

# Supplement

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**In a Canine Model of Septic Shock, Cardiomyopathy Occurs Independent of**

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**Catecholamine Surges and Cardiac Microvascular Ischemia**

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## 10 Results

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### 12 **Supplementary Laboratory Results**

#### 13 **Cytokines (IL-6, -8 -12 and -10, interferon- $\gamma$ , von Willebrand factor, Tumor necrosis factor- $\alpha$ , 14 **p-selectin, and Monocyte Chemoattractant Protein)****

15 There were no significant differences in any cytokine measure comparing septic animals that  
16 received an epinephrine vs. saline infusion (e-supplementary figure 1). There were significant  
17 increases in septic animals who received epinephrine or saline infusion, compared to baseline,  
18 in mean IL-6, IL-8 and MCP. There were no significant differences compared to baseline in septic  
19 animals who received epinephrine or saline infusion in mean IL-12, TNF- $\alpha$  , and p-selectin levels.  
20 Overall, there were no significant differences compared to baseline in mean IL-10, IFN- $\gamma$ , and  
21 vWF levels in both septic animals that receive epinephrine or saline infusion.

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#### 23 **Serum Chemistries, Complete Blood Count, Arterial Blood Gases, and Electrolytes**

24 Mean pH in septic animals receiving epinephrine was significantly less at 8 and 12 hours (e-  
25 supplementary figure 2, Panel A) compared to septic animals receiving saline. Mean pCO<sub>2</sub> was  
26 significantly less in septic animals receiving epinephrine compared to saline controls at 24 and  
27 44 hours (Panel B). There were significant changes in septic animals who received epinephrine  
28 or saline infusion, compared to baseline, in mean arterial pH, pCO<sub>2</sub> and pO<sub>2</sub> levels throughout.

29 There were no significant differences in change from baseline for mean total protein,  
30 BUN, and albumin levels in septic animals receiving epinephrine vs. saline (e-supplementary  
31 figure 3). There were isolated significant, but not clinically relevant, increases in mean serum  
32 Total Protein and BUN in septic animals that received epinephrine or saline (Panel A and B).

33 There were significant decreases compared to baseline in mean serum albumin levels (Panel C)  
34 and mean BUN/Cre (Panel D) in both septic animals receiving epinephrine or saline. Mean  
35 BUN/Cre was significantly less in septic animals receiving epinephrine compared to saline.

36 Septic animals that received epinephrine had significantly increased mean glucose and  
37 decreased mean serum potassium levels compared to septic animals that received saline (e-  
38 supplementary figure 4). Further, septic animals that received epinephrine had significant  
39 differences compared to baseline in mean serum glucose (Panel A) and potassium (Panel B)  
40 whilst septic animals receiving saline only had differences in mean potassium only. There were  
41 no significant changes from baseline or significant differences in septic animals that received  
42 epinephrine or saline for mean serum sodium or chloride levels (Panel C and D, respectively).

43 There were no other significant differences between septic animals receiving  
44 epinephrine or saline infusion in mean lymphocyte counts throughout the study (e-  
45 supplementary figure 5, Panel A). However, there were significant overall differences between  
46 septic animals receiving epinephrine compared to saline in mean hemoglobin, platelet, and  
47 eosinophil counts whilst on infusion (Panel B-D). Septic animals receiving epinephrine had  
48 significantly higher mean WBC counts at 20 to 44 hours compared to septic animals receiving  
49 saline (Panel E). There were significant changes from baseline in both septic animals receiving  
50 epinephrine or saline in mean lymphocytes, hemoglobin, platelets, eosinophils and WBC counts  
51 throughout the study.

