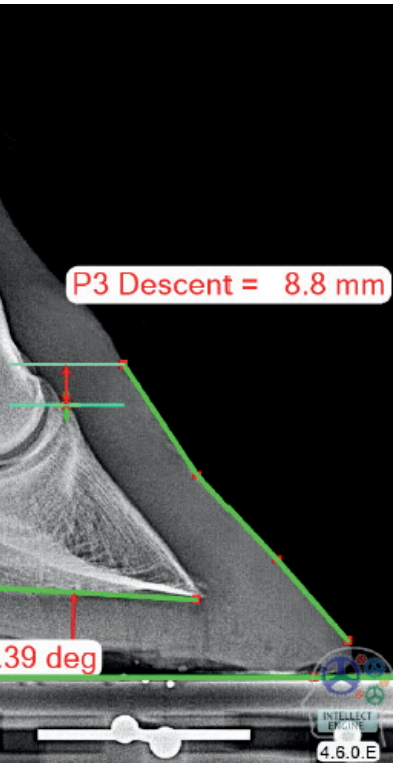
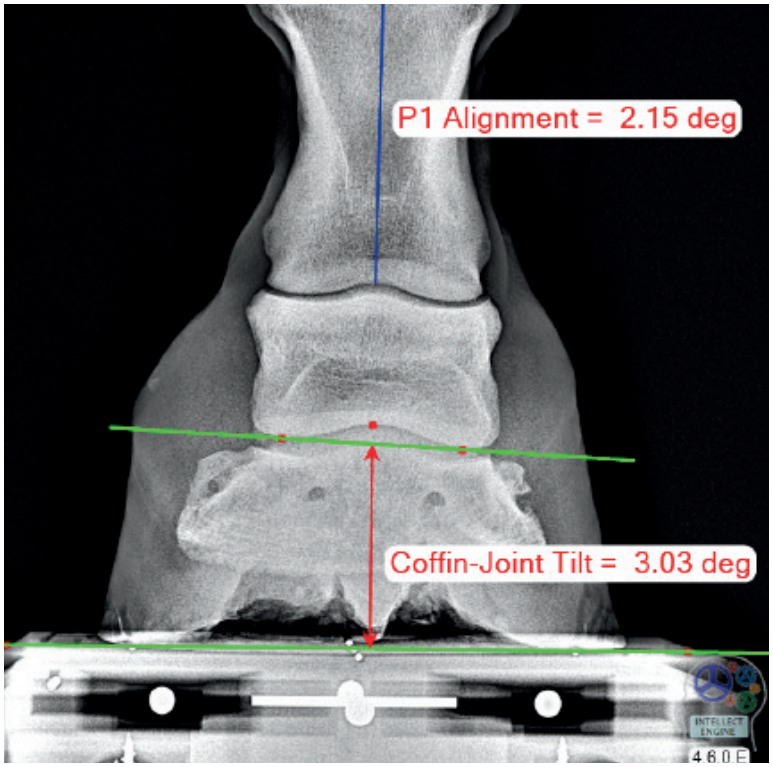
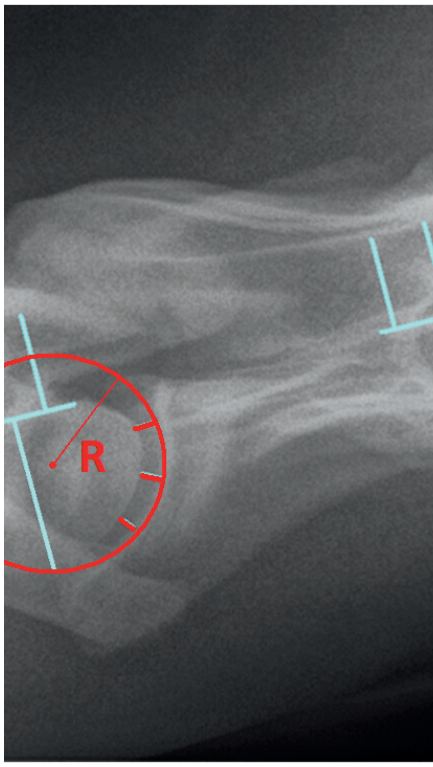
METRON INTELLECT MODULE

EQUINE DIAGNOSTIC REPORTS







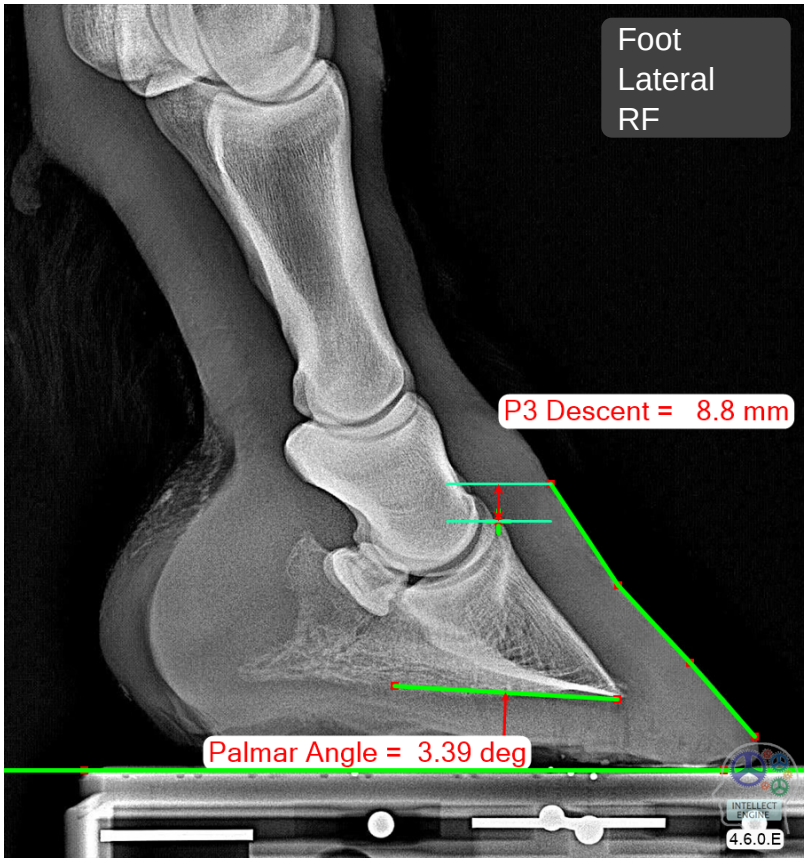
GENERATED BY EVIDENCE-BASED ARTIFICIAL INTELLIGENCE

VETEL

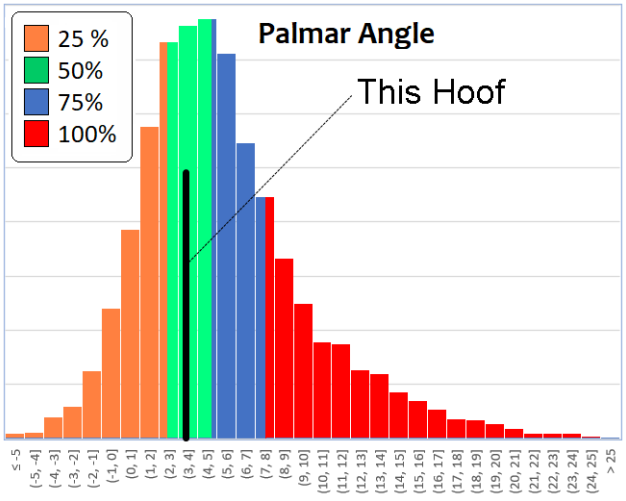
Lateral Hoof X-Ray

20:31:47

SampleOwner / SampleHorse / 10-Feb-2024



The Palmar Angle measurement helps to assess the dorso-palmar balance of the hoof. Horses with low palmar angle tend to be 'low at the heel', and horses with high palmar angle tend to be 'high at the heel'. No one value is 'correct' for all animals, but extreme values are to be avoided.

