

QUICK-REFERENCE FIELD BINDER

X-Ray Positioning

A friendly, step-by-step guide for Veterinary Assistants

Grab it, flip to the view you need, and follow the steps. Every page shows where to put the patient, where to center the beam, what to collimate, and the mistakes to skip. Built for the team at Cuddle Paws.

Built from the clinic's Radiographic Positioning handbook (v2.0, 2015), reworked for Veterinary Assistants with example films.

DOCUMENT	EDITION	AUDIENCE
CPV-RAD-POS-001	Rev. 2	Veterinary Assistants & RVTs

Contents & how to use

[Start here](#)

This binder lives at the X-ray station. Each view gets one page: patient position, where to center, what to collimate, breathing, plus the tips and traps. Two pages cover the rules that apply to every film — read those first.

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How to read the diagrams

-  **Crosshair** — center the X-ray beam right here.
-  **Dashed box** — open the collimator only this wide.
-  **Purple arrow** — pull or move the patient this way.
-  **Purple block** — place a foam wedge / positioning aid.

● GOLDEN HABIT

When in doubt: **measure, center, collimate, label, two views**. That order keeps you out of trouble on almost any study.

The 6 golden rules of positioning

Memorize these

These six apply to **every single radiograph**, no matter the patient or the view. Get these automatic and the rest of the binder is just centering points.

1

Two views, 90° apart

Always take at least two views at right angles — a lateral plus a VD/DV, or a mediolateral plus a craniocaudal. One view is never enough to call anything.

2

Measure the thickest part

Caliper the patient at the thickest point of the area you're shooting, in the position you'll shoot it. Read that number off the technique chart to set kVp / mAs.

3

Center on the target

The middle of the beam goes on the exact landmark for that view. Off-center films distort and clip the area of interest.

4

Collimate tight

Open the light field only to what you need. Tight collimation = sharper detail, less scatter, and a safer room for everyone.

5

Capture the whole bone or joint

For a long bone include the joint above and below. For a joint include the bone above and below. If a landmark is missing, you re-shoot.

6

Label every image

Patient ID, date, and a Left/Right marker in the field — every time. An unlabeled film can be a useless film.

Radiation safety basics

Non-negotiable

- **PRINCIPLE** ALARA — keep dose As Low As Reasonably Achievable

- **IN THE ROOM** Only essential staff, fully gowned

- 1 Nothing in the primary beam — ever.** No hands, no fingers. Use ties, sandbags, foam, troughs, and sedation instead of holding.
- 2 Wear your lead.** Wrap-around gown + thyroid shield every exposure; leaded gloves if hands could be near the field. Check lead for cracks before use.
- 3 Wear your dosimetry badge** at collar level, outside the apron. Never share it or take it home; turn it in on schedule.
- 4 Time, distance, shielding.** Step back, be quick, stay behind the barrier/apron.
- 5 Call it out.** Announce “X-ray!” and confirm the doorway is clear before you expose.

● PRO TIP

Pregnant staff should not restrain patients or be in the room during exposure — follow clinic policy and speak up early. There's no judgment in stepping out.

● AVOID THIS

Holding a patient by hand “just for one quick shot.” If a patient truly can't be positioned with aids, sedation is the answer — ask the doctor.

Lead-up checklist

- ☐ Wrap-around lead gown
- ☐ Thyroid shield
- ☐ Leaded gloves (if hands near field)
- ☐ Dosimetry badge at collar
- ☐ Door clear, “X-ray!” called
- ☐ Collimated to area of interest

Measure & set technique

Every patient

- **TOOL** Calipers — measure thickest part, in position
- **THEN** Read kVp / mAs off your technique chart

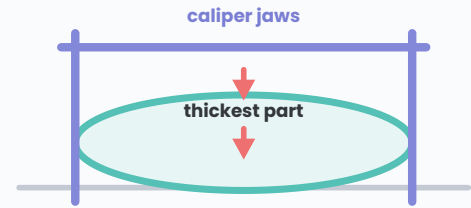
- 1 Position the patient for the view first, then caliper the **thickest part** of the region being imaged.
- 2 Find that measurement on your machine's technique chart to get the exposure settings (charts are machine-specific — use your clinic's).
- 3 Use a **grid** for body parts thicker than ~10–12 cm to cut scatter; skip the grid for thin extremities.
- 4 Place the **L / R marker** in the beam and confirm patient details in the imaging software before exposing.
- 5 Keep the standard distance set on your unit (often 100 cm / 40" source-to-detector).

PRO TIP

Two patients of the same breed can measure very differently. Always re-measure — never reuse the last patient's settings from memory.

AVOID THIS

Guessing technique by eye. Under-measuring gives a grainy, too-light film; over-measuring gives a dark one. The caliper number is your friend.



■ caliper → measure across the thickest point

Chest — 3 view

R lat • L lat • VD

POSITION Right lateral, left lateral, then VD

CENTER Caudal border of the scapula

COLLIMATE Thoracic inlet → just past the diaphragm

BREATHE Expose on **inspiration**

WHAT A CORRECT FILM LOOKS LIKE



Right lateral chest • inspiration



VD chest • centered on caudal scapula

Lateral views (R & L) ONE OF EACH

- 1 Place the patient in lateral recumbency on the detector.
- 2 Pull **both front legs forward (cranially)**, clear of the sternum, and tie/hold.
- 3 A foam wedge under the sternum lines sternum up with the spine and stops rotation.
- 4 Center on the caudal scapula; expose at peak inspiration.
- 5 Repeat for the opposite side.

VD view ON THE BACK

- 1 Settle the patient on its back in a trough; pull front legs forward.
- 2 Keep the head straight so the body is dead straight.
- 3 Center on the midline at the caudal scapula; expose on inspiration.

PRO TIP

Lungs read best fully inflated — time the breath and shoot at the top of an inspiration.

AVOID THIS

Shooting on expiration (crowded white lungs), front legs left over the chest, or clipping the diaphragm.

IN PLAIN WORDS

Lay it on its side, pull the front legs forward, and snap as the chest puffs UP. Do the right side, the left side, then one on its back.

Chest — 3 view

R lat • L lat • VD



Right lateral chest •
inspiration

Chest — 3 view

R lat • L lat • VD



VD chest • centered on
caudal scapula

Chest — 4 view

Adds DV for cardiac

POSITION R lat, L lat, VD **and** DV

WHEN Any cardiac patient

CENTER Caudal border of the scapula

BREATHE Expose on **inspiration**

Same 3 views as above

- 1 Take the right lateral, left lateral and VD exactly as on the 3-view page.

Add a DV view ON THE CHEST

- 1 Place the patient in sternal recumbency (lying on the chest).
- 2 Let the front legs relax, bent next to the body.
- 3 Hold the head straight and down, close to the table top.
- 4 Center on the caudal scapula; expose on inspiration.

PRO TIP

The DV is gentler on a sick heart patient and often shows the heart silhouette better. For a truly dyspneic patient, a DV can replace the VD — never wrestle them onto their back.

AVOID THIS

Forcing an unstable cardiac patient into dorsal recumbency, or skipping the DV the doctor asked for.

WHAT A CORRECT FILM LOOKS LIKE



VD chest · on the back, in a trough



DV chest · sternal — better for the heart

IN PLAIN WORDS

Same as the 3-view, plus one more with the pet lying on its chest (belly-down). The extra one is for heart cases.

Chest — 4 view

Adds DV for cardiac



VD chest · on the back, in a trough

Chest — 4 view

Adds DV for cardiac



DV chest · sternal — better
for the heart

Abdomen — 2 view

Right lateral + VD

POSITION Right lateral and VD

COVER Diaphragm → hip joints

LEGS Extend the hind legs caudally

BREATHE Expose on **expiration**

Right lateral

- 1 Place the patient in right lateral recumbency.
- 2 Extend the **hind legs back** and separate them slightly so the thighs don't cover the belly.
- 3 Foam under the spine keeps it parallel; line up the rib heads and ilial wings.
- 4 Include the diaphragm down to the hip joints; expose on expiration.

VD ON THE BACK

- 1 Place the patient in dorsal recumbency — with or without a trough, depending on body shape.
- 2 Straighten the spine on the midline.
- 3 Center between xiphoid and pubis; expose on expiration.

PRO TIP

Expiration gives the organs room and the cleanest detail. A fasted patient with an empty colon reads even better.

AVOID THIS

Shooting on inspiration, missing the diaphragm or hips, or a rotated (twisted) patient.

WHAT A CORRECT FILM LOOKS LIKE



Right lateral abdomen · diaphragm to hips



VD abdomen · spine straight on midline

IN PLAIN WORDS

On its right side with the back legs pulled back, then on its back. Snap both as the belly sinks DOWN (breathing out).

Abdomen — 2 view

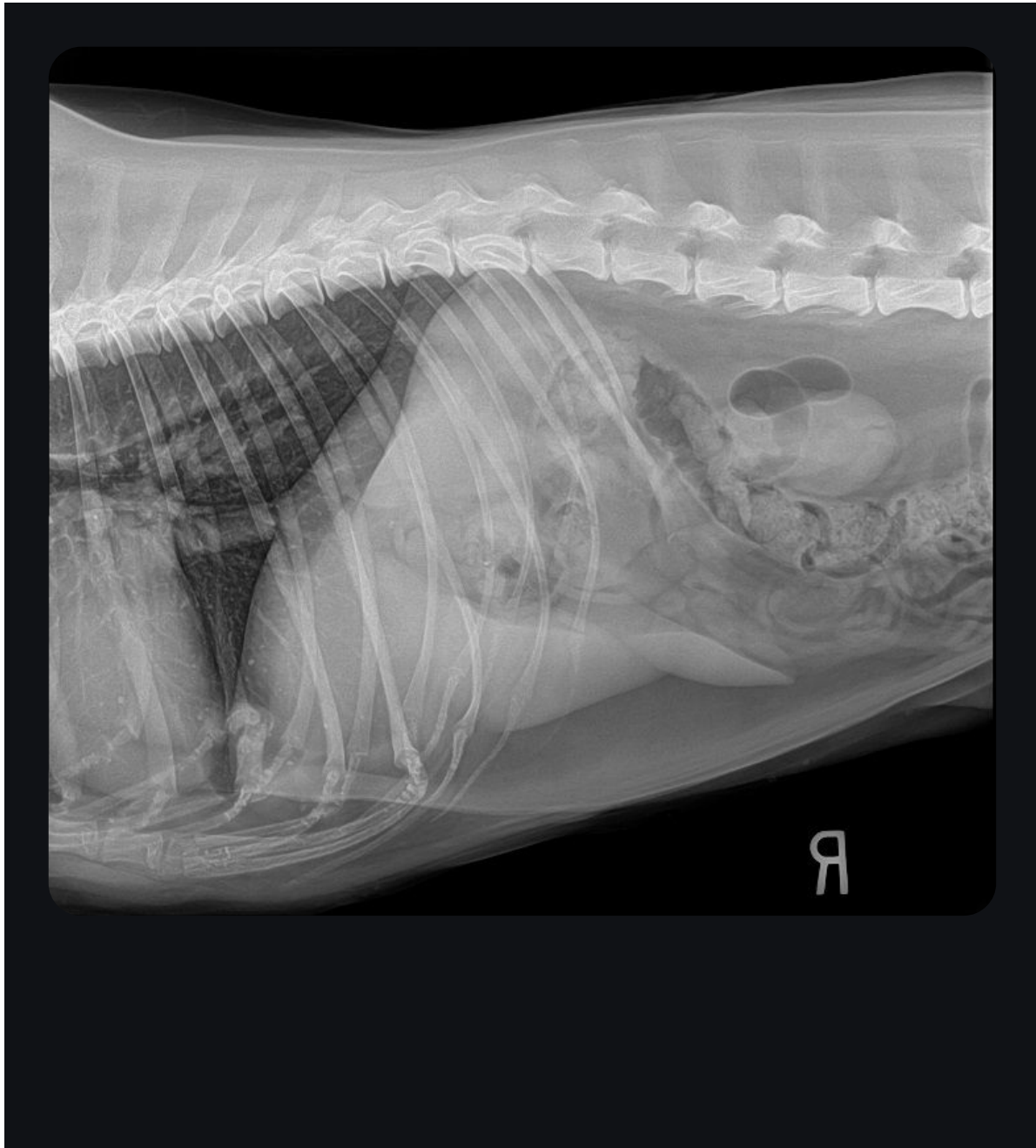
Right lateral + VD



VD abdomen · spine straight
on midline

Abdomen — 2 view

Right lateral + VD



Right lateral abdomen ·
diaphragm to hips

Abdomen — 3 view

Vomiting / foreign body

ORDER Left lateral → VD → right lateral

WHEN Vomiting patient or suspected foreign body

COVER Diaphragm → hip joints

BREATHE Expose on **expiration**

Why three views

- 1 A foreign body or gas pattern can hide on one view — the extra lateral catches it.
- 2 Take them in this order: **left lateral, then VD, then right lateral**.

Each view

- 1 Position exactly like the 2-view abdomen: hind legs back, diaphragm-to-hips, expiration.
- 2 Gas and fluid shift between the left and right laterals — that movement is the diagnostic clue.

PRO TIP

Shooting the laterals in a set order (and labeling each L or R) lets the doctor track how gas and contents move — key for finding obstructions.

