



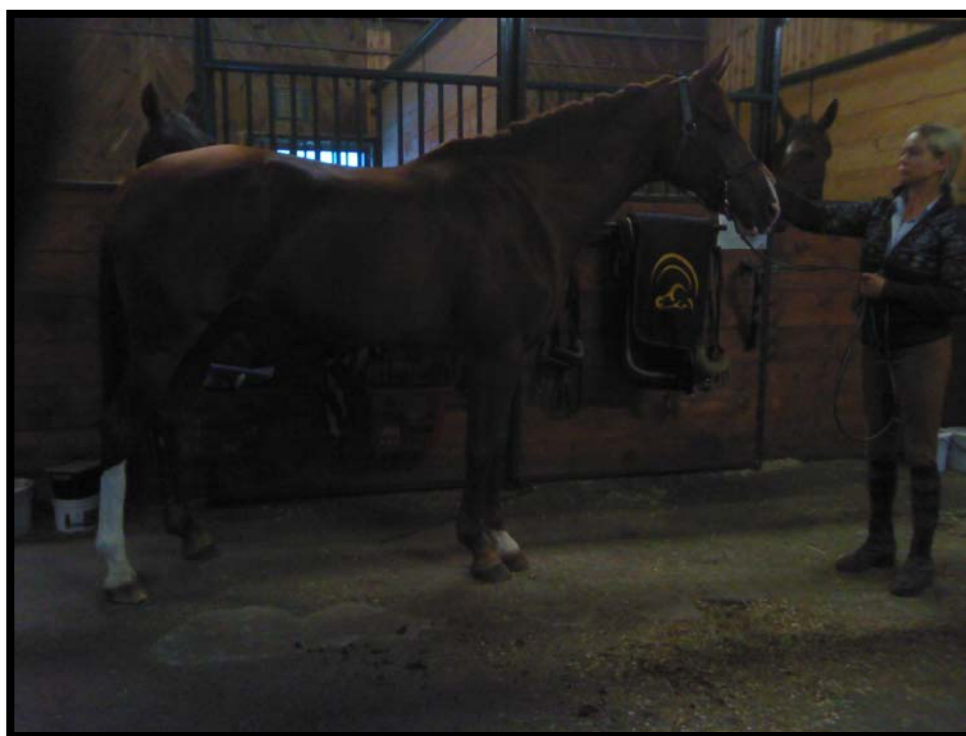
Thermal Imaging Report Londrina



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



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



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PATIENT: Londerina

THERMOGRAPHY DATE: 10092013

IMAGING TIME: 10.30

September 12, 2013

Hilde Simensen Hafskjold
Nøstevegen 110
3402 Lier

Dear Hilde Simensen Hafskjold:

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

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,

Anne M. Myrvoll

Thermographer, *Certified Infrared Thermographer*



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EQUINE CLIENT INFORMATION

CLIENT NAME: Hilde Simensen Hafskjold
MAILING ADDRESS: Nøstevegen 110, 3402 Lier
CLIENT EMAIL: ahafskjo@online.no
CLIENT PHONE: +4791104178
HORSE AGE: 9
HORSE BREED: Hannoverian
HORSE PRIMARY USE: Dressage

SURVEY INFORMATION

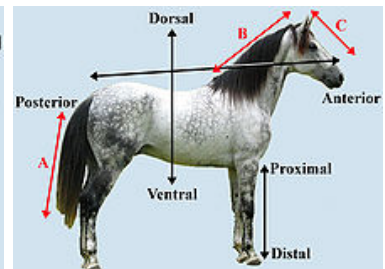
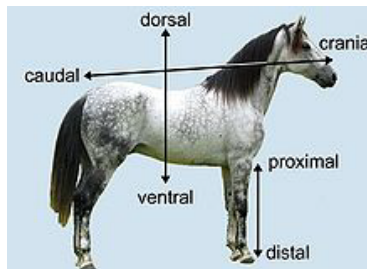
THERMOGRAPHER: Anne M. Myrvoll
INFRARED CERTIFICATION #: NO.2011NO47N003
INFRARED CAMERA MODEL: T335 **CAMERA SERIAL NUMBER:** 48804121
NUMBER OF THERMAL IMAGES SUBMITTED: 30
WEATHER: Cloudy and light wind
APPROXIMATE TEMPERATURE: 15 °C
IMAGING LOCATION: Barn aisle
EXERCISED PRIOR: Yes **HOW LONG:** 30 min **WHEN:** 10 min prior imaging
TYPE OF EXERCISE: Walk and trot under saddle
BOOTS OR WRAPS ON HORSE? No **HOURS SINCE:** Not Applicable
FLYSpray OR LINIMENTS APPLIED WITHIN 24 HOURS: Yes
REASON FOR SCAN or HISTORY RECEIVED: Londrina was bought in Germany as 3 years old. Owner bought the horse because she was so balanced and equal on both sides. The horse was poisoned in her pasture after eating poisonous flowers and had severe wounds in the fetlocks. This was treated with laser at a veterinary clinic.
 When the owner got the horse home from Germany, it had been broken in and shod. At the same time, she had developed an allergy after poisoning. The horse had become extremely uneven and unbalanced in the body and runs / drops forward under saddle.
 This problem has followed her all the time. The horse has well enough become more balanced and equal but still drops ahead, get sore musculature and tries to go out of the rein contact by open her jaws a lot
 Opening of the jaws is something she does when she is being held in halter too ..
 She had an injury to her left shoulder for 2-3 years ago. The horse pulled off a shoe and got a shoulder injury.
 For 1 1/2 years ago, she was very sore in the joints of the front legs and got free from work a few months.
 She is very hormonal during summer and behaves almost like a stallion.
 The shoes have now been taken off for about 2 weeks ago and hooves were x-rayed.
 These showed the hovbeinet had become paralell with the ground. She twists her hocks when she walks, especially the right. So now she walks a little without shoes to see how she uses her hooves.
 She seems softer and looser in her hindquarters without shoes, but still drops down and forward in the front end while riding.
 Note from imager: We did a static saddlefit after imaging, and saddle fit was not that bad. Nice wide channel (5 fingers). The saddle was a little to low back, putting the rider in the back of the saddle. The billets was to far back so the saddle slipped forward. The most riderweight was at the same place as the horse was sore, around T17-18. It was also hollow on the right side.