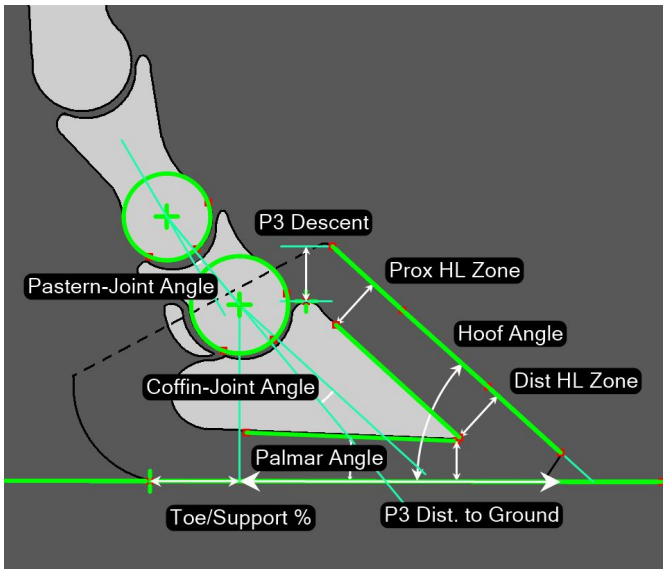


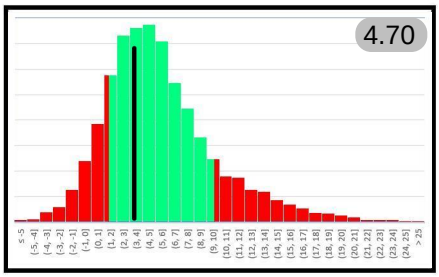
The Palmar Angle for this hoof is 3.4 degrees. This value is indicated on the histogram to the left by the vertical black line labelled 'This Hoof'. Angles substantialy higher or lower than normal are to be avoided, if possible.

The Palmar Angle is in the 2nd quartile when compared to a large group of horses.

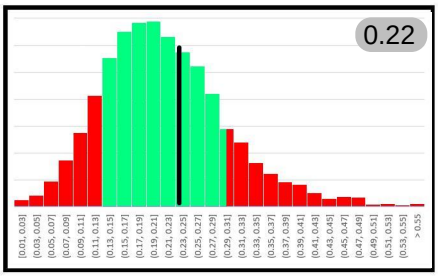
Data from 6,968 hooves of mixed breed.

1.	Palmar Angle	3.4 deg
2.	P3 Descent	8.8 mm
3.	P3 Dist. to Ground	17.0 mm
4.	Hoof Angle	51.1 deg
5.	Prox. HL Zone	16.7 mm
6.	Dist. HL Zone	17.0 mm
7.	Toe/Support %	61.8 %
8.	Coffin-Joint Angle	11.6 deg
9.	Pastern-Joint Angle	7.1 deg
10.	P2 Length	39.4 mm

