



Blue Wave Infrared
Equine Thermal Imaging

Thermal Imaging Report

AJ



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



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



Blue Wave Infrared
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Blue Wave Infrared
Equine Thermal Imaging



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PATIENT: AJ

THERMOGRAPHY DATE: September 18, 2013

IMAGING TIME: 4:50 pm

September 21, 2013

Client Name: Abby Greenfield
Client Address: 4726 Coburn Ct.
Client City State Zip: Charlotte, NC 28277

Dear Abby:

EquineIR was recently requested to perform a full body thermal imaging scan of AJ.

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,

Ward Woodbury

Ward Woodbury, *Certified Infrared Thermographer #9209*
Blue Wave Infrared



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Equine Thermal Imaging



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EQUINE CLIENT INFORMATION

CLIENT NAME: Abby Greenfield
MAILING ADDRESS: 4726 Coburn Ct., Charlotte, NC 28277
CLIENT EMAIL: N/A
CLIENT PHONE: 704-297-5794

HORSE AGE: 10
HORSE BREED: Thoroughbred
HORSE PRIMARY USE: Pleasure

SURVEY INFORMATION

THERMOGRAPHER: Ward Woodbury
INFRARED CERTIFICATION #: 9209
INFRARED CAMERA MODEL: Flir T420 **CAMERA SERIAL NUMBER:** 62101441
NUMBER OF THERMAL IMAGES SUBMITTED: 30

WEATHER: Sunny
APPROXIMATE TEMPERATURE: 79 °F
IMAGING LOCATION: Barn aisle

EXERCISED PRIOR: Yes **HOW LONG:** 20 min. **WHEN:** 1 hour prior
TYPE OF EXERCISE: walk/trot

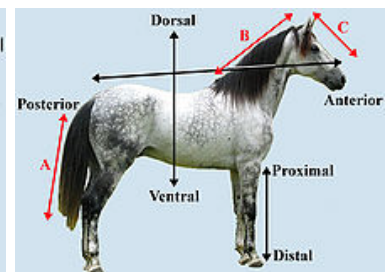
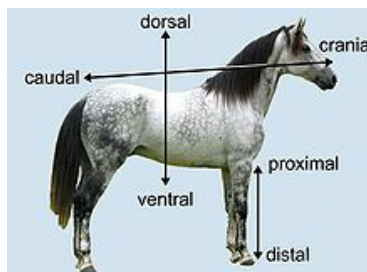
BOOTS OR WRAPS ON HORSE? No **HOURS SINCE:** Not Applicable
FLYSpray OR LINIMENTS APPLIED WITHIN 24 HOURS: No
REASON FOR SCAN or HISTORY RECEIVED: Evaluate for lameness

INTERPRETATION INFORMATION (Completed by Veterinarian)

INTERPRETATION TYPE: Full Enhanced Survey

DATE OF INTERPRETATION: 9/19/2013

REVIEWING VETERINARIAN: Joanna Robson, DVM, CIT





PATIENT: AJ

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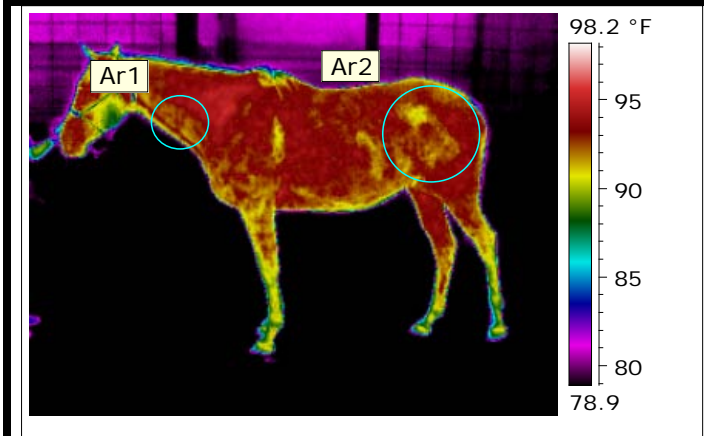


Image.File name 10.jpg Image.Date 9/18/2013 Image.Time 4:57:11 PM
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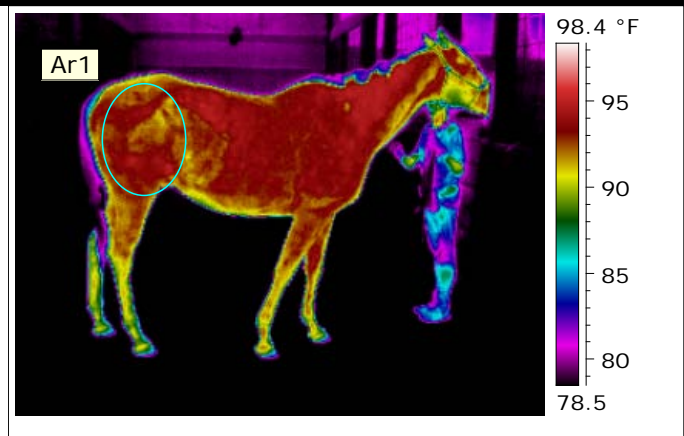


Image.File name 11.jpg Image.Date 9/18/2013 Image.Time 4:53:41 PM
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Whole horse lateral views are generally symmetrical; tension lines through the hindquarters suggesting strain, and small increase at the left neck.

