



Thermal Imaging Report

Zebora



*Thermal Imaging completed by
a Certified Thermographer
Authorized with the EquineIR™
Network.*



*Interpretative results
completed by Licensed
Veterinarians in contract with
Integrated Equine Infrared.*



Arnt Myrvoll AS
Kjelsåsveien 174
0884 Oslo Norway

Tlf: +47 958 04 696
Tlf: +47 917 17 419

WEB: www.arntmyrvoll.no
EMAIL: arntmyrvoll@online.no



Phone: +47 958 04 696/ 917 17 419

Email: arntmyrvoll@online.no

Web: www.arntmyrvoll.no

www.equineir.com

PATIENT: Zebora

THERMOGRAPHY DATE: 03.01.2014

IMAGING TIME: 11:15

January 9, 2014

Sylvia Nesper
B.P Hoelsveg 21
2230 Skotterud

Dear Sylvia Nesper:

EquineIR was recently requested to perform a full body thermal imaging scan of: **Zebora**

The following photo report was completed by your EquineIR™ Certified Thermographer and all interpretative results were channeled through interpretir.com and subsequently formulated and input by a licensed veterinary team member with Integrated Equine Infrared.

The interpretation is intended to aid your state-licensed veterinarian in providing a diagnostic or treatment protocol. All follow-up testing and treatments should be conducted and administered by your primary veterinarian. The interpretation provided is based solely on the conditions at the time of survey and the thermal images included in this report. Thermography is a diagnostic tool that measures heat emitted from the surface of the patient. The thermal imaging camera converts infrared energy into a visible image. Emitted heat is related to circulation; as such, the thermal camera can help detect areas of inflammation as well as decreased circulation. Thermal symmetry is key, so you compare one anatomic area with the same area on the other side. The EquineIR™ report is prepared in this manner. It should be understood that correct patient preparation and environment are vital to a successful survey. Your EquineIR™ technician is also a Certified Infrared Thermographer and has been trained in the proper use and the proven techniques of thermal imaging as it is used with horses. There are however certain situations which may reduce the quality of the survey including the improper preparation of the horse prior to technician's arrival. The interpreting veterinarians who review the imagery base their findings and recommendations on information provided, so it is critical that proper care be taken in the preparation process to ensure success.

Thermal imaging is a physiologic modality and should not be relied upon as the sole diagnostic tool. A complete clinical examination by your state-licensed veterinarian is always recommended for the best diagnosis and follow-up treatment. This Report is not a definitive diagnosis of any illness or disease. It is intended for use only by licensed veterinary professionals to evaluate patient health, diagnose medical conditions, and provide treatment. It is not to be used by individuals for self-diagnosis or self-evaluation, nor for the diagnosis or evaluation of other non-qualified personnel. This report does not replace, nor is intended to replace a complete clinical evaluation by your state-licensed veterinarian. Under no circumstances will EquineIR™, Integrated Equine Infrared or its affiliates be held responsible for illness, injury, or death to the patient as a result of the information contained herein. This report does not replace, nor is intended to replace a complete clinical evaluation.

Your EquineIR™ Technician looks forward to working with you in the future. If you would like to set up an ongoing maintenance imaging program for your horse(s), we can arrange this at discounted rates along with multiple horse discounts. Please call our office with any questions as we would love to assist you in your success.

Sincerely,

Ivar Martin Ovesen

Ivar Martin Ovesen, *Certified Infrared Thermographer*
Arnt Myrvoll AS



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EQUINE CLIENT INFORMATION

CLIENT NAME: Sylvia Nesar
MAILING ADDRESS: B.P Hoelsveg 21, 2230 Skotterud
CLIENT EMAIL: lunas07@ovi.com
CLIENT PHONE: 93617491

HORSE AGE: 9
HORSE BREED: KWPN
HORSE PRIMARY USE: Riding/ Drive

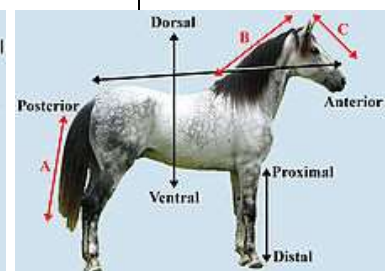
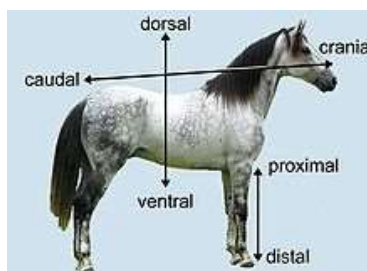
SURVEY INFORMATION

THERMOGRAPHER: Ivar Martin Ovesen
INFRARED CERTIFICATION #: NO.2011NO047N013
INFRARED CAMERA MODEL: Flir T335 **CAMERA SERIAL NUMBER:** 48804121
NUMBER OF THERMAL IMAGES SUBMITTED: 30
WEATHER: Raining
APPROXIMATE TEMPERATURE: 3 °C
IMAGING LOCATION: Covered area
EXERCISED PRIOR: Yes **HOW LONG:** 15 **WHEN:** 11:00
TYPE OF EXERCISE: Walk, trot and lunged
BOOTS OR WRAPS ON HORSE? No **HOURS SINCE:** Not Applicable
FLYSPRAY OR LINIMENTS APPLIED WITHIN 24 HOURS: No

REASON FOR SCAN or HISTORY RECEIVED: The horse is showing signs of sore back, has also lost weight after she started working out again after I bought her this summer 15/7-2013 . She also fails in the left hind leg occasionally. The horse is jumpy and keeps her head very high. She rears a lot when ridden and snaps at everything in the stable, both people and animals. She bites into rugs / saddle on the opposite side than I stand at when I put it on. Dragging her teeth on the edge of the stall if someone walks by. She does not like being brushed . She is very afraid of her head and gets really angry in the yard / riding path if someone slams with planks or empty water buckets. She eats very little roughage and rinses her mouth with water when she eats. Had Tooth treatment by inger Wetterhus from kongsvinger animal clinic 2/9-2013 but it seems like she does not feel good. The horse received antibiotics because of wounds between front legs when I brought her home this summer .The horse has proven kissing spine in t 4-6 with X-rays . Veterinary believed this should not affect the horse. She also had a change in left rear fetlock. NB! The horse is shaved and have blanket rubs on both shoulders.