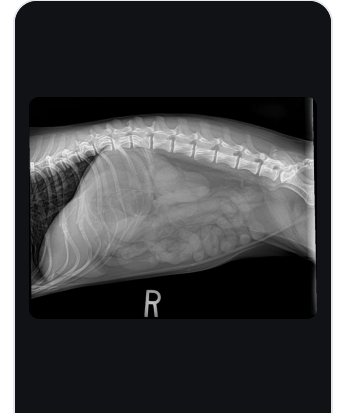
AVOID THIS

Mixing up which lateral is which, or skipping the second lateral to save time.

WHAT A CORRECT FILM LOOKS LIKE



Lateral abdomen · one of the L/R pair



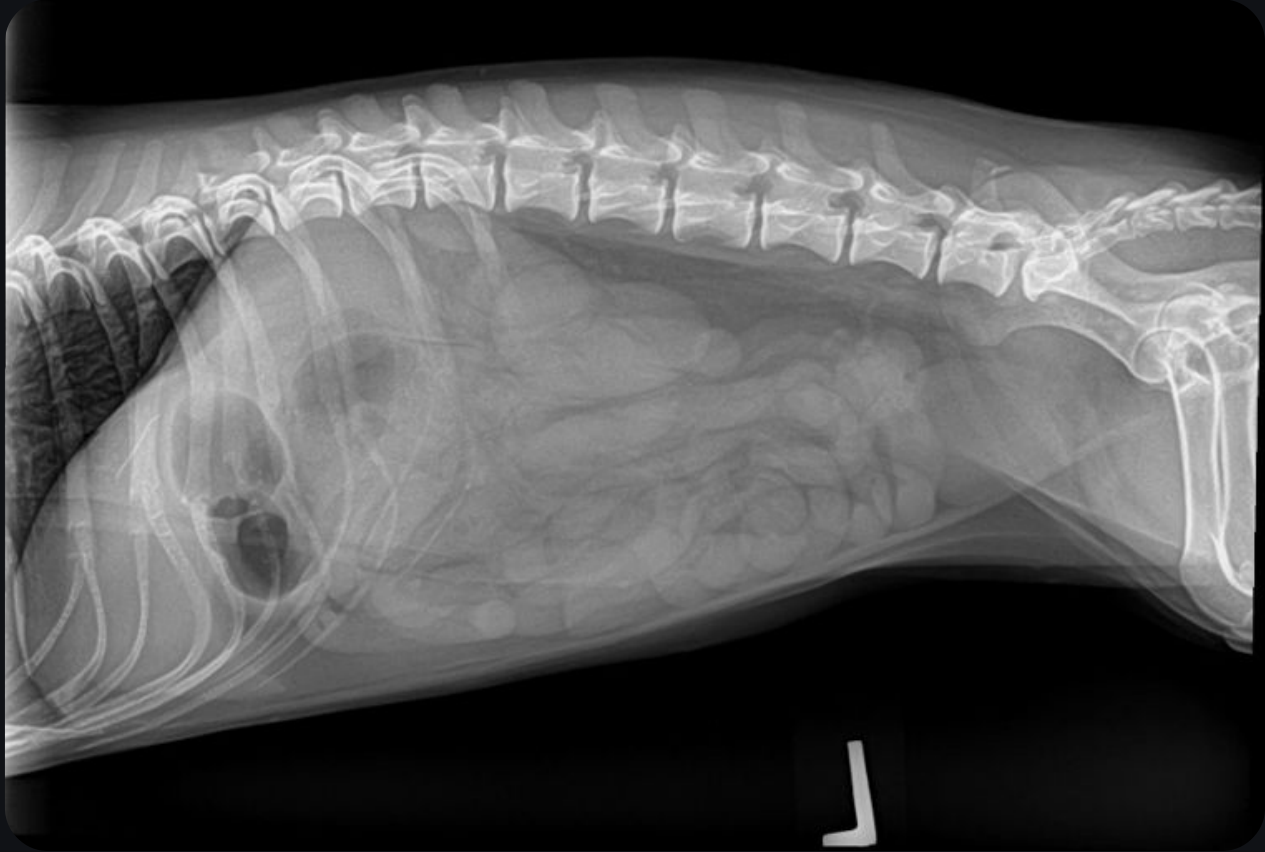
VD abdomen · taken between the laterals

IN PLAIN WORDS

Same as the 2-view but add an extra side shot (one left, one right). For a vomiting pet or a swallowed object.

Abdomen — 3 view

Vomiting / foreign body



Lateral abdomen · one of
the I / R pair

Abdomen — 3 view

Vomiting / foreign body



VD abdomen · taken
between the laterals

Abdomen — “Butt shot”

Add-on for stones

POSITION Right lateral recumbency

WHEN Patient has bladder/urethral stones

● **KEY** Light **behind** the rear end

AIM Capture the full urethra

Males LEGS UP

- 1 Place the patient in right lateral recumbency.
- 2 Pull the **back legs up toward the belly**.
- 3 Make sure there is light (open field) behind the rear so the whole urethra is on the film.

Females LEGS DOWN

- 1 Place the patient in right lateral recumbency.
- 2 Pull the **back legs straight down**.
- 3 Again, keep light behind the rear end to capture the entire urethra.

● PRO TIP

This extra view exists to catch stones lodged in the urethra, which the standard abdomen series can miss. Always do it *in addition to* the regular series, not instead.

● AVOID THIS

Legs in the wrong direction for the sex, or the rear end not fully in the light field.

WHAT A CORRECT FILM LOOKS LIKE



Right lateral “butt shot” · light behind the rear

IN PLAIN WORDS

Extra shot for stones. On the right side: pull the legs UP for boys, DOWN for girls, and keep the whole rear end in the picture.

Abdomen — “Butt shot”

Add-on for stones



Right lateral “butt shot” · light behind the rear

Shoulder

Lateral + CrCd

VIEWS Mediolateral + craniocaudal

CENTER On the shoulder joint

COLLIMATE Include the joint, bone above & below

AFFECTED Side of interest goes down

Lateral AFFECTED SIDE DOWN

- 1 Place the patient in lateral recumbency, affected side down.
- 2 Pull the affected leg **cranially**, out of the sternum and trachea.
- 3 Pull the top leg dorsally next to the body so the shoulders don't overlap.

Craniocaudal ON THE BACK

- 1 Place the patient in dorsal recumbency in a trough.
- 2 Pull the affected leg cranially (forward).
- 3 Center on the shoulder.

PRO TIP

Getting the top (unaffected) leg out of the way is the whole game here — otherwise the two shoulder joints superimpose and hide the joint you want.

AVOID THIS

Letting the shoulders overlap, or leaving the leg in the trachea/sternum on the lateral.

WHAT A CORRECT FILM LOOKS LIKE



Lateral shoulder · affected side down



Craniocaudal shoulder · on the back, leg forward

IN PLAIN WORDS

On its side, bad leg DOWN and pulled forward, top leg pulled up out of the way. Then one on its back with the leg forward.

Shoulder

Lateral + CrCd



Lateral shoulder · affected
side down

Shoulder

Lateral + CrCd



Craniocaudal shoulder · on
the back, leg forward

Shoulder — Skyline

Special view

POSITION Sternal recumbency

● **TARGET** Bicipital / intertubercular groove

HEAD Turned away from the limb

AIM Skyline of the shoulder

Skyline shoulder

- 1 Place the patient in sternal recumbency.
- 2 Turn the skull to the side **away** from the affected limb.
- 3 Flex the elbow and pull it caudally, toward the shoulder joint.
- 4 Abduct the radius and ulna away from the shoulder joint, then shoot the skyline.

● PRO TIP

This view profiles the groove on the front of the shoulder — useful for hunting bicipital tendon problems and OCD lesions the standard views flatten out.

● AVOID THIS

Head turned the wrong way, or the elbow not flexed/pulled back enough to clear the joint.

WHAT A CORRECT FILM LOOKS LIKE



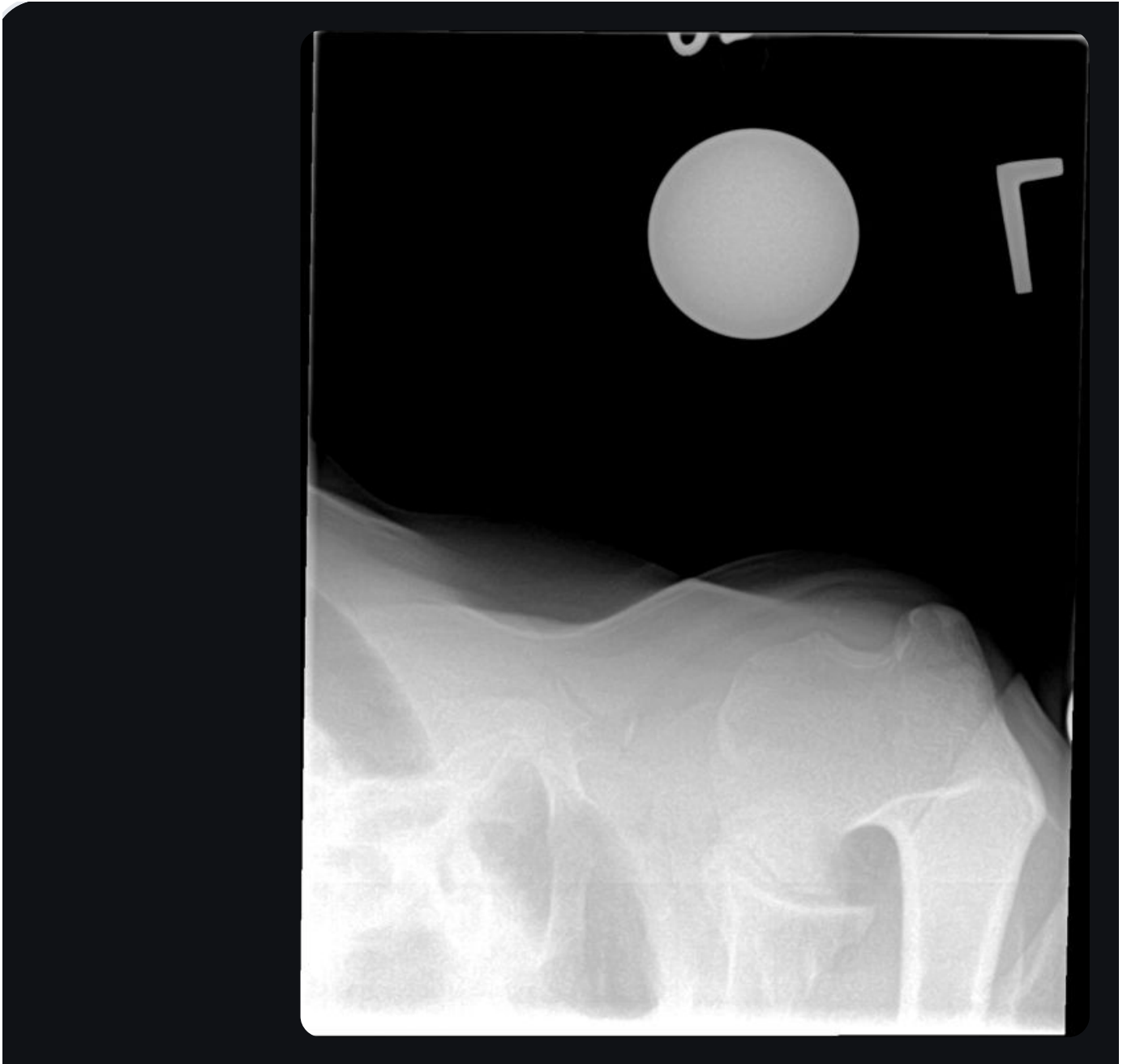
Skyline shoulder · groove in profile

IN PLAIN WORDS

On its chest, head turned away from the bad leg, elbow bent and pulled back. A special groove view.

Shoulder — Skyline

Special view



Skyline shoulder · groove in profile

Scapula

Lateral + CrCd

VIEWS Mediolateral + craniocaudal

CENTER On the scapula

COLLIMATE Whole shoulder blade

AFFECTED Side of interest down

Lateral AFFECTED SIDE DOWN

- 1 Place the patient with the affected side down.
- 2 At the same time, **push the affected leg dorsal** and **pull the unaffected leg ventral**.
- 3 That opposite motion stops the two scapulae from overlapping.

Craniocaudal ON THE BACK

- 1 Place the patient in dorsal recumbency in a trough.
- 2 Extend the affected leg cranially.
- 3 Center on the scapula.

PRO TIP

Think push-one-up, pull-one-down: separating the shoulder blades is the only way to see the affected scapula cleanly on the lateral.

AVOID THIS

Both scapulae stacked on top of each other, or the body rotated off square.

WHAT A CORRECT FILM LOOKS LIKE



Lateral scapula · legs split apart



Craniocaudal scapula · centered on the blade

IN PLAIN WORDS

On its side, bad leg DOWN. Push the bad leg up and pull the good leg down so the shoulder blades don't overlap.

Scapula

Lateral + CrCd



Lateral scapula • legs split
apart

Scapula

Lateral + CrCd



Craniocaudal scapula ·
centered on the blade

Humerus

Lateral + CrCd

VIEWS Mediolateral + craniocaudal

CENTER Mid-shaft of the humerus

COLLIMATE Shoulder above → elbow below

AFFECTED Side of interest down

Lateral AFFECTED SIDE DOWN

- 1 Place the patient in lateral recumbency, affected side down.
- 2 Pull the affected leg **cranially**, out of the sternum and trachea.
- 3 Pull the top leg dorsally so the shoulder joints don't superimpose.

