



Blue Wave Infrared
Equine Thermal Imaging

Thermal Imaging Report

Cash



*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, LLC

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Equine Thermal Imaging



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PATIENT: Cash

THERMOGRAPHY DATE: 8-20-13

IMAGING TIME: 1:15pm

August 23, 2013

Marshall Long
8819 Belt Lane
Fort Mill, SC

Dear Marshall Long:

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

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, LLC



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EQUINE CLIENT INFORMATION

CLIENT NAME: Marshall Long

MAILING ADDRESS: 8819 Belt Lane, Fort Mill, SC

HORSE AGE: 9 years

HORSE BREED: Thoroughbred

HORSE PRIMARY USE: Lessons/Trail Rides

SURVEY INFORMATION

THERMOGRAPHER: Ward Woodbury

INFRARED CERTIFICATION #: 9209

INFRARED CAMERA MODEL: Flir T420 **CAMERA SERIAL NUMBER:** 62101441

NUMBER OF THERMAL IMAGES SUBMITTED: 30

WEATHER: Overcast

APPROXIMATE TEMPERATURE: 78 °F

IMAGING LOCATION: Barn

EXERCISED PRIOR: Horse on stall rest **HOW LONG:** 5 Days **WHEN:** N/A

TYPE OF EXERCISE: None

BOOTS OR WRAPS ON HORSE? No **HOURS SINCE:** Not Applicable

FLYSPRAY OR LINIMENTS APPLIED WITHIN 24 HOURS: No

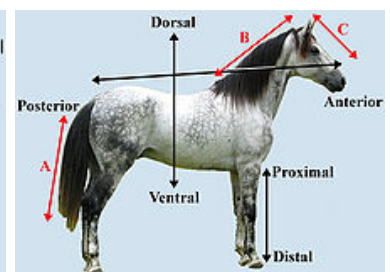
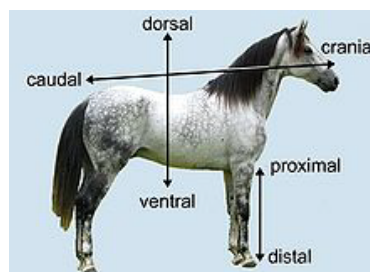
REASON FOR SCAN or HISTORY RECEIVED: RF Lameness- See attached notes

INTERPRETATION INFORMATION (Completed by Veterinarian)