INTERPRETATION INFORMATION (Completed by Veterinarian)

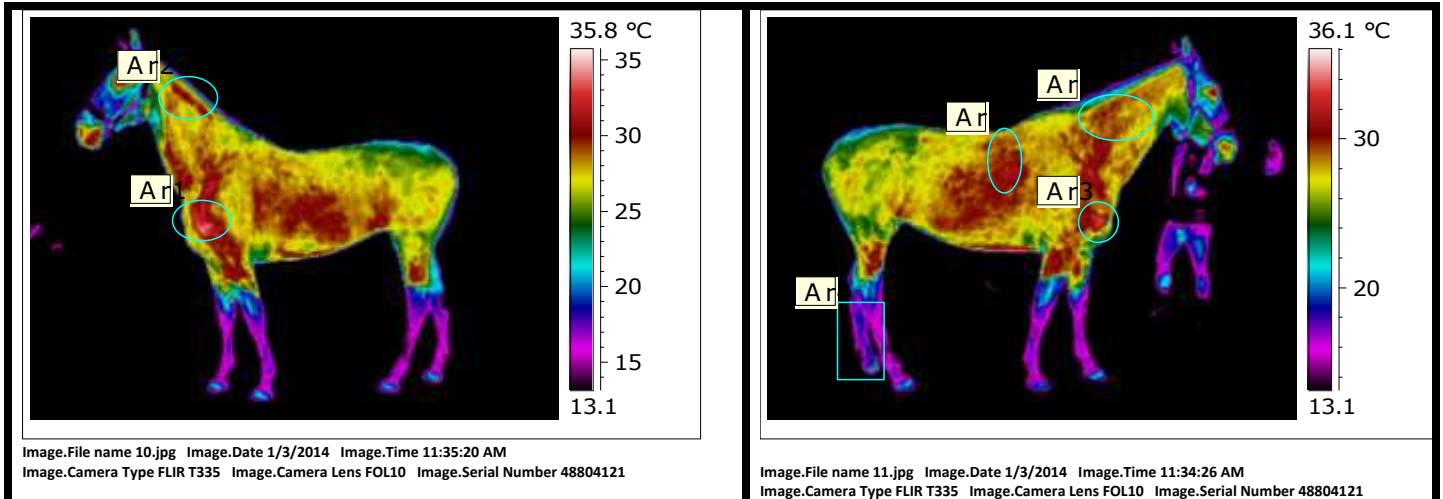
INTERPRETATION TYPE: Full Enhanced Survey
DATE OF INTERPRETATION: 1/9/2014
REVIEWING VETERINARIAN: Dr. Debra K Tibbitts



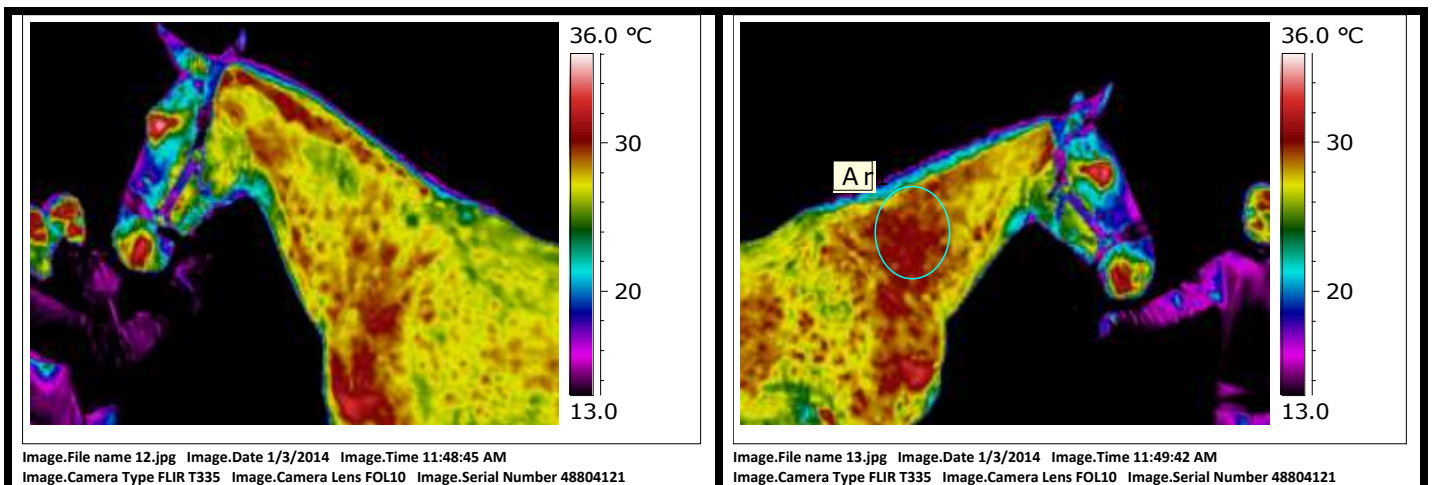
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Blanket rubs on shoulders. Increased heat along left nuchal ligament may be artifact but it is in several views therefore palpation is recommended. Asymmetry seen along right trapezius muscle and left rib. Palpation recommended ruling out local inflammation. It may also represent muscle imbalances. Heat is also seen in the medial left hind lower limb.