Craniocaudal ON THE BACK

- 1 Place the patient in dorsal recumbency in a trough, with the shoulder joint **out** of the trough.
- 2 Pull the affected leg down, as parallel to the table as possible.
- 3 Abduct the elbow slightly away from the body.

PRO TIP

Frame so you can see the shoulder *and* elbow in the same image — the doctor needs both joints to judge a long-bone film.

AVOID THIS

Clipping the shoulder or elbow, or a trough line across the bone (keep the shoulder out of the trough).

WHAT A CORRECT FILM LOOKS LIKE



Lateral humerus · both joints included



Craniocaudal humerus · leg parallel to the table

IN PLAIN WORDS

On its side, bad leg down and pulled forward; then on its back with the leg pulled down. Always show the shoulder AND the elbow.

Humerus

Lateral + CrCd



Lateral humerus · both joints included

Humerus

Lateral + CrCd



Cranio-caudal humerus •
leg parallel to the table

Elbow

4 views

VIEWS Lateral, flexed lateral, CrCd, oblique

CENTER On the elbow joint

COLLIMATE Include bone above & below

HEAD Held back for the CrCd

Lateral & flexed lateral AFFECTED SIDE DOWN

- 1 Place the patient in lateral recumbency, affected side down.
- 2 Shoot one lateral with the elbow in a neutral position, then a second with the elbow flexed.

CrCd & medial oblique ON THE CHEST

- 1 Place the patient in sternal recumbency.
- 2 Extend the affected leg straight out, holding the head **back (caudally)**.
- 3 Take a straight craniocaudal and a medial oblique.

PRO TIP

The flexed lateral opens up the anconeal process, and the oblique catches the medial coronoid — both common elbow trouble spots, so don't skip them.

AVOID THIS

Only taking one lateral, or the head left forward blocking a clean CrCd.

WHAT A CORRECT FILM LOOKS LIKE



Lateral elbow · neutral



Craniocaudal elbow · leg extended, head back

IN PLAIN WORDS

On its side (bad leg down) for two shots, then on its chest with the leg out and the head held back. Four shots in total.

Elbow

4 views



Cranio-caudal elbow • leg
extended, head back

Elbow

4 views



Lateral elbow • neutral

Radius / Ulna

Lateral + CrCd

VIEWS Mediolateral + craniocaudal

CENTER Mid-shaft

COLLIMATE Elbow above → carpus below

AFFECTED Side of interest down

Lateral AFFECTED SIDE DOWN

- 1 Place the patient in lateral recumbency, affected side down.
- 2 Keep the humerus perpendicular to the body and the radius/ulna **parallel** to the body.
- 3 Hold position with tape on the foot.

Craniocaudal ON THE CHEST

- 1 Place the patient in sternal recumbency.
- 2 Extend the affected leg straight out, holding the head back (caudally).
- 3 Center on the mid-shaft.

PRO TIP

Include the elbow and the carpus in the same film — for any long bone the doctor reads the joint above and the joint below for alignment.

AVOID THIS

A rotated (oblique) forearm, or clipping the elbow or carpus off the edge.

WHAT A CORRECT FILM LOOKS LIKE



Lateral radius/ulna · forearm parallel to body



Craniocaudal radius/ulna · leg extended straight

IN PLAIN WORDS

On its side, bad leg down and parallel to the body; then on its chest with the leg out. Show the elbow AND the wrist.

Radius / Ulna

Lateral + CrCd



Lateral radius/ulna ·
forearm parallel to body

Radius / Ulna

Lateral + CrCd



Craniocaudal radius/ulna •
leg extended straight

Carpus

Lateral + CrCd

VIEWS Mediolateral + craniocaudal

CENTER On the carpus

COLLIMATE Tight to the carpus

AFFECTED Affected leg down

Lateral AFFECTED LEG DOWN

- 1 Place the patient in lateral recumbency with the affected leg down.
- 2 Extend the carpus naturally; tape to hold.

Craniocaudal ON THE CHEST

- 1 Place the patient in sternal recumbency.
- 2 Extend the affected leg out straight, toes forward.
- 3 Center on the carpus and collimate tight.

PRO TIP

Carpus and below are thin — drop the grid and use a low technique, or the film will be far too dark.

AVOID THIS

Using a grid on a thin extremity, or over-collimating and clipping a row of carpal bones.

WHAT A CORRECT FILM LOOKS LIKE



Lateral carpus · affected leg down



Craniocaudal carpus · leg extended straight

IN PLAIN WORDS

On its side, bad leg down; then on its chest with the leg out straight. It's thin — use a low setting and no grid.

Carpus

Lateral + CrCd



Lateral carpus · affected leg down

Carpus

Lateral + CrCd



Cranio-caudal carpus · leg
extended straight

Carpus & Foot

CrCd + spread-toe

VIEWS Craniocaudal + spread-toe lateral

COVER Carpus through the toes

AFFECTED Affected side down

• **TRICK** Tape / cotton to spread toes

Craniocaudal ON THE CHEST

- 1 Place the patient in sternal recumbency.
- 2 Extend the affected leg out straight.
- 3 Collimate to include the carpus through the toes.

Spread-toe lateral AFFECTED SIDE DOWN

- 1 Place the patient in lateral recumbency, affected side down.
- 2 Pull the unaffected leg cranially, out of the way.
- 3 Use tape or cotton balls to **spread the toes apart** so they don't overlap.
- 4 Collimate to include the whole carpus through the toes.

• PRO TIP

Spreading the toes is what makes individual digits and P3s readable — overlapping toes hide fractures and lytic lesions.

• AVOID THIS

Toes left bunched together, or the unaffected leg superimposed on the foot.

WHAT A CORRECT FILM LOOKS LIKE



Craniocaudal carpus & foot · leg extended



Spread-toe lateral · toes taped apart

IN PLAIN WORDS

On its chest with the leg out, then on its side with the toes taped apart so they don't overlap.

Carpus & Foot

CrCd + spread-toe



Cranio-caudal carpus & foot · leg extended

Carpus & Foot

CrCd + spread-toe



Spread-toe lateral • toes
taped apart

Pelvis

Lateral + VD extended

POSITION Lateral and extended-leg VD

CENTER Midline at the hips

COVER Iliac wings → through the stifles

OFTEN Sedation for a clean VD

Lateral AFFECTED SIDE DOWN

- 1 Place the patient in lateral recumbency, affected side down.
- 2 Extend the **top** leg caudally, keeping its femur parallel to the table.
- 3 Extend the **bottom** leg cranially so the femoral heads don't overlap.

Craniocaudal (extended VD) ON THE BACK

- 1 Place the torso in dorsal recumbency in a trough, pelvis dead straight.
- 2 Holding around each tarsus, push the legs cranially and rotate them inward until the stifles nearly touch.
- 3 Keep that inward rotation and extend the legs so the femurs are parallel to the table.

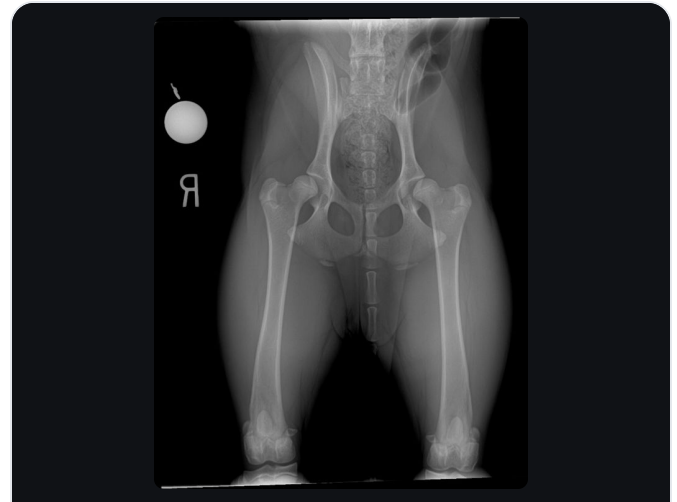
PRO TIP

Symmetry check on the VD: the two obturator foramina and the iliac wings should look equal. Any difference means the pelvis is rotated — re-square and repeat.

AVOID THIS

A rotated pelvis, femurs not parallel, or attempting the extended VD on a painful, awake patient.

WHAT A CORRECT FILM LOOKS LIKE



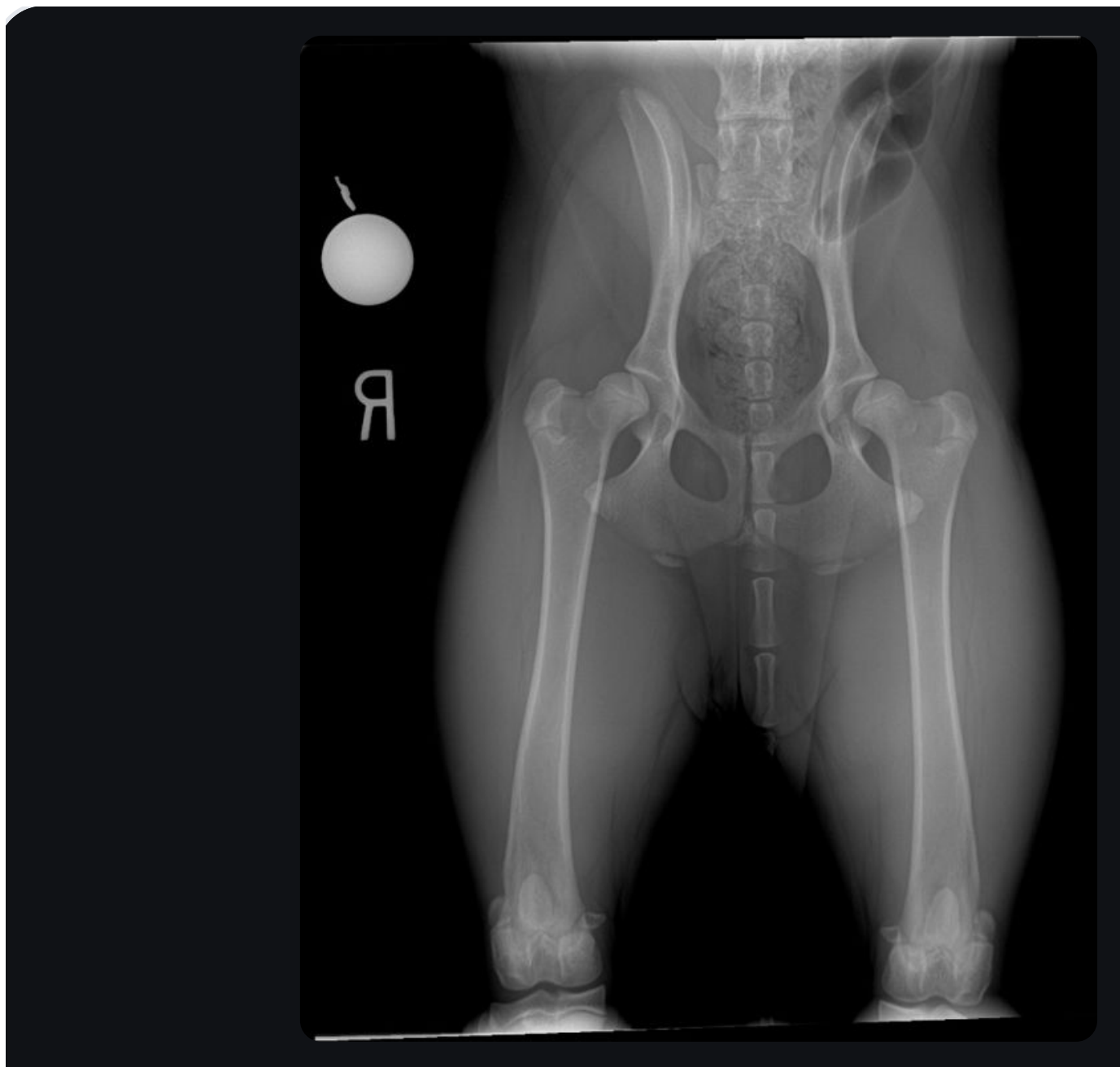
Extended VD pelvis · symmetric, femurs parallel

IN PLAIN WORDS

On its side (legs split front/back), then on its back with the legs pulled straight, knees turned IN and hocks tied. Usually needs sedation.

Pelvis

Lateral + VD extended



Extended VD pelvis · symmetric, femurs parallel

OFA & OFA (German)

Screening combos

• **OFA** Flexed-lateral elbows + VD pelvis

• **GERMAN** Lateral shoulders + VD pelvis

REQUIRED Sedation for the pelvis

SEE Elbow / shoulder / pelvis pages

OFA

- 1 This is a screening set: **flexed-lateral elbows** plus a **VD extended pelvis**.
- 2 Position the elbows per the Elbow page and the pelvis per the Pelvis page.

OFA (German)

- 1 The German screening set swaps in **lateral shoulders** plus a **VD extended pelvis**.
- 2 Position the shoulders per the Shoulder page and the pelvis per the Pelvis page.

PRO TIP

These go to a registry, so positioning and labeling have to be textbook. Confirm the exact protocol the doctor / registry wants before you sedate and shoot.

AVOID THIS

Submitting a slightly rotated pelvis or the wrong joint set for the registry being used.

WHAT A CORRECT FILM LOOKS LIKE



Flexed-lateral elbow · OFA set



Lateral shoulder · German set



VD extended pelvis · shared by both

IN PLAIN WORDS

Screening set: bent elbows (or shoulders) plus the on-its-back pelvis. It has to be textbook — sedate first.