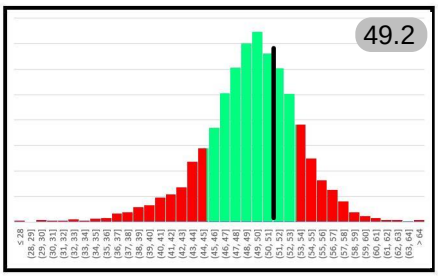




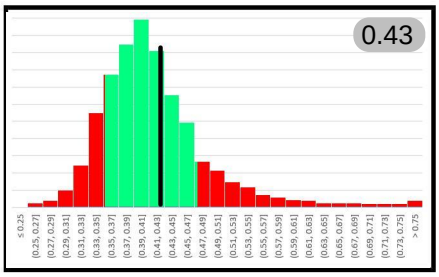
1. Palmar Angle



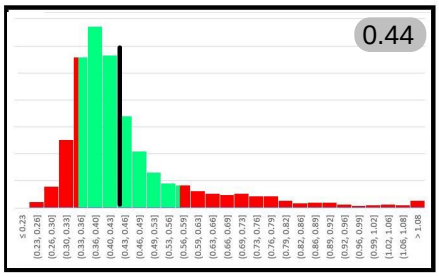
2. P3 Descent



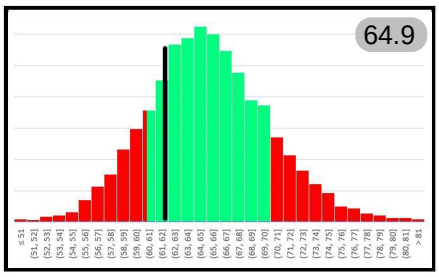
4. Hoof Angle



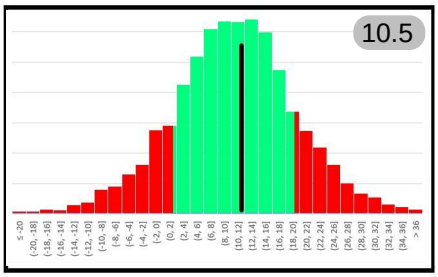
5. Prox. HL Zone



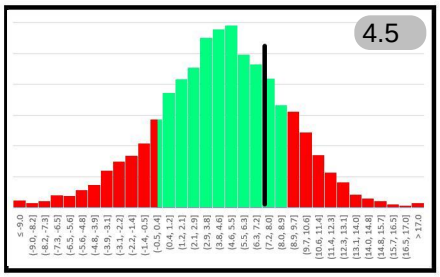
6. Dist. HL Zone



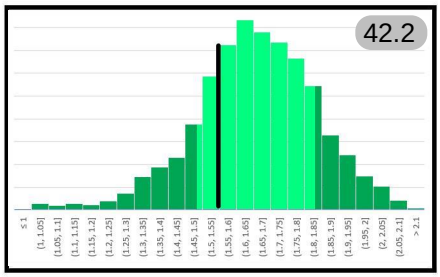
7. Toe/Support %



8. Coffin-Joint Angle



9. Pastern-Joint Angle

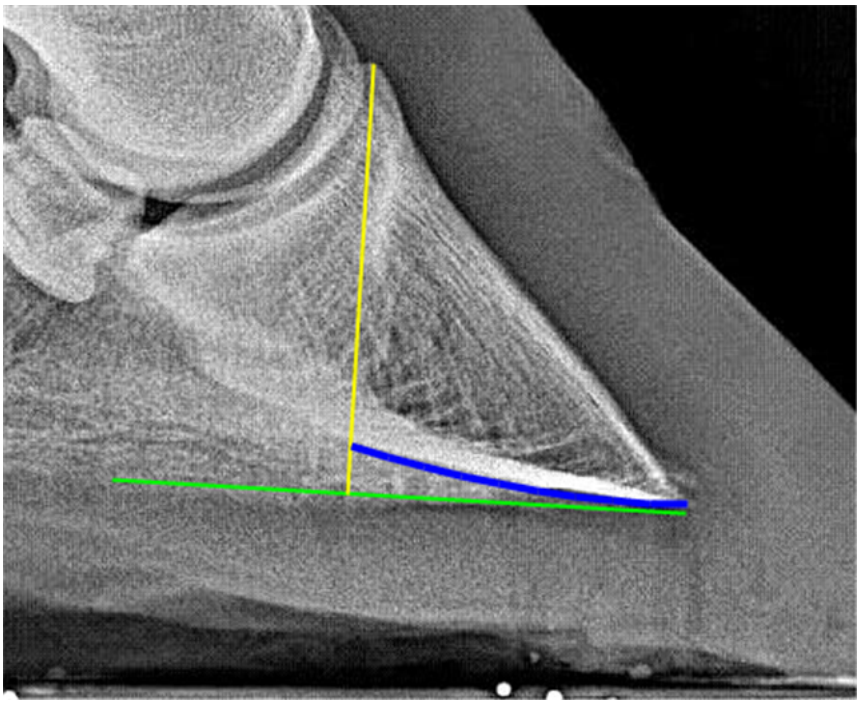


10. P2 Length

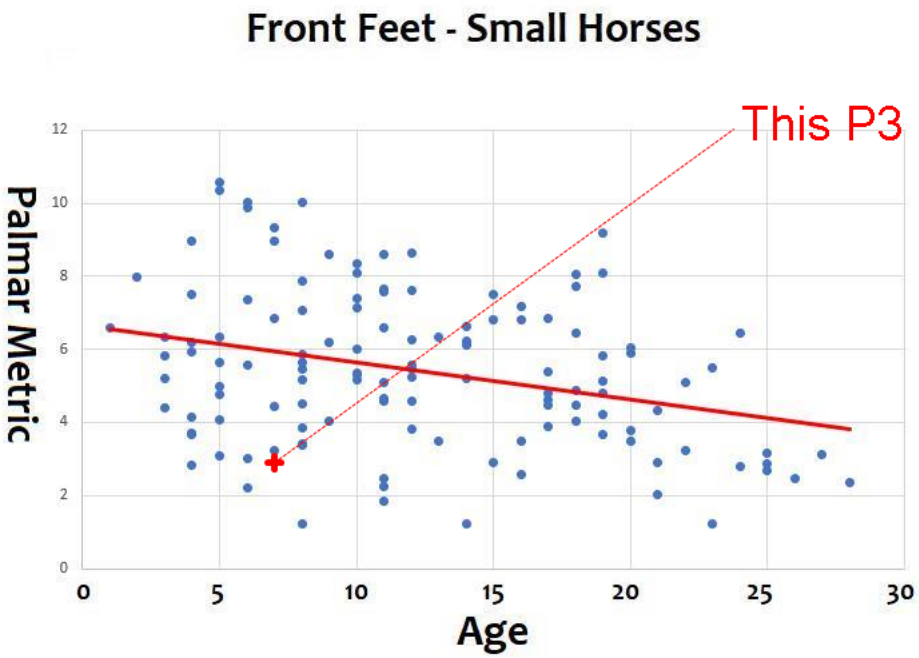
Data from 6,968 hooves of mixed breed. Central green zones correspond to 70% of the population. Red zones represent "15th percentile and lower" and "85th percentile and higher". Median values are shown in upper right corner of each graph. Linear measures have been scaled by 'P2 Length'.

Link: Explanation of all the Measures

P3 Analysis



The value of the Palmar Metric for this hoof is 3.2.



The 'Palmar Metric' measures the concavity of the pedal bone (P3). The red curve shows the average value for a population of horses as a function of age. As the graph above shows, this metric tends to decrease as the horse ages. The red cross shows this P3's concavity relative to average for it's age.

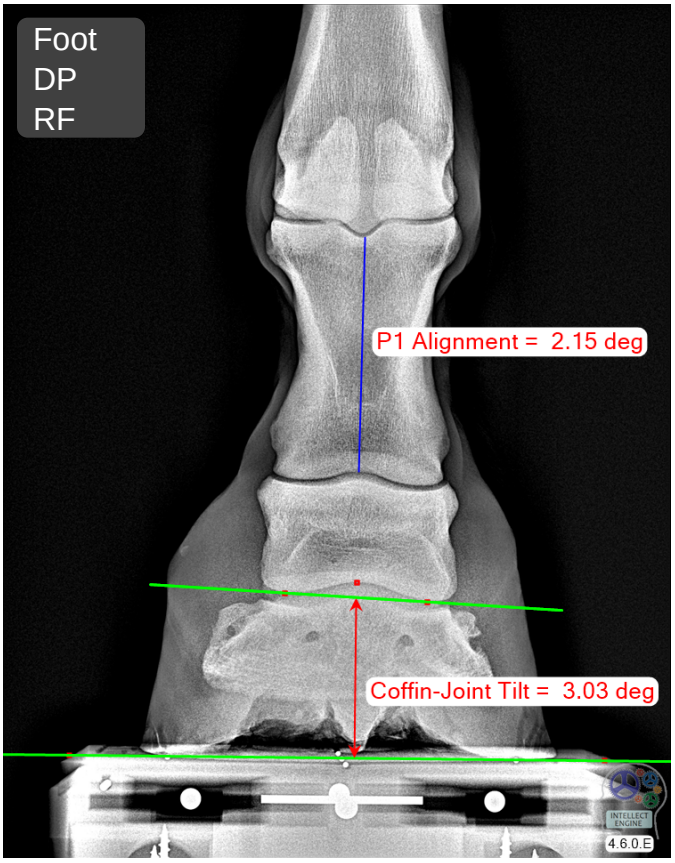
530 data points from hooves of 'small' horses of mixed breed. 'Small' is defined as a 'P2 Length' less than 1.6 inches. The red curve shows a trendline for the data. Concavity tends to decrease with age, but less so in the case of smaller horses.