INTERPRETATION INFORMATION (Completed by Veterinarian)

INTERPRETATION TYPE: Full Enhanced Survey

DATE OF INTERPRETATION: 9/11/2013

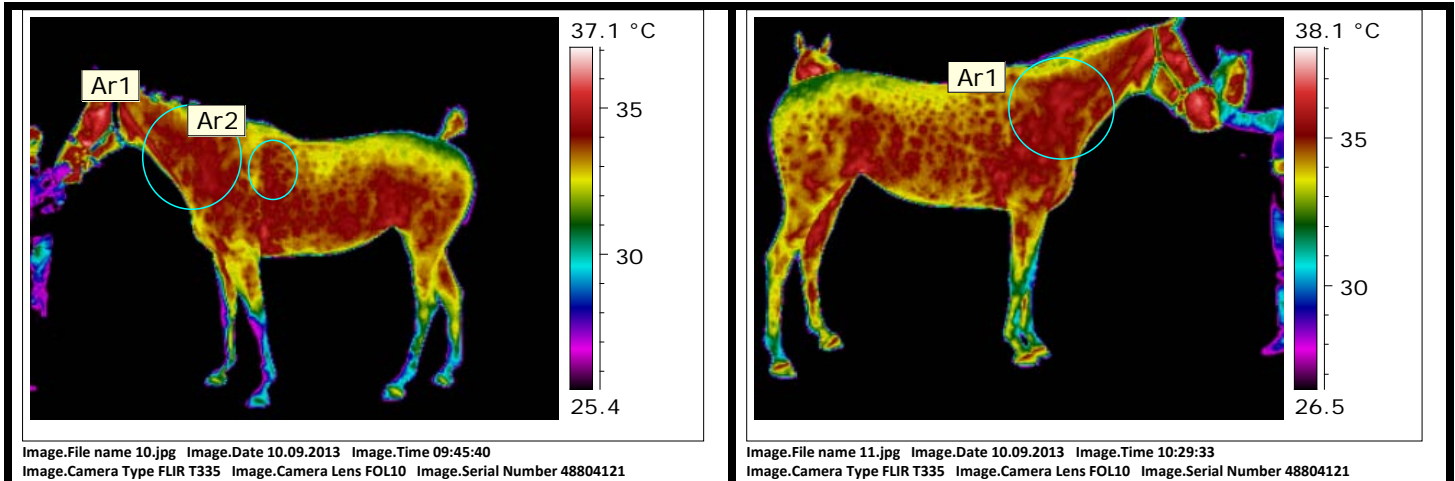
REVIEWING VETERINARIAN: Joanna Robson, DVM, CIT



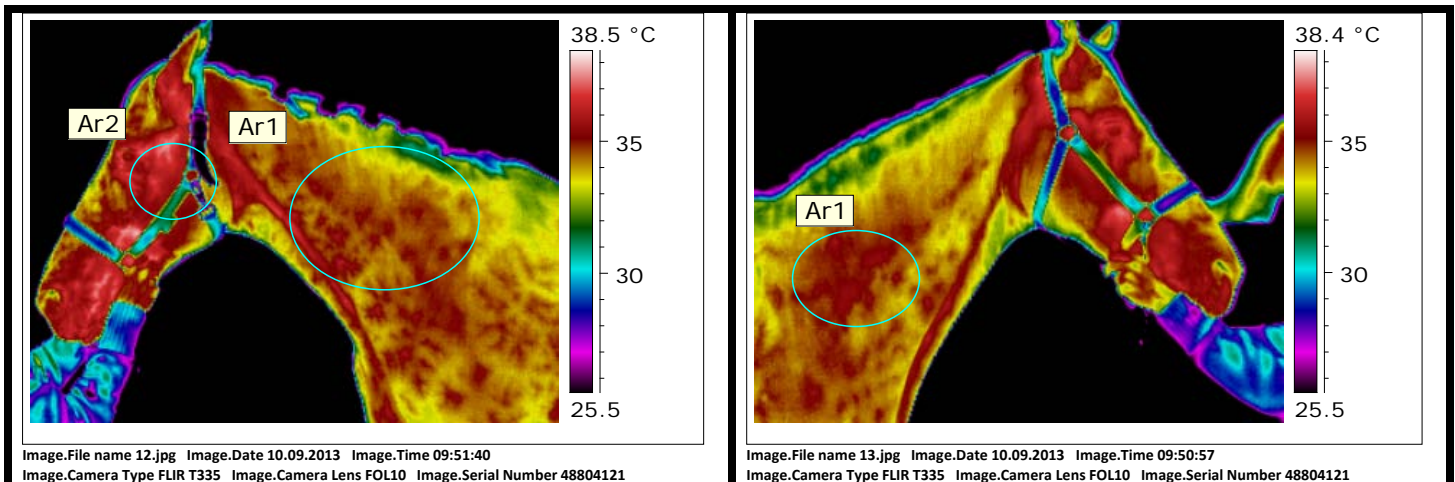
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Whole horse views are symmetrical but show increased patterning throughout suggesting low grade inflammation, though timing between exercise and imaging suggests the patient may be residually warm. There is increased heat at the feet. Increased heat at the neck and prescapular muscles, and behind the left shoulder (could be saddle related).