OFA & OFA (German)

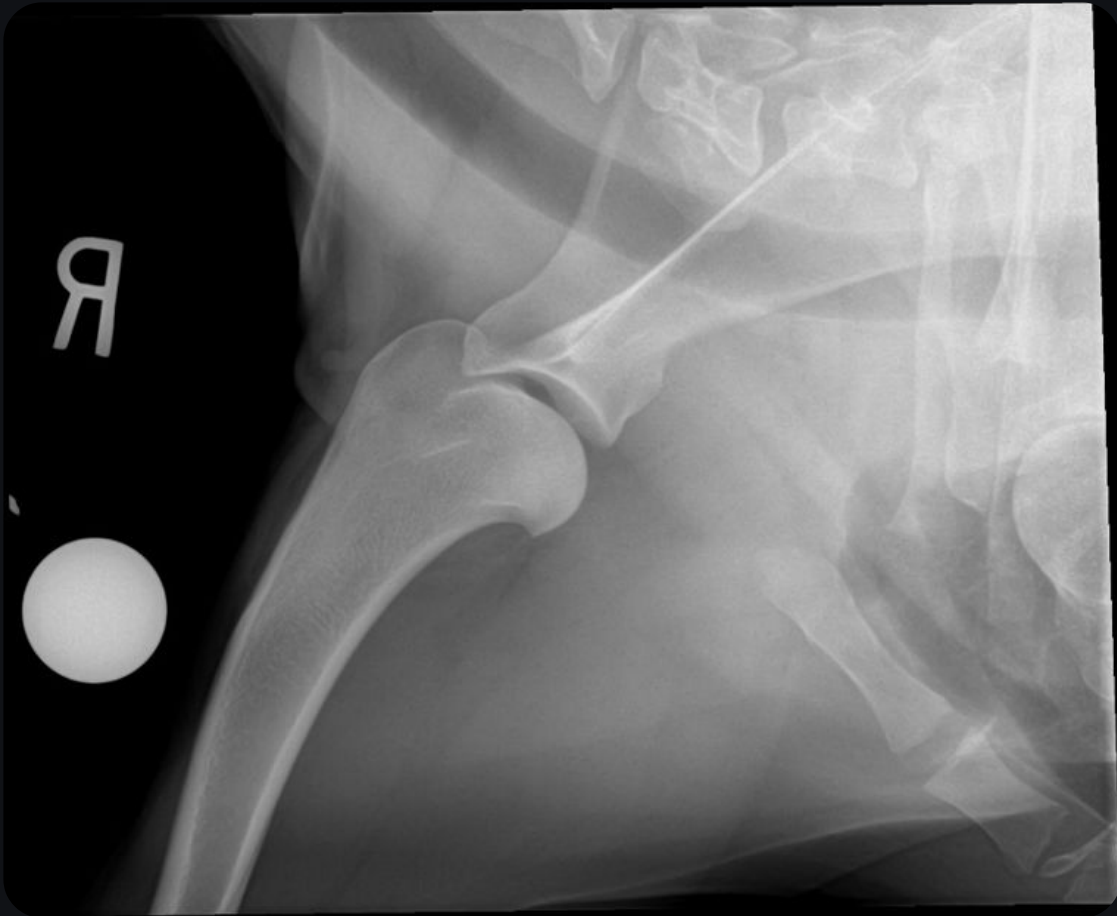
Screening combos



Flexed-lateral elbow · OFA
set

OFA & OFA (German)

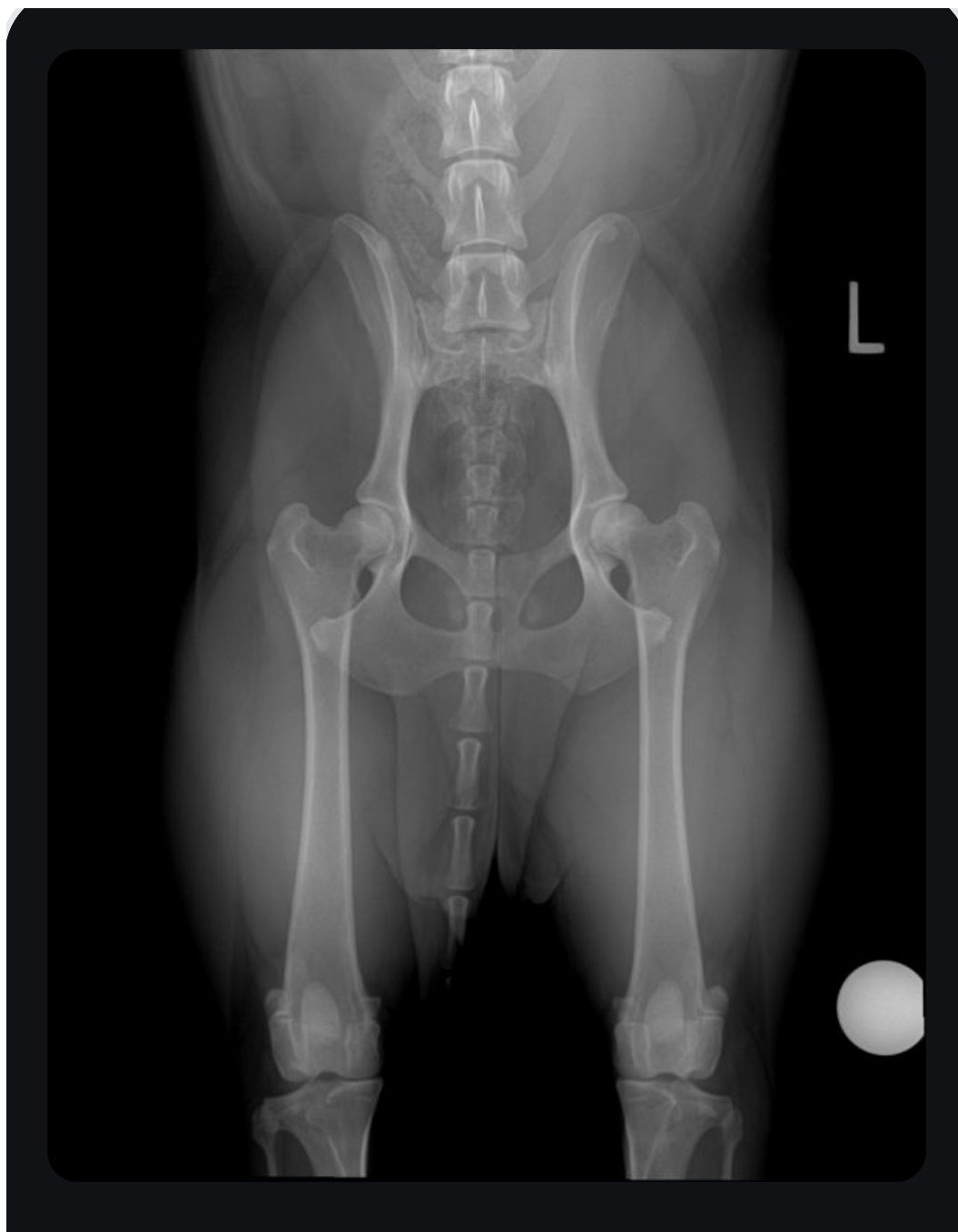
Screening combos



Lateral shoulder · German
set

OFA & OFA (German)

Screening combos



VD extended pelvis · shared
by both

Pelvis — Total Hip

Pre-op THR

POSITION VD pelvis + lateral & horizontal-beam femur

● **FEMUR CRCD** HORIZONTAL beam only

CENTER Hip / proximal femur

SEE Pelvis & Femur pages

Pelvis & lateral femur

- 1 Take the VD pelvis per the Pelvis page and the lateral femur per the Femur page.

Craniocaudal femur — horizontal beam

- 1 **Horizontal beam only.** Place the patient in lateral recumbency, **affected side up**.
- 2 The patient's dorsal (back) side faces the detector.
- 3 Extend the top leg caudally, keeping the femur parallel to the detector.

● PRO TIP

The horizontal-beam femur gives the surgeon a true craniocaudal of the implant without rolling the patient — only attempt it with the right setup and a technologist's guidance.

● AVOID THIS

Trying to shoot the CrCd femur with the normal vertical beam, or the affected side placed down.

WHAT A CORRECT FILM LOOKS LIKE



VD pelvis · total-hip planning



Horizontal-beam femur · affected side up

IN PLAIN WORDS

The pelvis and femur shots, plus a special sideways-beam femur with the bad side UP. Done before hip surgery.

Pelvis — Total Hip

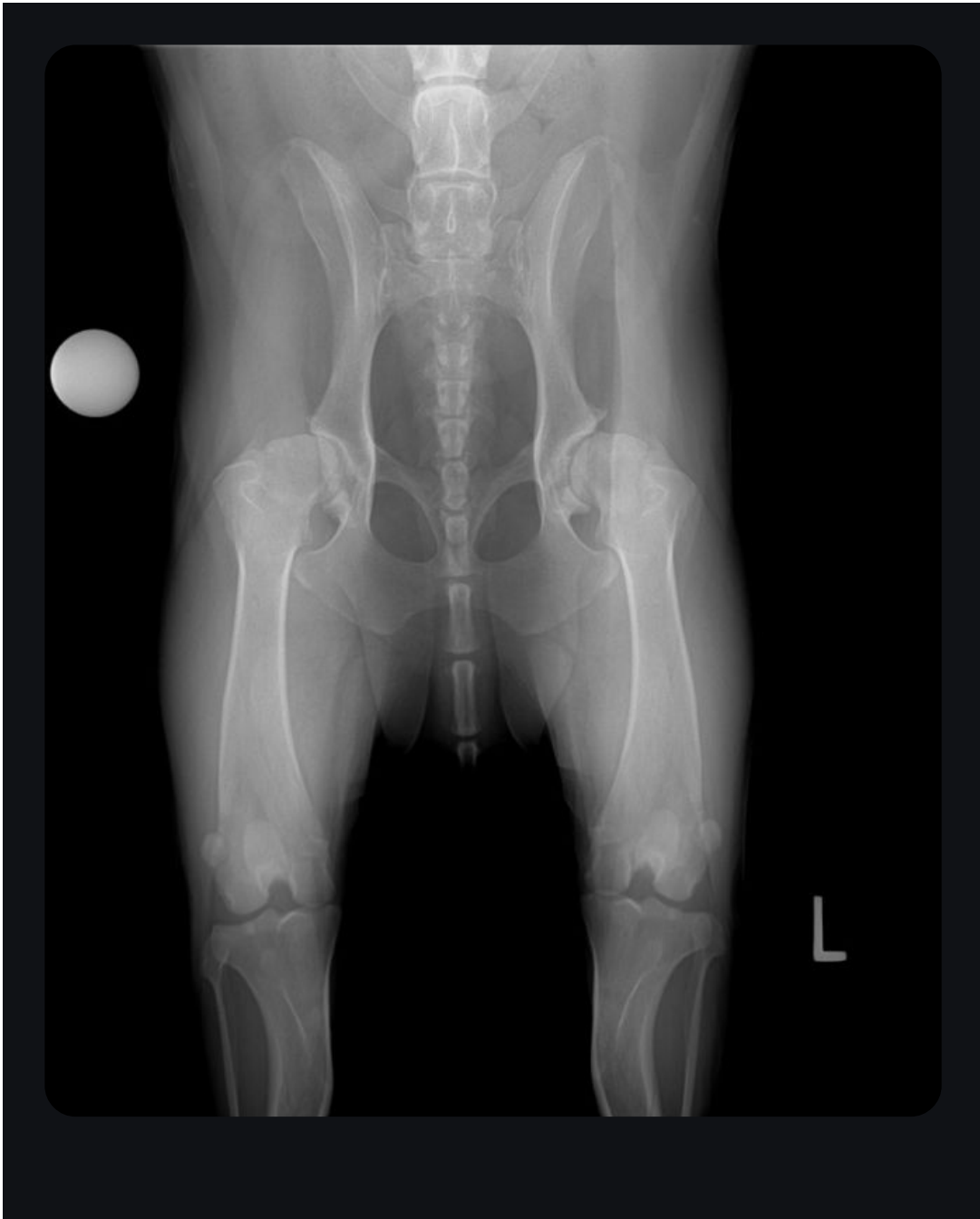
Pre-op THR



VD pelvis · total-hip
planning

Pelvis — Total Hip

Pre-op THR



Horizontal-beam femur ·
affected side up

Pelvis — Additional

Acetabular / frog / distract

VIEWS Acetabular, frog-leg, distraction

CENTER On the acetabulum

• **DISTRACTION** Technologist must be present

AIM Joint congruity / laxity

Frog-leg ON THE BACK

- 1 Place the torso in dorsal recumbency in a trough.
- 2 Get the pelvis as straight as possible and hold the femurs out to the sides (laterally).

Acetabular OBLIQUE

- 1 Place the patient in lateral recumbency, affected side down.
- 2 “Frog-leg” the unaffected leg straight up while rolling the patient into a more oblique position.
- 3 Collimate to the acetabular area.

Distraction DEVICE

- 1 Only with a technologist present — this view uses a distraction device to measure hip laxity.

● PRO TIP

These specialty hip views answer specific surgical questions. If you're unsure which one is wanted, ask before positioning — they aren't interchangeable.