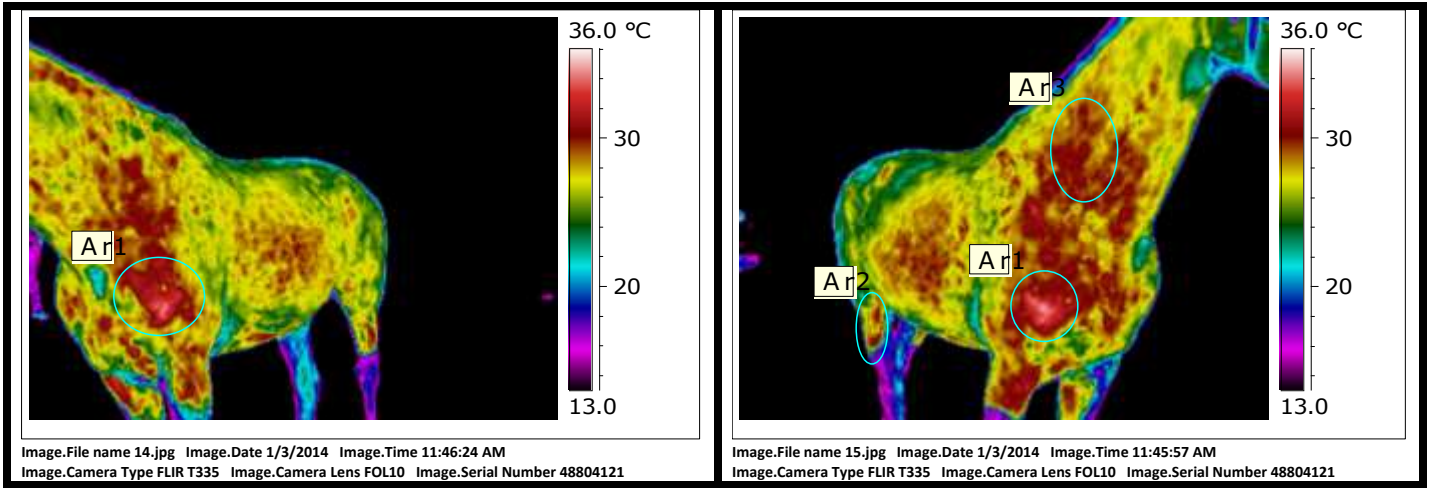


Right trapezius also has greater heat than the left in this view. See previous comments above.

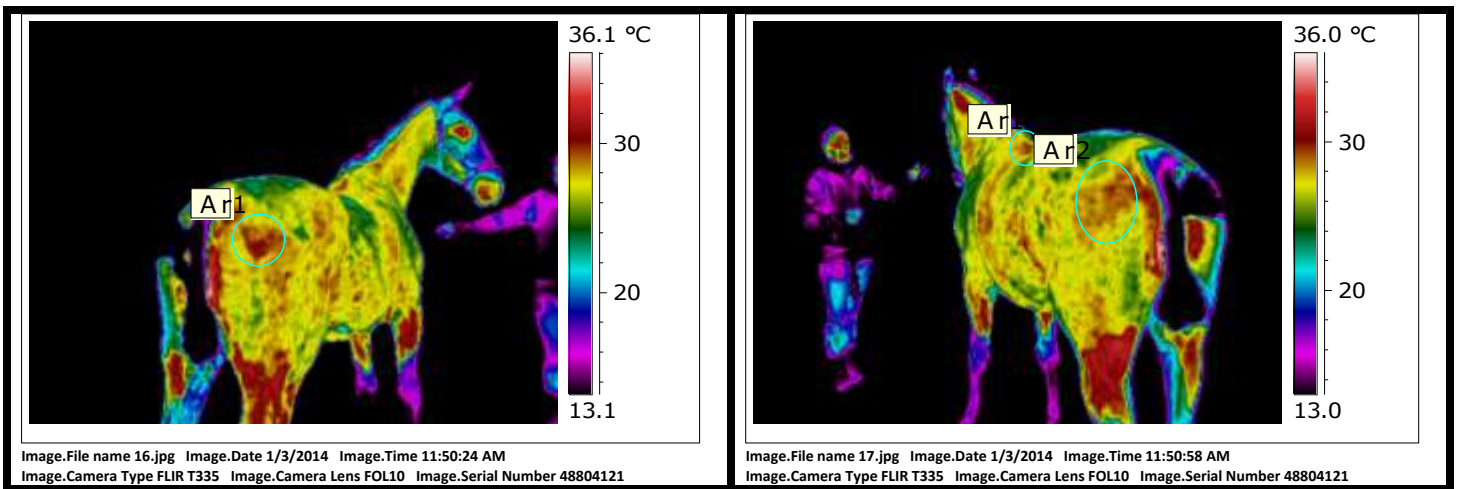
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Blanket rubs on shoulders as mentioned in history very evident in these views.

