Supplementary Table 1. Neurological and Respiratory Scores for Piglets.

Neurological Score

Level of consciousness

4	Normal/Awake
3	Lethargy/arousable but not to full normal state
2	Obtunded/some reaction with stimulation
1	Coma

Behavior

4	Normal
3	Needs gentle prodding
2	Needs vigorous prodding
1	No interaction/spontaneous activity

Feeding

3	Normal
2	Needs assistance
1	Will not eat

Coordination

4	Stands normally
3	Stands but sways
2	Stands but falls over
1	Cannot stand

Locomotion

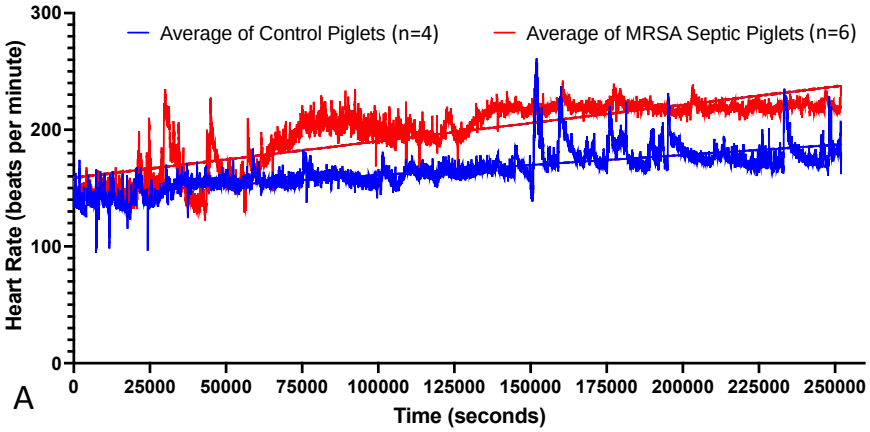
3	Normal
2	Ataxia but more than 2 steps
1	Cannot walk more than 2 steps

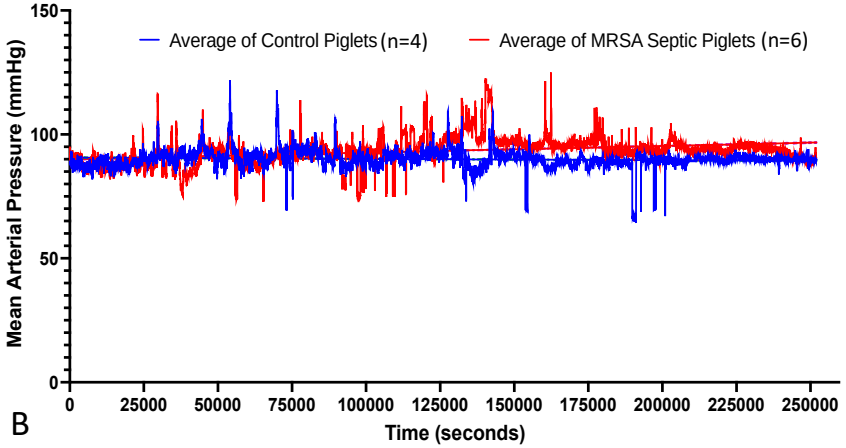
Respiratory Score

Respiration

4	Normal
3	Mild increase in respiratory rate
2	Moderate increase in respiratory rate, some abdominal breathing
1	Severe respiratory distress, significant increase in respiratory rate with abnormal effort