References: Burd, Craig, and Craig, 2014

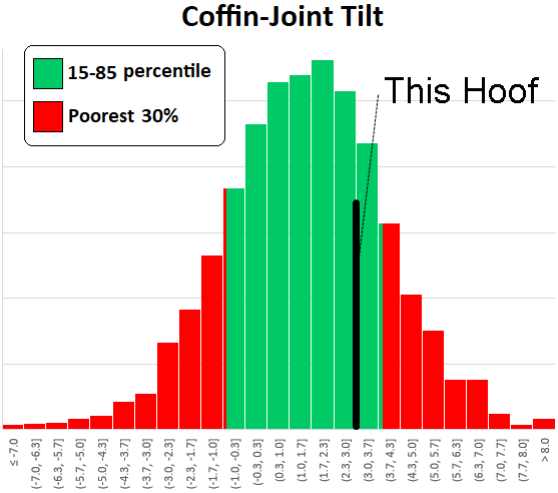
DP Hoof X-Ray

20:32:40

SampleOwner / SampleHorse / 10-Feb-2024



The Coffin-Joint Tilt measurement helps to assess the medial-lateral balance of the hoof. A value of zero occurs when the axis of rotation of the coffin-joint is parallel to ground. A positive value means 'medial heel lower'. The P1-alignment value is not related to the conformation of the hoof, but rather, gives a measure of how well aligned the radiographic appartus was. This value should be low (say, within +/- 3 degrees) in order to trust the Coffin-Joint Tilt value.



Data from 5,045 images of mixed breed.

The Coffin-Joint Tilt for this hoof is 3.0 degrees. This value is indicated on the histogram to the left by the vertical black line labelled 'This Hoof'. It is preferred to be in the green zone. The red zone is far away from the norm.

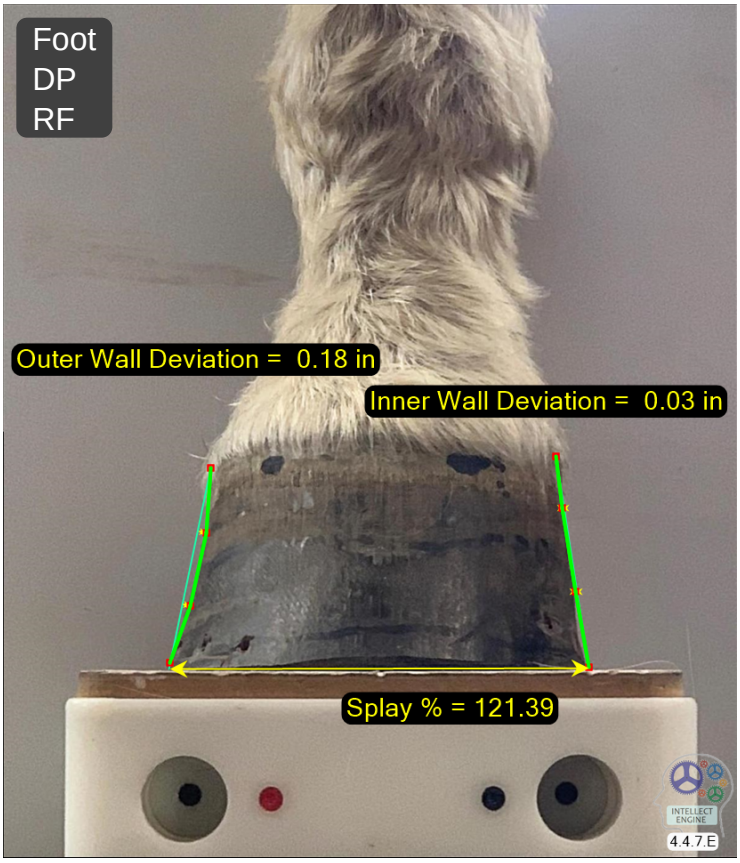
The Coffin-Joint Tilt value is reasonable. It is somewhat below average, but in not in the problem zone.

Link: Explanation of the Measures

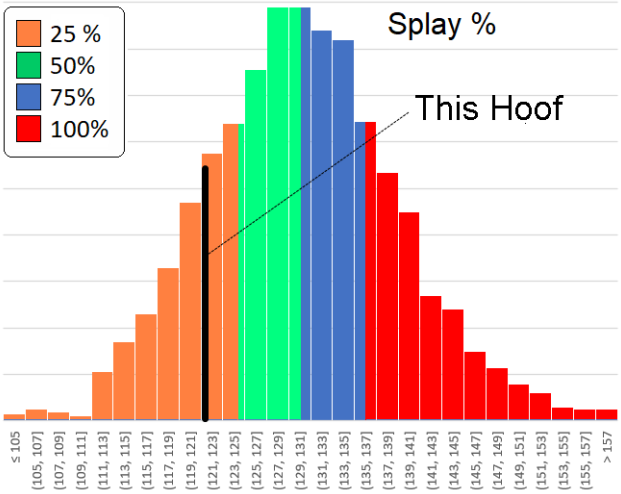
DP Hoof Photo

10:54:30

Owner: SampleOwner Animal: SampleHorse Date: 3-Nov-2022



The 'Splay' measurement helps to assess the frontal view of the hoof. Horses with low splay values tend to be contracted or clubby, and horses with high splay tend to be weak walled and/or have weak bars. No one value is 'correct' for all animals, but extreme values are to be avoided.



The Splay for this hoof is 121.4 percent. This value is indicated on the histogram to the left by the vertical black line labelled 'This Hoof'. Splay values substantialy higher or lower than normal are to be avoided, if possible.

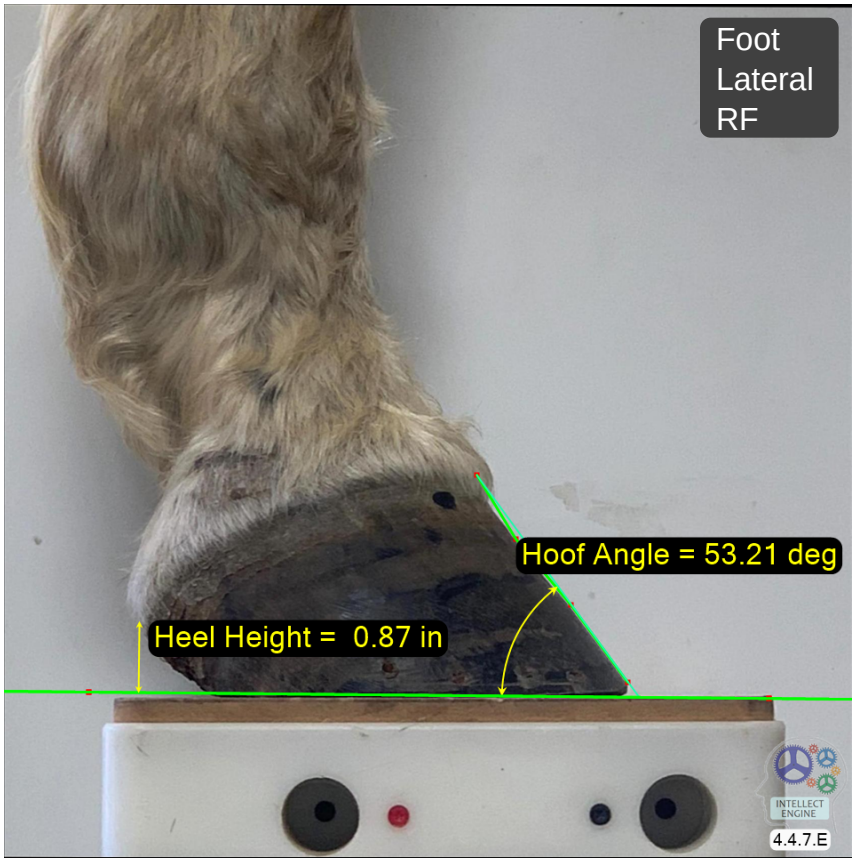
The Splay value is in the 1st (low) quartile when compared to a large group horses which have been measured.