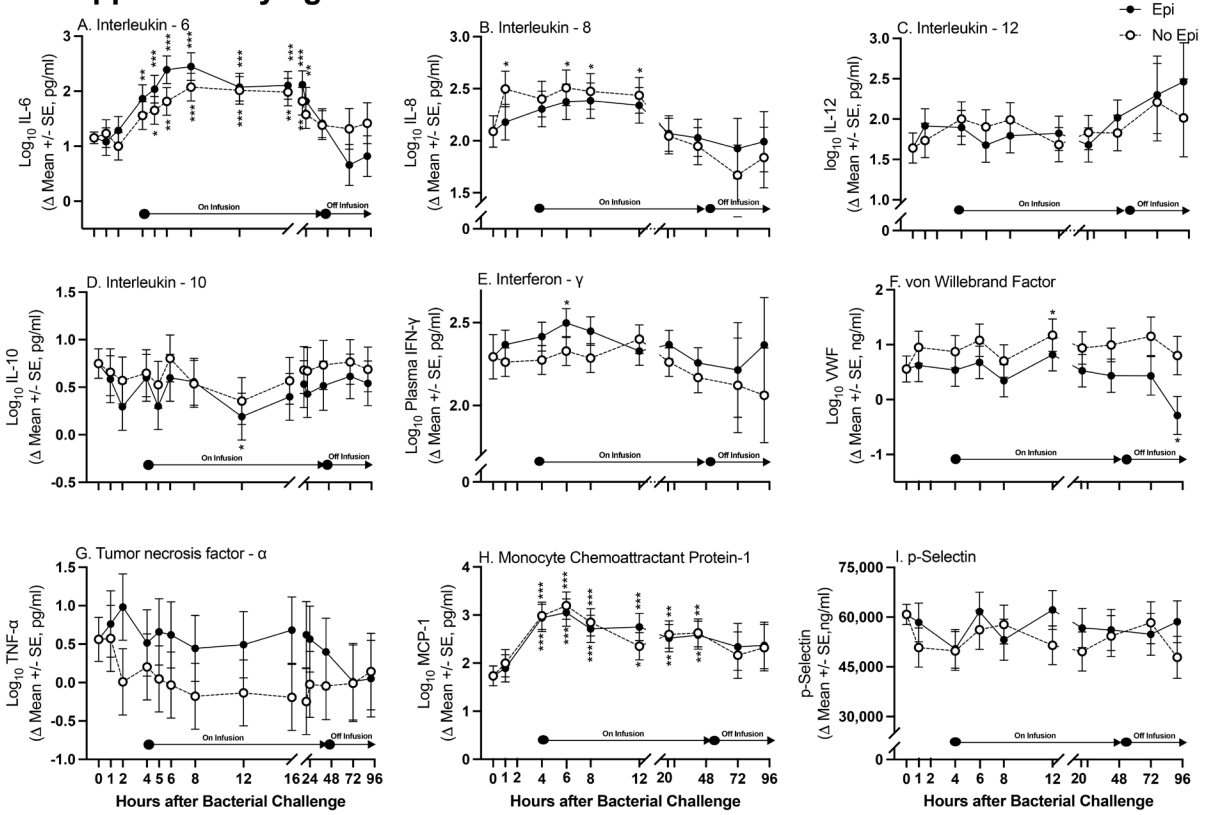
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55 **Figures**

**e-supplementary figure 1**



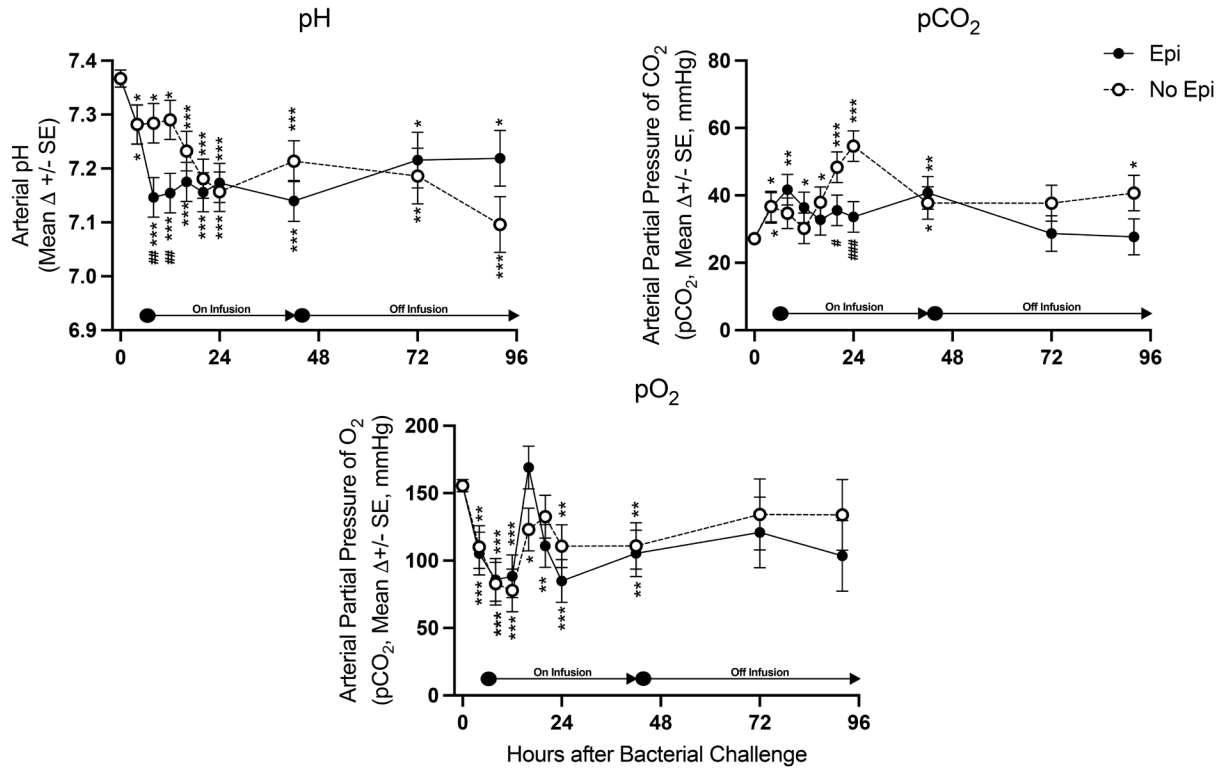
P-Value  
Effect of Epinephrine  
#p: 0.01-0.05  
##p: 0.001-0.01  
###p < 0.001