INTERPRETATION TYPE: Full Enhanced Survey

DATE OF INTERPRETATION: 8/22/2013

REVIEWING VETERINARIAN: Joanna Robson, DVM, CIT

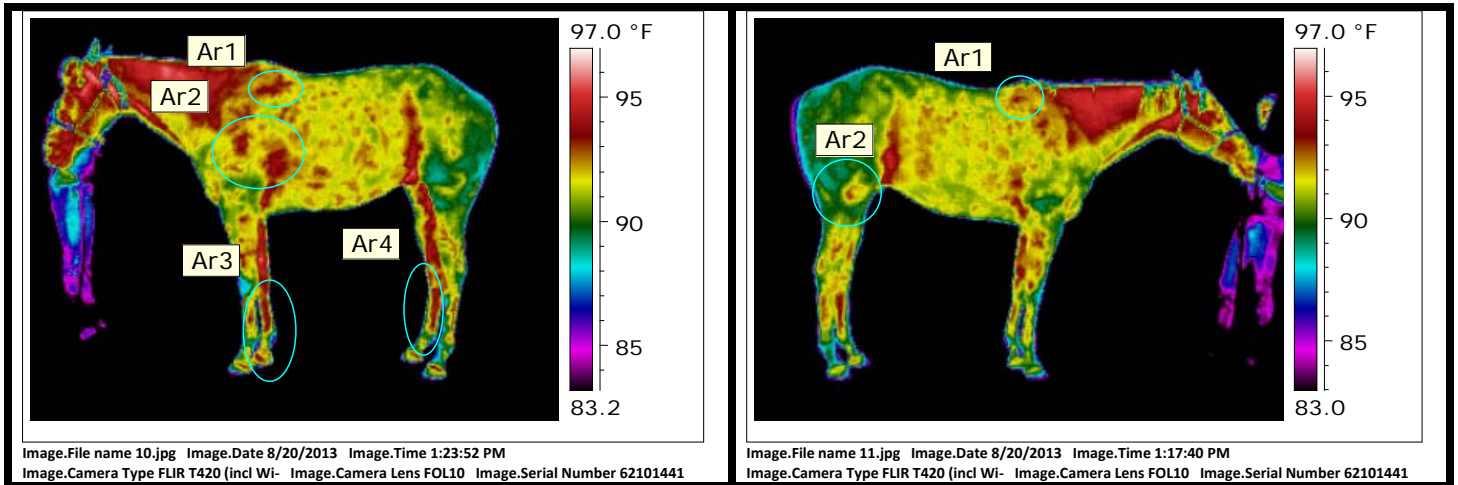




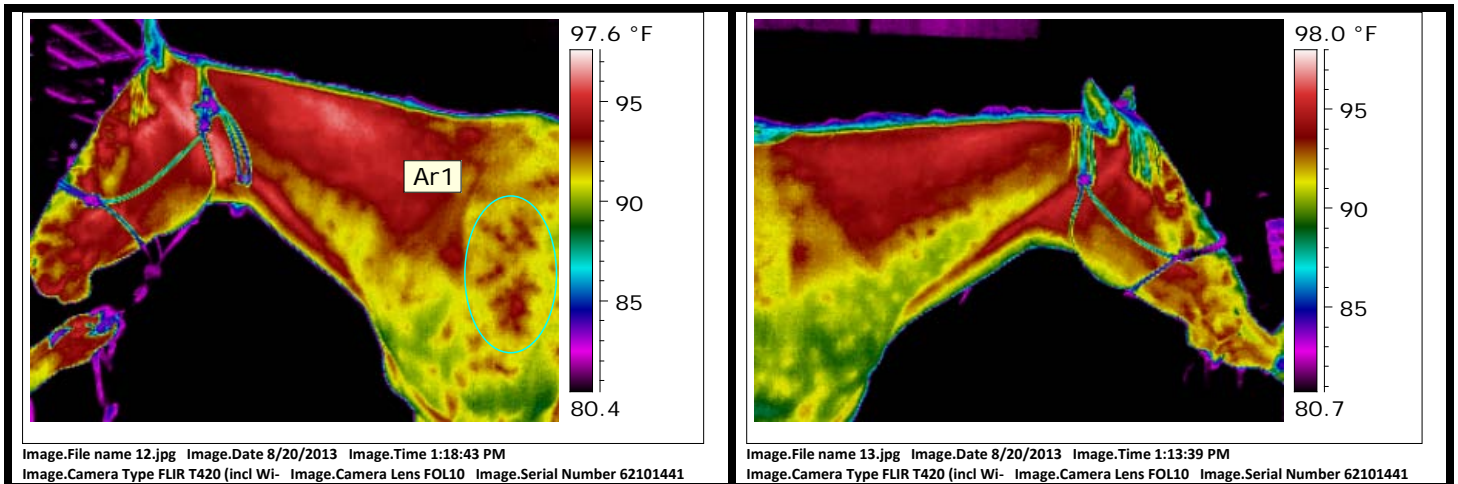
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Whole horse lateral views show increased heat at both trapezius muscles likely related to chronic saddle-fit issues. Medial aspects of both the RF and RH are increased. LF shoulder and girth area are increased and should be evaluated for local irritation. Lateral right stifle region soft-tissues are increased. Both hocks are increased.



Increased heat along the patient's left shoulder represents inflammation and could be primary muscle strain or compensatory contraction to off-load the right side, and should be palpated for pain or soreness. Neck looks generally symmetrical.



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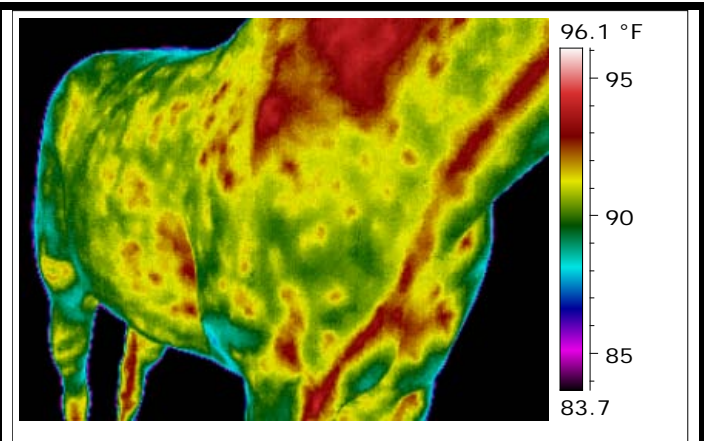
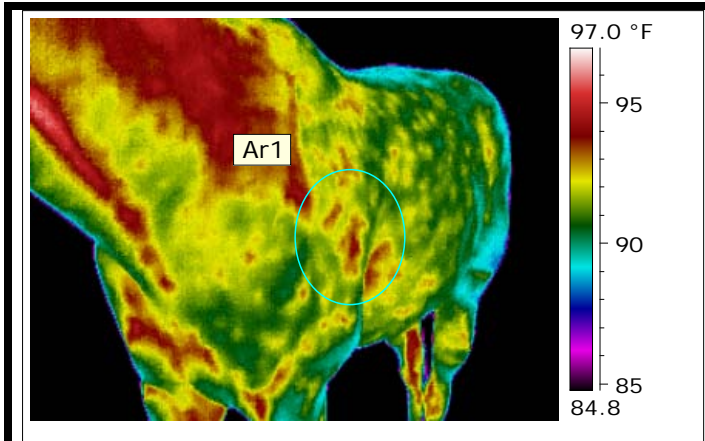


Image.File name 14.jpg Image.Date 8/20/2013 Image.Time 1:22:35 PM
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Image.File name 15.jpg Image.Date 8/20/2013 Image.Time 1:16:17 PM
Image.Camera Type FLIR T420 (incl Wi- Image.Camera Lens FOL10 Image.Serial Number 62101441

Lateral left shoulder as above. Increased heat is noted at both hocks suggesting tarsitis.

