For the meniscal release procedure, dogs were anesthetized with propofol and isoflurane, and using orthoscopic guidance, a complete radial transection of the meniscus in the medial tibial plateau (open squares, right panel).

Figure 5. Cumulative pain scores do not show a significant correlation with overall bone resorption induced lesions in the medial cartilage and subchondral bone. 

- Gross Pathology and Histopathology - MIA Injection

Lesions induced by meniscal release surgery were more superficial and involved the tibial and femoral surfaces, more prominent in the tibial plateau. The transection of the subchondral bone was severe in all animals and was severe in four of the six animals. Subchondral bone sclerosis was observed in all animals and was severe in four of the six animals.

- Gross Pathology and Histopathology - MIA Injection

MIA injection produced mild to moderate deficits in performance on the stairs task in all dogs, and in 5 of 6 dogs on the platform task; moderate to severe deficits were observed in 3 animals in any task.

- Gross Pathology and Histopathology - MIA Injection

MIA injection caused mild to moderate deficits on the functional tasks assessed during this period. Oral administration of carprofen (75 mg) improved the deficits seen to mild to no deficits in these assessments.

Table 2. Individual Animal Data – MIA Injection

<table>
<thead>
<tr>
<th>Animal</th>
<th>Group</th>
<th>Platform - Placebo</th>
<th>Stairs - Placebo</th>
<th>Platform - Carprofen</th>
<th>Stairs - Carprofen</th>
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<tbody>
<tr>
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<td>Carprofen</td>
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</tbody>
</table>

Material and Methods

- Gross Pathology and Histopathology - MR

Meniscal release produced mild to moderate deficits in performance on the stairs task in all dogs, but produced no deficits in performance on the platform task; moderate to severe deficits were observed in 3 animals in any task.

- Gross Pathology and Histopathology - MR

Gross and histopathological assessment: Following humane euthanasia, joints from all animals and the non-injected stifle joint from one animal were dissected, photographed, and the lesion size was determined using indigo ink with staining morphological analyses using images from the different views of the joint. 

- Gross Pathology and Histopathology - MR

Microscopic examination of the joints was performed using the Olympus (10x for meniscal release study) or a modified CANON (for MIA study) scanning microscope.

- Gross Pathology and Histopathology - MR

Lesions observed in all animals and were severe in four of the six animals. Subchondral bone sclerosis was observed in all animals and was severe in four of the six animals.

- Gross Pathology and Histopathology - MR

Lesions induced by meniscal release surgery were more superficial and involved articular cartilage without involvement of deeper structures, whereas MIA-induced lesions were extensive and involved subchondral bone. 

- Gross Pathology and Histopathology - MR

The MIA model may serve as a useful model for the assessment of novel therapeutics for OA-related pain in humans as well as dogs.