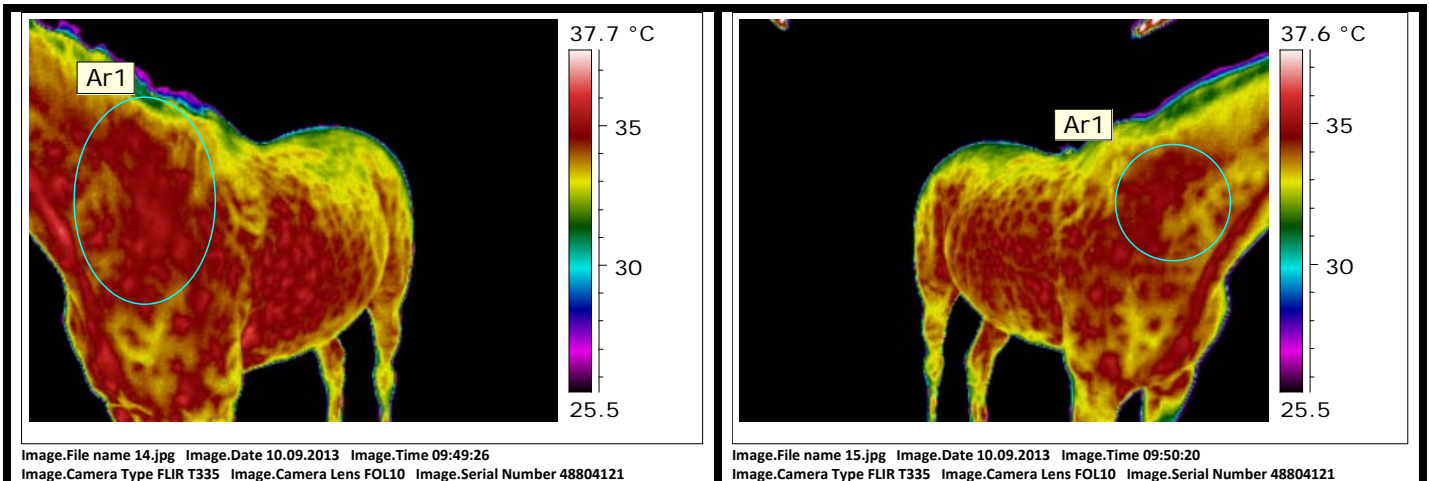


Excessive heat at the head and face – dental evaluation is suggested if not done within the past 6-12 months. Increased heat at the neck bilaterally suggesting muscle inflammation/tension, palpation is warranted and carrot stretches would be useful.

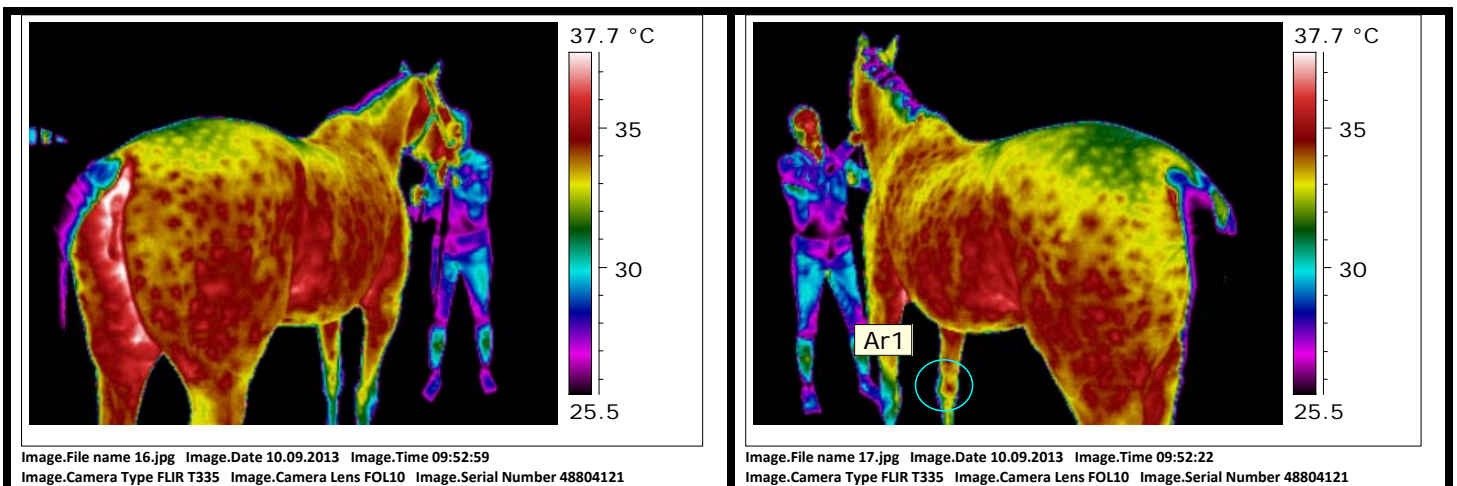
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Heat at prescapular muscles is typical but here is increased as noted in other images..

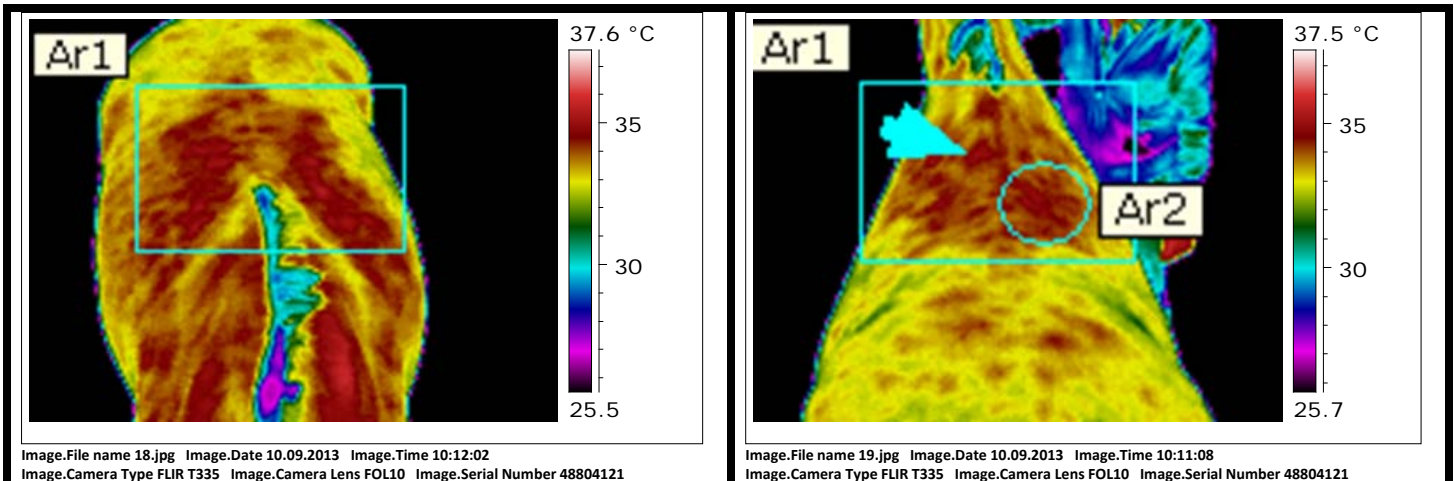


Good views, symmetrical, though with increased heat at the biceps and hamstrings bilaterally. Back of the RF carpus is abnormal. Good topline shape.

