Getting Started

• Knowledge of normal anatomy is PARAMOUNT!
• Knowledge of radiographic conventions is necessary
• Consistency is your friend
• Learning this now will make life in the clinic (and ultimately practice) soooo much easier!
Radiographic Positioning
Naming the Views

• Can be confusing
  – Take the time to understand or equine radiology will remain frustrating and difficult to understand

• YOU SHOULD BE ABLE TO:
  – IDENTIFY THE VIEW
  – DESCRIBE HOW IT WAS POSITIONED
  – IDENTIFY MEDIAL AND LATERAL BORDERS
    • and where markers should be located
Radiographic Positioning
Naming the Views

• **ALL** radiographs are named using the direction of the beam as it leaves the x-ray machine ---> passes through the patient ---> reaches the film

• There is a convention for extremities
  – Proximal to and including the radiocarpal and tibiotarsal joints - use the terms CRANIAL and CAUDAL
  – From the carpus and tarsus distal to the radiocarpal and tibiotarsal joints use the terms DORSAL and PALMAR (forelimb) or PLANTAR (hindlimb)
  – PROXIMAL and DISTAL are also used when describing direction on the extremity
# Radiographic Positioning

## Forelimb

<table>
<thead>
<tr>
<th>Forelimb</th>
<th>Views</th>
<th>Views Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoulder</td>
<td>1 view</td>
<td>Lat</td>
</tr>
<tr>
<td>Elbow</td>
<td>2 views</td>
<td>CrCd, Lat</td>
</tr>
<tr>
<td>Carpus</td>
<td>5 views</td>
<td>DP, Lat, Flex Lat, DLO, DMO</td>
</tr>
</tbody>
</table>
Shoulder
Lateral view
(Medial to lateral)
Elbow
CC or CrCd view
(Cranial to caudal)
Elbow

Lateral view
(Medial to lateral)
Carpus
DP view
(Dorsal to Palmar)

Anatomy
Lateral - Accessory carpal bone
Carpus
Lateral view
(Lateral to Medial)
Carpus

Flexed Lateral View
(Lateral to Medial)

Anatomy
Intermediate carpal bone is more proximal than radial carpal bone
Medial Lateral Marker INCORRECT
Should be at LATERAL aspect of limb (palmar)
60° off dorsal
OR
30° off lateral

Anatomy
Lateral - Fourth carpal bone and MC IV have a “stairstep” appearance
- Accessory carpal bone is NOT superimposed with the carpus
**Anatomy**

Medial - Second carpal bone and MC II are superimposed
Accessory carpal bone is superimposed with the carpus
## Radiographic Positioning

### Hindlimb

<table>
<thead>
<tr>
<th>Hindlimb</th>
<th>Views</th>
<th>Views Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hip</td>
<td></td>
<td>Requires anesthesia</td>
</tr>
<tr>
<td>Stifle</td>
<td>3</td>
<td>CdCr, Lat, DMO</td>
</tr>
<tr>
<td>Hock</td>
<td>4</td>
<td>DP, Lat, DLO, DMO</td>
</tr>
</tbody>
</table>
Stifle
CC or CdCr view
(Caudal to Cranial)

Anatomy
Lateral - Patella, Fibula
Medial - Medial tibial eminence is larger
Stifle
Lateral view
(Lateral to Medial)

Cassette is too low in this example. You must really push cassette high into flank!
Tarsus (Hock)
DP view
(Dorsal to plantar)

**Anatomy**
Lateral - Calcaneus
Tarsus (Hock)
Lateral view
(Lateral to Medial)

Marker is DORSAL
Tarsus (Hock)

DLO view
(Dorsolateral - plantaromedial oblique)

Anatomy

Lateral - Fourth tarsal bone and MC IV have a “stairstep” appearance
- Calcaneus is NOT superimposed with the tarsus
Medial - Medial trochlea does NOT have a distal “hook”
Medial - Second tarsal bone and MT II superimposed
Lateral - Large “hook” distal aspect of lateral trochlea
Radiographic Positioning
Either Limb

<table>
<thead>
<tr>
<th>Location</th>
<th>Views</th>
<th>Positioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metatarsus</td>
<td>4</td>
<td>DP, Lat, DLO, DMO</td>
</tr>
<tr>
<td>Metacarpus</td>
<td>4</td>
<td>DP, Lat, DLO, DMO</td>
</tr>
<tr>
<td>Fetlock</td>
<td>5</td>
<td>DP, Lat, flex lat, DLO, DMO</td>
</tr>
<tr>
<td>Pastern</td>
<td>4</td>
<td>DP, Lat, DLO, DMO</td>
</tr>
<tr>
<td>Foot (P3)</td>
<td>2</td>
<td>DP, Lat</td>
</tr>
<tr>
<td>Navicular bone</td>
<td>5</td>
<td>60ºDP, Lat, 0ºDP, 30ºDP, DP-DDO</td>
</tr>
</tbody>
</table>
Metacarpophalangeal Joint (Fetlock)  
DP  
(Dorsal to palmar)
Metacarpophalangeal Joint (Fetlock)

Lateral
(Lateral to Medial)

Marker is DORSAL
Flexed Lateral views are typically made for the forelimbs ONLY.

**Anatomy**
The sagittal ridge is less opaque and more dorsally located than the medial and lateral condyles.
Metacarpophalangeal Joint (Fetlock)

DLO

(Dorsolateral to palmaromedial oblique)

35° from dorsal
OR
55° from lateral

Marker INCORRECT
Should be at LATERAL aspect of limb (palmar)
Metacarpophalangeal Joint (Fetlock)  
**DMO**  
(Dorsomedial to palmarolateral oblique)

35° from dorsal  
OR  
55° from medial
Metacarpophalangeal Bones

DP
Dorsal to palmar

Study is positioned the same way for Metatarsophalangeal bones
Metacarpophalangeal Bones
Lateral
Lateral to medial

Study is positioned the same way for Metatarsophalangeal bones
Metacarpophalangeal Bones

DLO

(Dorsolateral to palmaromedial oblique)

“Stairstep” between C4 and MC IV - has to be a DLO view

Study is positioned the same way for Metatarsophalangeal bones
Metacarpophalangeal Bones

DMO

(Dorsomedial to palmarolateral oblique)

Study is positioned the same way for Metatarsophalangeal bones.

NO Stairstep” between C2 and MC II - has to be a DMO view.
Distal Phalanx and Navicular Bone

60° DP
(Dorsal to palmar oblique)

This view is also used for the 60° DP of the navicular bone. Increased collimation and a darker technique is required.
Distal Phalanx and Navicular Bone

Lateral

(Lateral to medial)
Distal Phalanx and Navicular Bone

30 - 45° DP

Upright pedal view
Navicular Bone
Skyline
(Dorsoproximal to palmarodistal oblique)

Generally move the heel to the back edge of the cassette holder