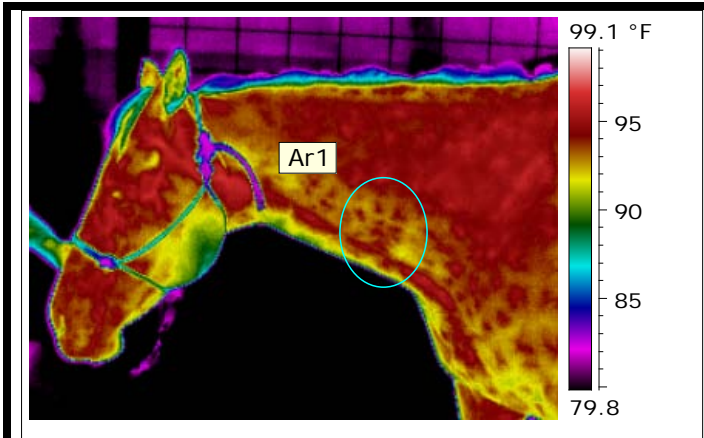


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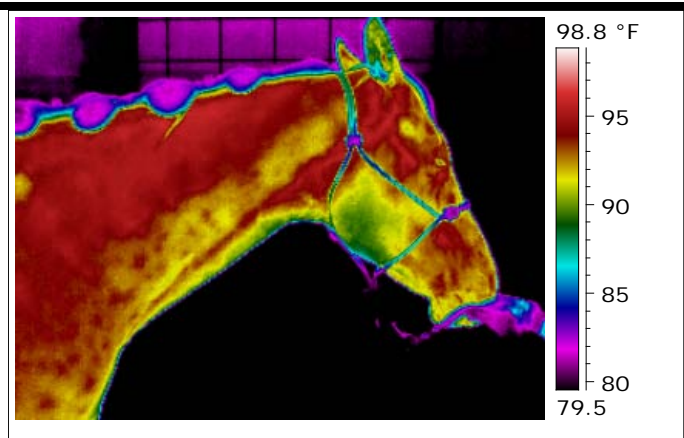


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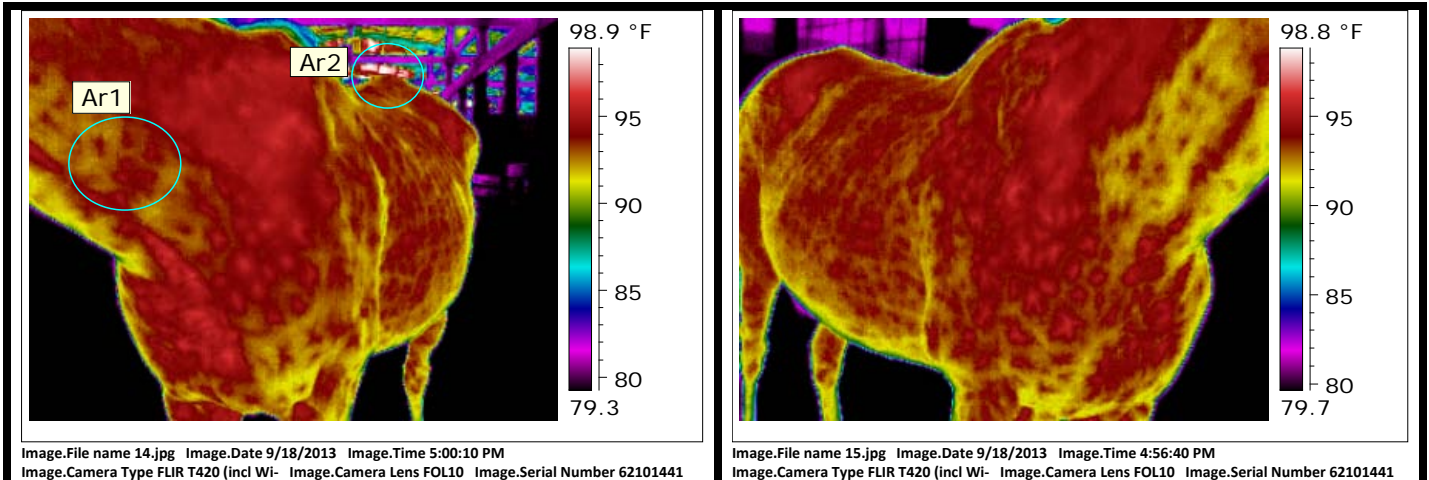
Slight increase at the left C4 region, palpation is warranted, assess range of motion; could be chiropractic, muscular, or facet changes.