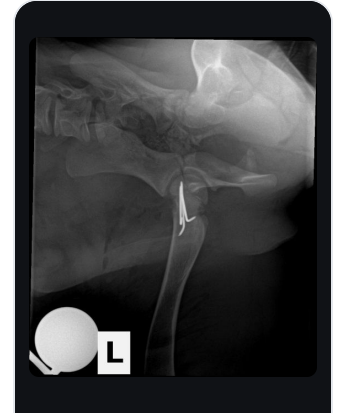
● AVOID THIS

Attempting a distraction view without a technologist, or a poorly-rotated acetabular oblique.

WHAT A CORRECT FILM LOOKS LIKE



Frog-leg pelvis · femurs held out



Acetabular oblique · rolled off true VD

IN PLAIN WORDS

Special hip views (frog-leg, acetabular, distraction). Ask which one is wanted before you start.

Pelvis — Additional

Acetabular / frog / distract



Acetabular oblique · rolled
off true VD

Pelvis — Additional

Acetabular / frog / distract



Frog-leg pelvis · femurs
held out

Femur

Lateral + CrCd

VIEWS Mediolateral + craniocaudal

CENTER Mid-shaft of the femur

COLLIMATE Hip above → stifle below

AFFECTED Side of interest down

Lateral AFFECTED SIDE DOWN

- 1 Place the patient in lateral recumbency, affected side down.
- 2 **Frog-leg the unaffected leg straight up** so the femoral heads don't overlap.

Craniocaudal ON THE BACK

- 1 Place the torso in dorsal recumbency in a trough, with the **whole femur out of the trough** (no trough line).
- 2 Holding around each tarsus, push the legs cranially and rotate them inward (stifles nearly touching).
- 3 Keep them rotated and extend so the femurs are parallel to the table; collimate to the femur of interest.

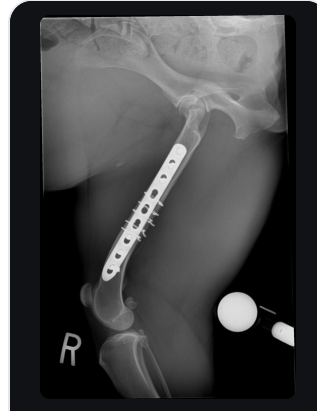
PRO TIP

Keep the entire femur clear of the trough — a trough edge under the bone throws a line right across your film.

AVOID THIS

Femoral heads overlapping on the lateral, a trough line, or clipping the hip or stifle.

WHAT A CORRECT FILM LOOKS LIKE



Lateral femur · other leg
frog-legged up



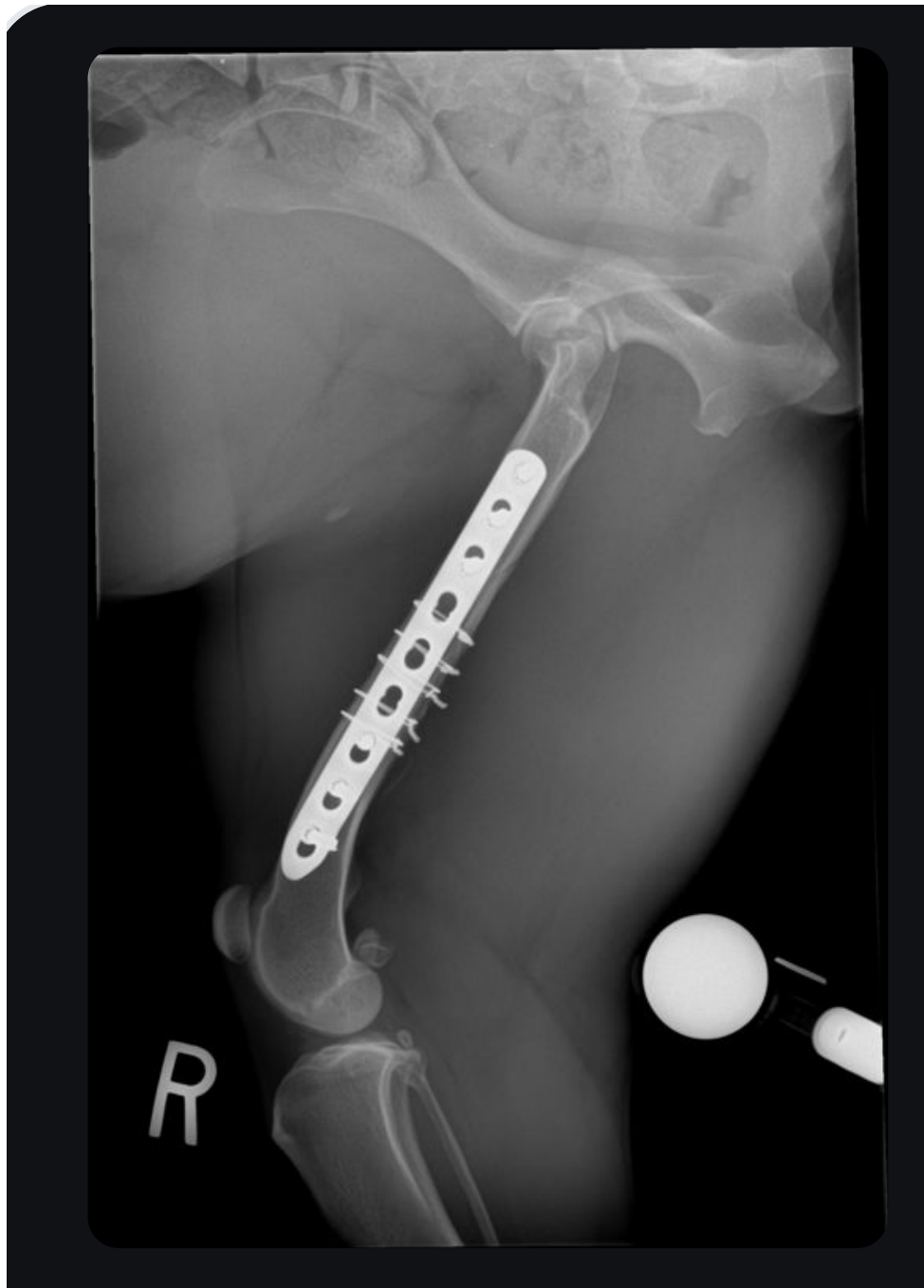
Craniocaudal femur · femur
out of the trough

IN PLAIN WORDS

On its side with the good leg frog-legged up; then on its back. Keep the whole thigh OFF the trough. Show hip AND knee.

Femur

Lateral + CrCd



Lateral femur · other leg
frog-legged up

Femur

Lateral + CrCd



Craniocaudal femur · femur
out of the trough

Stifle

2 views • every stifle

VIEWS Mediolateral + caudocranial

CENTER On the stifle joint

COLLIMATE Tight to the stifle

● **RULE** 2 views for every stifle & recheck

Lateral AFFECTED SIDE DOWN

- 1 Place the patient in lateral recumbency, affected side down.
- 2 Collimate to the **stifle only**.

Caudocranial ON THE CHEST

- 1 Place the patient in sternal recumbency.
- 2 One person extends the affected leg straight back (caudally).
- 3 A second holds the unaffected foot with one hand and the lateral abdomen (same side as the affected leg) with the other.
- 4 Collimate to the stifle joint.

● PRO TIP

Always two views, even on rechecks — a clean lateral can completely hide an effusion or avulsion that the caudocranial shows.

● AVOID THIS

Settling for a single view, or a rotated stifle that obscures the joint space.

WHAT A CORRECT FILM LOOKS LIKE



Lateral stifle • collimated to the joint



Caudocranial stifle • leg extended back

IN PLAIN WORDS

On its side, bad leg down, then on its chest with the leg stretched back. Always two shots — even on rechecks.

Stifle

2 views · every stifle



Lateral stifle · collimated to the joint

Stifle

2 views · every stifle



Caudocranial stifle · leg
extended back

Stifle — TPLO

Pre & post-op

VIEWS Lateral + 90/90

• **90/90** Both joints at 90° angles

COLLIMATE Lateral: stifle • 90/90: tibia

AFFECTED Side of interest down

Lateral AFFECTED SIDE DOWN

- 1 Place the patient in lateral recumbency, affected side down.
- 2 Pull the unaffected leg cranially, out of the way.
- 3 Collimate to the **stifle only**.

90/90 BOTH JOINTS SQUARE

- 1 Stay in the same lateral position.
- 2 Set the stifle and the hock each to a **90° angle**.
- 3 Collimate to the tibia/fibula, confirming both joints are truly at 90°.

PRO TIP

The 90/90 gives the surgeon a repeatable angle to measure tibial plateau slope and check the plate — eyeball both joints and fix anything that isn't square before you expose.

AVOID THIS

Joints not actually at 90°, or the unaffected leg overlapping the stifle.

WHAT A CORRECT FILM LOOKS LIKE



Lateral stifle (TPLO) • collimated to the joint



90/90 view • both joints at 90°

IN PLAIN WORDS

A side shot, plus a "90/90" with the knee and hock both bent to 90°. For knee (TPLO) surgery.

Stifle — TPLO

Pre & post-op



Lateral stifle (TPLO) ·
collimated to the joint

Stifle — TPLO

Pre & post-op



90/90 view · both joints at
90°

Tibia / Fibula

Lateral + CdCr

VIEWS Mediolateral + caudocranial

CENTER Mid-shaft

COLLIMATE Stifle above → hock below

AFFECTED Side of interest down

Lateral AFFECTED LEG DOWN

- 1 Place the patient in lateral recumbency with the affected leg down.
- 2 Pull the unaffected leg cranially, out of the way.
- 3 Include the tibia/fibula and both joints above and below.

Caudocranial ON THE CHEST

- 1 Place the patient in sternal recumbency.
- 2 One person extends the affected leg straight back (caudally).
- 3 A second holds the unaffected foot and the lateral abdomen (same side as the affected leg).
- 4 Collimate to the tibia/fibula including both joints.

PRO TIP

Both the stifle and the hock belong in the picture — that's the joint above and below the long bone the doctor needs to assess.

AVOID THIS

Clipping the stifle or hock, or a rotated leg that overlaps the two bones.

WHAT A CORRECT FILM LOOKS LIKE



Lateral tibia/fibula • both joints included



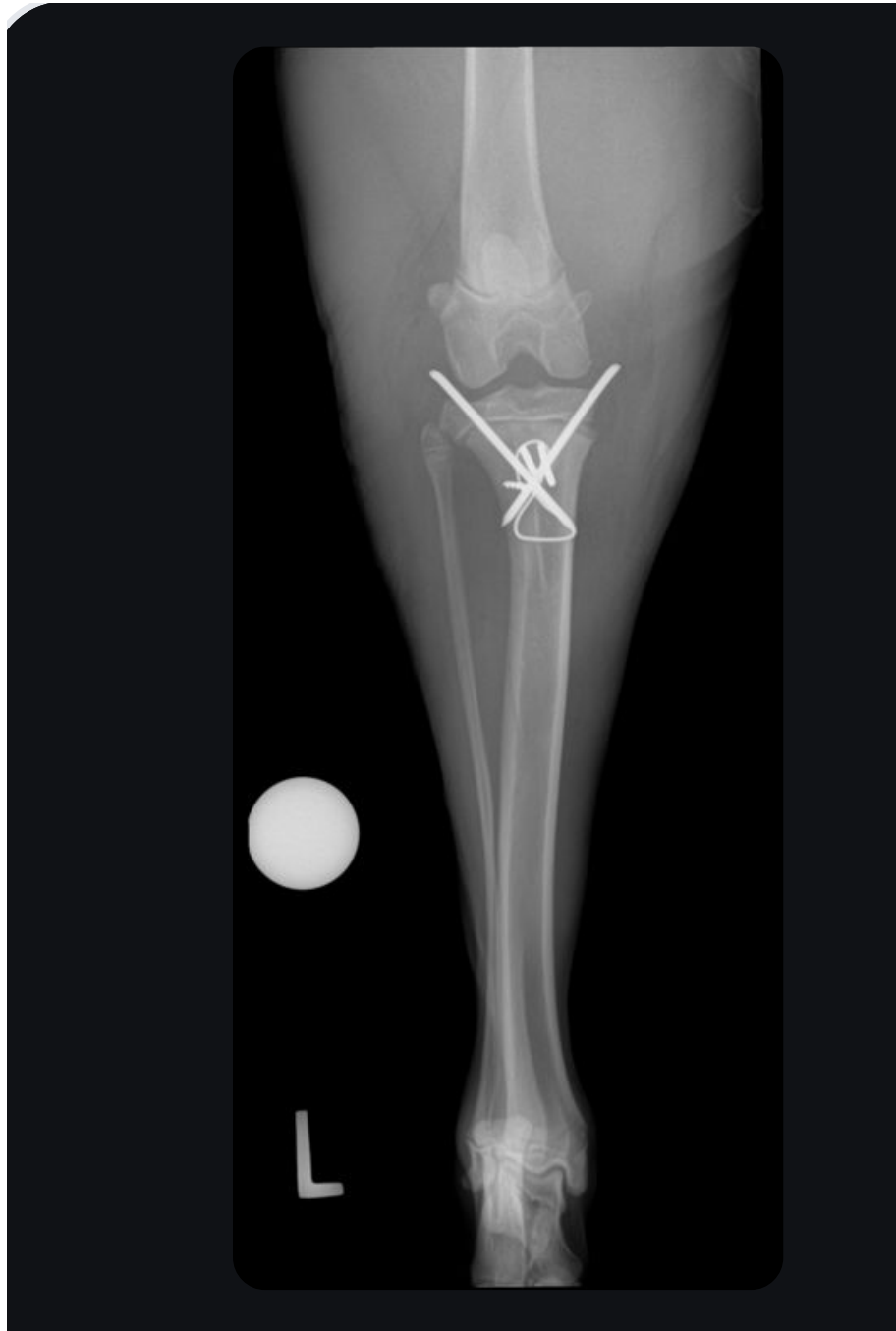
Caudocranial tibia/fibula • leg extended back

IN PLAIN WORDS

On its side (bad leg down) and on its chest (leg stretched back). Show the knee AND the hock.