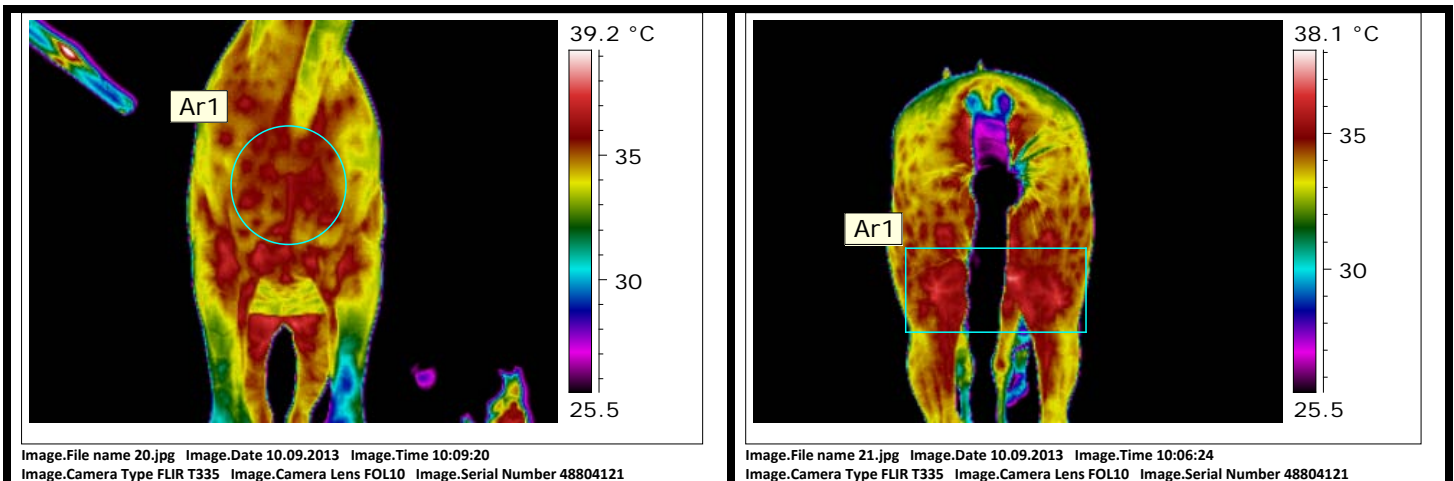
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Dorsal views show patterning consistent with local friction or inflammation in the paraspinal muscles and thoracics, especially at the left wither base and lower right thoracics; without a complete saddle scan, I cannot comment on whether this is inflammatory resulting from the underside of the saddle, but is highly likely. The technician reports the saddle sits low- a full dynamic fit is recommended. There is evidence of increased pressure at the left wither base and at the right lower thoracics. Channel appears wide and no overt patterning of OSP is noted here.

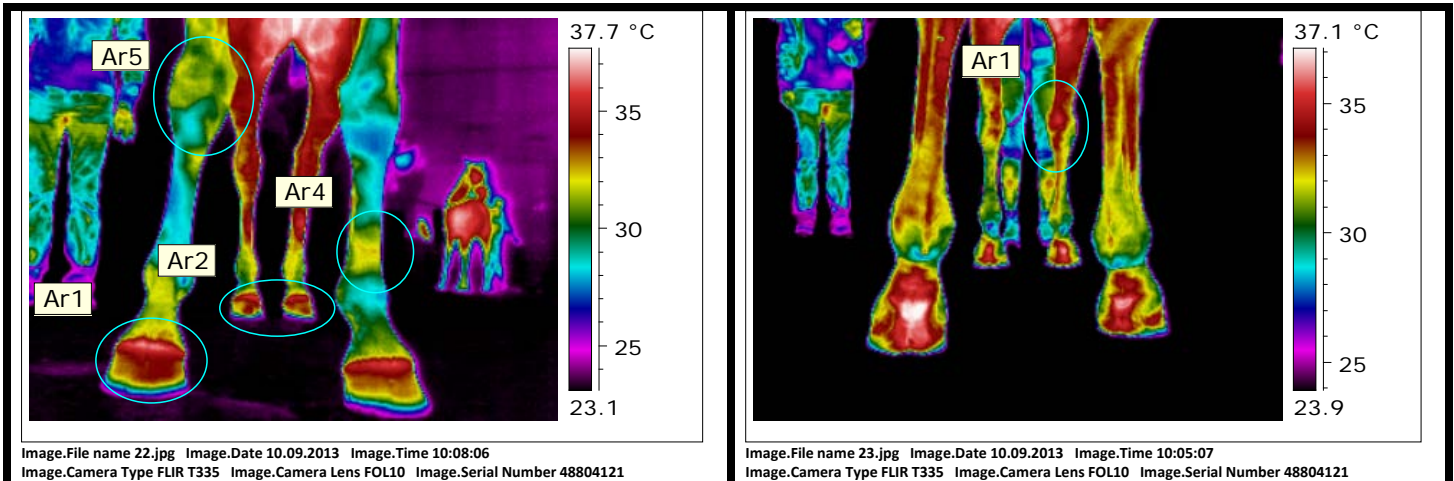


Increased heat at the central pectorals and the hamstrings. This can be seen with primary tension or with off-loading from sore feet.