Data from 1,880 hooves of mixed breeds.

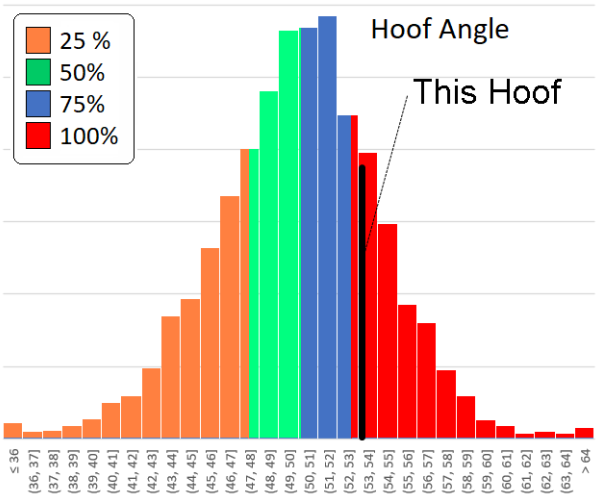
Lateral Hoof Photo

10:54:25

Owner: SampleOwner Animal: SampleHorse Date: 3-Nov-2022



The Hoof Angle measurement helps to assess the dorso-palmar balance of the hoof. Horses with low hoof angle tend to be 'low at the heel', and horses with high hoof angle tend to be 'high at the heel'. No one value is 'correct' for all animals, but extreme values are to be avoided.

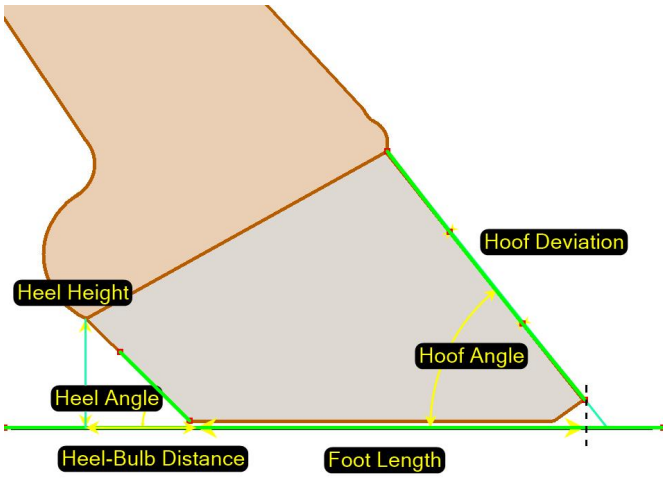


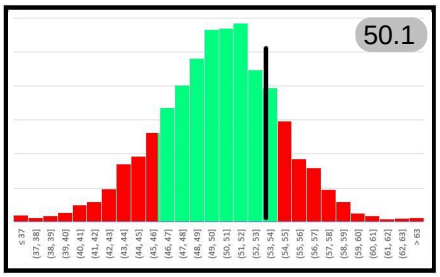
The Hoof Angle for this hoof is 53.2 degrees. This value is indicated on the histogram to the left by the vertical black line labelled 'This Hoof'. Angles substantialy higher or lower than normal are to be avoided, if possible.

The Hoof Angle is in the 4th (high) quartile when compared to a large group horses which have been measured.

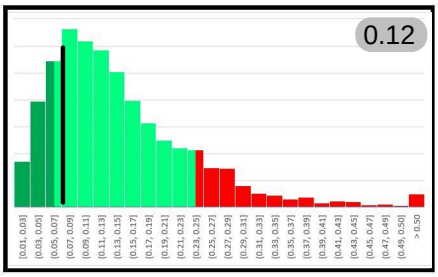
Data from 2,800 hooves of mixed breed.

1.	Hoof Angle	53.2 deg
2.	Wall Deviation	0.07 in
3.	Heel Angle	37.5 deg
4.	Heel Height	0.87 in
5.	Foot Length	5.08 in
6.	Heel-Bulb Dist	0.85 in
7.	Heel Height %	17.1 %
8.	Heel-Bulb %	16.7 %