Tibia / Fibula

Lateral + CdCr



Lateral tibia/fibula · both joints included



Caudocranial tibia/fibula •
leg extended back

Tarsus

Lateral + CdCr

VIEWS Mediolateral + caudocranial

CENTER On the tarsus

COLLIMATE Tight to the tarsus

AFFECTED Affected side down

Caudocranial ON THE BACK OR CHEST

- 1 Place the patient in either dorsal or sternal recumbency.
- 2 Extend the affected leg straight back (caudally).
- 3 Collimate to the **tarsus only**.

Lateral AFFECTED SIDE DOWN

- 1 Place the patient in lateral recumbency, affected side down.
- 2 Collimate to the tarsus only.

PRO TIP

The tarsus is thin — skip the grid and use a low technique so the small bones don't burn out.

AVOID THIS

Over-collimating and clipping a tarsal bone, or a rotated, oblique joint.

WHAT A CORRECT FILM LOOKS LIKE



Lateral tarsus · collimated to the joint

IN PLAIN WORDS

Leg stretched back, on its back or chest; then on its side. It's thin — low setting, no grid.

Tarsus

Lateral + CdCr



Lateral tarsus • collimated to the joint

Tarsus & Foot

CdCr + spread-toe

VIEWS Caudocranial + spread-toe lateral

COVER Tarsus through the toes

AFFECTED Affected foot down

• **TRICK** Tape to spread the toes

Caudocranial ON THE BACK OR CHEST

- 1 Place the patient in either dorsal or sternal recumbency.
- 2 Extend the affected leg straight back (caudally).
- 3 Collimate to include the tarsus and foot.

Spread-toe lateral AFFECTED FOOT DOWN

- 1 Place the patient in lateral recumbency with the affected foot down.
- 2 Pull the unaffected leg cranially, out of the way.
- 3 Use tape on the phalanges to **spread the toes apart**.
- 4 Collimate to include the entire tarsus and foot.

PRO TIP

As with the front foot, spreading the toes is what makes each digit readable — bunched toes hide fractures.

AVOID THIS

Toes left overlapping, or the unaffected leg superimposed on the foot.

WHAT A CORRECT FILM LOOKS LIKE



Caudocranial tarsus & foot
• leg extended back



Spread-toe lateral • toes taped apart

IN PLAIN WORDS

Leg stretched back, then on its side with the toes taped apart. Include the whole foot.

Tarsus & Foot

CdCr + spread-toe



Caudocranial tarsus & foot

• leg extended back

Tarsus & Foot

CdCr + spread-toe



Spread-toe lateral · toes
taped apart

Spine — Cervical

Sedation • lateral + VD

POSITION Sedated; lateral and VD

AIDS Foam under neck & mandible

LEGS Pull front legs caudal

ET TUBE Spoon it off the spine

Lateral RIGHT LATERAL

- 1 With adequate sedation, place the patient in right lateral recumbency.
- 2 Put a small flat foam wedge **under the neck** (stops sagging) and a rectangular wedge **under the mandible** (makes the skull lateral).
- 3 Pull the front legs caudal to get the scapulae out of the cervical anatomy.

VD ON THE BACK

- 1 Place the patient in dorsal recumbency in a trough, head straight.
- 2 Pull the front legs caudal to clear the scapulae.
- 3 If intubated, use a **wooden spoon** to push the ET tube off the cervical spine.

PRO TIP

Foam under the neck and jaw keeps the cervical spine straight and the skull truly lateral — a sagging neck fakes disc-space changes the doctor might misread.

AVOID THIS

Scapulae overlapping C6–T1, a sagging/rotated neck, or the ET tube laid over the vertebrae.

WHAT A CORRECT FILM LOOKS LIKE



Lateral cervical spine · foam under neck & jaw



VD cervical spine · head straight, legs back

IN PLAIN WORDS

Sedate. On its right side with foam under the neck and jaw, front legs pulled back; then on its back. Spoon the tube off the spine.

Spine — Cervical

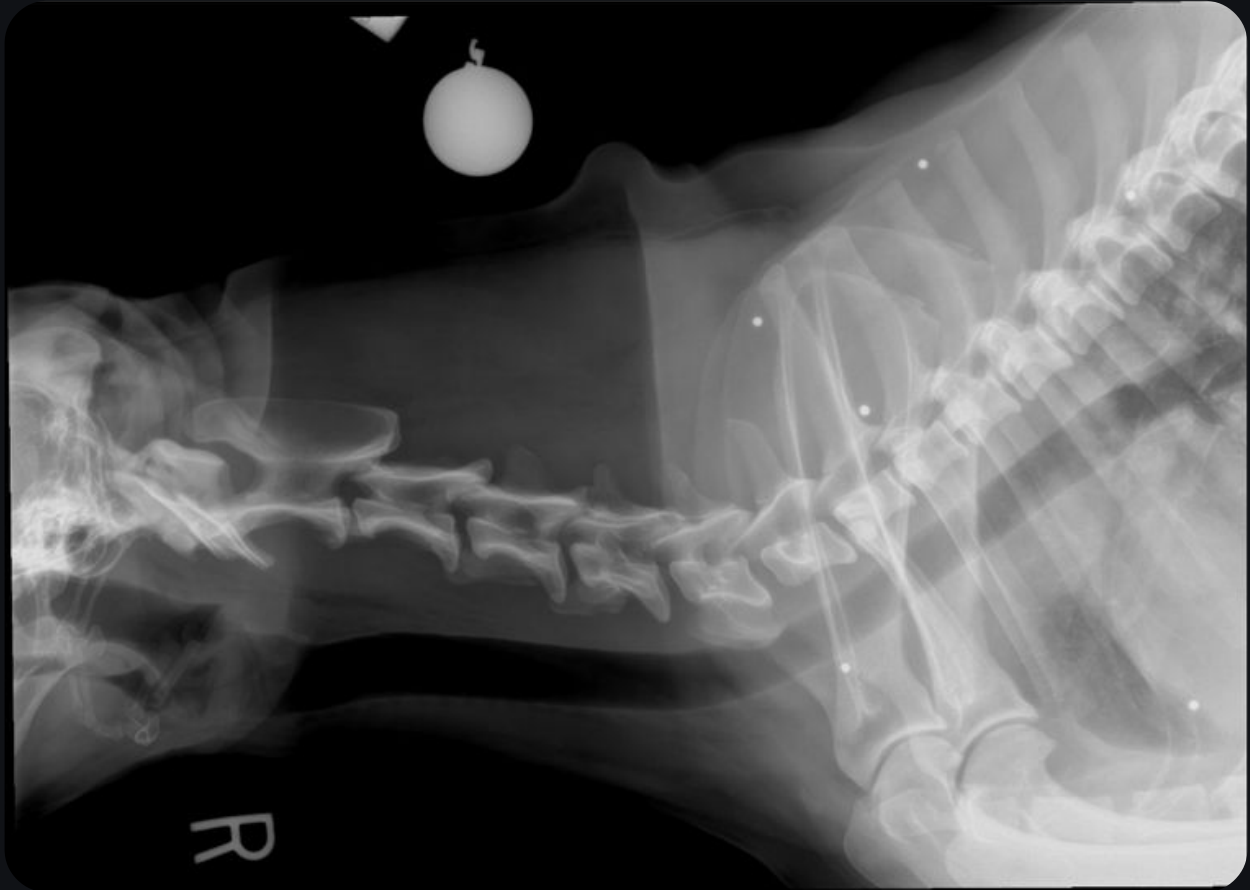
Sedation · lateral + VD



VD cervical spine · head
straight, legs back

Spine — Cervical

Sedation • lateral + VD



Lateral cervical spine •
foam under neck & jaw

Spine — Thoracic

Lateral + VD

POSITION Sedated; lateral and VD

CENTER On the thoracic spine

LEGS Front legs forward

AIM Parallel vertebrae

Lateral RIGHT LATERAL

- 1 Place the patient in right lateral recumbency.
- 2 Hold the front limbs together and pull them cranially.
- 3 Center on the thoracic spine; foam under the spine keeps it parallel.

VD ON THE BACK

- 1 Place the patient in dorsal recumbency in a trough.
- 2 Pull the front limbs cranially.
- 3 Center on the thoracic spine.

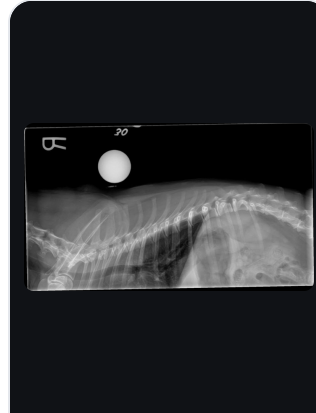
PRO TIP

Support the spine with foam so it stays parallel to the table — a drooping mid-back narrows disc spaces that are actually normal.

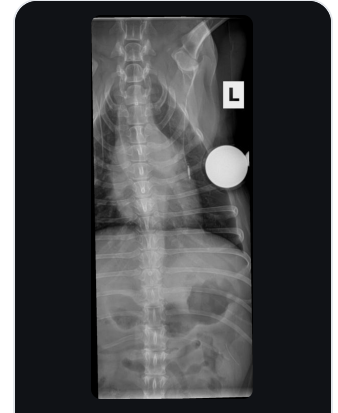
AVOID THIS

A sagging spine, rotation, or front legs left over the cranial thorax.

WHAT A CORRECT FILM LOOKS LIKE



Lateral thoracic spine · spine parallel



VD thoracic spine · centered on the midline

IN PLAIN WORDS

On its right side with the front legs pulled forward, then on its back. Keep the spine level with foam.

Spine — Thoracic

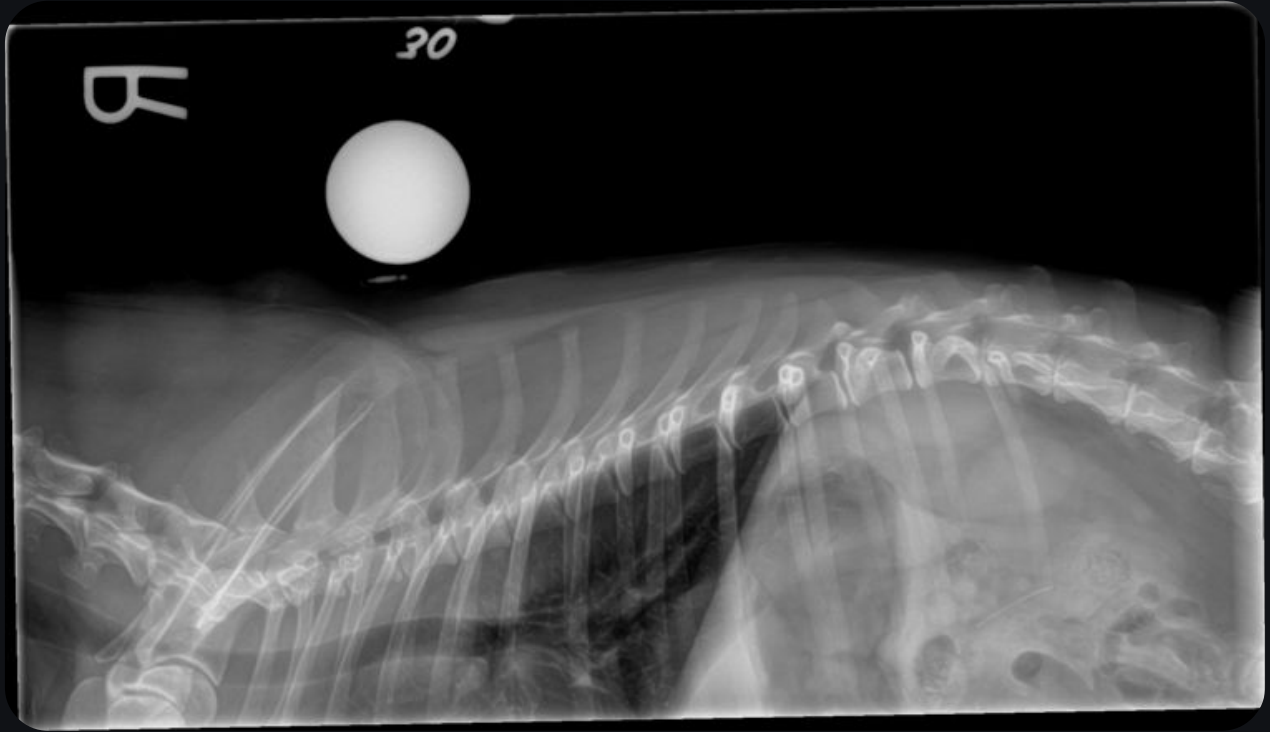
Lateral + VD



VD thoracic spine · centered
on the midline

Spine — Thoracic

Lateral + VD



Lateral thoracic spine •
spine parallel

Spine — Lumbar

Lateral + VD (+ LS)

POSITION Sedated; lateral and VD

COLLIMATE Lumbar spine, small overlap each end

LEGS Hold hind limbs together

EXTRA Flexed & extended for LS

Lateral & VD

- 1 Lateral: right lateral recumbency, hind limbs held together; collimate to the lumbar spine with a little overlap at each end.
- 2 VD: dorsal recumbency in a trough; collimate to the lumbar spine the same way.