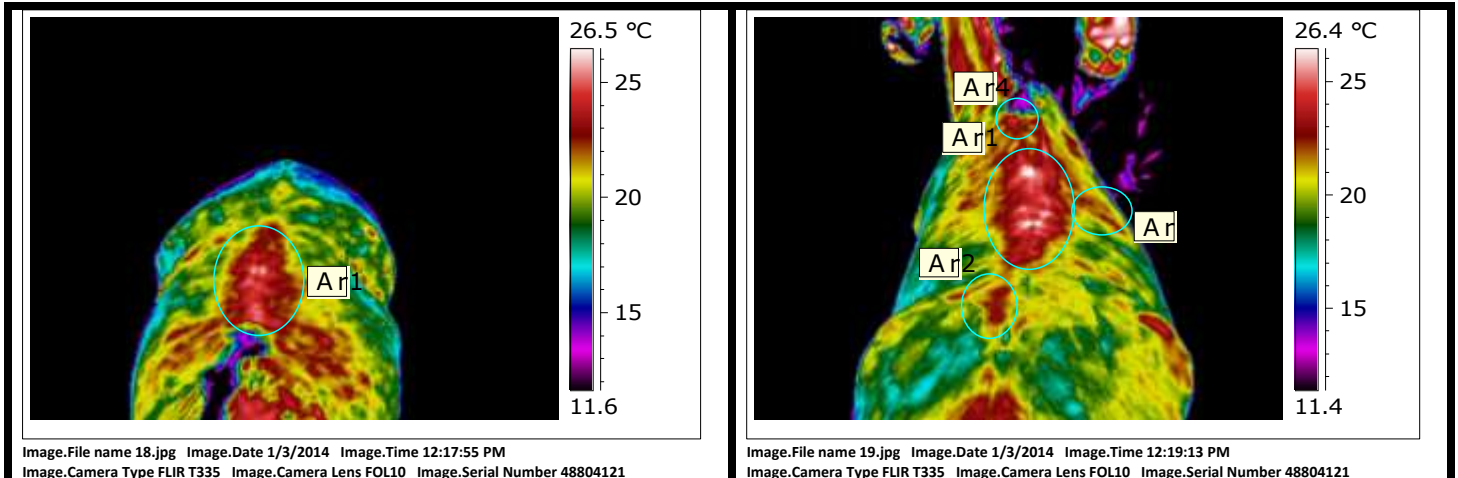


Increased heat withers – may correlate with kissing spines mentioned in history. Palpation recommended. Slight asymmetry biceps femoris/semitehdinosus muscles. Artifact may be present. Recommend palpation to rule out inflammation.

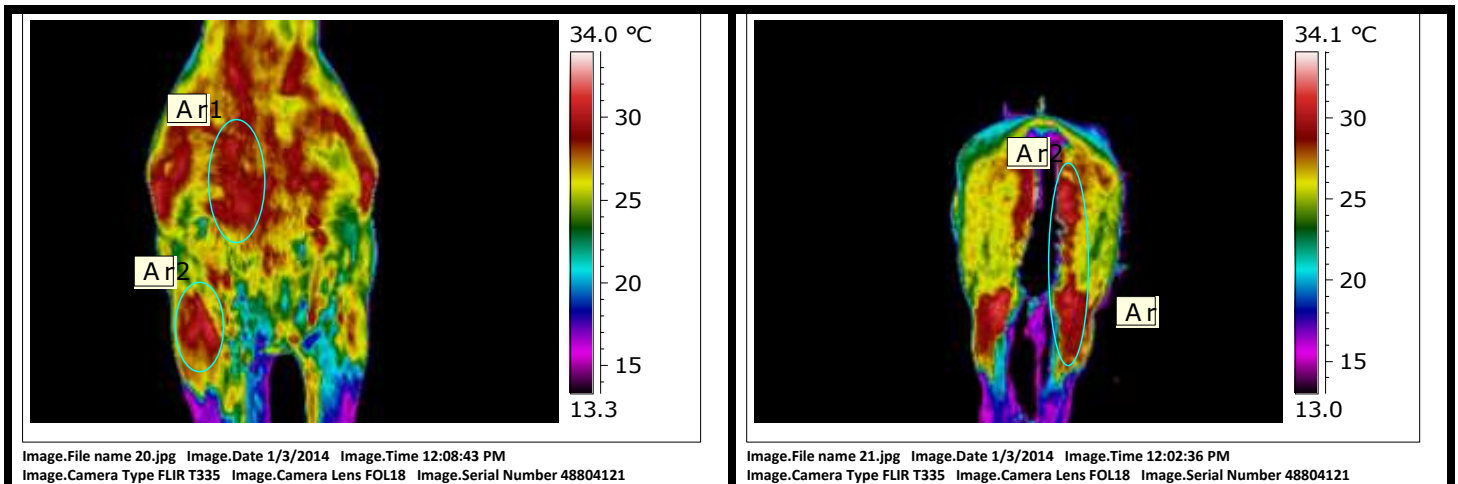
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Increased heat in the thoracolumbar spine, particularly at the thoracolumbar junction with extension along the right rib. Chiropractic lesions, saddle fit issues and kissing spine may be the source of increased heat. There is asymmetry at the sacroiliac joint with heat greater on the left. Muscle imbalance, uneven limb loading, inflammation of the sacroiliac joint and/or chiropractic lesions may be present. Palpation, motion palpation, chiropractic evaluation, saddle fit analysis and possibly radiographs are appropriate for further evaluation.