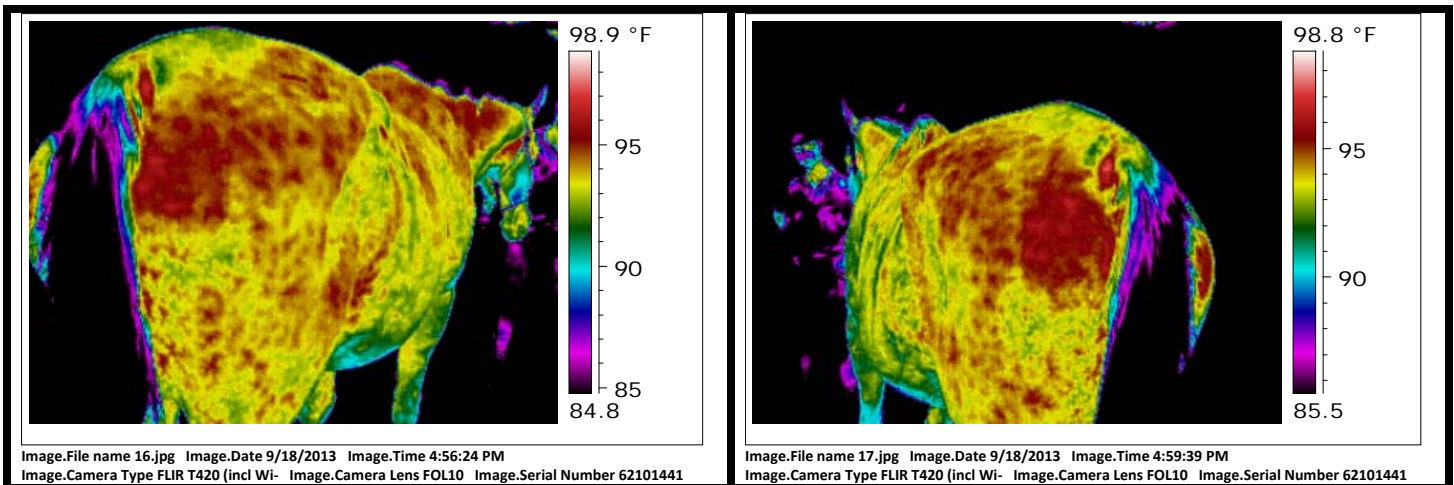
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Left neck again increased. Early suggestion of tarsitis in these views. Grossly peaked sacrum suggesting SI strain.



Patient is boney at the haunches with evidence of muscular stress, hence increased heat is present over the tuber ischiaie bilaterally. Lack of roundness and development in the haunches dictates the patient is not using himself correctly behind, whether secondary to his lameness, or saddlefit/riding issues.



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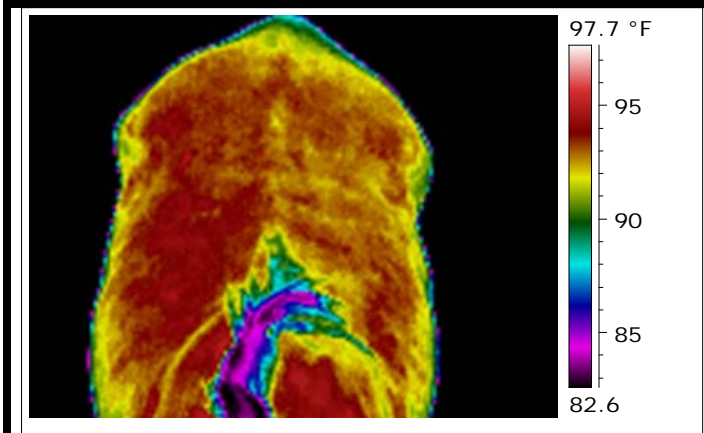


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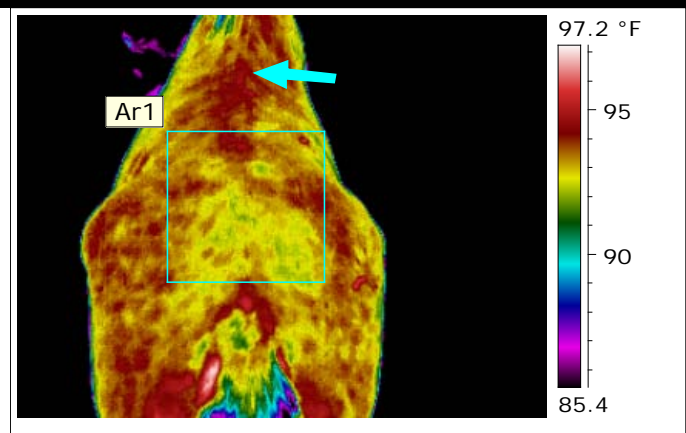


Image.File name 19.jpg Image.Date 9/18/2013 Image.Time 5:04:56 PM
Image.Camera Type FLIR T420 (incl Wi- Image.Camera Lens FOL10 Image.Serial Number 62101441

Lack of a t-zone between the hips and the tail head suggests chronic sacral issues, ultrasound would be useful to assess for pathology, along with supportive modalities such as chiropractic and acupuncture. Patterning in the back suggests possible kissing spine (perpendicular streaking) and/or saddle-fit issues; palpation is warranted, with a saddle-fit check, and radiographs if needed.