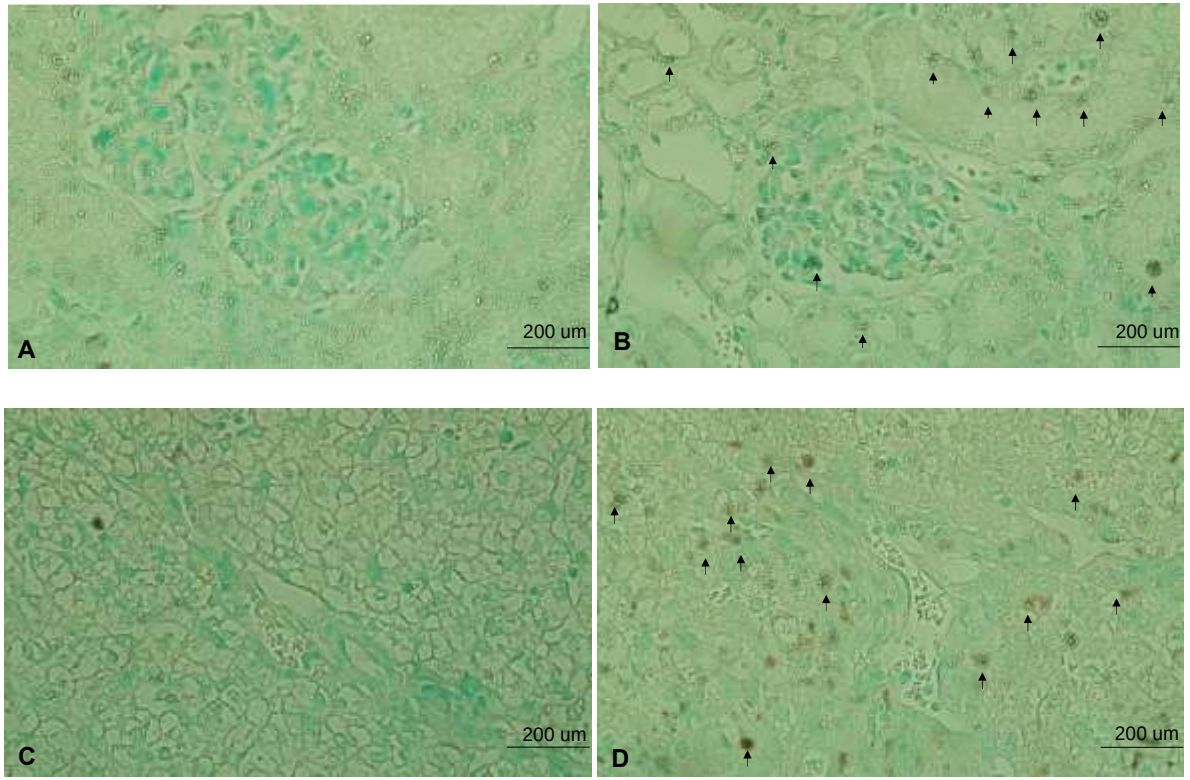
Supplementary Figure 1. Heart Rate and Mean Arterial Blood Pressure of MRSA Septic and Control Piglets over 70 Hours.





(**Suppl Fig. 1A**) Average heart rate of the septic piglets was clinically higher over the 70h study period compared to control piglets. The simple linear regression slopes of two groups are significantly different (P <0.0001). Septic slope 0.0003124 (95% CI 0.0003088 to 0.0003160). Control slope 0.0001723 (95% CI 0.0001697 to 0.0001750). (**Suppl Fig. 1B**) Average mean arterial blood pressure was not clinically different over time between the septic and control piglets. The simple linear regression slopes of two groups are significantly different (P <0.0001). Control slope of -0.00004982 (95% CI -0.000005897 to -0.00004066). Sepsis slope of 0.00002671 (95% CI 0.0000002549 to 0.000002792). MRSA = methicillin-resistant *Staphylococcus aureus.*

Supplementary Figure 2. Apoptotic (TUNEL assay) cell death in the kidney and liver of MRSA septic piglets.



Apoptotic (TUNEL assay) cell death in the kidney and liver of MRSA septic piglets. Representative TUNEL images (brown with arrows) in the kidney (**Suppl Fig. 2B**) and liver (**Suppl Fig. 2D**) of MRSA septic piglets compared to none seen in control kidney (**Suppl Fig. A**) and liver (**Suppl Fig. C**). MRSA = methicillin-resistant *Staphylococcus aureus.*

Supplementary Table 2. Serum Kidney & Liver Biomarkers of MRSA Septic Piglets.

Serum Kidney & Liver Biomarkers of MRSA Septic Piglets					
Piglets	**Hours post-MRSA**	**BUN mg/dL**	**Cr mg/dL**	**ALT U/L**	**AST U/L**
MRSA 1	**0h**	7.64	1.04	15.32	14.43
	70h	8.12	0.96	22.8	16.5
MRSA 2	**0h**	7.7	1.02	21	16.58
	70h	9.6	1.04	24.9	18.2
MRSA 3	**0h**	8.3	1.05	28.49	25.81
	70h	7.8	0.97	32.8	23.4
MRSA 4	**0h**	5.65	0.88	18.98	20.66
	70h	7.2	0.92	21.2	22.6
MRSA 5	**0h**	9.15	0.86	16.48	29.86
	70h	8.25	0.93	19.5	28.4
MRSA 6	**0h**	7.27	0.98	21.83	22.19
	70h	8.32	0.89	22.6	25.9

BUN = blood urea nitrogen; Cr = creatinine; ALT = alanine transaminase; AST = aspartate Transaminase; MRSA = methicillin-resistant *Staphylococcus aureus*.

