Stifle Radiograph: Lateral View

A routine stifle exam consists of a lateral view and the caudocranial (CdCr) view or the craniocaudal (CrCd) view. When performing stifle radiographs, a quality control check system is performed. The guidelines for this check are listed here for review. If your answer is yes to all of questions below, have your doctor review the images and then send them to AIS for evaluation. If you answer is no, review the material to help you obtain a diagnostic quality radiograph.

1. Check the anatomical boundaries

<table>
<thead>
<tr>
<th>Lateral</th>
<th>Anatomy Boundaries Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image.jpg" alt="Lateral View" /></td>
<td>The boundaries include the mid-diaphyseal region of the femur to the mid-diaphyseal region of the tibia or fibula.</td>
</tr>
<tr>
<td></td>
<td>The areas just proximal and distal to the stifle must be included.</td>
</tr>
</tbody>
</table>

2. Is the patient straight? Is the positioning appropriate?

<table>
<thead>
<tr>
<th>Checklist</th>
<th><img src="image2.jpg" alt="Patient View" /></th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️ Patient right side (affected side) down</td>
<td></td>
</tr>
<tr>
<td>✔️ Stifle neutral to slightly flexed position</td>
<td></td>
</tr>
<tr>
<td>✔️ Opposite limb flexed and abducted away from beam</td>
<td></td>
</tr>
<tr>
<td>✔️ Superimposition of the femoral condyle</td>
<td></td>
</tr>
<tr>
<td>✔️ Positioning devices can be used</td>
<td></td>
</tr>
<tr>
<td>✔️ Collimate to landmarks</td>
<td></td>
</tr>
<tr>
<td>✔️ Verify positioning</td>
<td></td>
</tr>
</tbody>
</table>
3. **Is the technique appropriate? Is the background black? Can you see the needed anatomy including soft tissues?**

<table>
<thead>
<tr>
<th>Lateral</th>
<th>Anatomy Needed</th>
</tr>
</thead>
</table>
| ![Diagram](image.png) | • the femur  
• femoral condyle  
• patella  
• tibia  
• fibular head  
• tibial crest  
• fabellae |

- There should be superimposition of the femoral condyle

4. **Is there a positioning marker present? Is it on the correct side of the patient, not obscuring anatomy and legible? Is the patient ID information correct on the image or file?**

5. **Do you have all of the necessary views?** Lateral and caudocranial or craniocaudal

**Quick Tips**

1. Plates or cassettes can be “split” so that a comparative of the right and left stifle or multiple views of the same stifle can be obtained. If this technique is used, the proximal and distal orientation of the limb should be the same for both views.
2. It is not acceptable to center the x-ray beam in the middle of both limbs and include both limbs on one plate.
3. If the patient is sedated/anesthetized, note type of sedation on the radiology form.
4. Verify limb is flat on the table and beam is centered on the joint space.
5. For a lateral view, flexing the stifle at 90 degrees is used for TPLO surgical planning.
6. For a routine the lateral view, the stifle is placed at a 120 degree angle.
7. Use of patient positioning devices is recommended to keep patient in the proper position. Some examples include foam wedges, sandbags and ties.
8. Wear your personal protective equipment appropriately and distance yourself from the primary beam.
9. Once reviewed, submit the study to AIS immediately to expedite interpretation and communication of results.
10. Appreciate your patient.
Stifle Radiograph: Caudocranial (CdCr) View

When performing stifle radiographs, a quality control check system is performed. The guidelines for this check are listed here for review. If your answer is yes to all of questions below, have your doctor review the images and then send them to AIS for evaluation. If you answer is no, review the material to help you obtain a diagnostic quality radiograph.

1. **Check the anatomical boundaries**

<table>
<thead>
<tr>
<th>Caudo cranial</th>
<th>Anatomy Boundaries Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Stifle Radiograph" /></td>
<td>The boundaries include the mid-diaphyseal region of the femur to the mid-diaphyseal region of the tibia. The areas just proximal and distal to the stifle must be included.</td>
</tr>
</tbody>
</table>

2. **Is the patient straight? Is the positioning appropriate?**

**Checklist**
- Sedation needed
- Patient sternal
- Cranial aspects of the stifle on the table
- Angle x-ray beam 5 to 10 degrees toward the head
- Affected limb extended so long axis of the femur is parallel to the long axis of the tibia
- Pelvis slightly rolled toward affected limb
- Positioning devices can be used
- Collimate to landmarks
- Verify positioning
3. Is the technique appropriate? Is the background black? Can you see the needed anatomy including soft tissues?