P-Value  
Change from Baseline (T0)  
\*p: 0.01-0.05  
\*\*p: 0.001-0.01  
\*\*\*p < 0.001

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58 **e-supplementary figure 1: The format is similar to figure 1**

e-supplementary figure 2



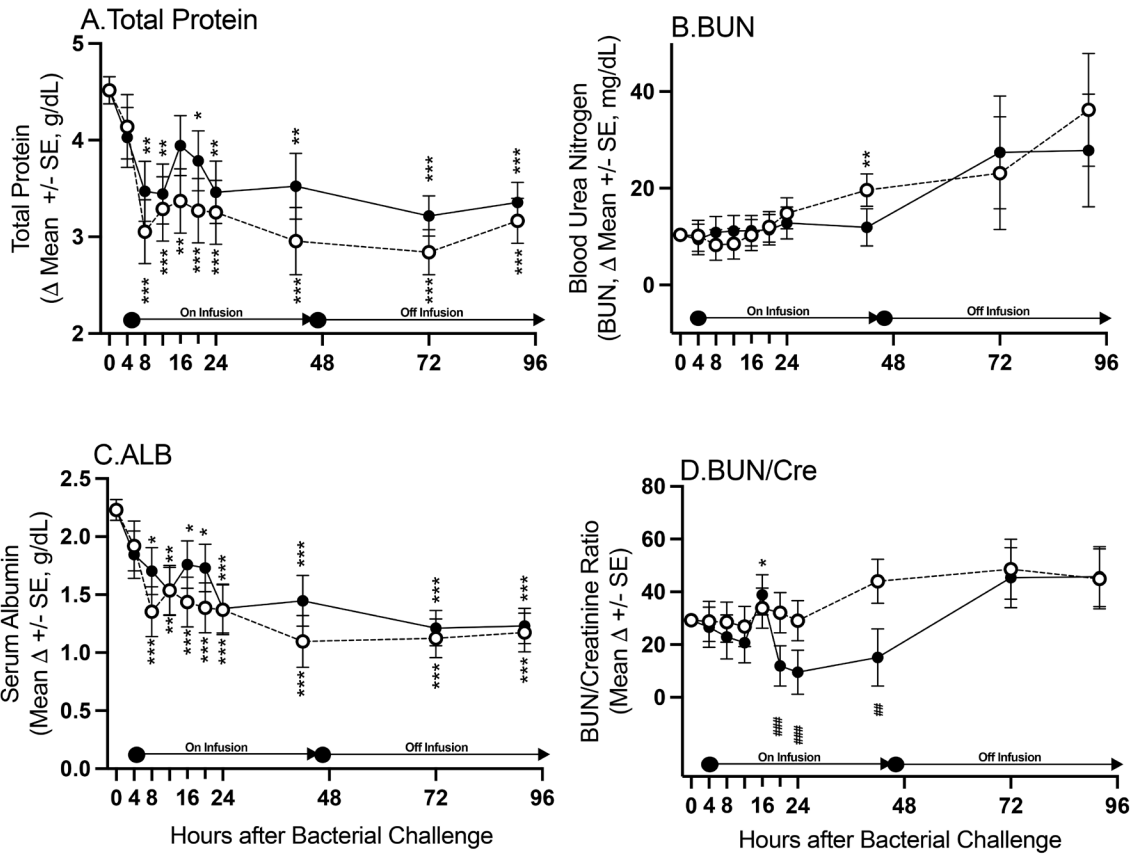
P-Value  
Change from Baseline (T0)  
\*p: 0.01-0.05  
\*\*p: 0.001-0.01  
\*\*\*p < 0.001