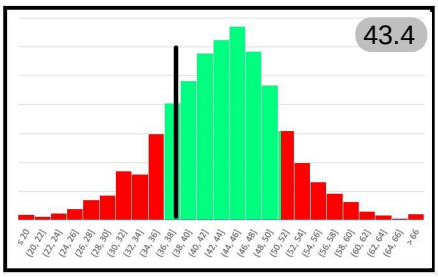




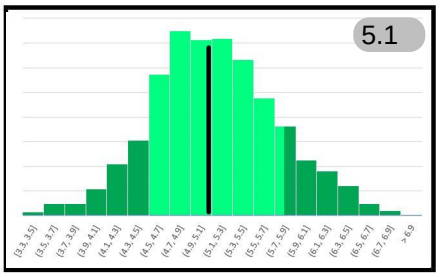
1. Hoof Angle



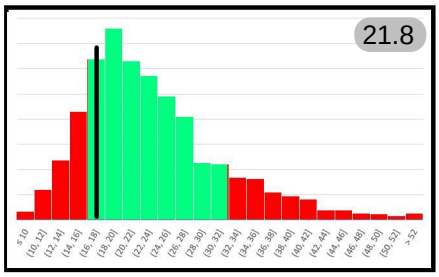
2. Wall Deviation



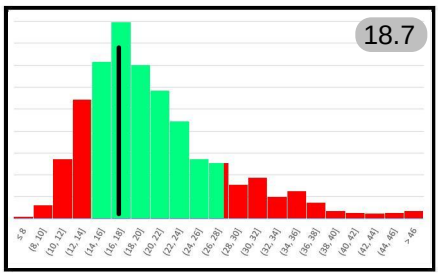
3. Heel Angle



5. Foot Length



7. Heel Height %



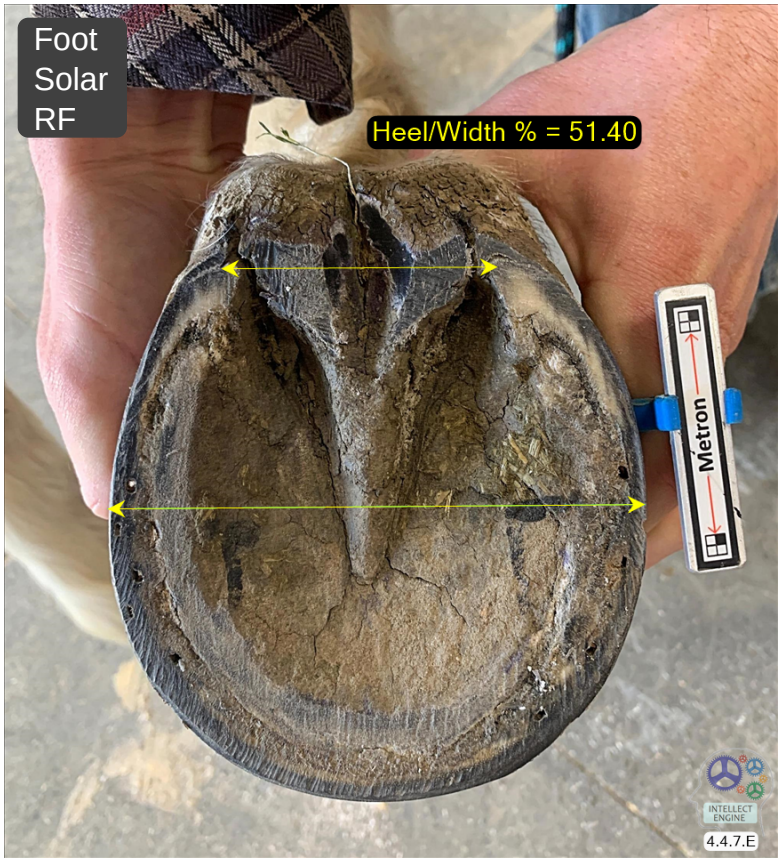
8. Heel-Bulb %

Data from 2,800 hooves of mixed breed. Central green zones correspond to 70% of the population. Red zones represent "15th percentile and lower" and "85th percentile and higher". Median values are shown in upper right corner of each graph.

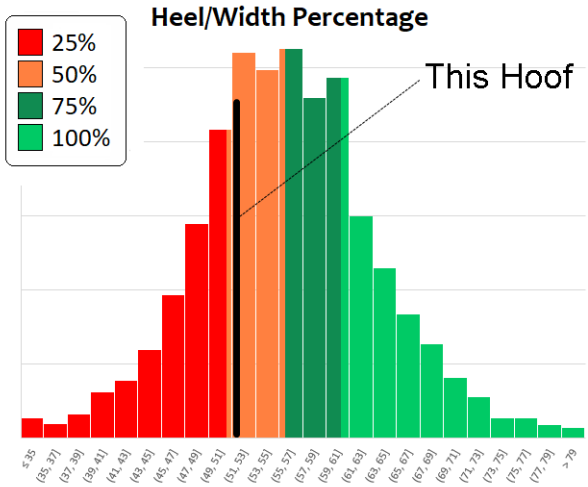
Solar Hoof Photo

10:54:34

Owner: SampleOwner Animal: SampleHorse Date: 3-Nov-2022



The 'Heel-Width Percentage' measurement gives the width of the heel points as a percentage of the widest part of the foot. This can be used as a way to check for 'contracted heels'.

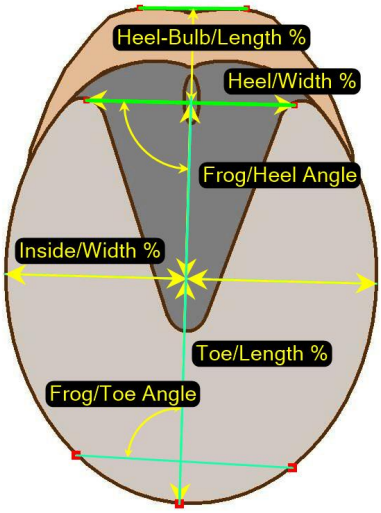


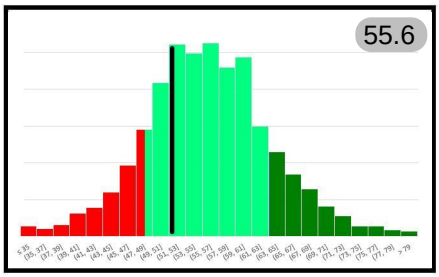
The Heel-Width for this hoof is 51.4 percent (of the widest part of the foot). This value is indicated on the histogram to the left by the vertical black line labelled 'this hoof'.

Heel-Width is in the 2nd quartile when compared to a large group horses which have been measured.

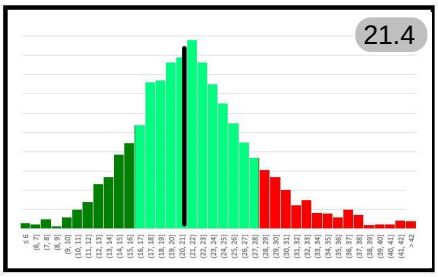
Data from 2,394 images of hooves of mixed breeds.

1.	Heel/Width %	51.4 %
2.	Heel-Bulb/Length %	20.8 %
3.	Toe/Length %	55.3 %
4.	Inside/Width %	47.5 %
5.	Frog/Heel Angle	88.0 deg
6.	Frog/Toe Angle	91.3 deg

