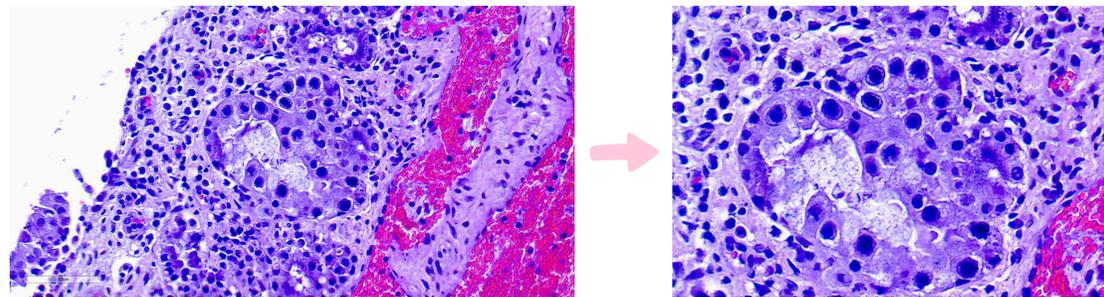


## Introduction and objective

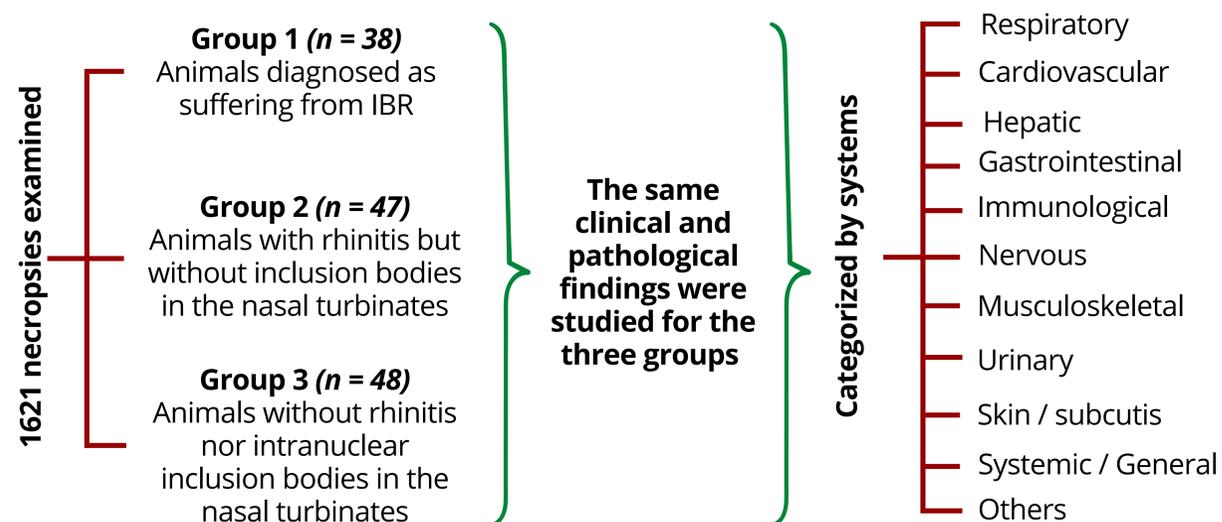
**Inclusion body rhinitis (IBR)** is caused by **porcine cytomegalovirus (PCMV)**. The aim of this **experimental-retrospective study** was to obtain information about IBR through the review of all porcine necropsies carried out by the Veterinary Pathology Diagnostic Service of the Autonomous University of Barcelona between the years 2010 and 2022.



**Figure 1.** Large basophilic intranuclear inclusion bodies with a translucent halo and defined nuclear membrane are observed in the nasal mucous glands.