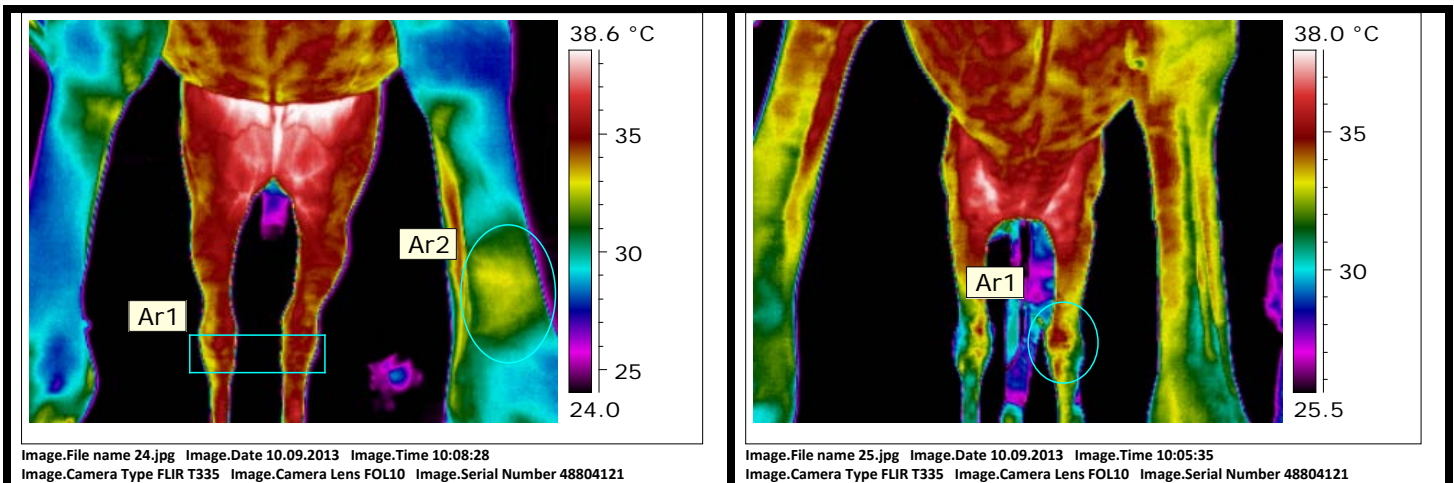
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Significant heat at all 4 hooves, especially the RF and the hinds. Hocks show patterning consistent with tarsitis, and there is uneven patterning across the canons in front. The palmer view shows significant inflammation at the right carpus. Patient may be off-loading from the RF into the LF stressing the bone. Radiographs may be needed to evaluate for carpal injury and assess the LF cannon, and infection at the hooves, especially RF should be treated if present.

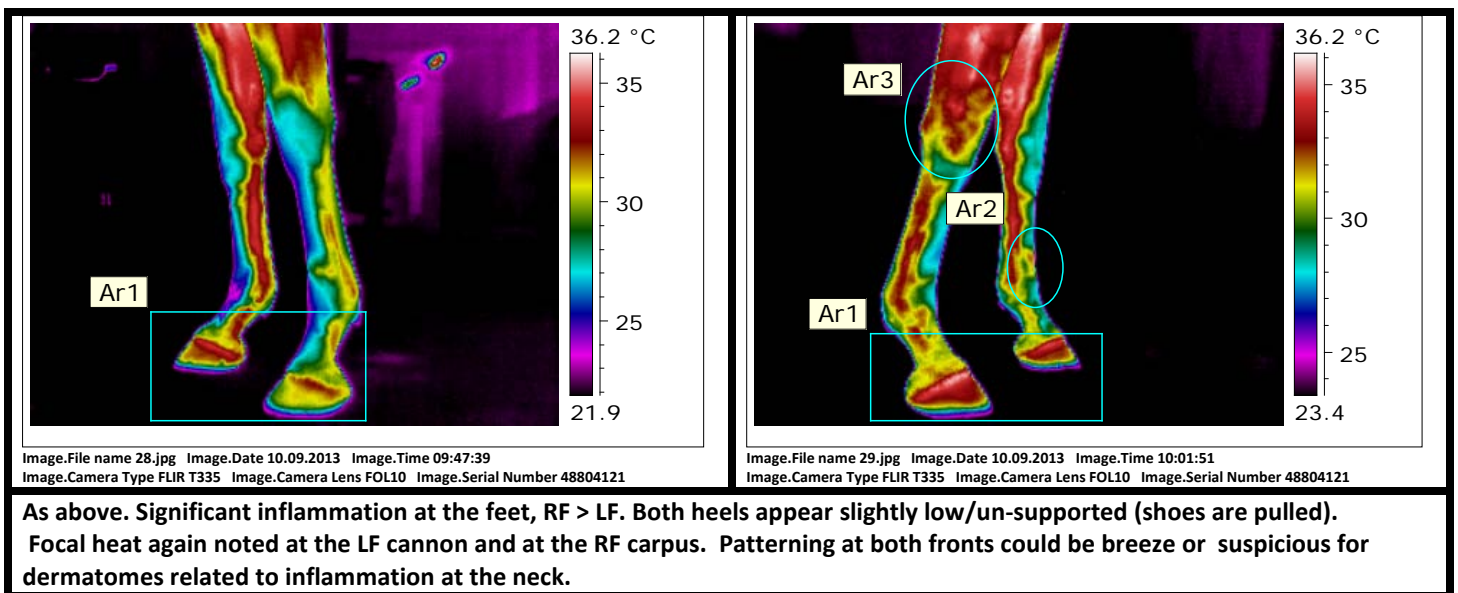
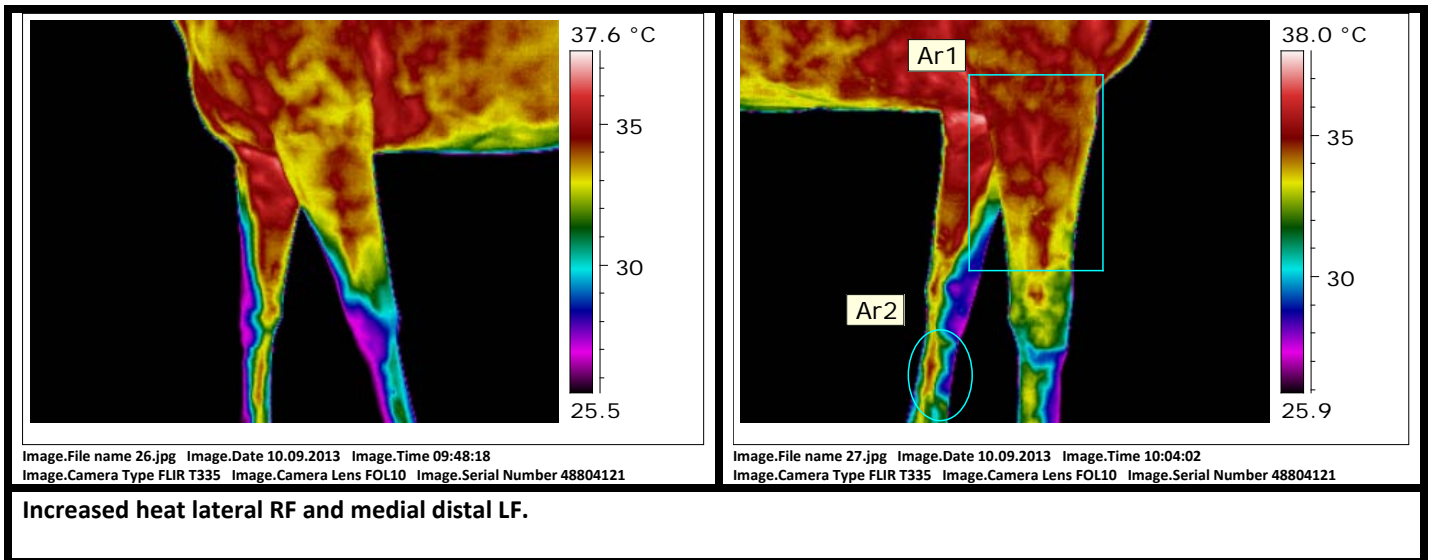