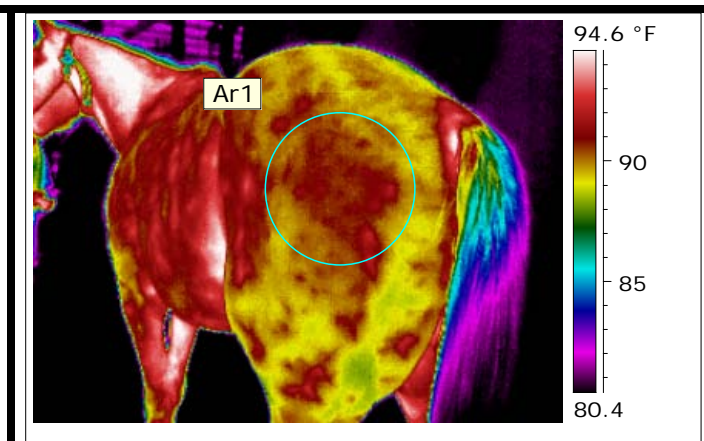
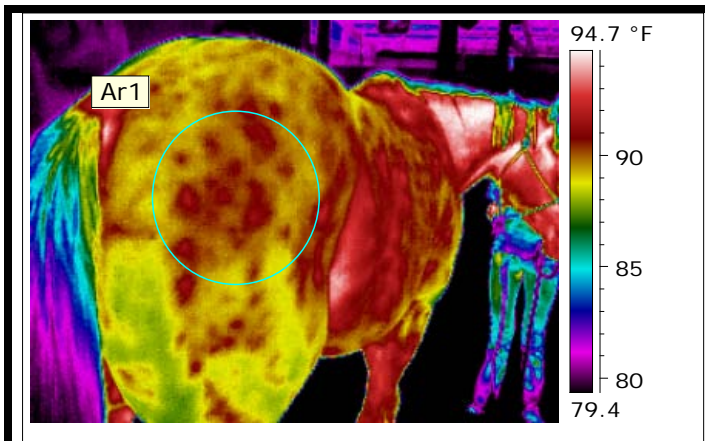


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Image.File name 17.jpg Image.Date 8/20/2013 Image.Time 1:22:19 PM
Image.Camera Type FLIR T420 (incl Wi- Image.Camera Lens FOL10 Image.Serial Number 62101441

Some increased heat is noted in the biceps femoris muscles bilaterally – while generally symmetrical, the increased patterning does suggest active inflammation and tension from use, and should be palpated. Bodywork would be useful.



PATIENT: Cash

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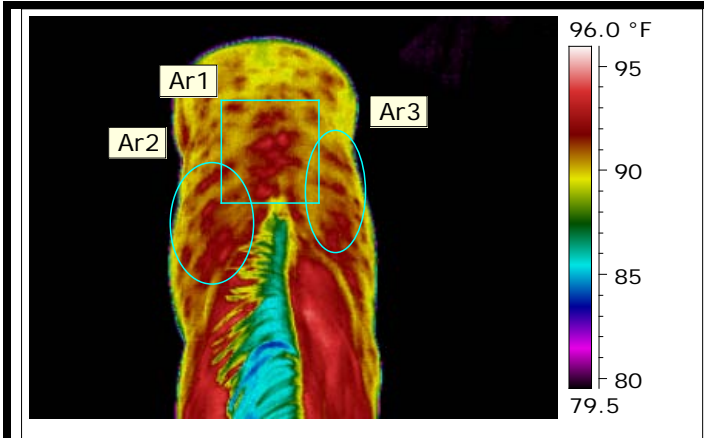


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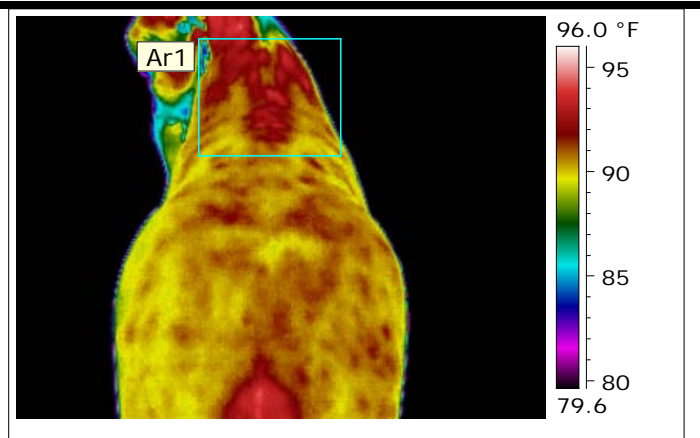


Image.File name 19.jpg Image.Date 8/20/2013 Image.Time 1:28:17 PM
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Heat in the dorsal midline is typical given the close interface of the skin and the dorsal spinous processes; however, the patterning seen here is consistent with active inflammation and irritation of the dorsal spinous processes or dorsal spinous ligament, the paraspinal muscles, and the rib cage bilaterally. Chiropractic lesions, saddle-fit problems, and kissing spine may be represented by this patterning. Careful palpation is warranted, and given that this patient has had 7 days off from riding, saddle-fit evaluation is essential given the remaining patterning seen. A veterinary-chiropractic evaluation would be useful.