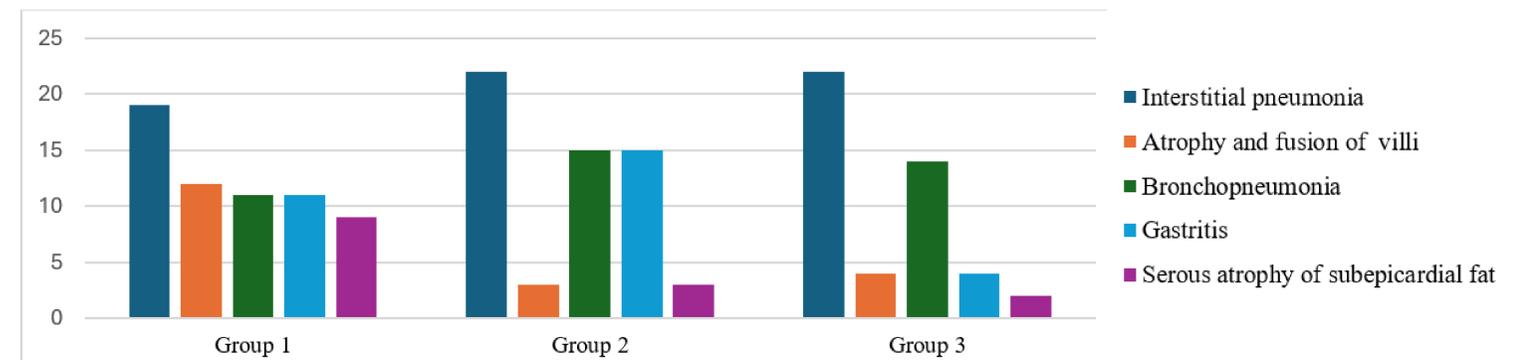
The **objective** of this study was to assess the relationship between IBR in pigs and other findings observed in necropsies.

## Materials and methods



**Figure 2.** Description of the study groups and summary of the pathological findings observed during the study, organized by organ systems.

## Results



**Figure 3.** Proportion of cases in which each lesion was identified in each group. The numbers on the Y-axis indicate the number of cases in which each lesion was observed.

**Table 1. (a)** Results of the Chi-square ( $\chi^2$ ) and the Fisher's exact test. The results indicate that the variables serous atrophy of subepicardial fat, atrophy and fusion of intestinal villi, and gastritis were statistically significant ( $p < 0.05$ ), and **(b)** Pairwise Fisher's exact test results for the same pathological findings.

<b>(a)</b>							<b>(b)</b>				
Groups	Serous atrophy of subepicardial fat		Atrophy and fusion of intestinal villi		Gastritis		Group 1	Group 2	p-value adjusted	significance	
	Yes	No	Yes	No	Yes	No					
	1	9	29	12	26	11	27	Group 1	Group 2	<b>0.0598</b>	ns
2	3	44	3	44	15	32	Group 1	Group 3	<b>0.0283</b>	*	
3	2	46	4	44	4	44	Group 2	Group 3	<b>0.677</b>	ns	
	$\chi^2 = 9.903,$ $p = 0.0071$		$\chi^2 = 13.067,$ $p = 0.0015$		$\chi^2 = 8.804,$ $p = 0.0123$		Group 1	Group 2	<b>0.0107</b>	*	
	Fisher's exact test, $p = 0.0103$		Fisher's exact test, $p = 0.0030$		Fisher's exact test, $p = 0.0085$		Group 1	Group 3	<b>0.021</b>	*	
							Group 2	Group 3	<b>1</b>	ns	
							Group 1	Group 2	<b>0.816</b>	ns	
							Group 1	Group 3	<b>0.0406</b>	*	
							Group 2	Group 3	<b>0.0145</b>	*	

## Conclusions

**Serous atrophy of subepicardial fat**, as well as **atrophy and fusion of intestinal villi**, were significantly **more common in pigs with PCMV infections** than in controls. In contrast, **gastritis was significantly more frequent in Groups 1 and 2** compared to Group 3. Those findings demonstrate a **strong statistical association between IBR and systemic signs of wasting**, such as serous fat atrophy and villous atrophy.