Patterning consistent with tarsitis at the hocks; the LF cannon again shows heat mid-shaft that should be palpated or evaluated for bucked shin (bone stress) with radiographs if warranted. Inflammation is noted at the RF carpus which may or may not be related to significant inflammation at the foot. Further diagnostics are needed.

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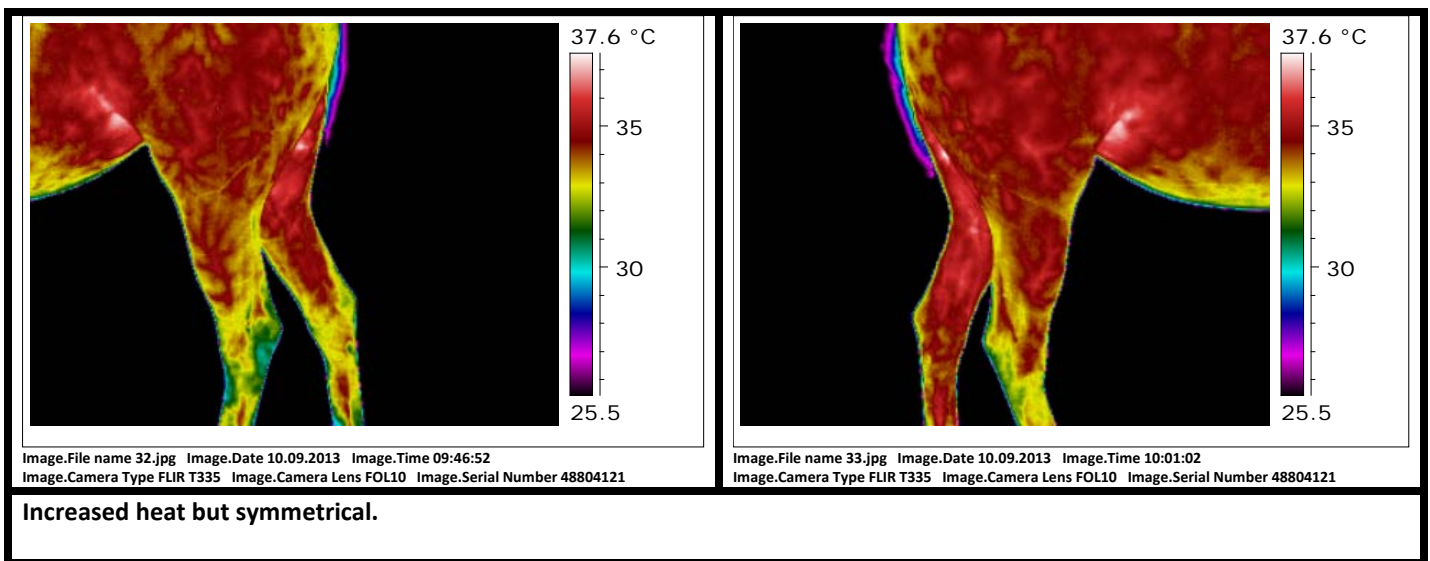
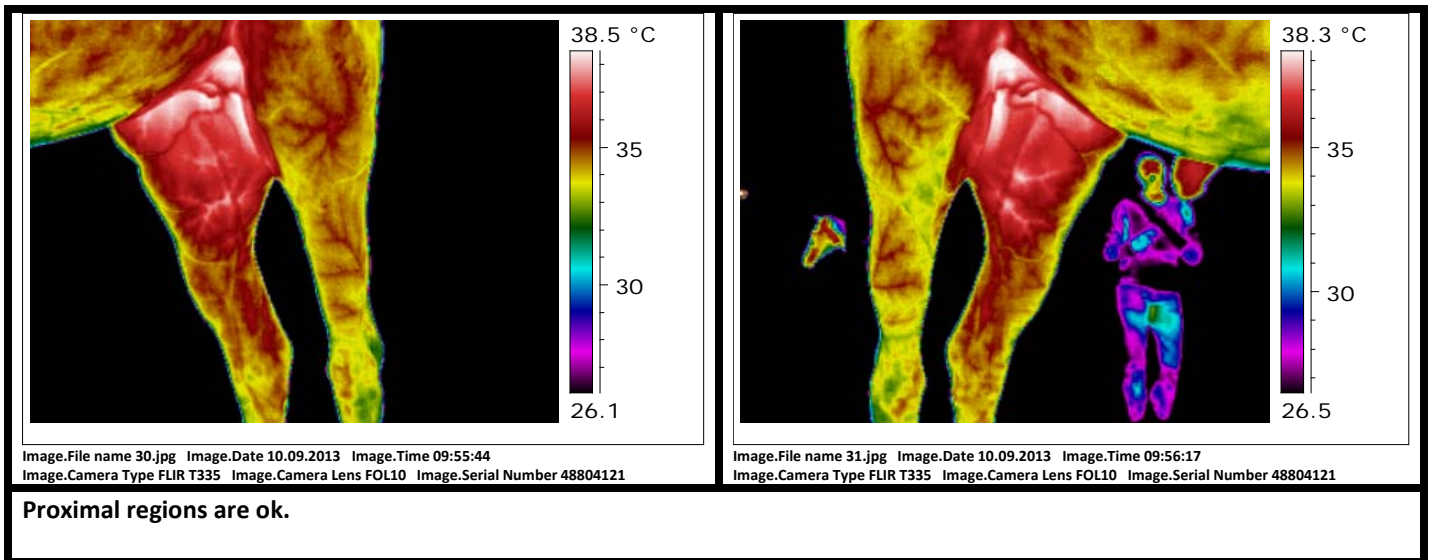