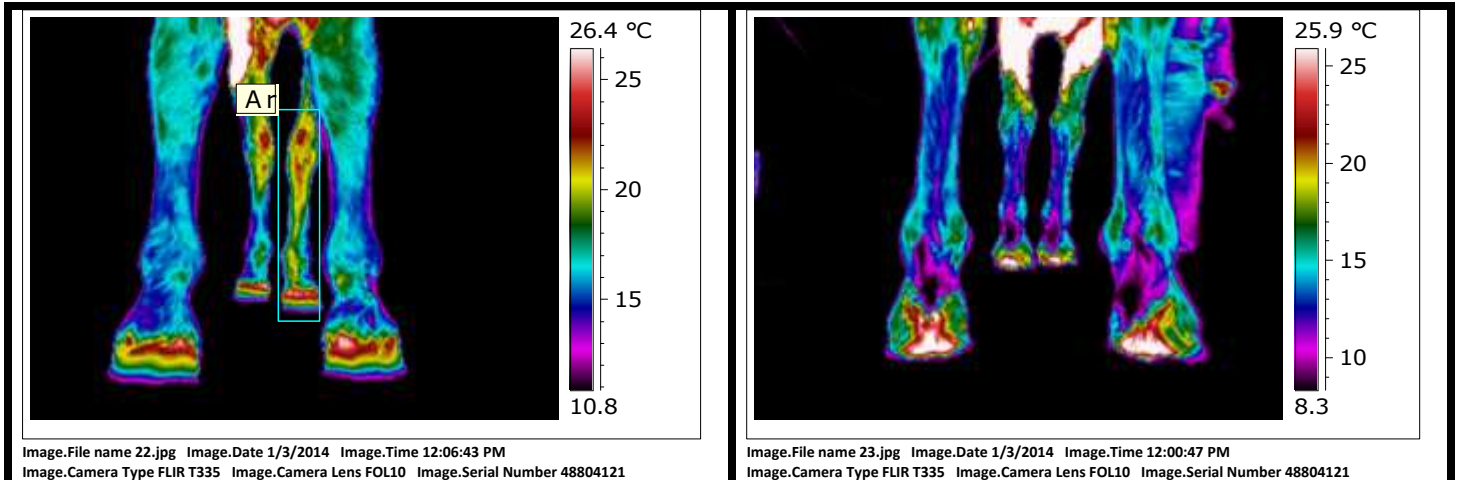


There is asymmetry in the chest and forelimbs with heat greater on the right – this may be due to off-loading of the left front limb or local inflammation/strain of the right forelimb. There is asymmetry in the hindquarters with heat greater on the right gaskin and semimembranosus. This also may be due to off-loading of other limb or local inflammation/strain of the right hind. Palpation recommended along with gait and postural analysis to differentiate.

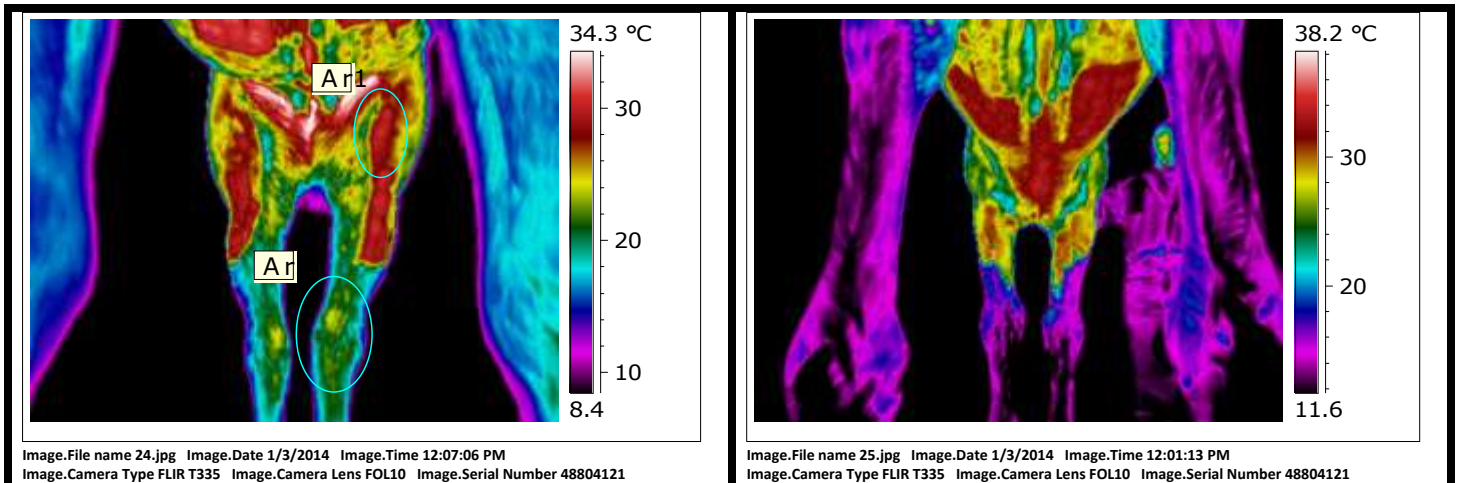
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There is increased heat along the medial left hock and medial lower limb. This may represent tarsitis. Palpation, gait analysis, flexion tests and possible radiographs based on findings are all recommended for further evaluation.

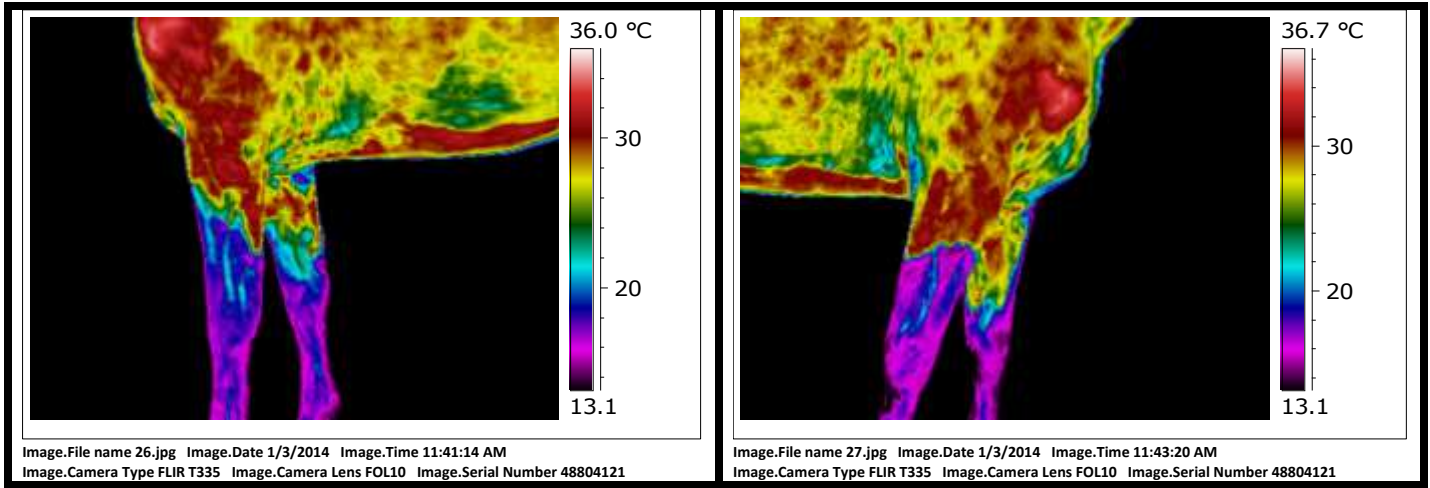


There is some asymmetry in the stifle and hock, with heat greater on the left. Gait analysis, palpation, flexion tests and possibly radiographs based on exam findings recommended for further evaluation.