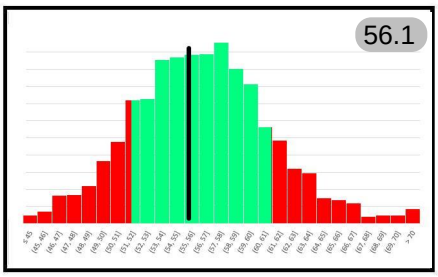




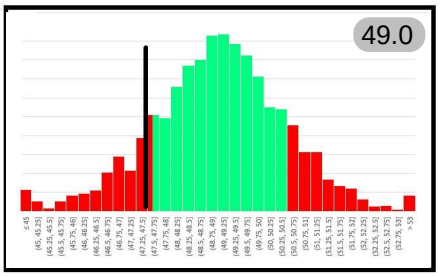
1. Heel/Width %



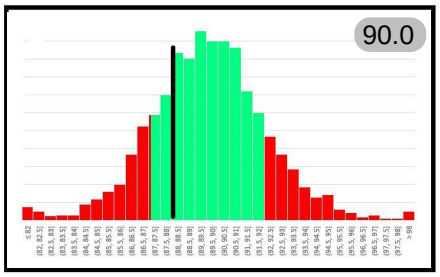
2. Heel-Bulb/Length %



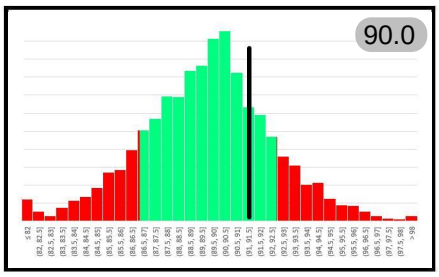
3. Toe/Length %



4. Inside/Width %



5. Frog/Heel Angle



6. Frog/Toe Angle

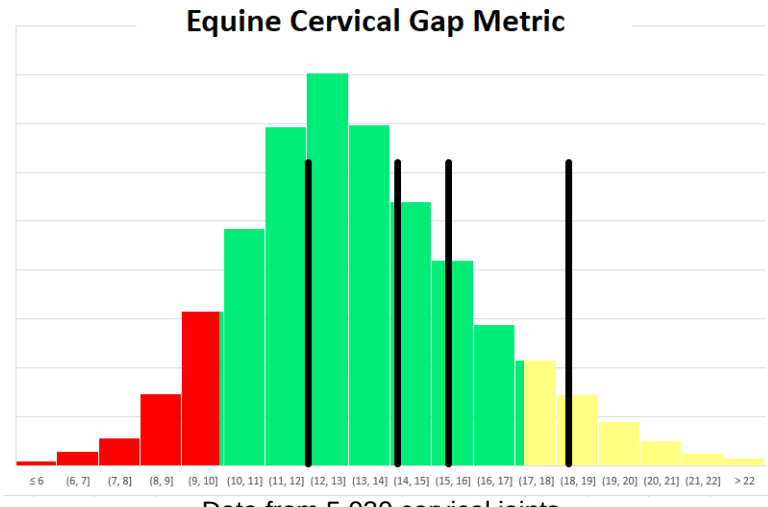
Data from 2,394 images of hooves of mixed breeds. Central green zones correspond to 70% of the population. Red zones represent "15th percentile and lower" and "85th percentile and higher". Median values are shown in upper right corner of each graph.

Equine Neck

17:43:21

Z M Smith / Trigger / 15-Nov-2025

The size of gaps which are correlated with cervical disc thickness are measured at each cervical joint that was captured in this image.



Data from 5,030 cervical joints.

Measurements falling within the red section of the histogram represent values in the lowest 10th percentile of the reference population. Measurements within the yellow section represent values above the 90th percentile, indicating comparatively larger values.

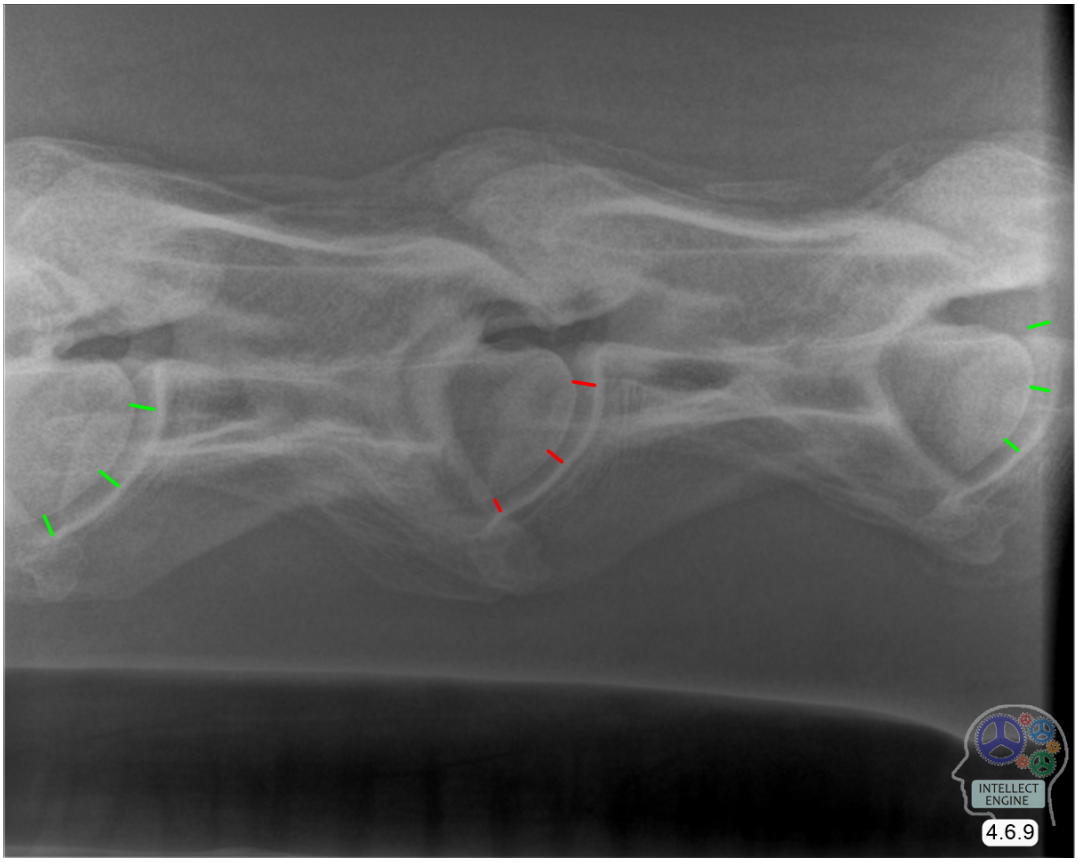
Reference: Veraa et al, 2020

Algorithm Notes

Equine Neck

17:43:48

Z M Smith / Trigger / 15-Nov-2025



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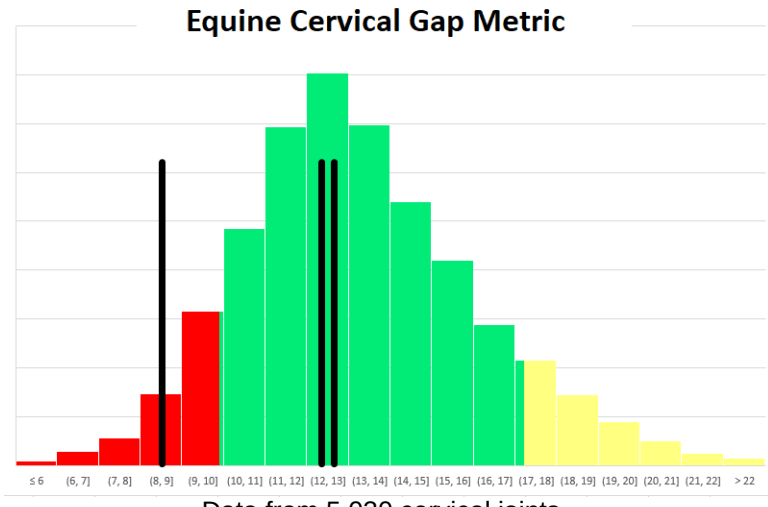


Data from 5,030 cervical joints.

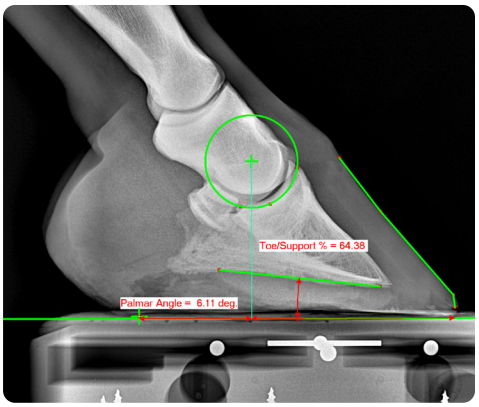
Measurements falling within the red section of the histogram represent values in the lowest 10th percentile of the reference population. Measurements within the yellow section represent values above the 90th percentile, indicating comparatively larger values.