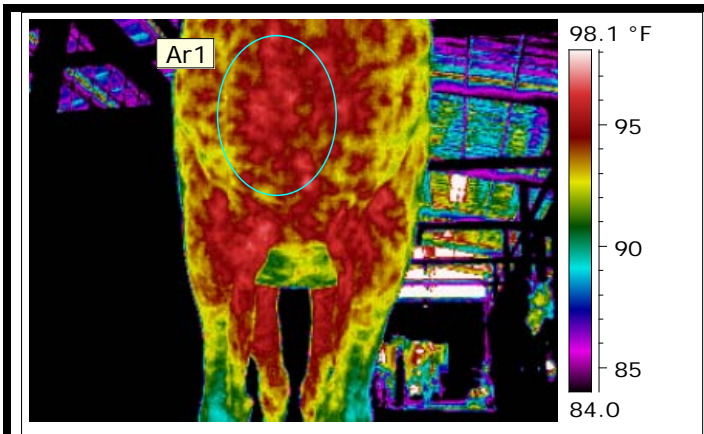


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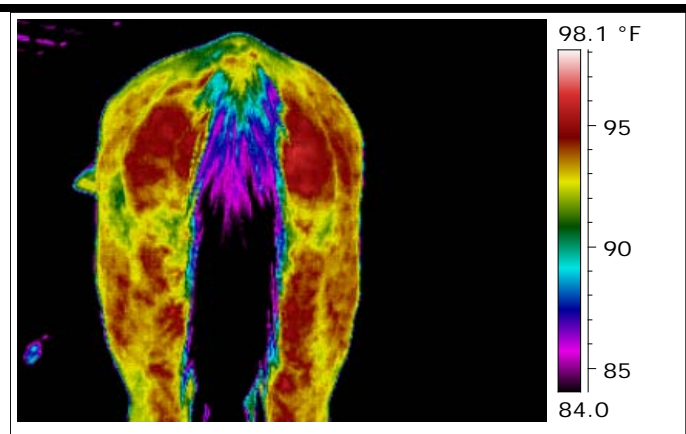


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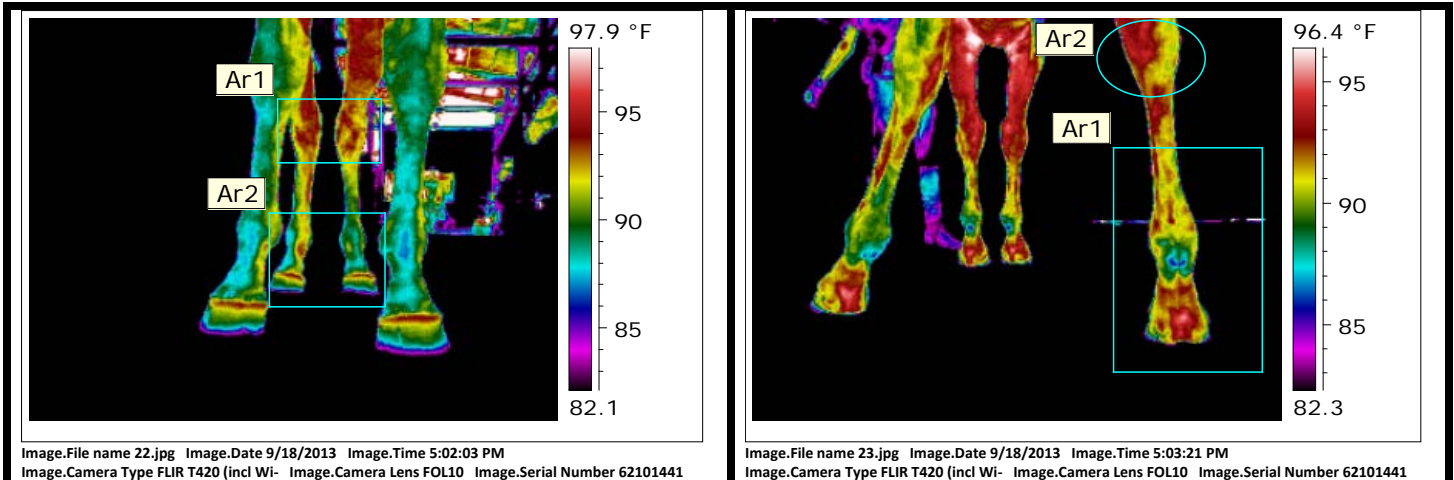
Slightly increased at the pectorals, more on the right side, often seen with primary strain or compensation for sore feet. Tuber ischiae heat previously noted; hamstrings generally symmetrical; sacral issues likely in this patient.