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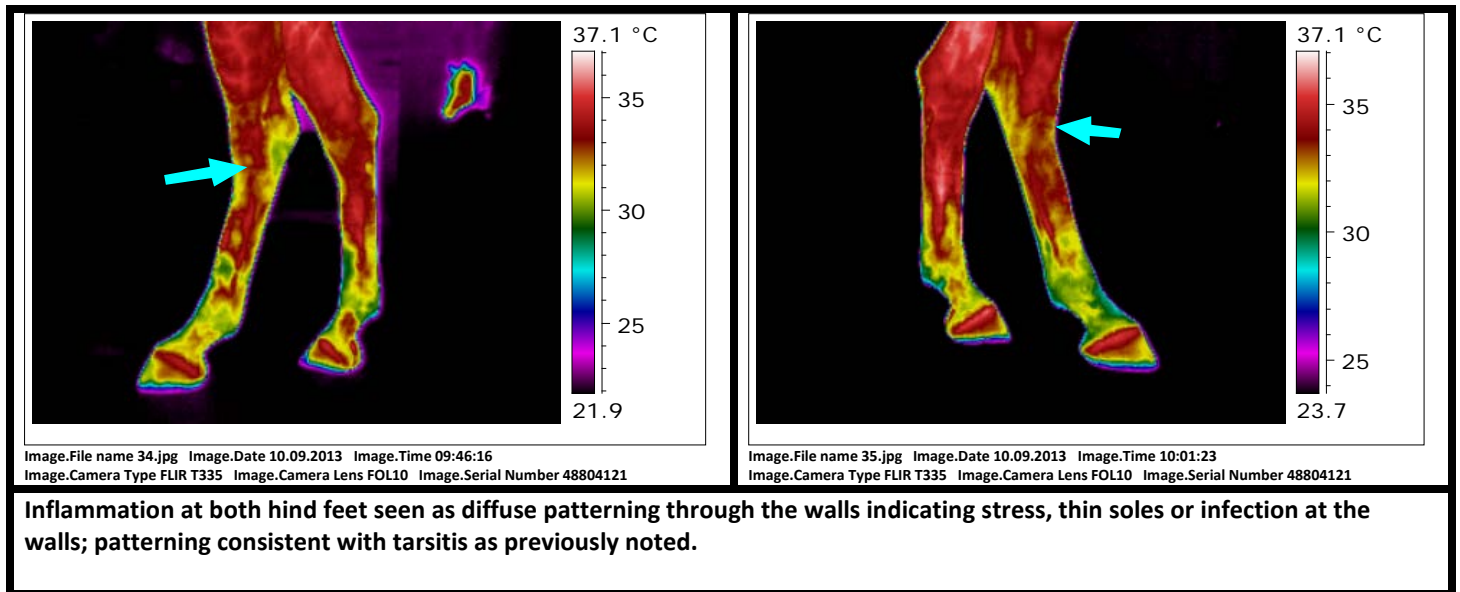
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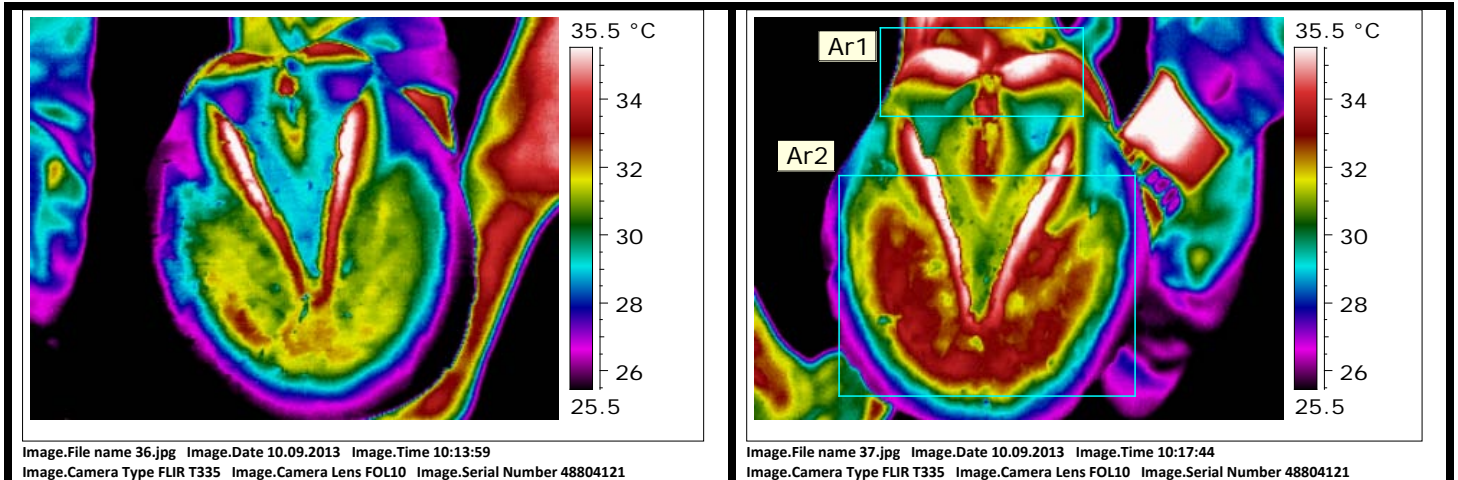
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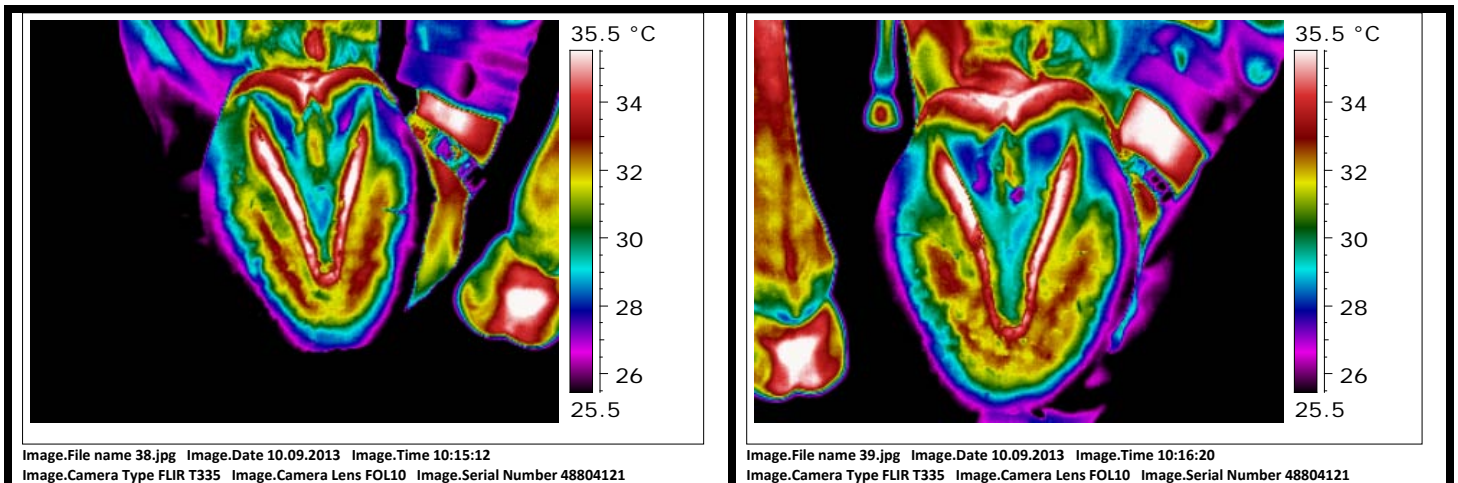
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Significant inflammation at the RF foot, immediate attention is needed (soaking, support, anti-inflammatory, etc.). Thin soles, thrush, wall separation, etc. may cause this patterning.