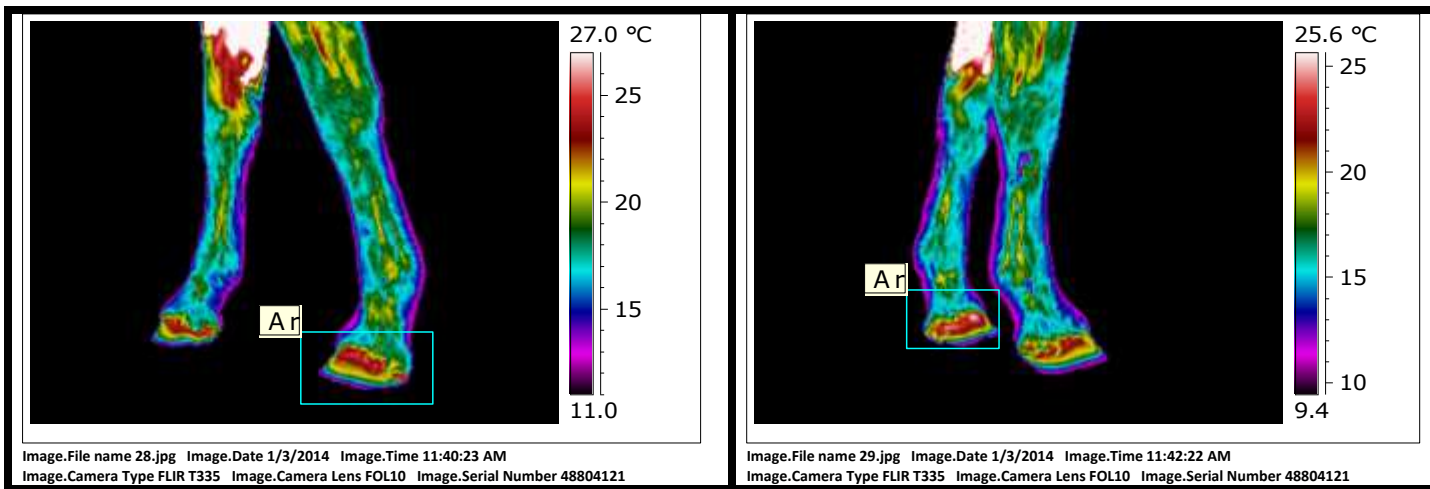
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NSF: No Significant Findings

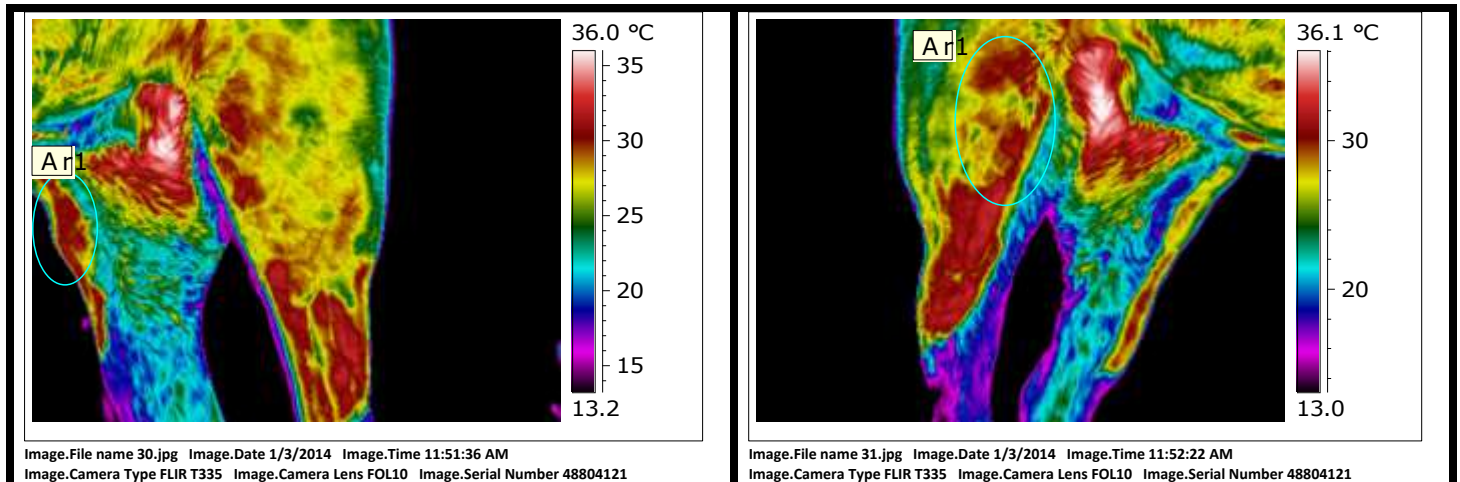


The left front foot has greater heat than the right. (Though it is a bit difficult to evaluate due to the long hair along the coronary band.) It may be due to uneven limb loading, imbalances in the foot or inflammation/infection in the foot.

