Supplementary Material

A. MRI sequence list
1. Sagittal T1 weighted
   i. Repetition time: 468 ms
   ii. Echo time: 13 ms
   iii. Slice thickness: 3 mm
   iv. Flip angle: 90 degrees
2. Sagittal proton density
   i. Repetition time: 3,350 ms
   ii. Echo time: 14 ms
   iii. Slice thickness: 3 mm
   iv. Flip angle: 150 degrees
3. Dorsal T1 weighted
   i. Repetition time: 468 ms
   ii. Echo time: 13 ms
   iii. Slice thickness: 2.875 mm
   iv. Flip angle: 90 degrees
4. Dorsal proton density
   i. Repetition time: 3,350 ms
   ii. Echo time: 14 ms
   iii. Slice thickness: 2.875 mm
   iv. Flip angle: 150 degrees
5. T2-weighted transverse sequence
   i. Repetition time: 3,730 ms
   ii. Echo time: 110 ms
   iii. Slice thickness: 2.2 mm
   iv. Flip angle: 150 degrees

B. MRI scoring criteria

<table>
<thead>
<tr>
<th>MRI scoring criteria of G1 implants</th>
<th>Excellent</th>
<th>Good</th>
<th>Poor</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1. Fluid signal not evident at host–graft interface</td>
<td>1. Patchy areas of fluid evident at host–graft interface</td>
<td>1. Fluid signal evident surrounding host–graft interface</td>
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<tr>
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<td>2. Graft surface(s) appear perfectly aligned</td>
<td>2. Graft surface within 0.5 mm of the host cartilage surface</td>
<td>2. Host–graft surface was 0.5–1 mm disparate</td>
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<td>3. No or slight joint effusion</td>
<td>3. No or slight joint effusion</td>
<td>3. Mild-moderate joint effusion</td>
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</table>

C. Lameness grades
1. Grade 0 = no lameness
2. Grade 1 = mild intermittent lameness
3. Grade 2 = persistent mild weight-bearing lameness
4. Grade 3 = persistent moderate weight-bearing lameness
5. Grade 4 = persistent severe weight-bearing lameness
6. Grade 5 = persistent or intermittent non-weight-bearing lameness

D. Stifle osteophyte scoring scheme
1. Scoring was based on osteophyte formation around the joint margins; the proximal and distal poles of the patella; the lateral and medial aspects of the trochlear ridges of the distal femur; and the lateral, medial, cranial, and caudal aspects of the proximal tibia, and the fabellae. Each area was scored as having absent, moderate or severe osteophytosis which correlated to a score of 0, 1 or 2.

E. Activity level scoring
1. No activity was defined as the dog moving only to obtain food or carry out toileting.
2. Minimal levels of activity were defined as the dog going outside several times a day on lead-restricted exercise with the owner.
3. Moderate levels of activity were defined as the dog routinely playing/running for most of the day and not requiring lead restriction.
4. High levels of activity were defined as the dog performing exercise at the level of a professional canine athlete—for example completive agility or fly ball.

F. CT acquisition parameters
1. 120 mm FOV/120 kV/80 mAs/0.5 mm slice thickness

G. CT grading scheme
1. Implants were graded excellent if positioning was optimal and there was evidence of bone abutting all surfaces of the implant within the recipient bed.
2. A good grade was attributed to implants that had acceptable positioning with minimal evidence of bone resorption around the implant.
3. Implants were graded poor if there was any evidence of movement or subsidence or significant lucency surrounding the implant.