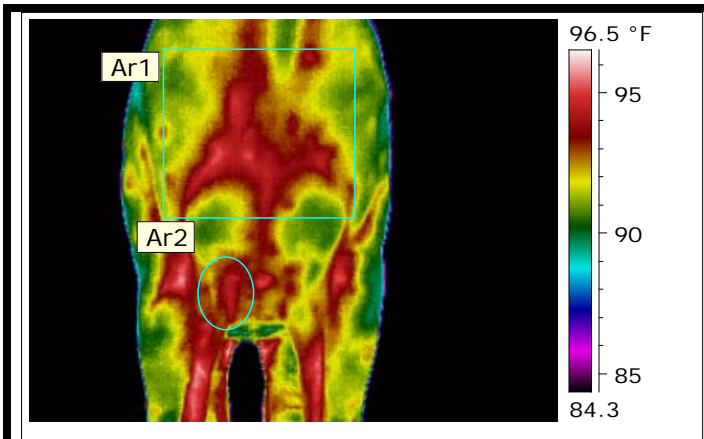


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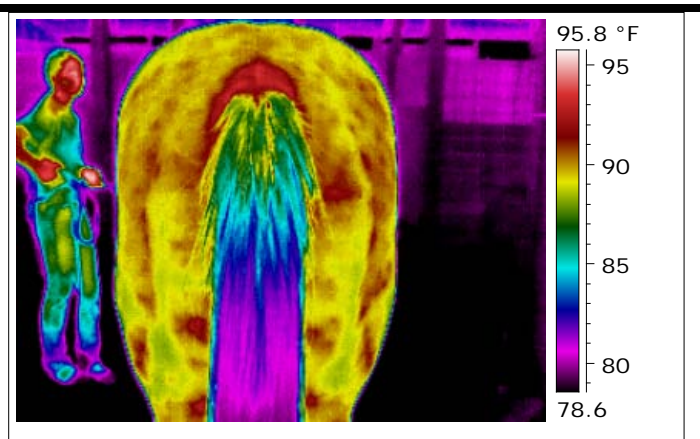


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Pectoral view shows increased heat through the right medial shoulder and ascending and descending pecs – this may be a primary injury or related to compensation for a more distal RF lameness.



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IMAGING TIME: 1:15pm

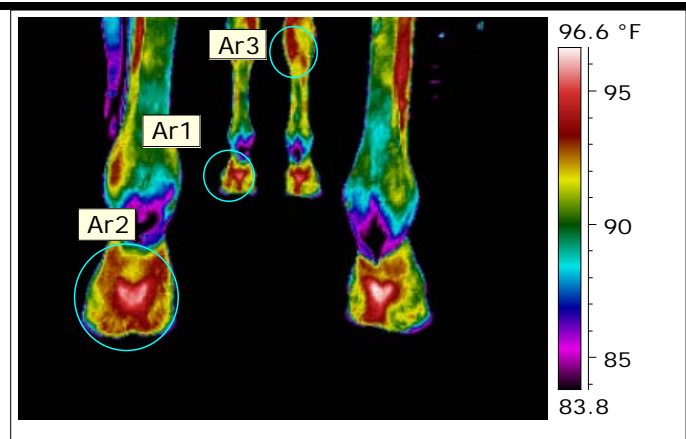
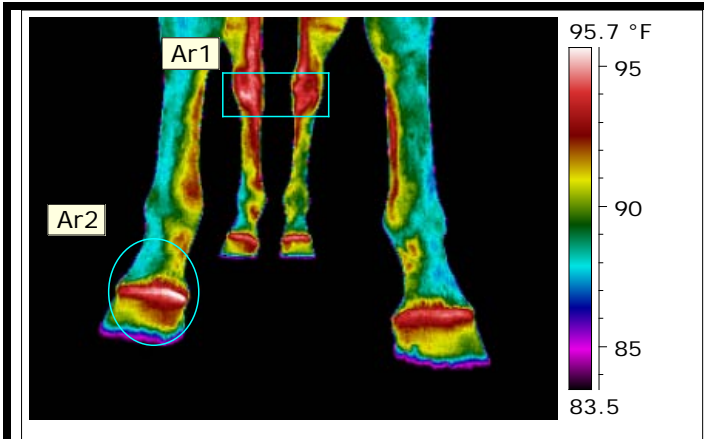


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Image.File name 23.jpg Image.Date 8/20/2013 Image.Time 1:27:06 PM
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Patient shows significant hock inflammation, especially at the right side, fitting with the hind end soreness history. Flexions and radiographs are warranted. The RF shows a primary increase at the coronary band and medial hoof seen with bruising, abscess, thrush, laminitis, or other deep injury. The heels show increased heat throughout with some off-loading likely with a decrease at the RF probably from off-loading. Anatomic imaging such as radiographs and careful gross inspection by the veterinary-farrier team are needed.