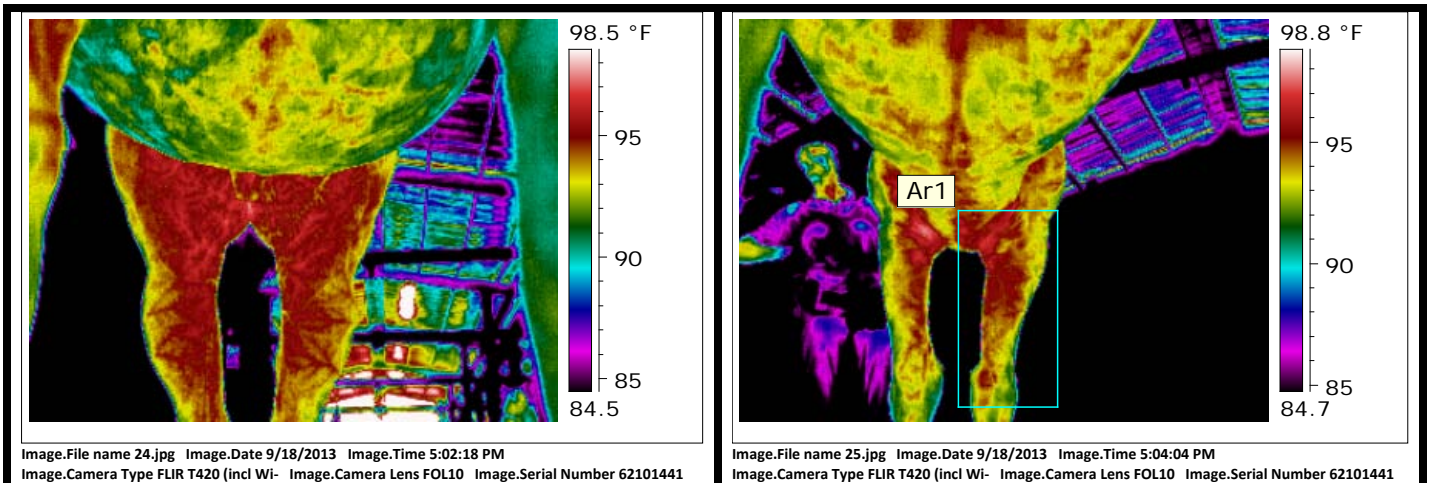
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Patient is not standing balanced/evenly in the PA view making interpretation and comparison difficult; there is an increase throughout the distal RH not seen at the LH; all heels show increased heat. Focal heat seen higher at the backs of the canons may be simple dermatitis, but should be evaluated. Tarsitis is suggested bilaterally.



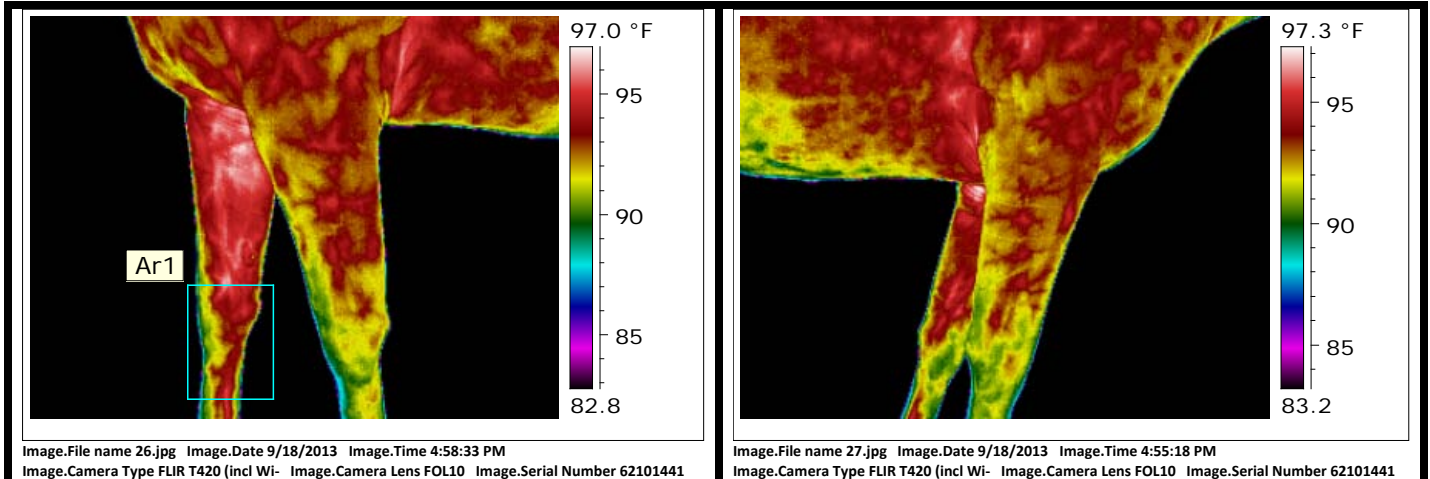
Cannot see the hocks in this view; gaskins are generally symmetrical; slight increase RF at the flexors.