P-Value  
Effect of Epinephrine  
#p: 0.01-0.05  
##p: 0.001-0.01  
###p < 0.001

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e-supplementary figure 2: The format is similar to figure 1

e-supplementary figure 3



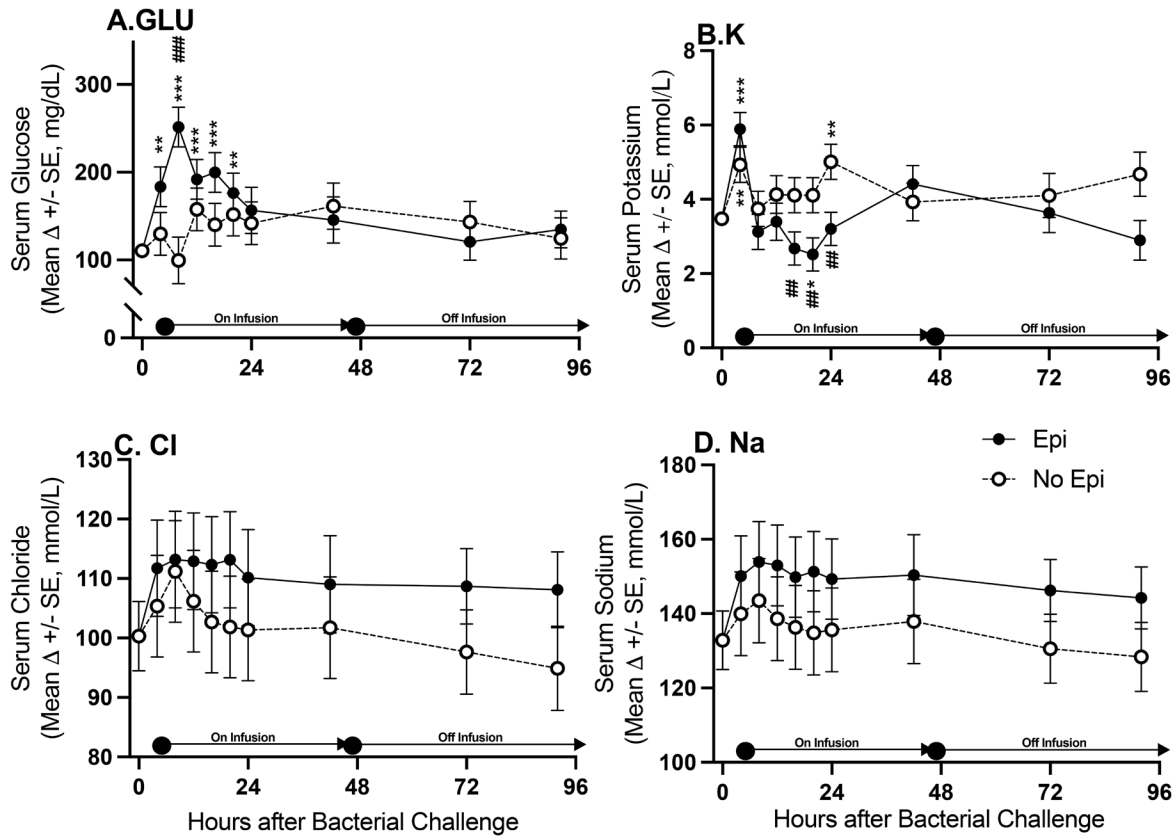
P value  
 Change from Baseline (T0)  
 \* p : 0.01 - 0.05  
 \*\* p : 0.001 - 0.01  
 \*\*\* p < 0.001

P-Value  
 Effect of Epinephrine  
 #p: 0.01-0.05  
 ##p: 0.001-0.01  
 ###p < 0.001

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e-supplementary figure 3: The format is similar to figure 1

e-supplementary figure 4



P value  
Change from Baseline (T0)  
\* p : 0.01 - 0.05  
\*\* p : 0.001 - 0.01  
\*\*\* p < 0.001