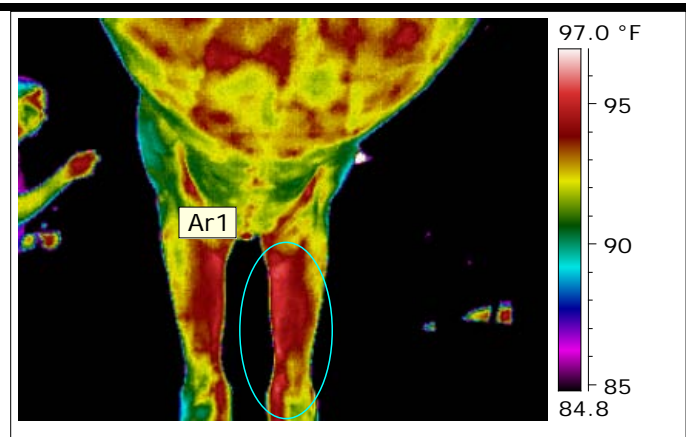
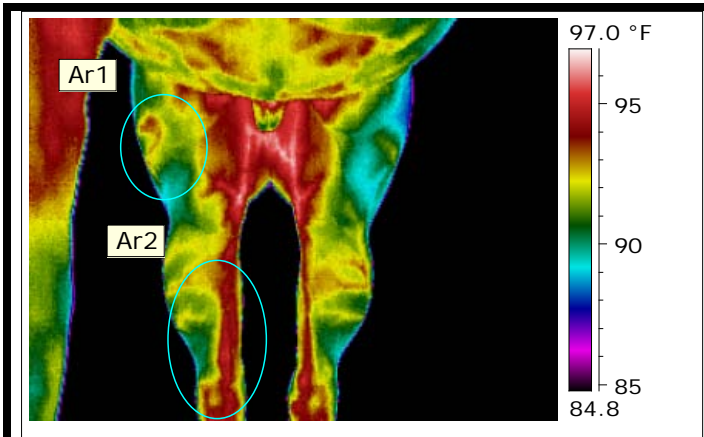


Image.File name 24.jpg Image.Date 8/20/2013 Image.Time 1:24:51 PM
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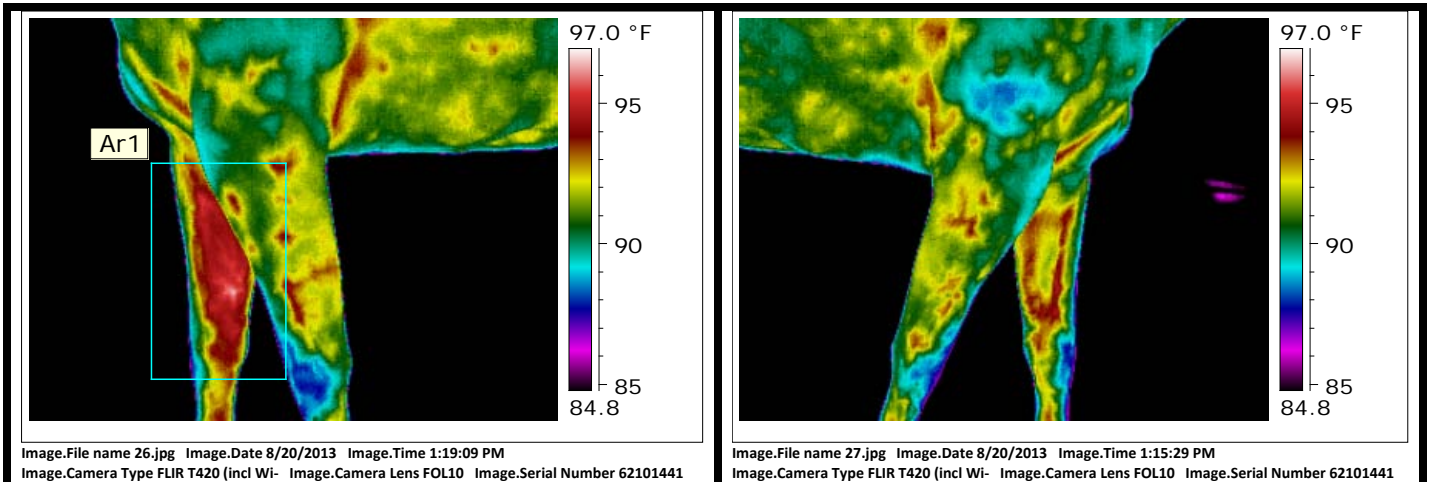
Palmar RF upper limb circulation may be related to distal limb inflammation. Medial RH also increased with some stifle region irritation and increased medial circulation related to hock inflammation and possible compensating for the RF. Further palpation and imaging is warranted.



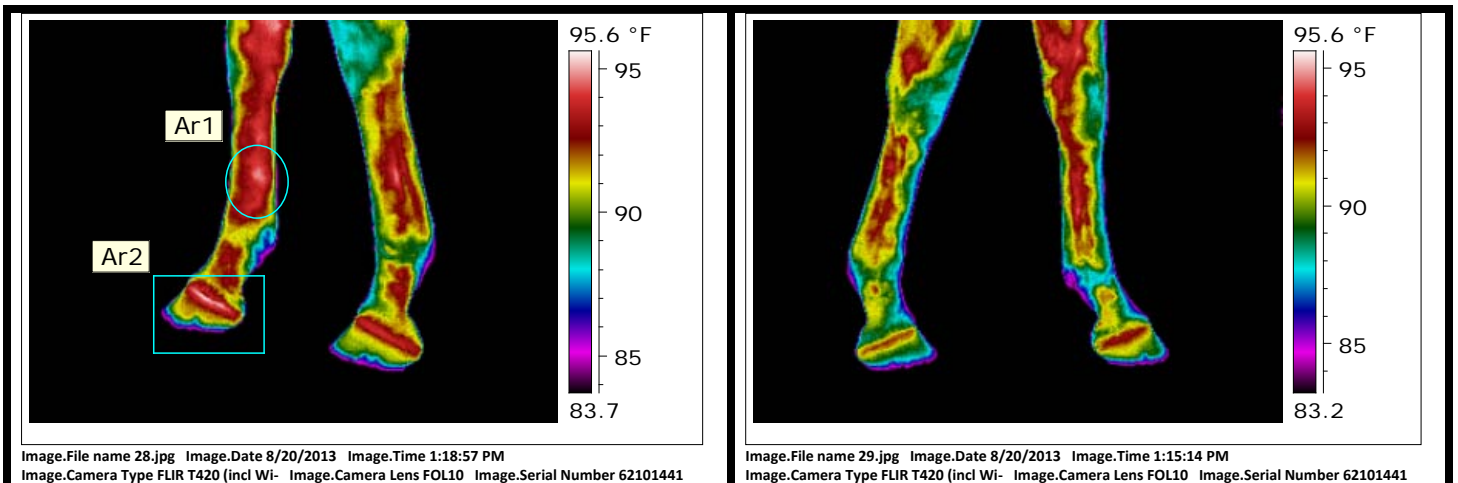
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Significant medial RF inflammation/circulation.



