Table S1. Number and Characteristics of Ewes and Fetuses relating to Space Restriction and Surgical Treatment

	Treatment	Ewes (n=32)	Fetuses (n=53)	Male/Female	GD120/GD130
NSR	Non-unilateral	9	9 (all singleton)	4/5	4/5 ewes (4/5 fetuses)
	Unilateral	13	13 (all singleton)	5/8	8/5 ewes (8/5 fetuses)
USR	Non-unilateral	8	25 (7 triplets, 1 quad)	14/11	3/5 ewes (9/16 fetuses)
	Unilateral	2	6 (2 triplets)	2/4	1/1 ewes (3/3 fetuses)

USR, uterine space restriction; NSR, non space restriction defined by number and weight of individual placetomal attachments; GD120, gestational day 120; GD130 gestational day 130.
Treatment are defined as pre-pregnancy unilateral horn ligation or non-unilateral as a surgical intervention to facilitate reduction in space for placental attachment.

Table S2. Discussion Summary: Comparison of USR with Models or Human Conditions

	RAS Block-ade	Caruncu-lectomy	Placental Emboli-zation	Hyperna-tremic Dehydration	Fetal Nephrect-omy	Postnatal Renal Insufficiency	Human IUGR	Human Multifetal Gestation
Fetal Morph-ometric Data		✓	✓				✓	✓
Oxygen Indices			✓				✓	✓
Placental-Regulated Chemistries				✓	✓			✓
Renal-Regulated Chemistries					✓	✓		
Osmolarity				✓				
Macroscopic Renal Morphology		✓			✓			
Microscopic Renal Morphology	✓	✓	✓		✓		✓	

Summarizing the descriptive and functional findings from the current work as it compares to what is known in previously-published work. Not all clinical or laboratory findings could be found for each animal model or human condition. A check (√) identifies findings similar to animal models of IUGR or human conditions.[4,12,18-22,32,33,37,39,44,45,48]