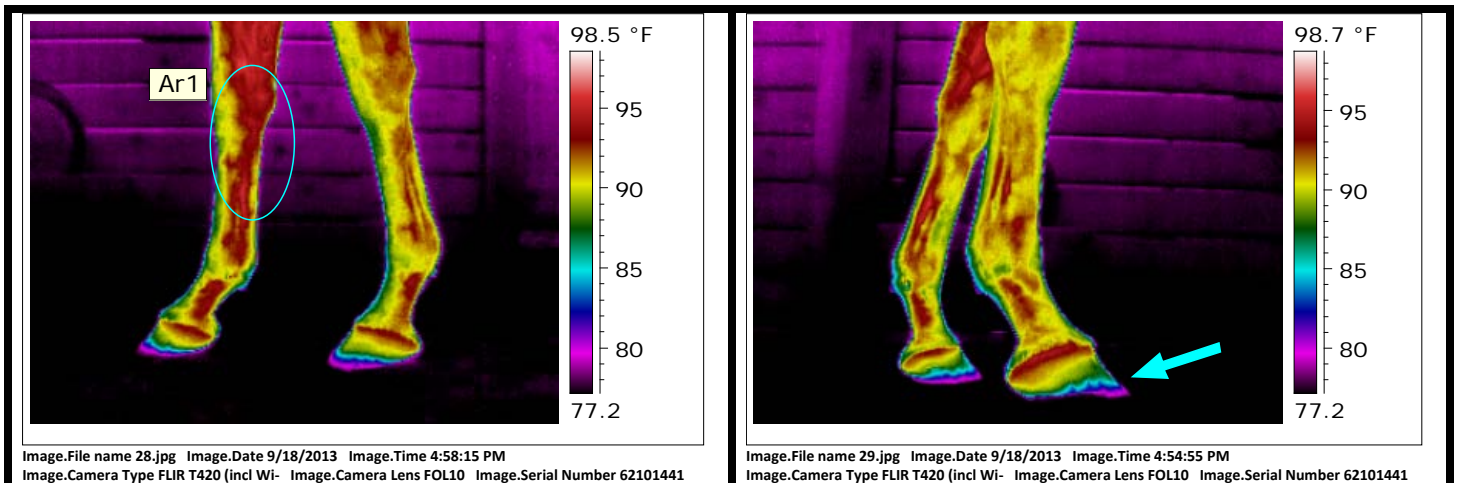
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Increased heat at the RF flexors, could be primary or compensatory and requires further assessment.



General increase throughout the RF, some dishing at hoof wall with evidence of longer toe, might be able to pull break over back and better support the boney column (radiographs would be needed to determine sole depth, wall thickness, and alignment of the boney column). Palpation of RF soft-tissue for strain would be useful.



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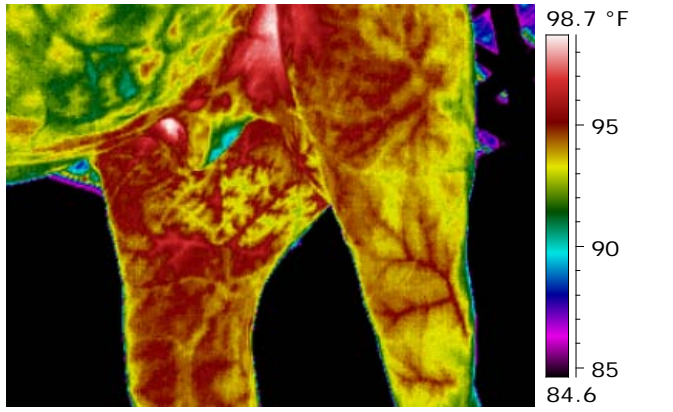


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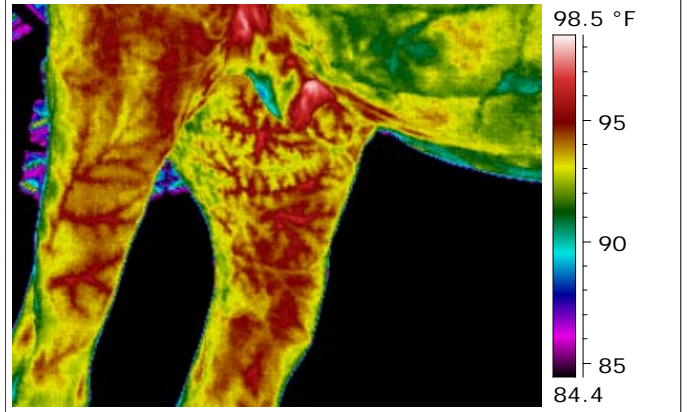


Image.File name 31.jpg Image.Date 9/18/2013 Image.Time 4:56:03 PM
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NSF: No Significant Findings

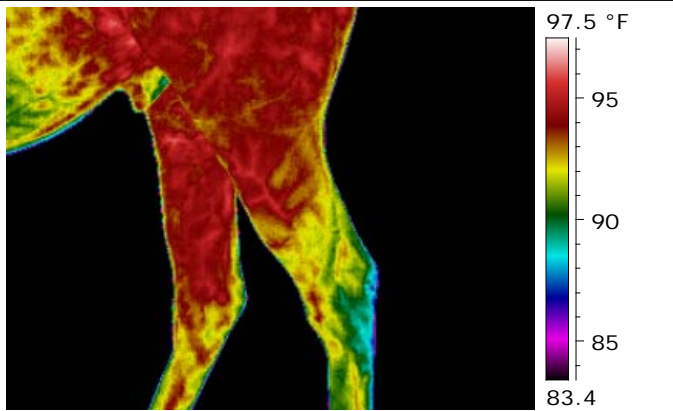


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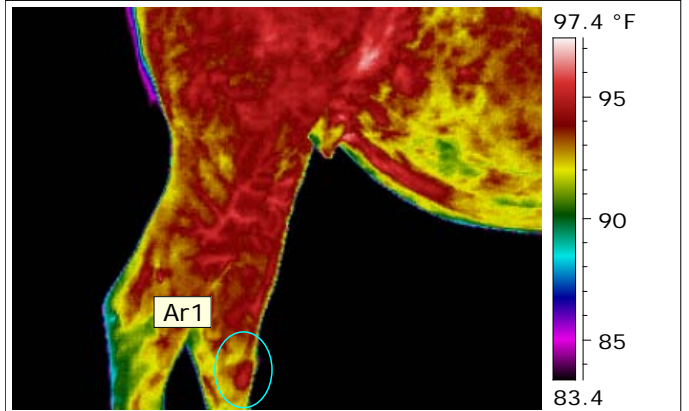