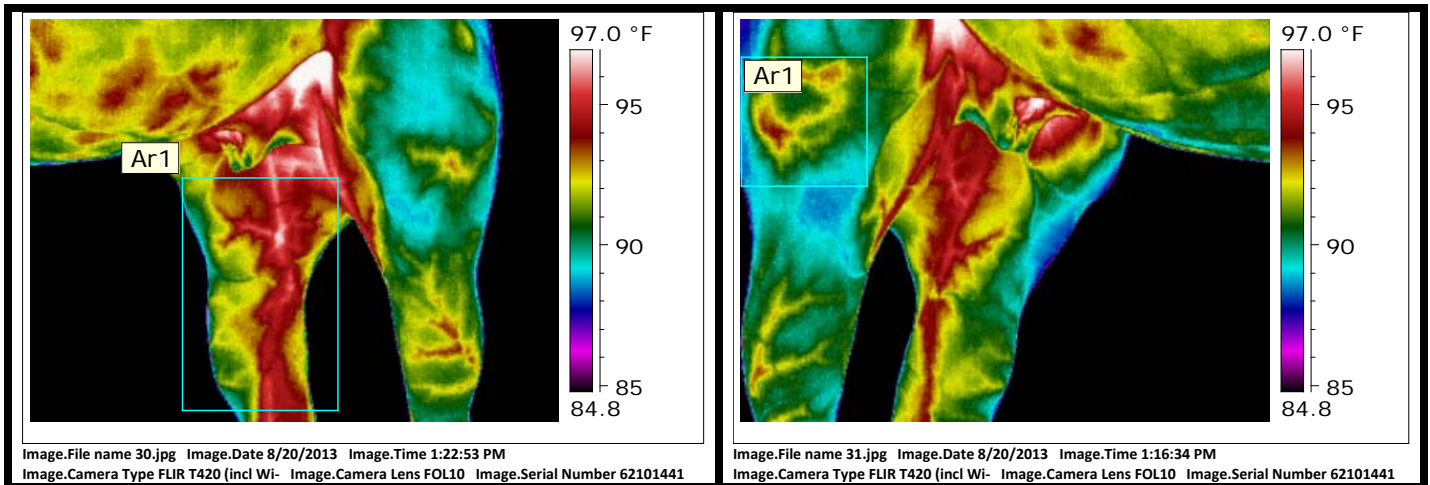
Given the patterning seen here, a medial intra-capsular lesion is suspected at the RF hoof. The lateral aspect appears generally unaffected. There is also increased heat at the LF that requires evaluation. Medial distal limb soft-tissues should also be palpated to rule out strain or tearing, though the changes are suspected to be compensatory rather than primary.



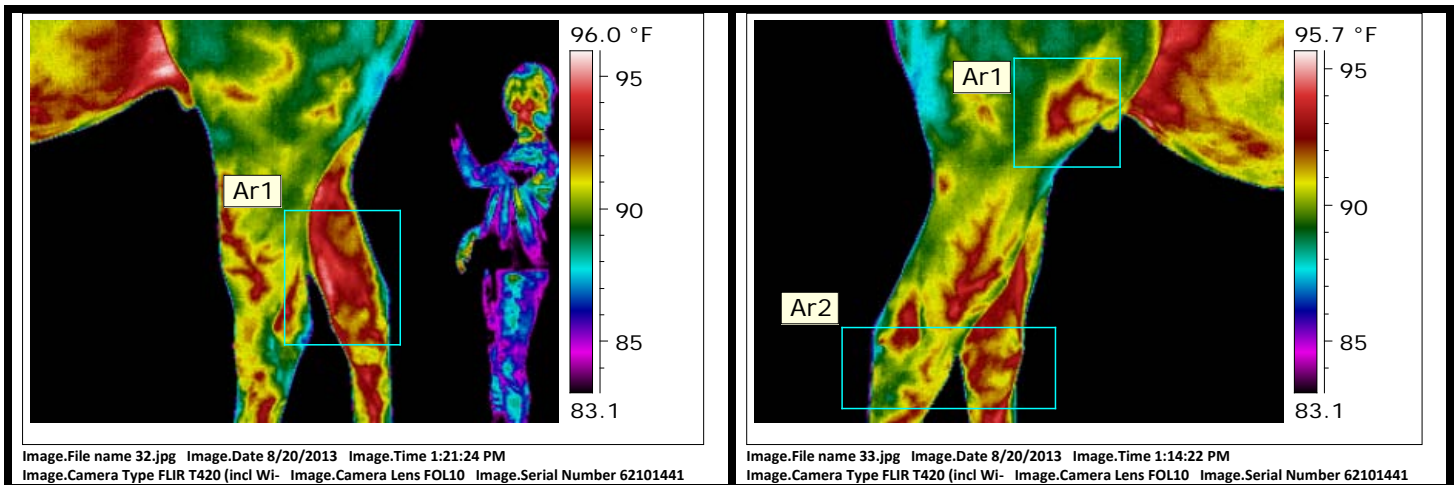
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IMAGING TIME: 1:15pm