Flexed & extended (LS junction)

- 1 For the lumbosacral junction, stay in right lateral with hind limbs together.
- 2 **Flexed:** pull the hind limbs ventral while a hand on the back holds it down.
- 3 **Extended:** two people — one pulls front limbs cranio-dorsally, one pulls hind limbs caudo-dorsally, using a spoon near the LS junction.

PRO TIP

Flexed and extended views show how the lumbosacral junction moves — that dynamic change is what reveals instability a single static film misses.

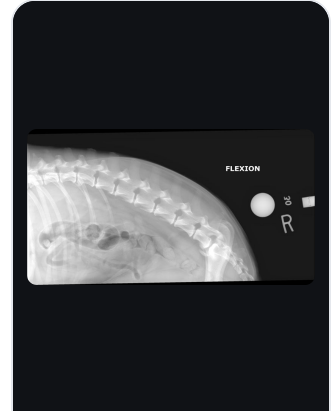
AVOID THIS

Allowing a small overlap is fine, but don't clip the thoracolumbar or lumbosacral ends entirely.

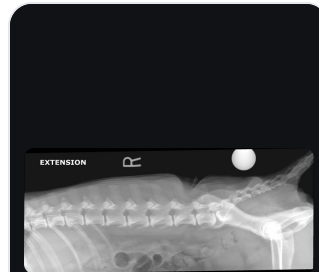
WHAT A CORRECT FILM LOOKS LIKE



Lateral lumbar spine · small overlap each end



Flexed LS · junction flexed



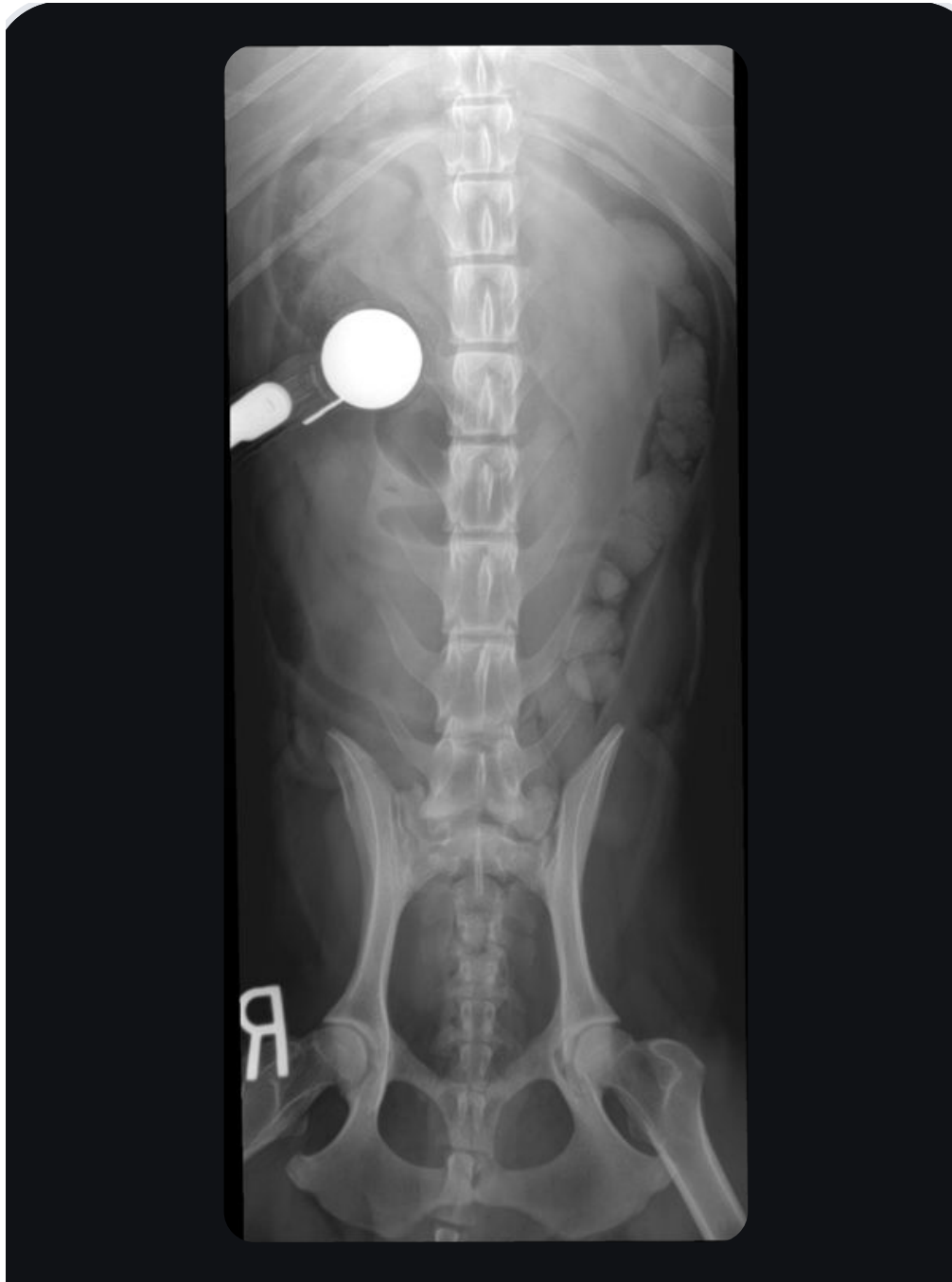
Extended LS · junction extended

IN PLAIN WORDS

On its right side with the back legs together, then on its back. Add bent and stretched shots for the lower back.

Spine — Lumbar

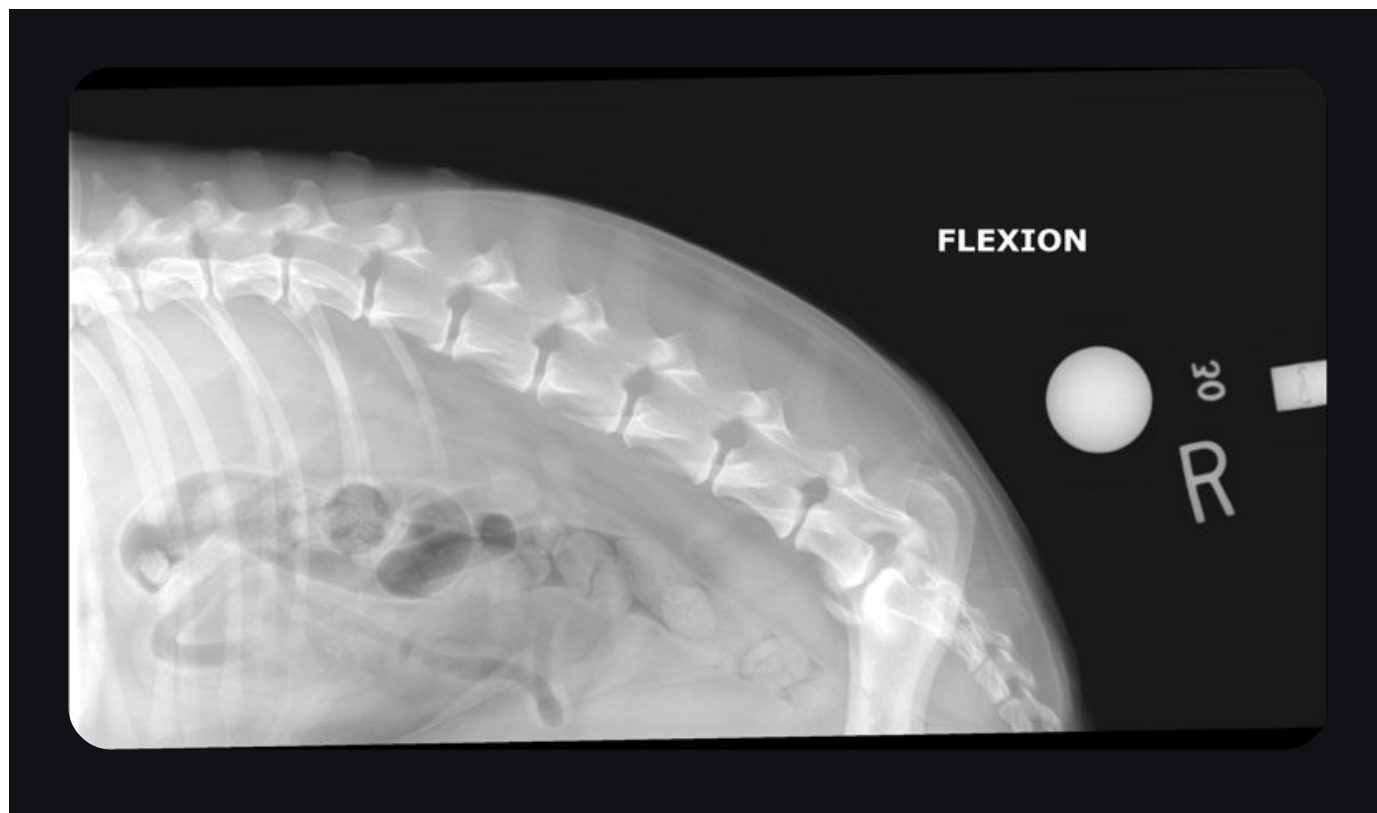
Lateral + VD (+ LS)



Lateral lumbar spine • small overlap each end

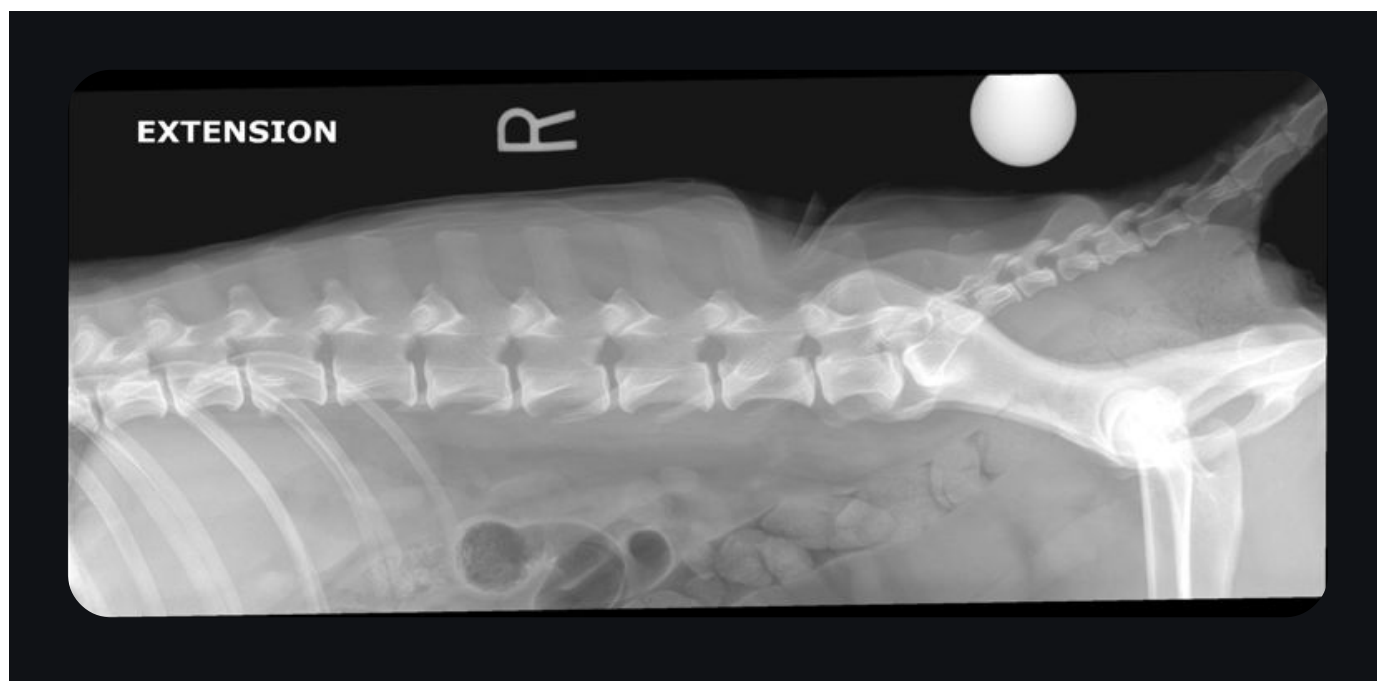
Spine — Lumbar

Lateral + VD (+ LS)



Spine — Lumbar

Lateral + VD (+ LS)



Spine — Survey

Count ribs

WHO Small dogs & cats only

PURPOSE Count ribs / vertebrae

LEGS Hold front and hind together

COLLIMATE Open wide — all the spine

Lateral RIGHT LATERAL

- 1 Place the patient in right lateral recumbency.
- 2 Hold the front limbs together and the hind limbs together.
- 3 Open the collimator to include as much spine as possible.

VD ON THE BACK

- 1 Place the patient in dorsal recumbency in a trough.
- 2 Pull the front limbs cranially and the hind limbs caudally.
- 3 Open the collimator to include as much spine as possible.