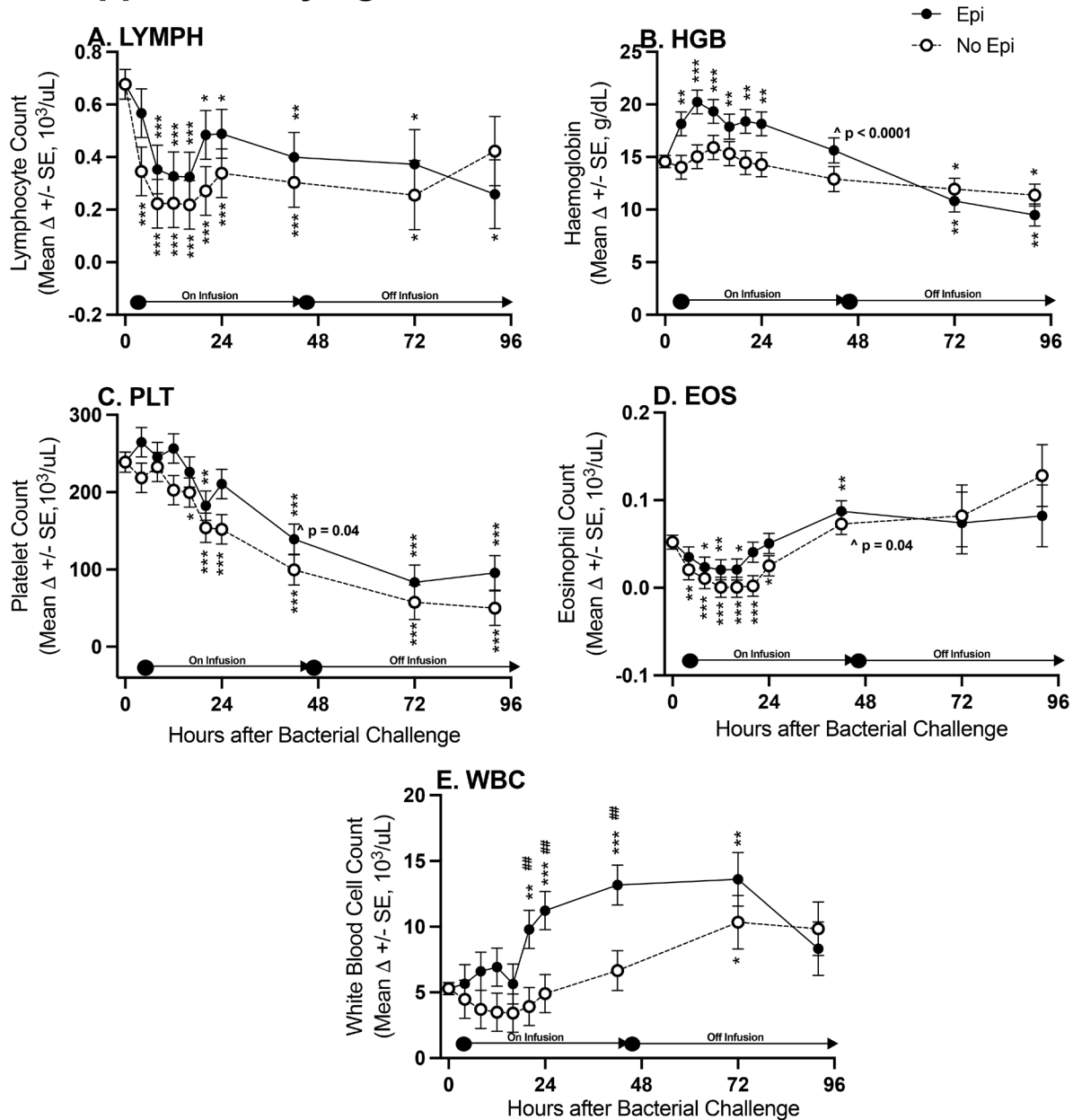
P-Value  
Effect of Epinephrine  
#p: 0.01-0.05  
##p: 0.001-0.01  
###p < 0.001

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e-supplementary figure 4: The format is similar to figure 1

### e-supplementary figure 5



P value  
 Change from Baseline (T0)  
 \* p : 0.01 - 0.05  
 \*\* p : 0.001 - 0.01  
 \*\*\* p < 0.001

P-Value  
 Effect of Epinephrine  
 #p: 0.01-0.05  
 ##p: 0.001-0.01  
 ###p < 0.001

^ Since there were no significant group time interactions, the overall effect was calculated from time 0 - 48 hours comparing septic animals receiving epinephrine vs. receiving saline infusions.

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e-supplementary figure 5: The format is similar to figure 1