<table>
<thead>
<tr>
<th>Caudocranial</th>
<th>Anatomy Needed</th>
</tr>
</thead>
</table>
| ![Image](image.png) | - the femur  
- femoral condyle  
- patella  
- tibia  
- fibular head  
- fabellae |

- The femur and tibia/fibula should be aligned and parallel to the x-ray table

4. Is there a positioning marker present? Is it on the correct side of the patient, not obscuring anatomy and legible? Is the patient ID information correct on the image or file?

5. Do you have all of the necessary views? Lateral and caudocranial or craniocaudal

**Quick Tips**

1. Plates or cassettes can be “split” so that a comparative of the right and left stifle or multiple views of the same stifle can be obtained. If this technique is used, the proximal and distal orientation of the limb should be the same for both views.
2. It is not acceptable to center the x-ray beam in the middle of two limbs and include both limbs on one plate.
3. If the patient is sedated/anesthetized, note type of sedation on the radiology form.
4. Angle the x-ray beam 5 to 10 degrees toward the patient’s head for the appropriate image.
5. Remember to reset the angle of the beam after the image is captured.
6. Use of patient positioning devices is recommended to keep patient in the proper position. Some examples include foam wedges, sandbags and ties.
7. Wear your personal protective equipment appropriately and distance yourself from the primary beam.
8. Once reviewed, submit the study to AIS immediately to expedite interpretation and communication of results.
9. Appreciate your patient
**Stifle Radiograph: Craniocaudal (CrCd) View**

When performing stifle radiographs, a quality control check system is performed. The guidelines for this check are listed here for review. If your answer is **yes** to all of questions below, have your doctor review the images and then send them to AIS for evaluation. If you answer is **no**, review the material to help you obtain a diagnostic quality radiograph.

1. **Check the anatomical boundaries**

<table>
<thead>
<tr>
<th>Craniocaudal</th>
<th>Anatomy Boundaries Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td>The boundaries include the mid-diaphyseal region of the femur to the mid-diaphyseal region of the tibia. The areas just proximal and distal to the stifle must be included.</td>
</tr>
</tbody>
</table>

2. **Is the patient straight? Is the positioning appropriate?**

   **Checklist**
   - ✓ Sedation needed
   - ✓ Patient in dorsal recumbency
   - ✓ Caudal aspect of the stifle on the table
   - ✓ Affected limb extended so long axis of the femur is parallel to the long axis of the tibia
   - ✓ Extend coxofemoral joint to get stifle close to the table
   - ✓ Rotate femurs inward
   - ✓ Positioning devices can be used
   - ✓ Collimate to landmarks
   - ✓ Verify positioning

![Image](image2.png)
3. Is the technique appropriate? Is the background black? Can you see the needed anatomy including soft tissues?

<table>
<thead>
<tr>
<th>Craniocaudal</th>
<th>Anatomy Needed</th>
</tr>
</thead>
</table>
| ![Image](image.jpg) | • the femur  
• femoral condyle  
• patella  
• tibia  
• fibular head  
• fabellae |

• The femur and tibia/fibula should be aligned and parallel to the x-ray table

4. Is there a positioning marker present? Is it on the correct side of the patient, not obscuring anatomy and legible? Is the patient ID information correct on the image or file?

5. Do you have all of the necessary views? Lateral and caudocranial or craniocaudal

Quick Tips

1. Plates or cassettes can be “split” so that a comparative of the right and left stifle or multiple views of the same stifle can be obtained. If this technique is used, the proximal and distal orientation of the limb should be the same for both views.
2. It is not acceptable to center the x-ray beam in the middle of two limbs and include both limbs on one plate.
3. The VD of the pelvis cannot be used for this view.
4. If the patient is sedated/anesthetized, note type of sedation on the radiology form.
5. Image distortion typically occurs in this view due to distance from the table.
6. The long axis of the femur must be parallel to the long axis of the tibia.
7. Use of patient positioning devices is recommended to keep patient in the proper position. Some examples include foam wedges, sandbags and ties.
8. Wear your personal protective equipment appropriately and distance yourself from the primary beam.
9. Once reviewed, submit the study to AIS immediately to expedite interpretation and communication of results.
10. Appreciate your patient