Medial RH increase noted previously. RH stifle region/lateral musculature patterning also noted.



Bilateral tarsitis is suspected. RH stifle region increased, though the vascular trees may be increased relative to the hock and some off-loading from the RF. Further diagnostics are warranted.



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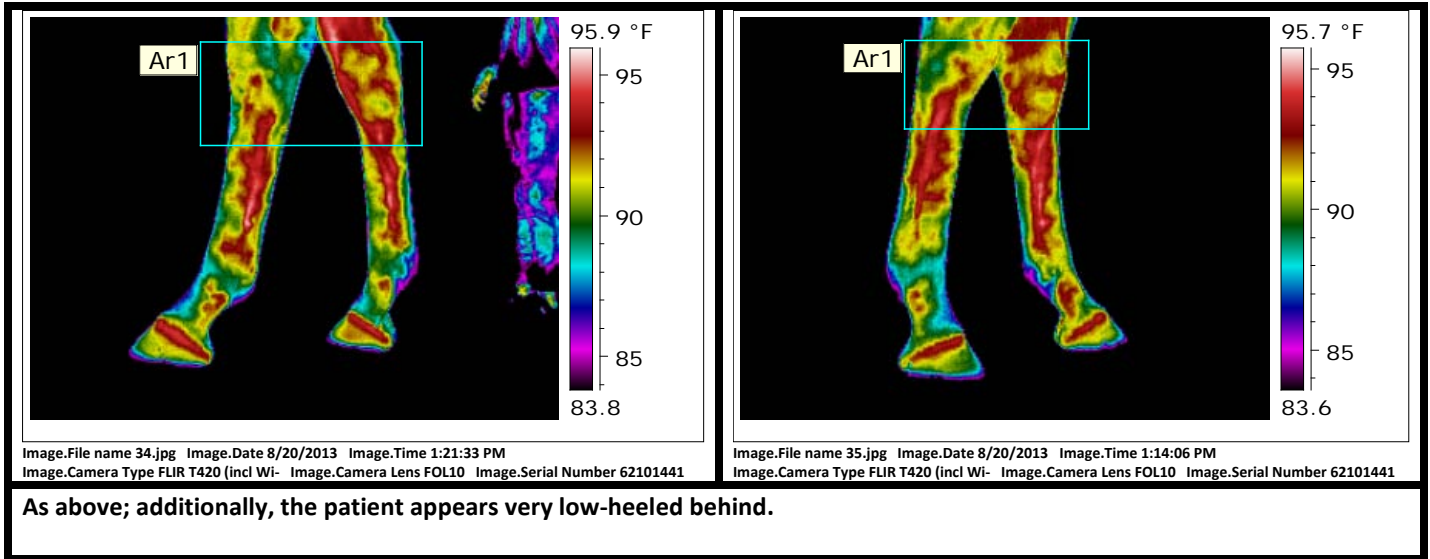


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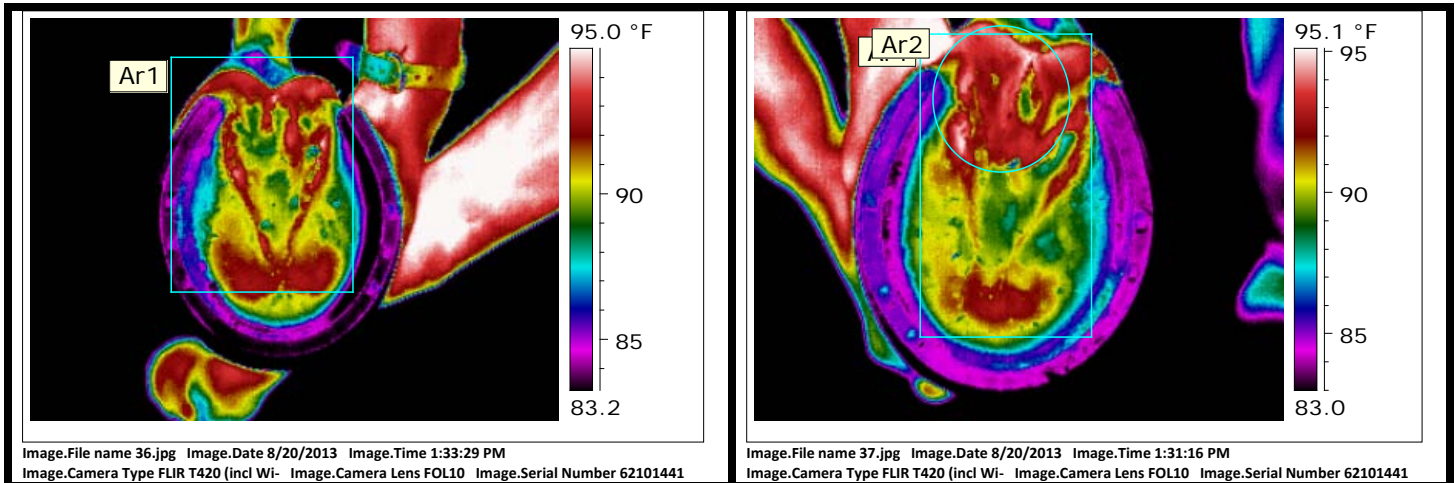




