

Table S1. Key Operative Parameters between groups that were stored for 8h of NEVKP versus SCS after being subjected to 120min warm ischemia prior to procurement.

	NEVKP (n=5)	SCS (n=6)	p-value
Retrieval			
Pig Weight (Kg)	31.7 ± 1.1	31.4 ± 1.5	0.66
Total Warm Ischemic Time (min)	120.4 ± 0.9	120.3 ± 0.5	0.89
Storage			
Total Storage Time (min)	517.4 ± 16.0	520.0 ± 13.7	0.79
Transplantation			
Vascular Anastomosis Time (min)	37.2 ± 13.6	43.8 ± 16.2	0.49

Figure S1. Additional perfusion characteristics during Normothermic Ex-Vivo Kidney Perfusion of grafts subjected to 120min warm ischemia prior to procurement (n=5) including **A.** Hemoglobin concentration, **B.** Perfusate pH, **C.** Sodium Concentration, **D.** Potassium concentration, and **E** glucose concentration. Expressed as means \pm standard deviation.

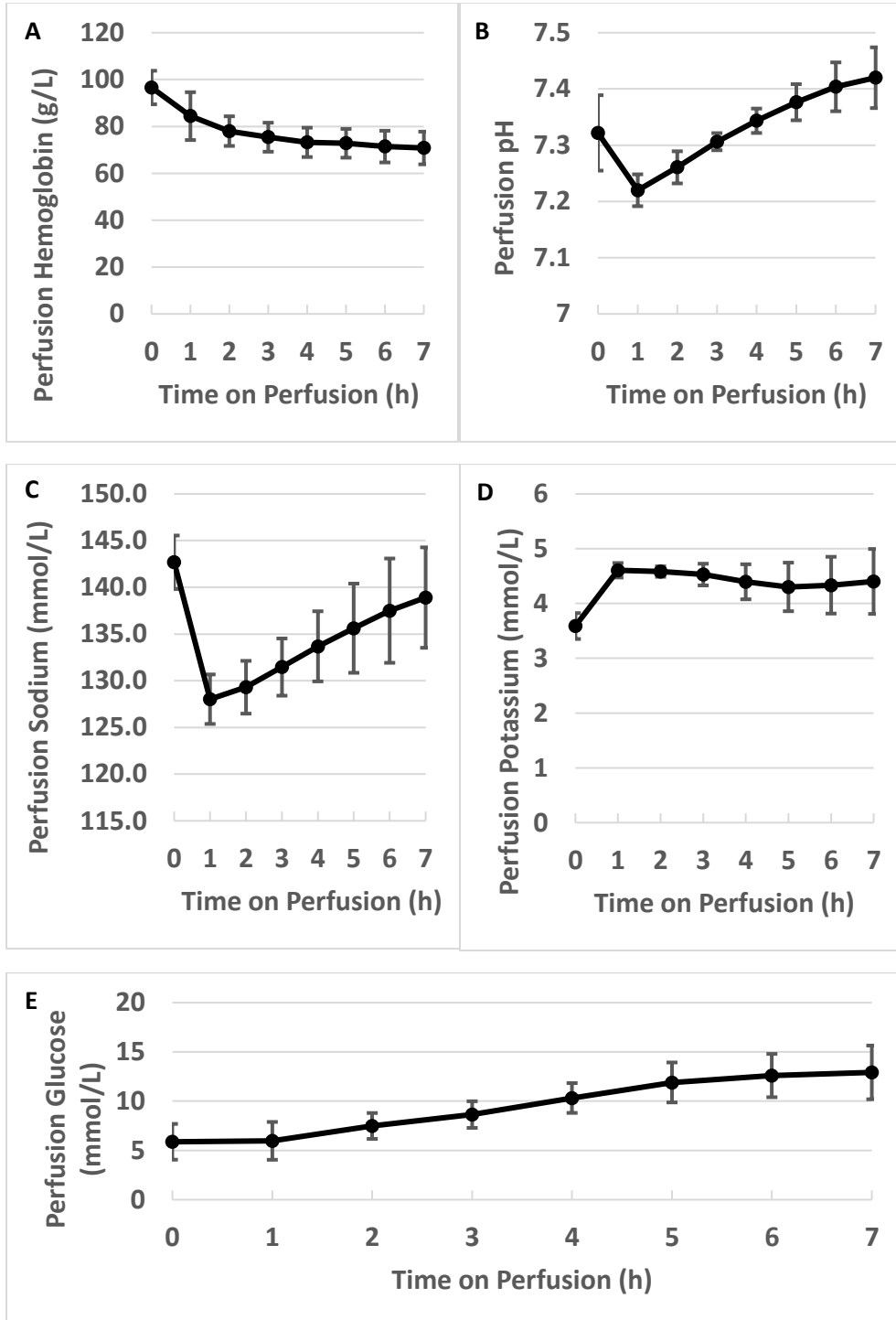


Figure S2. Individual animal post-operative renal function expressed as A. Serum Creatinine and B. Creatinine clearance at POD4 and C. POD7. NEVKP: Normothermic Ex-Vivo Kidney Perfusion. SCS: Static Cold Storage. SRD: Significant Renal Dysfunction. POD: Post-Operative Day.