Image.File name 33.jpg Image.Date 9/18/2013 Image.Time 4:55:51 PM
Image.Camera Type FLIR T420 (incl Wi- Image.Camera Lens FOL10 Image.Serial Number 62101441

Check for scrape or other inflammation medial LH hock. Gaskins symmetrical.



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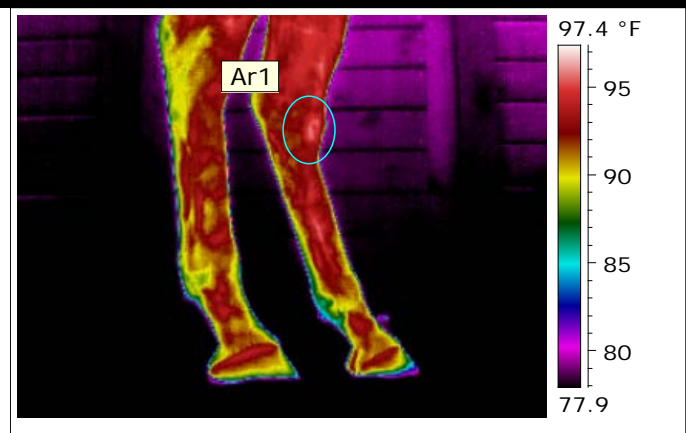
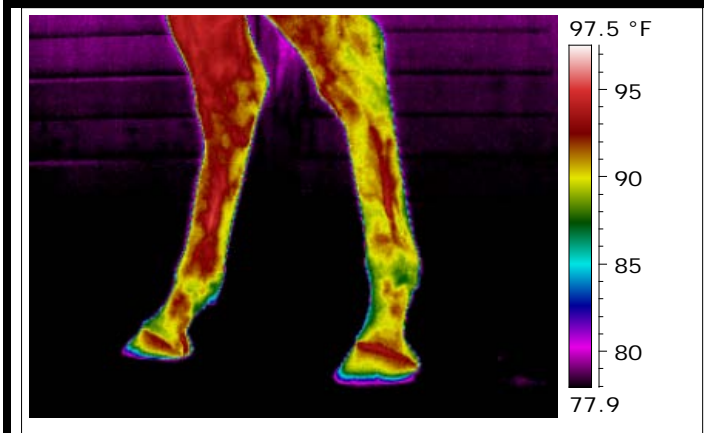


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Image.File name 35.jpg Image.Date 9/18/2013 Image.Time 4:55:41 PM
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Check for source of increased heat at medial LH; tarsitis is suspected bilaterally. Patterning in these views is generally symmetrical, and the coronary bands are not overtly abnormal, though with diffuse heat at both walls suggesting thin walls, stress, or infection, at the feet.

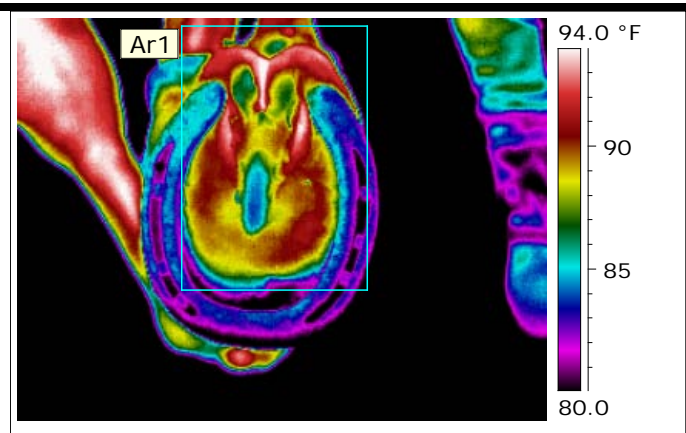
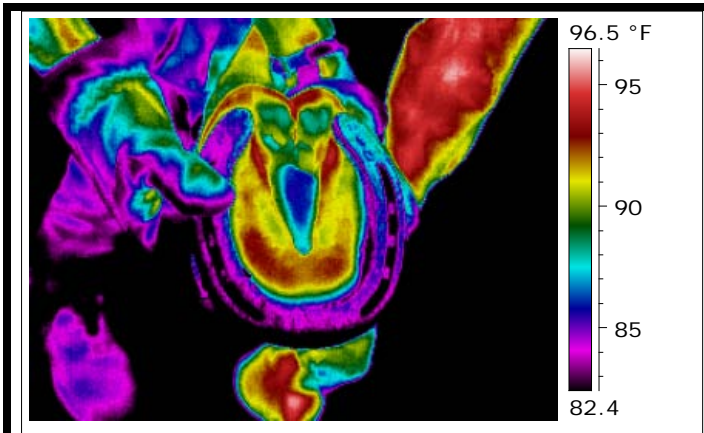