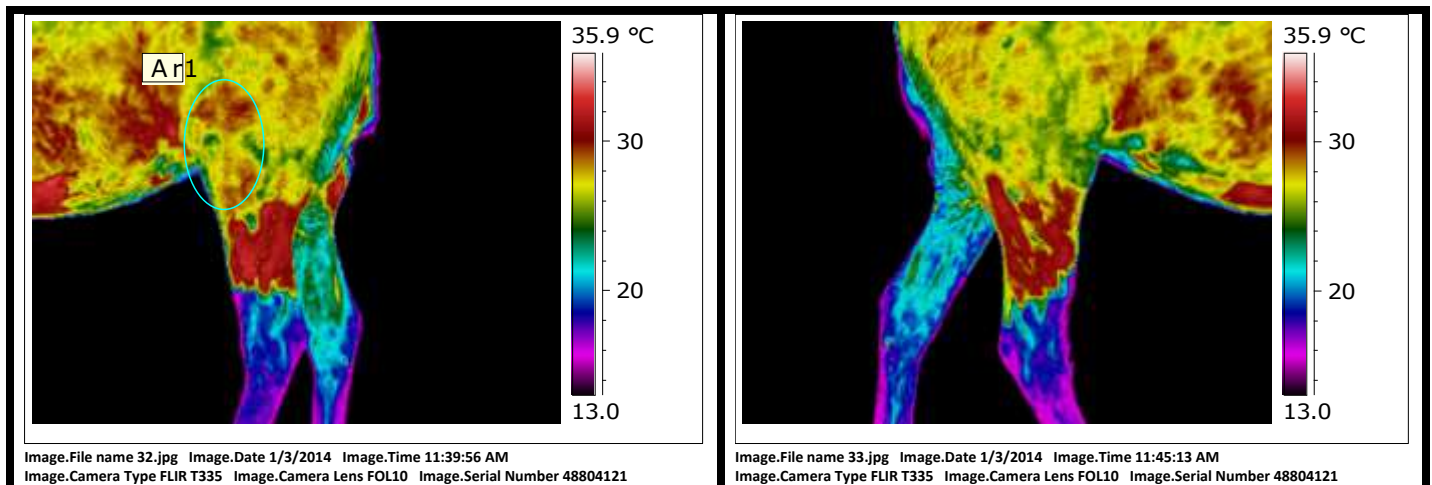
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Some asymmetry seen in the stifle area, with heat greater on the right. Palpation recommended ruling out inflammation along the tendons. Flexion tests and gait analysis may also be helpful.

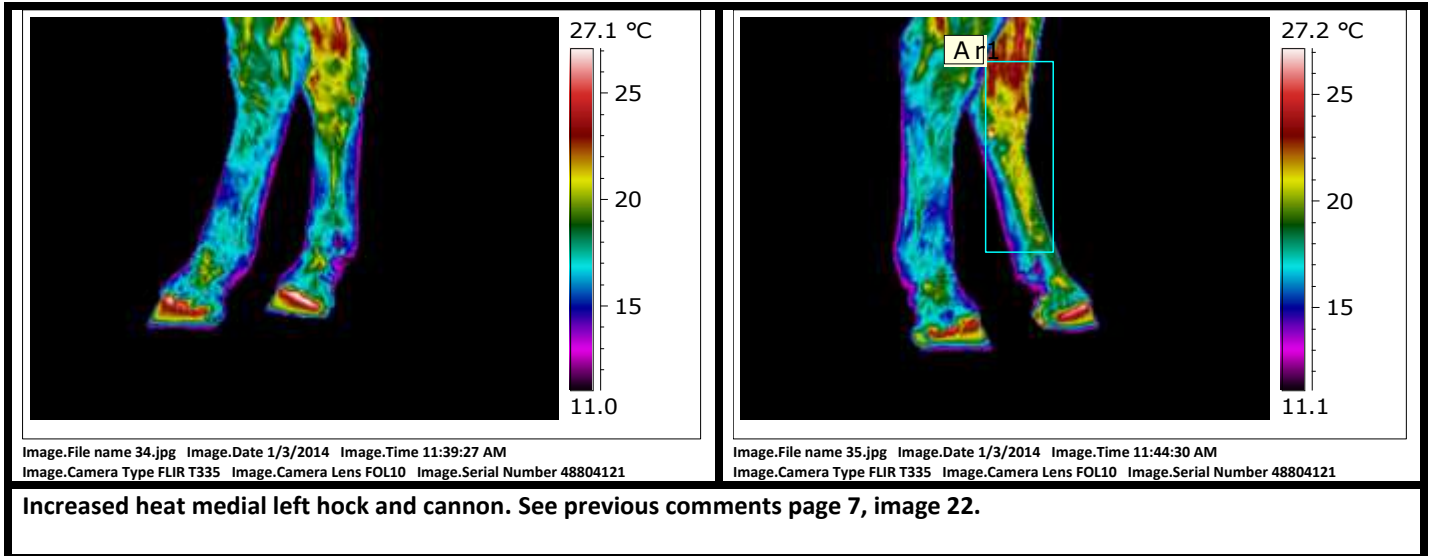


Slight asymmetry left lateral stifle – palpation recommended checking for inflammation.