Both hinds show significant inflammation through the heels, solar surface, and increased at the frog sulci. Very thin soles, infection such as thrush or separation, and systemic inflammation may cause this patterning.



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SUMMARY AND RECOMMENDATIONS:

Londrina is a lovely looking mare who appears well suited to her job; she has an unfortunate history, and I am sorry to hear of your problems.

Ordinarily interpretations would be strictly limited to what we view in the images provided; however, in this particular case, I feel compelled to share a broader interpretation of the report. When I look at the images presented here, the patient appears “inflamed” as if she has a mild systemic myositis. From an Eastern medicine (TCVM) standpoint, this mare could be described as “Liver Stagnation” with “Qi-Blood Stagnation” resulting in “Hot Hood.” Any kind of an insult (drugs, vaccinations, stress, poisoning in this case) can upset the Wood/Liver balance and cause stagnation, which results in irritability, moodiness, strong heats (stallion like behavior), and inflammation in the feet and tendons. This is not something that would show up on traditional bloodwork, but is rather an Eastern medicine diagnosis. Other signs may include eye irritation or redness. Local Qi-Blood stagnation or myofascial syndrome can also result from her history, and may cause muscle and soft-tissue pain that is heightened beyond what a typical animal might feel. I would strongly suggest an Eastern medicine evaluation for this mare if there is any such practitioner available in your area; acupuncture and Chinese herbal medicine would be incredibly beneficial in re-balancing her overall wellness and health. Jing Tang herbals formulas Body Sore or Liver Happy combined with Hot Hoof 1 for 30-60 days would be useful, but they may be prohibited from shipping internationally. If herbal medicine or other supportive holistic systemic treatments are not available, then rest, massage, anti-inflammatories or muscle-relaxants, arnica, etc. may be useful.

There is significant inflammation in all 4 hooves suggesting infection and thin soles, and I understand radiographs were obtained and the mare is now without shoes in order to evaluate her hoof wear. Regardless, she requires treatment and support while going through this phase – perhaps with padded boots or styrofoam, deep bedding, and anti-inflammatories as needed, with local treatment for any infection. The RF in particular is very badly inflamed, causing increased circulation throughout the limb, and the mare’s performance issues are no doubt connected to pain in her feet and possibly her back. While a static review of the saddle showed a good channel, the images show some pressure points along the right side and left wither base. A full fitting +/- thermographic review is recommended if saddle-fit has not already been addressed.

There is some indication of tarsitis bilaterally (causing or resulting in the swivel?), and flexions, palpation, and baseline radiographs may be useful, though patterning may be increased prior to boney changes.

If not artifact (breeze) there is possibility of dermatome changes on the front cannons – cooler on the RF and a focal warm spot on the LF cannon that should be very carefully evaluated and possibly radiographed; there is also a lesion of significance at the RF carpus creating inflammation as marked that requires further assessment and diagnostics.



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Heat at the neck is symmetrical but also increased and a careful palpation and range of motion assessment is warranted, with cervical radiographs if there is pain or reduced movement.

Thank You!

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