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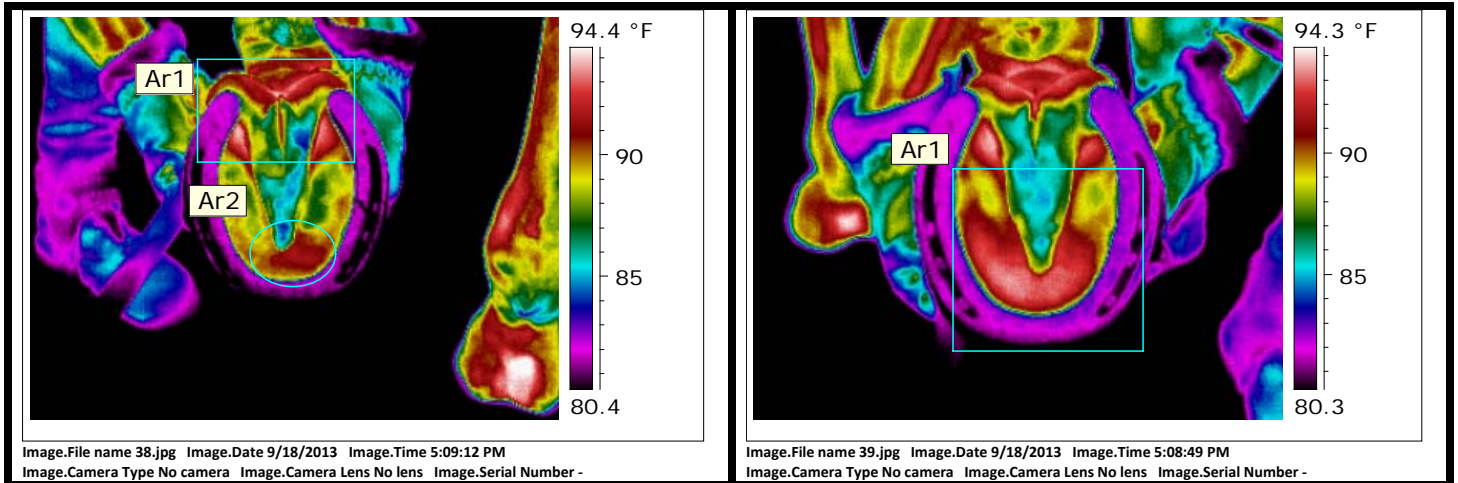
Patterning at the feet shows increased heat t the soles and heels, with likely thin sole, especially RF, flattened heels and a lack of support. Cooler area at the RF toe could be debris or indicate long toe/separation.



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As above, both hinds show increased heat at the heels and toes, especially the RH, which would support the patient's history and indicate significant bruising or other developing abscess/infection, coffin fracture, or hot nail. Assessing with hoof testers, radiographing the foot, and soaking/local treatment, are recommended. The excessive heat can be seen in the standing portion of the RH in the left image.

SUMMARY AND RECOMMENDATIONS:

AJ shows changes in his thermal report consistent with his history, and other abnormalities that require further assessment and evaluation.

AJ shows a lack of hindquarter development, with tension in the haunch muscle patterning and a lumbo-sacral dip and prominent tuber sacrale. These changes suggest he does not use himself correctly behind, which could be secondary to pain/lameness, or related to saddle-fit or training issues. Careful palpation is required of the hindquarters, and the hips and stifles. Based on the patterning and a lack of a t-zone from hips to tail head, palpation and ultrasound of the SI and low lumbar regions might be useful, as well as supportive care such as veterinary-chiropractic and veterinary-acupuncture.

The RF shows increased heat throughout the flexors and palpation is warranted, with ultrasound as a baseline if there is reactivity noted. Strain is likely, and could be off-loading from the hind end.

All four hooves show abnormal patterning, and certainly the low-heel thin sole problems are common in Thoroughbreds, but he appears to lack support and baseline radiographs of the hooves would be useful to assess sole depth, wall thickness, and boney column alignment. The RH shows a significant increase in sole heat at the toe portion, suggesting an active bruise or developing abscess; coffin fracture or hot nail could also produce this patterning. Local assessment with hoof testers, radiograph, soaking, anti-inflammatories, etc. are recommended.



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Both hinds show evidence of tarsitis, and flexions and radiographs would be useful to determine a joint health maintenance plan for AJ.

The left neck shows a subtle band around C4 which could be local irritation, chiropractic change, or other inflammation. Palpation would be useful.

There is patterning in the topline suggesting saddle-fit issues or other focal inflammation, with suspicion for kissing spine at the marked area, though radiographs are only warranted if there is a history of pain or reactivity, especially when being saddled.

Equine bodywork would be especially useful for this lovely patient.

Thank You!

Reviewing Veterinarian: Joanna Robson, DVM, CVSMT, CMP, CVA, CSFT, CIT