Reference: Veraa et al, 2020

Algorithm Notes

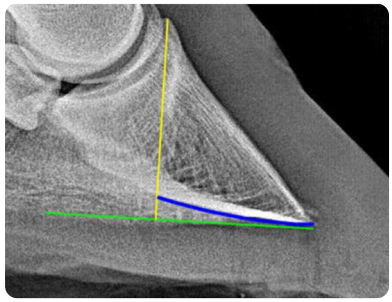
Metron Intellect Module Tools

Equine Foot Mark-Up & Measurements



- Metron Intellect Module will automatically recognize 96 different radiographic views and 6 different photographic views, performing a 26 point mark-up for the 10 most comonly used hoof metrics.
- Automate hoof mark-ups and measurements for lateral, DP and solar radiographic views, saving time while quickly identifing early indicators of lameness.

Mark-Up Exclusive: The Palmar Angle



- Metron's automatic Palmar Metric tool allowsfor the assessment of morphological vs. chronological age of P3 (coffin bone).
- Provides objective data to inform better clinical decisions for pre-purchase exams, lameness diagnostics, and preventative care and monitoring.
- This empowers veterinarians to make data-driven decisions that can improve long-term hoof health for every patient based on their unique morphology.

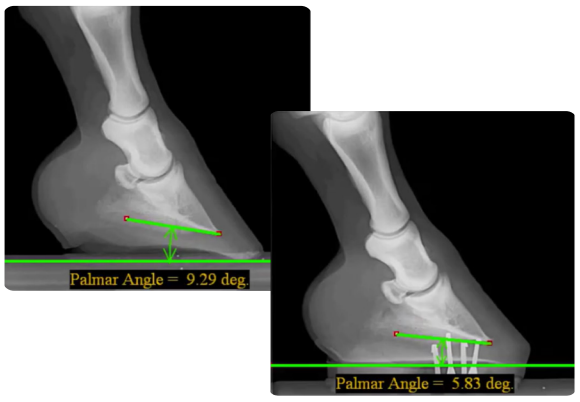
Image Overlay Tool

Visualize Internal And External Structures

- Superimpose radiographs directly over a photograph of the horse's foot to create a single, clear image that connects internal structures to external landmarks.
- By visually connecting what's visible externally with what's happening internally, it creates a shared reference point for veterinarians, clients, and farriers.

Image Morph Tool

Before And After Visual Comparison



- The Morph Tool takes a "before" and "after" image, and seamlessly transitions between them to create a dynamic visual animation.
- Image morph comparisons highlight critical changes in hoof structure over time and demonstrates treatment effectiveness, especially when making changes to trimming and shoeing.

Luminescence Tool

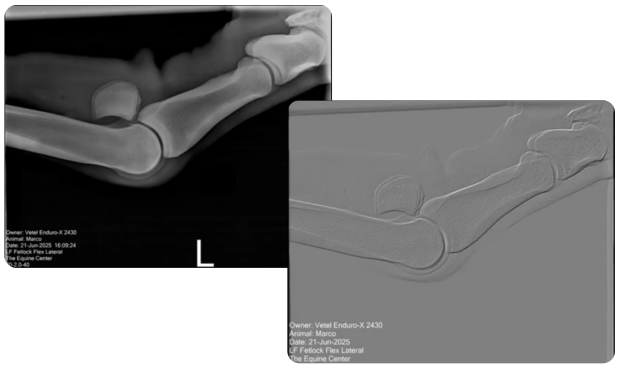
Quickly Evaluate Bone Density

- The Luminescence tool measures relative bone density along a user-defined line in each radiograph.
- Generates a pixel-by-pixel density map that highlights variations in bone and cartilage.
- Helps to identify areas of higher or lower bone density, including tiny stress fractures or other abnomalies that may be missed even under magnification.

Emboss Tool

Visualize Subtle Details

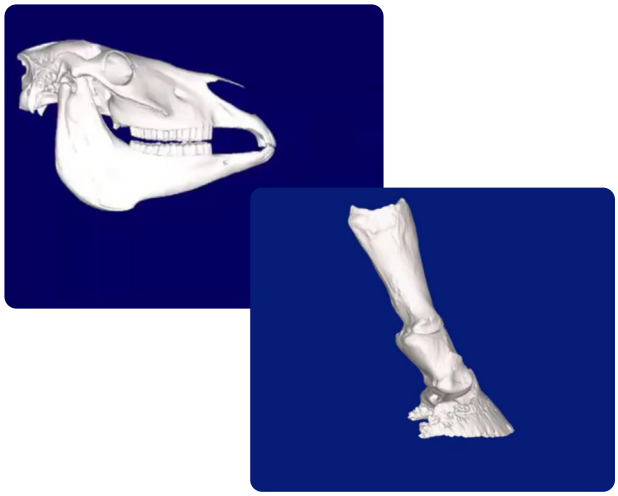
- The Emboss tool is an edge-enhancement funtion that defines the appearance subtle details in a radiographs, making them easier to indentify.
- Detect small changes, abnormalities, or lesions in bone or cartilage that might be missed at first glance.



3D Viewer

Explore Anatomy Further

- Once hoof mark-ups are made, 3D viewer maps that data onto a conical CT model. The model is then stretched to fit the specific measurements of the patient's foot, creating a precise, interactive 3D representation.
- Dental model provides 3D skull and detailed bite/dental maps for dental treatment planning.
- Pre-plan shoeing, experiment with palmar angles, and visualize how specific adjustments can affect other structures.



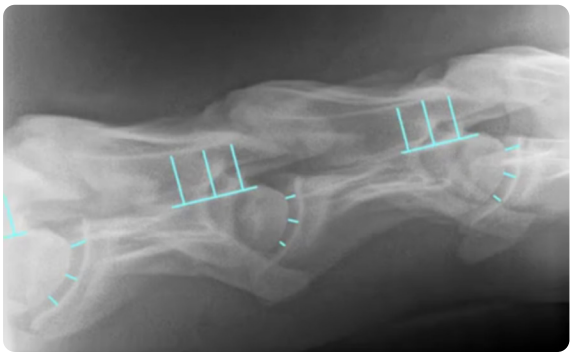
Metron Online WebViewer

Instantly Share And Collaborate

- Metron's WebViewer is a unique cloud-based tool that gives veterinarians and their clients fast, interactive access to imaging studies.
- Comments and voice memos can be attached to each study.
- Users can view, edit, and download each study, making client communication or collgue collaboration fast and easy.

New in 2026: Cervical Spine Measurements

- Evaluating the equine cervical spine can be time-consuming and complex, but neck pain and cervical spine disorders are recognised as significant factors in equine performance and soundness.
- Soon, Metron will automatically perform detailed, magnification-corrected measurements to lateral cervical radiographs, including:
  - Intervertebral gap widths
  - Angle changes between vertebrae
  - Spinal canal measurements at multiple levels



METRON 8.5

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