

Table S1: Comparative histopathology of trachea at 14 dpi following infection with the Canadian DMV/1639 strain (IBV/Ck/ Can/17–036989).

Groups	VC				NVC				Control groups			
Lesions in trachea	No change (0)	Mild (1)	Moderate (2)	Severe (3)	No change (0)	Mild (1)	Moderate (2)	Severe (3)	No change (0)	Mild (1)	Moderate (2)	Severe (3)
Loss of epithelial lining	8/10	1/10	1/10	0/10	6/10	1/10	0/10	3/10	10/10	0/10	0/10	0/10
Loss of cilia	7/10	1/10	2/10	0/10	5/10	0/10	2/10	3/10	10/10	0/10	0/10	0/10
Necrosis of epithelial lining	7/10	0/10	3/10	0/10	5/10	0/10	2/10	3/10	10/10	0/10	0/10	0/10
Inflammatory cell infiltration in the lamina propria	5/10	2/10	2/10	1/10	1/10	4/10	2/10	3/10	10/10	0/10	0/10	0/10

Mean of lesion scores from 10 hens in each group were compared using Kruskal–Wallis’ test followed by Dunn’s multiple comparisons test. Significance was assumed at $p < 0.05$.

Table S2: Comparative histopathology of lung at 14 dpi following infection with the Canadian DMV/1639 strain (IBV/Ck/ Can/17–036989).

Groups	VC				NVC				Control groups			
Lesions in lung	No change (0)	Mild (1)	Moderate (2)	Severe (3)	No change (0)	Mild (1)	Moderate (2)	Severe (3)	No change (0)	Mild (1)	Moderate (2)	Severe (3)
Peribronchitis	2/10	1/10	6/10	1/10	2/10	2/10	4/10	2/10	10/10	0/10	0/10	0/10
Inflammatory cell infiltrations in the interstitial tissue	7/10	3/10	0/10	0/10	5/10	3/10	1/10	1/10	10/10	0/10	0/10	0/10
Circulatory disturbances (hyperemia, edema, and hemorrhage in the interstitial tissue)	1/10	8/10	1/10	0/10	0/10	8/10	1/10	1/10	10/10	0/10	0/10	0/10

Mean of lesion scores from 10 hens in each group were compared using Kruskal–Wallis’ test followed by Dunn’s multiple comparisons test. Significance was assumed at $p < 0.05$.

Table S3: Comparative histopathology of kidney at 14 dpi following infection with the Canadian DMV/1639 strain (IBV/Ck/ Can/17–036989).

Groups	VC				NVC				Control groups			
	No change (0)	Mild (1)	Moderate (2)	Severe (3)	No change (0)	Mild (1)	Moderate (2)	Severe (3)	No change (0)	Mild (1)	Moderate (2)	Severe (3)
Lesions in kidney												
Necrosis of ducto-tubular epithelium	7/10	2/10	0/10	1/10	6/10	2/10	1/10	1/10	10/10	0/10	0/10	0/10
Inflammatory cell infiltration in the interstitial tissue	6/10	0/10	0/10	4/10	5/10	2/10	1/10	2/10	10/10	0/10	0/10	0/10
Renal tubular dilatation	6/10	3/10	1/10	0/10	5/10	4/10	0/10	1/10	10/10	0/10	0/10	0/10

Mean of lesion scores from 10 hens in each group were compared using Kruskal–Wallis’ test followed by Dunn’s multiple comparisons test. Significance was assumed at $p < 0.05$.

Table S4: Comparative histopathology of magnum at 14 dpi following infection with the Canadian DMV/1639 strain (IBV/Ck/ Can/17–036989).

Groups	VC				NVC				Control groups			
	No change (0)	Mild (1)	Moderate (2)	Severe (3)	No change (0)	Mild (1)	Moderate (2)	Severe (3)	No change (0)	Mild (1)	Moderate (2)	Severe (3)
Lesions in magnum												
Epithelial cell necrosis	4/10	4/10	2/10	0/10	5/10	0/10	4/10	1/10	10/10	0/10	0/10	0/10
Loss of cilia	4/10	2/10	4/10	0/10	5/10	1/10	1/10	3/10	10/10	0/10	0/10	0/10
Tubular gland dilatation	6/10	3/10	1/10	0/10	4/10	5/10	1/10	0/10	10/10	0/10	0/10	0/10
Lymphocyte infiltration	10/10	0/10	0/10	0/10	9/10	0/10	0/10	1/10	10/10	0/10	0/10	0/10
Edema in submucosa	10/10	0/10	0/10	0/10	8/10	1/10	0/10	1/10	10/10	0/10	0/10	0/10

Mean of lesion scores from 10 hens in each group were compared using Kruskal–Wallis’ test followed by Dunn’s multiple comparisons test. Significance was assumed at $p < 0.05$.

Table S5: Comparative histopathology of isthmus at 14 dpi following infection with the Canadian DMV/1639 strain (IBV/Ck/ Can/17–036989).

Groups	VC				NVC				Control groups			
	No change	Mild	Moderate	Severe	No change	Mild	Moderate	Severe	No change	Mild	Moderate	Severe
Lesions in isthmus	(0)	(1)	(2)	(3)	(0)	(1)	(2)	(3)	(0)	(1)	(2)	(3)
Epithelial cell necrosis	8/8	0/8	0/8	0/8	6/7	0/7	0/7	1/7	10/10	0/10	0/10	0/10
Loss of cilia	8/8	0/8	0/8	0/8	5/7	1/7	0/7	1/7	10/10	0/10	0/10	0/10
Tubular gland dilatation	6/8	2/8	0/8	0/8	6/7	0/7	0/7	1/7	10/10	0/10	0/10	0/10
Lymphocyte infiltration	5/8	2/8	1/8	0/8	4/7	2/7	0/7	1/7	10/10	0/10	0/10	0/10
Edema in submucosa	4/8	2/8	2/8	0/8	2/7	0/7	1/7	4/7	10/10	0/10	0/10	0/10

Mean of lesion scores from 10 hens in the control groups, 8, and 7 hens in the VC and NVC groups, respectively, were compared using Kruskal–Wallis’ test followed by Dunn’s multiple comparisons test. Significance was assumed at $p < 0.05$.

Table S6: Comparative histopathology of uterus at 14 dpi following infection with the Canadian DMV/1639 strain (IBV/Ck/ Can/17–036989).

Groups	VC				NVC				Control groups			
	No change	Mild	Moderate	Severe	No change	Mild	Moderate	Severe	No change	Mild	Moderate	Severe
Lesions in uterus	(0)	(1)	(2)	(3)	(0)	(1)	(2)	(3)	(0)	(1)	(2)	(3)
Epithelial cell necrosis	10/10	0/10	0/10	0/10	9/10	1/10	0/10	0/10	10/10	0/10	0/10	0/10
Loss of cilia	10/10	0/10	0/10	0/10	9/10	1/10	0/10	0/10	10/10	0/10	0/10	0/10
Tubular gland dilatation	10/10	0/10	0/10	0/10	9/10	0/10	0/10	1/10	10/10	0/10	0/10	0/10
Lymphocyte infiltration	10/10	0/10	0/10	0/10	9/10	0/10	0/10	1/10	10/10	0/10	0/10	0/10
Edema in submucosa	4/10	1/10	5/10	0/10	4/10	1/10	1/10	4/10	10/10	0/10	0/10	0/10

Mean of lesion scores from 10 hens in each group were compared using Kruskal–Wallis’ test followed by Dunn’s multiple comparisons test. Significance was assumed at $p < 0.05$.