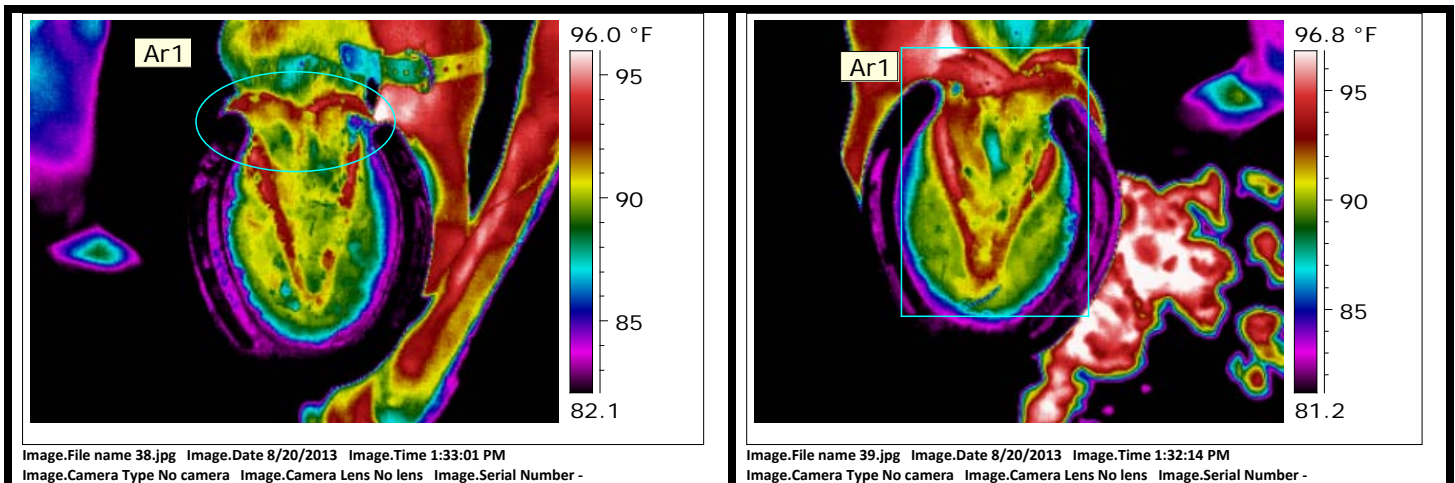
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Abnormal patterning is visible in both front feet. The patterning at the toe suggests this patient is very thin soled; marked increased heat is also seen at both heels and the frog sulci, with the medial aspect of the RF most affected as seen in other views. Abscess, deep bruising, coffin fracture, and low-grade laminitis should be considered. Radiographs and further assessment are necessary.



Hind show a similar pattern to the fronts, with low heels with marked inflammation, increased heat at the frog sulci, and the medial aspect of the RH particularly affected.



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SUMMARY AND RECOMMENDATIONS:

Cash is a handsome guy but is showing some wear and tear related to his job. After a week of stall rest, he continues to show significant inflammation at multiple sites and requires further diagnostics and treatment ASAP.

There is marked inflammation throughout the RF limb from hoof to pectorals. Patterning could suggest a medial sprain or muscle pull, but the circulation is most likely increased relative to an intra-capsular lesion at the medial aspect of the RF hoof. Hoof abscess, deep bruising, coffin bone fracture, and laminitis could all produce this patterning, and baseline radiographs are imperative to assess the sole depth, wall thickness, angles, and rule out pathology. Both feet appear low and inflamed in the soles and heels, and sole thickness is suspiciously thin based on patterning. Ongoing rest, soaking, oral or injectable anti-inflammatories, and corrective shoeing/trimming may be needed.

The RH also shows significant increased circulation and the tarsal joints and the stifle musculature are affected; as well as patterning in the hoof that suggests primary inflammation. Both hocks and stifles should be flexed and palpated, with baseline radiographs of the hocks suggested to assess for further joint support and maintenance.

Patterning in the patient's topline is a concern given the patient's time off and residual saddle-pattern suggesting poor fit. Additional patterning suggests chiropractic lesions and/or active inflammation of the DSPs. Careful palpation is warranted, saddle-fit assessment is essential, and further diagnostics such as radiographs could be warranted. A veterinary-chiropractic assessment would be useful, and the patient would also benefit from equine bodywork.

At this time, the RF (likely at the medial hoof) and the RH hock/stifle, and all hooves and the patient's back require further assessment and treatment.

Thank You!

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