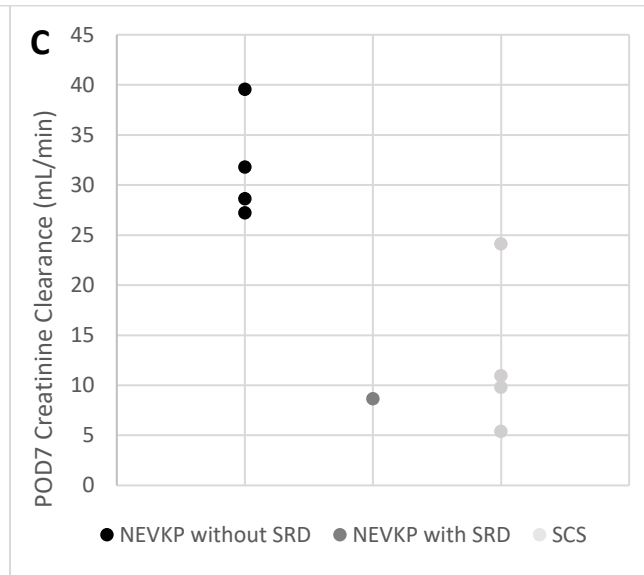
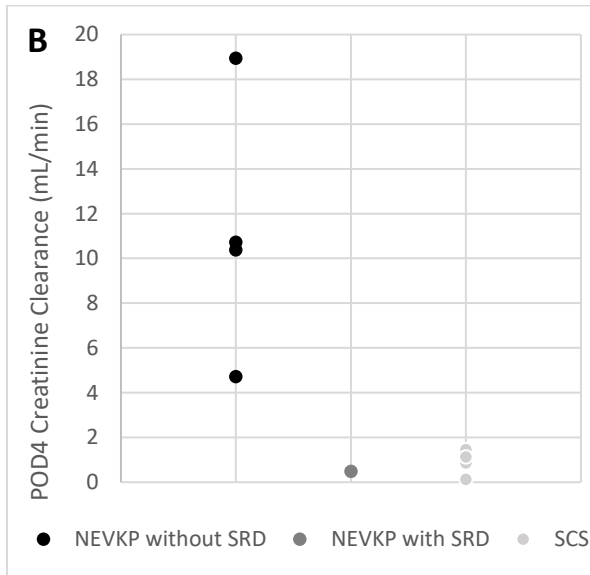
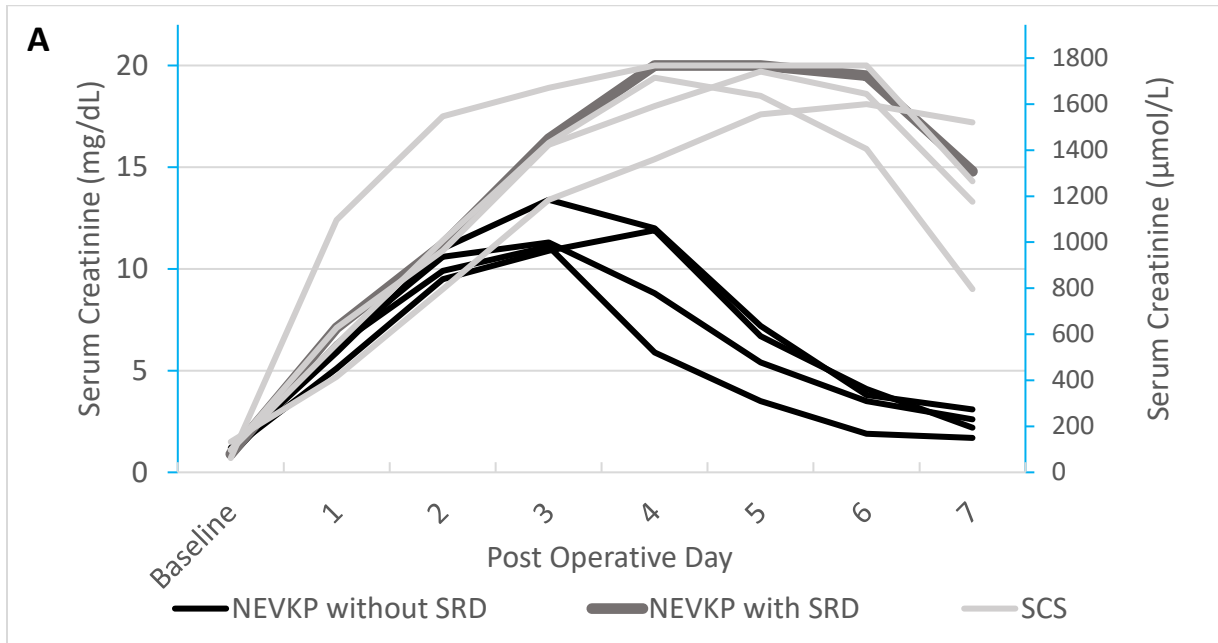


Figure S3. Parameters of Significant Renal Dysfunction of each individual animal including **A.** 24h urine output on post-operative day 4 and **B.** Post operative serum potassium levels. NEVKP: Normothermic Ex-Vivo Kidney Perfusion. SCS: Static Cold Storage. SRD: Significant Renal Dysfunction. POD: Post-Operative Day