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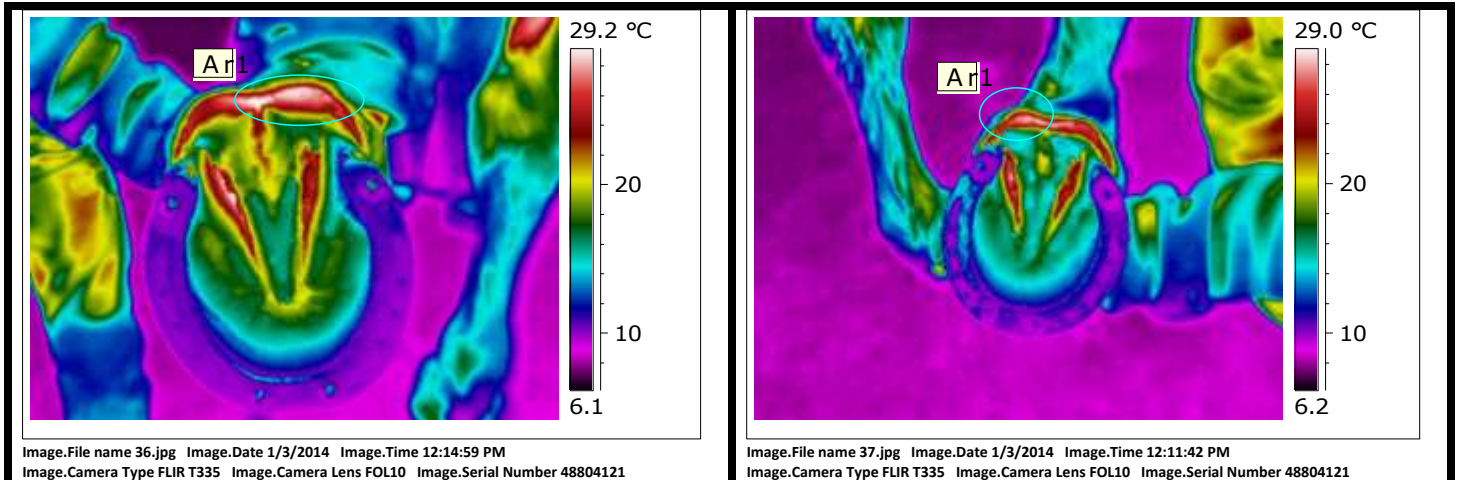
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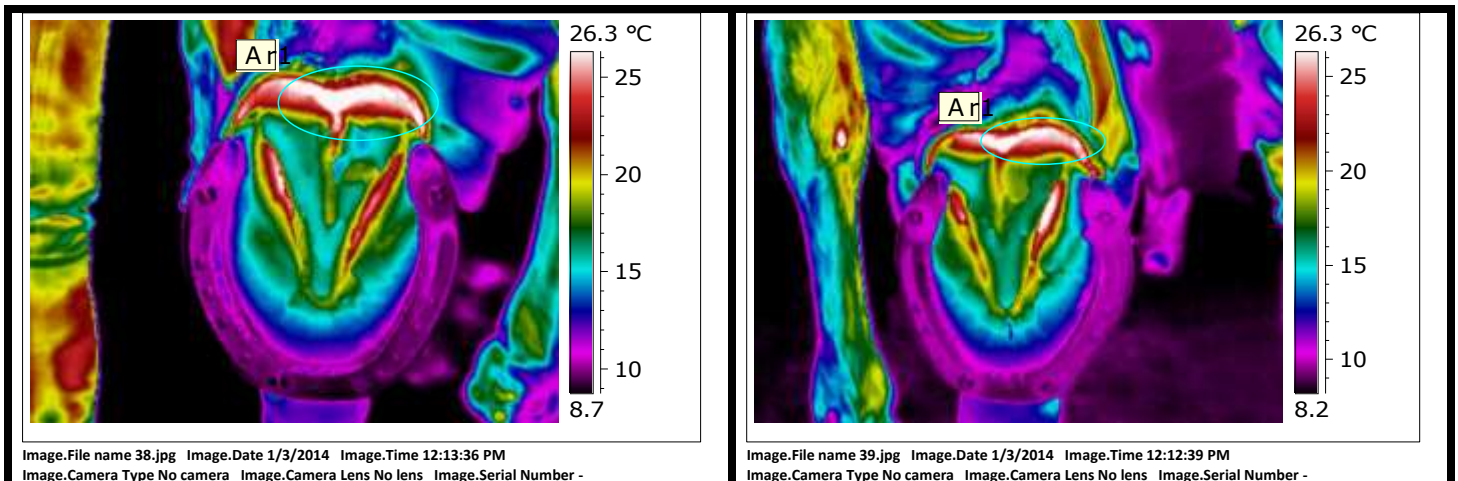
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Uneven pressure at the heels with both medial heels having greater pressure than the lateral heels. Hoof imbalances or chronic uneven loading of the foot due to issues in the limbs.



Uneven pressure at the heels with the left hind medial and right hind lateral heel having greater pressure. Uneven loading of the limb or imbalances in the feet are present. Postural analysis, thorough visual evaluation of the foot, gait analysis and motion testing of the joints will be helpful for further evaluation.



Phone: +47 958 04 696/ 917 17 419

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SUMMARY AND RECOMMENDATIONS: Zebora is a nice looking mare but there are some areas of concern based on the images presented.

There is asymmetry in the front limbs with heat greater along the upper right shoulder, chest and forelimb. This may be due to off-loading of other limb or primary muscular inflammation/strain of the right front. There is also asymmetry in the hindquarters with heat greater in the right semimembranosus and gastrocnemius muscles. Palpation including motion palpation, postural and gait analysis recommended for further evaluation.

There is increased heat in the medial left hock with extension distally along the medial aspect of the cannon, fetlock and pastern. Palpation, gait analysis, flexion tests and possible radiographs based on exam findings recommended for ruling out tarsitis. There is also some heat in the right stifle seen in the stifle view and also the left stifle on lateral and medial views. Palpation, motion palpation and gait analysis recommended for ruling out primary inflammation of the stifle area. It may also be secondary to the increased heat seen in the left hock and uneven limb loading on the right.

There is increased heat in the withers and thoracolumbar spine with extension onto the right rib. Thorough veterinary chiropractic evaluation recommended of the entire area along with possible radiographs as kissing spines may be present at the thoracolumbar junction. Saddle fit analysis also recommended. There is also asymmetry in the sacroiliac joint, with heat greater on the left. Palpation, motion palpation and chiropractic evaluation recommended ruling out inflammation and chiropractic lesion of the sacroiliac joint.

All four feet have uneven pressure at the heels that may be due to imbalances in the feet or secondary to uneven loading of the limb. Gait and postural analysis along with thorough visual evaluation of the hoofs are recommended for differentiation.

Though not able to be evaluated via thermography, Zebora's history suggests possible gastrointestinal ulcers as a source of pain and the reason she acts out in her stall and during saddling. Veterinary examination and diagnostics such as endoscopy are suggested.

Thank You!

Reviewing Veterinarian: Debra K Tibbitts, DVM ,CVCP, EDO, CVA ,CIT

