of analyzable samples.

Supplementary Table 2: Renin removal by continuous renal replacement therapy

Patient No.	Mode	Qb (mL/min)	Renin Mass Inlet (μU/min)	Renin Mass Removal (μU/min)	% Plasma Clearance	Effluent Renin Concentration (μU/min)	% Removal by Membrane Adsorption
6	HF	120	146880	2481	1.9	11	87.6
6	HDF	120	34632	0	0	0	100
12	HDF	160	31968	3600	11.3	0	100
14	HDF	120	59400	2600	4.4	0	100
15	HDF	140	15540	336	2.2	0	100

HF=Hemofiltration; HDF = Hemodiafiltration; Qb = Blood flow.

While removal was entirely by membrane adsorption for HDF, the minimal absolute values along with the exponential relationship between Qb and mass removal (Fig. 2) indicate that renin has a low affinity for the AN69HF filter.