Supplementary Table 3. Cystatin C Levels in Controls and MRSA Septic Piglets.

Plasma Cystatin C Levels in Controls and MRSA Septic Piglets		
Piglets	**Hours**	**Cystatin C (ng/mL)**
Control 1	0h	1.307
	70h	1.237
Control 2	0h	1.254
	70h	1.268
Control 3	0h	1.349
	70h	1.255
Control 4	0h	1.196
	70h	1.16
MRSA 1	0h	1.357
	70h	1.375
MRSA 2	0h	1.324
	70h	1.256
MRSA 3	0h	1.384
	70h	1.284
MRSA 4	0h	1.256
	70h	1.277
MRSA 5	0h	1.292
	70h	1.298
MRSA 6	0h	1.218
	70h	1.229

MRSA = methicillin-resistant *Staphylococcus aureus.*

Supplementary Table 4. Serum Creatinine, BUN, AST and ALT Levels in Control and MRSA Septic Piglets at 0, 24, 36, 48, 60 and 70h.

Serum Creatinine Levels in Control and MRSA Septic Piglets					
Piglets	**Hours**	**BUN (mg/dL)**	**Creatinine (mg/dL)**	**ALT (U/L)**	**AST (U/L)**
Control 5	0h	7.9	0.5	34	18
	24 h	6.9	0.5	40	22
	36h	6.9	0.5	35	17
	48h	6.1	0.5	37	22
	60h	15	0.6	22	21
	70h	11	0.6	24	23
MRSA 7	0h	8.3	0.5	33	19
	24 h	7.4	0.5	31	18
	36h	4.5	0.6	27	19
	48h	5.1	0.5	23	21
	60h	4.3	0.6	42	20
	70h	5.1	0.6	28	36
MRSA 8	0h	7.6	0.6	25	14
	24 h	7.4	0.6	27	24
	36h	10.9	0.6	24	25
	48h	6.7	0.5	20	21
	60h	2.3	0.5	22	25
	70h	3.9	0.6	22	30
MRSA 9	0h	31.3	0.7	16	15
	24 h	30.5	0.9	20	30
	36h	17.1	0.8	19	55
	48h	9.5	0.5	27	83
	60h	3.7	0.5	20	30
	70h	5.7	0.6	17	26

MRSA = methicillin-resistant *Staphylococcus aureus.*

Supplementary Table 5. Arterial Blood Gases of MRSA Septic Piglets.

Arterial Blood Gases of MRSA Septic Piglets										
Piglets	**Hours post-MRSA**	**pH**	**PaCO2 (mmHg)**	**PaO2 (mmHg)**	**BE (mmol/L)**	**HCO3 (mmol/L)**	**TCO2 (mmol/L)**	**02 Saturation (%)**	**Lactate (mmol/L)**	**Glucose (mg/dL)**
MRSA 1	**0h**	7.497	37.4	83	6	29	30	97	0.47	104
	70h	7.595	29.8	63	7	28.9	30	95	0.54	58
MRSA 2	**0h**	7.496	39.5	85	7	30.5	32	97	0.52	103
	70h	7.565	24.9	54	0	22.6	23	93	0.34	58
MRSA 3	**0h**	7.534	40.3	98	11	33.9	35	98	0.55	107
	70h	7.527	32.4	57	4	26.9	28	93	0.81	59
MRSA 4	**0h**	7.488	42.2	89	9	32	33	97	0.57	96
	70h	7.571	31.5	89	7	28.9	30	98	0.38	51
MRSA 5	**0h**	7.487	41.2	80	8	31.2	32	97	0.5	106
	70h	7.52	35.1	75	6	28.6	30	96	0.5	56
MRSA 6	**0h**	7.501	38.2	80	7	29.9	31	97	0.35	106
	70h	7.656	25.6	77	8	28.6	29	98	0.64	58

PaCO2 = arterial partial pressure of carbon dioxide; PaO2 = arterial partial pressure of oxygen; BE = base excess; HCO3 = bicarbonate; TCO2 = total carbon dioxide; O2 = oxygen; MRSA = methicillin-resistant *Staphylococcus aureus.*