PRO TIP

The survey is the one time you open up collimation on purpose — the whole point is to count ribs and vertebrae end to end on a small patient.

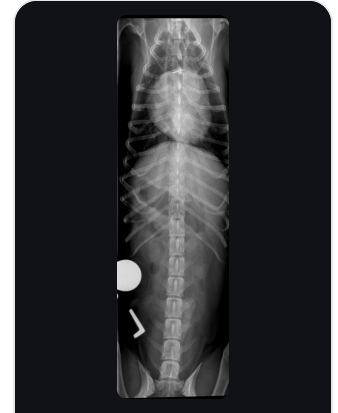
AVOID THIS

Trying this on a large dog (won't fit), or collimating too tightly to count segments.

WHAT A CORRECT FILM LOOKS LIKE



Lateral survey spine · as much spine as possible



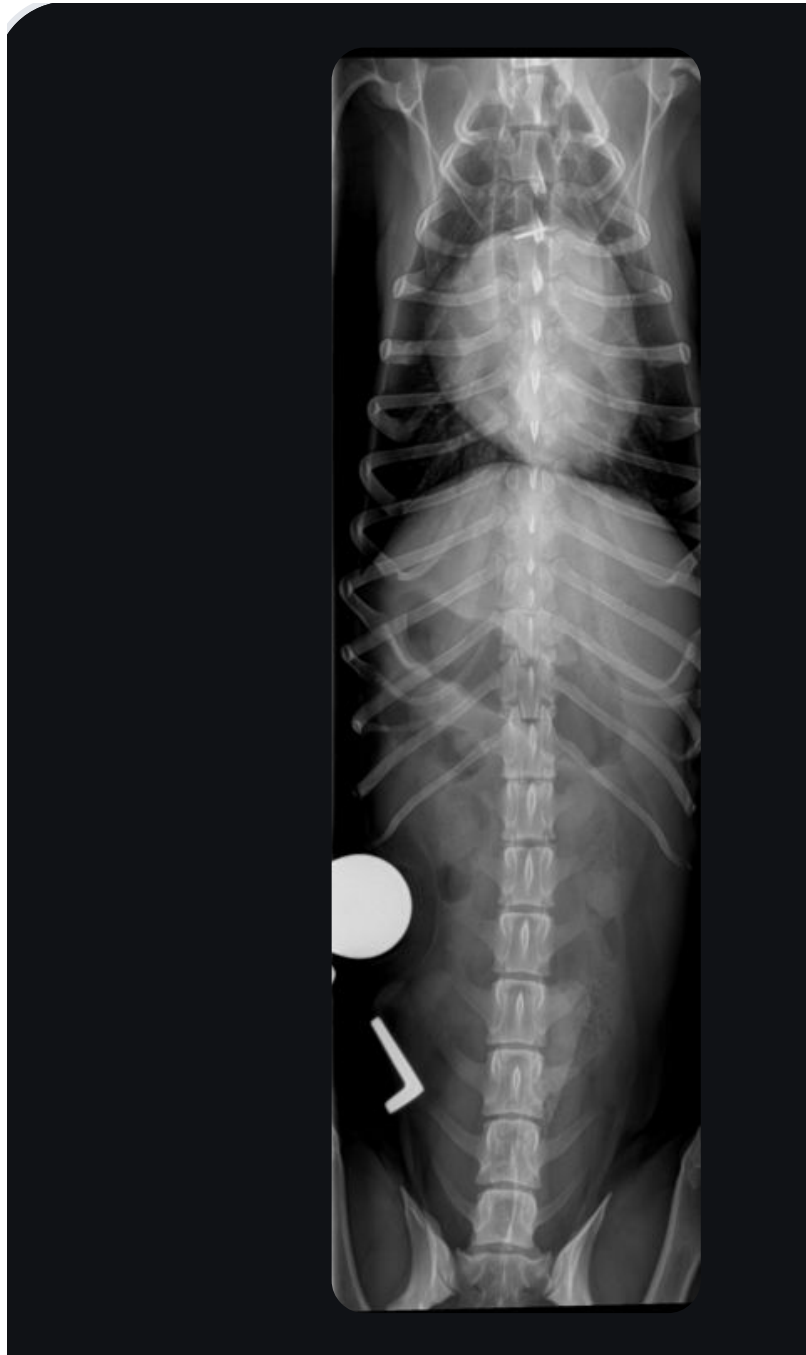
VD survey spine · legs pulled apart

IN PLAIN WORDS

Small pets only. Hold all the legs together, open the light box wide, and get the whole spine to count the ribs.

Spine — Survey

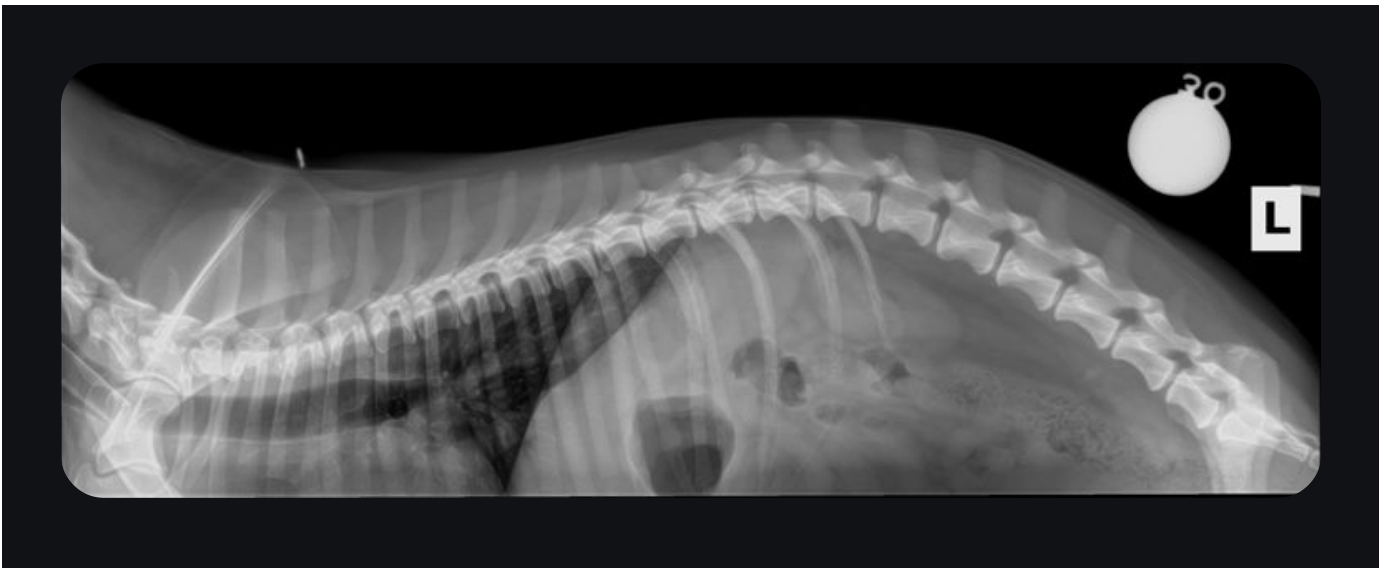
Count ribs



VD survey spine • legs
pulled apart

Spine — Survey

Count ribs



Spine — Total / TL

Full survey + TL junction

POSITION Lateral + VD of each region

PLUS Thoracolumbar (TL) junction

METHOD Separate centered region views

OFTEN Sedation throughout

Regional views

- 1 A total spine is lateral and VD projections of the cervical, thoracic and lumbar regions — each shot and centered separately (see those pages).

TL junction

- 1 VD: dorsal recumbency in a trough, collimate to the TL junction.
- 2 Lateral: right lateral recumbency, collimate to the TL junction.

PRO TIP

Shoot each region with its own centered exposure rather than one wide film — centered views avoid the distortion that makes the ends of a long spine unreadable.

AVOID THIS

One single wide-open exposure of the whole spine — the periphery distorts and disc spaces lie to you.

WHAT A CORRECT FILM LOOKS LIKE



VD spine (TL) · centered on the junction



Lateral spine (TL) · collimated to TL junction

IN PLAIN WORDS

Side and back shots of each section (neck, chest, lower back) plus the mid-back junction. Shoot each part separately.

Spine — Total / TL

Full survey + TL junction



Lateral spine (TL) •
collimated to TL junction

Spine — Total / TL

Full survey + TL junction



VD spine (TL) · centered on
the junction

Tube Placement

Right lateral chest

VIEW Right lateral chest only

• **ASKED AS** "Special Rad View for Clinician"

COVER Chest; cranial abdomen if needed

WHY Confirm feeding/ET tube position

Single view RIGHT LATERAL

- 1 To check tube placement, take **only a right lateral chest radiograph**.
- 2 Include the cranial abdomen in the field if it's needed to follow the tube.
- 3 This may come through on the board as "Special Rad View for Clinician."

PRO TIP

This is a quick single-shot confirmation, not a full study — one right lateral is all the clinician needs to verify the tube tip, so don't add views unless asked.

AVOID THIS

Taking a full chest series when only the one right lateral was requested.

WHAT A CORRECT FILM LOOKS LIKE



Right lateral chest · tube-placement check

IN PLAIN WORDS

Just ONE shot of the right side of the chest to check the tube. That's it.

Tube Placement

Right lateral chest



Right lateral chest · tube-placement check

Fixing common errors

Most repeats come from the same handful of issues. Spot it, change **one** thing, and re-shoot — don't adjust three variables at once.

If the film...	What you'll see	Fix it by
Looks rotated / oblique	Ribs, transverse processes or obturator foramina don't match side to side.	Re-stack with foam wedges; superimpose the rib heads; recheck symmetry before re-shooting.
Blurry / motion	Soft, smeared edges.	Shorter exposure time, firmer restraint or sedation, and time the breath.
Area clipped	A joint or landmark is cut off the edge.	Re-open the collimator to the landmarks and re-center. Long bone = joint above & below.
Too light / grainy	Pale, noisy image.	Increase technique per the chart; re-check your caliper measurement; add a grid if >10–12 cm.
Too dark	Black, washed-out image.	Decrease technique; re-measure the part; drop the grid on thin extremities.
Trough line on a limb	A bright line crosses the bone.	Keep the whole bone (and shoulder/hip) out of the trough on craniocaudal limb views.
Wrong breath phase	Chest looks white & crowded; abdomen looks crammed.	Re-shoot chest on inspiration, abdomen on expiration.
No marker / ID	Can't tell left from right; wrong patient on file.	Put the L/R marker in the field and verify patient details before exposing.

Rotation check — look down the spine before you expose

Straight

Rotated

Quick-reference table

One-glance cheat sheet for every view in this binder. Default habit: **measure • center • collimate • label • two views.**

Region	View(s)	Position notes	Center at	Breathe
Chest	3 view (R/L lat + VD)	Front legs forward	Caudal scapula	Inspiration
Chest	4 view (+ DV)	Forward / relaxed (DV)	Caudal scapula	Inspiration
Abdomen	2 view (R lat + VD)	Hind legs back	Diaphragm → hips	Expiration
Abdomen	3 view (L lat, VD, R lat)	Hind legs back	Diaphragm → hips	Expiration
Abdomen	Butt shot (stones)	R lat; legs up (M) / down (F)	Full urethra	—
Shoulder	Lateral + CrCd	Affected fwd, top leg dorsal	Shoulder joint	—
Scapula	Lateral + CrCd	Push affected up, pull other down	Scapula	—
Humerus	Lateral + CrCd	Shoulder out of trough	Mid-shaft	—
Elbow	4 views (+ flexed, oblique)	Sternal, head held back	Elbow joint	—
Radius / Ulna	Lateral + CrCd	R/U parallel to body	Mid-shaft	—
Carpus / Foot	Lateral + CrCd (spread toe)	Affected down, tape toes	Carpus / digits	—
Pelvis	Lateral + VD extended	Legs extended, knees in, hocks tied	Hips, midline	—
OFA / German	Elbows or shoulders + VD pelvis	Per joint + pelvis	Per protocol	—
Total hip	VD + horizontal-beam femur	Affected side UP (CrCd)	Hip / femur	—
Femur	Lateral + CrCd	Frog-leg other; femur out of trough	Mid-shaft	—
Stifle	Lateral + CdCr (always 2)	Affected down / extended back	Stifle joint	—
Stifle TPLO	Lateral + 90/90	Both joints at 90°	Stifle / tibia	—
Tibia / Fibula	Lateral + CdCr	Extended back	Mid-shaft	—
Tarsus / Foot	Lateral + CdCr (spread toe)	Extended back, tape toes	Tarsus / digits	—
Spine Cervical	Lateral + VD	Sedate; foam neck+jaw; legs back	Cervical	—
Spine Thoracic	Lateral + VD	Front legs forward	Thoracic	—
Spine Lumbar	Lateral + VD (+ flex/ext)	Hind limbs together	Lumbar / LS	—
Spine Survey	Lateral + VD	Limbs together / apart	Whole spine	—
Spine Total	Regional + TL junction	Per region	Each region	—
Tube placement	R lateral chest only	—	Chest (+cr. abd.)	—

Remember: these are positioning guides, not exposure settings — always set kVp / mAs from *your* machine's technique chart, label every image, and ask the doctor whenever sedation makes for a safer, cleaner film.

CPV-RAD-POS-001 • Rev. 2 • Adapted from the clinic Radiographic Positioning handbook v2.0 (2015) • Cuddle Paws Veterinary, Culver City CA