



Thermal Imaging Report

Precious Tamara



*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: Precious Tamara

THERMOGRAPHY DATE: 10092013

IMAGING TIME: 1200

September 12, 2013

Nina Bjerkås
Tunellveien 16
3426 Gullaug

Dear Nina Bjerkås:

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

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: Nina Bjerckås
MAILING ADDRESS: Tunellveien 16, 3426 Gullaug
CLIENT EMAIL: n.mb@live.no
CLIENT PHONE: +4798457601

HORSE AGE: 5
HORSE BREED: Knabstruper
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, light wind
APPROXIMATE TEMPERATURE: 15 °C
IMAGING LOCATION: Barn aisle

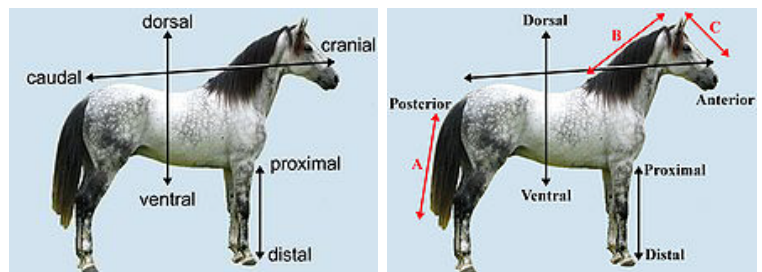
EXERCISED PRIOR: Yes **HOW LONG:** 30 min **WHEN:** 10 min prior imaging
TYPE OF EXERCISE: walk, trot and canter under saddle

BOOTS OR WRAPS ON HORSE? No **HOURS SINCE:** Not Applicable
FLYSPRAY OR LINIMENTS APPLIED WITHIN 24 HOURS: No

REASON FOR SCAN or HISTORY RECEIVED: Fall 2011, lame in one of the hind legs. Might have been kicked by another horse. No treatment other than resting. Spring 2012, removed moving piece on the right lower joint, in front.(Ole Einar Sem)Lame winter 2012/13 treated both upper (knee)joints in front.(Ole Einar Sem)Trouble with finding a saddle she is relaxed with. Often tense in left side, during riding.
 Reason for Scan: To know if there is a reason she is so tense on the left rein. Also to know the inside history of my horse, so I can be aware of, and prevent any damage to her body. Note from imager: We did a static saddlefit. Nice channel 4 fingers, but saddle twisted in the pommel, to narrow top and pinching withers, especially left side. Saddle is also to big for the rider, putting her rear in the saddle and to high front/low back. Falling left.

INTERPRETATION INFORMATION (Completed by Veterinarian)

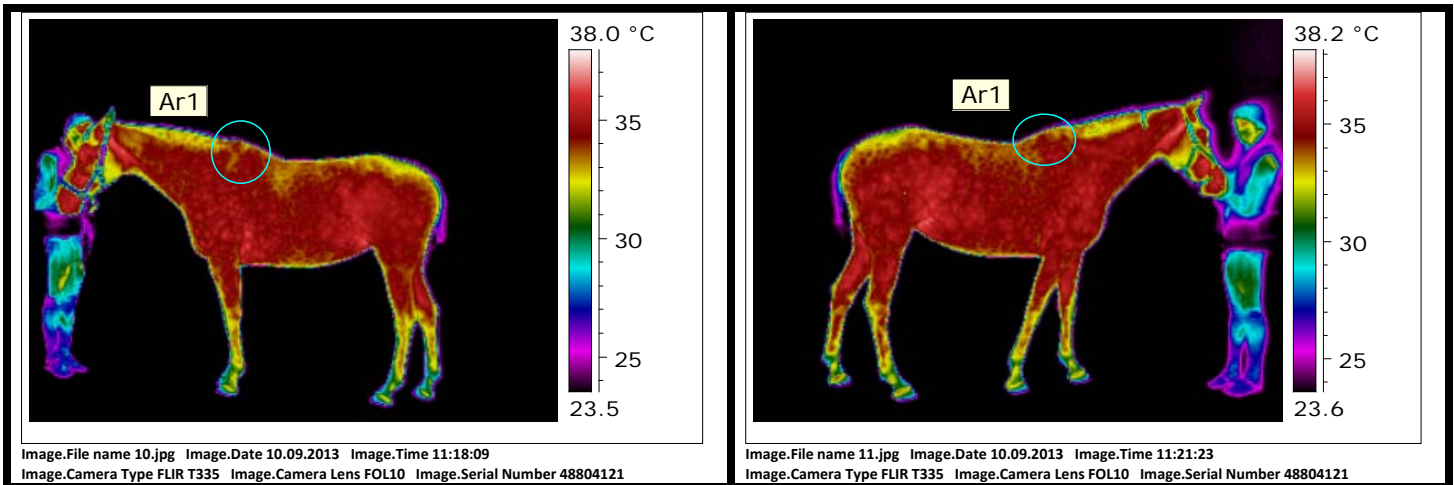
INTERPRETATION TYPE: Full Enhanced Survey
DATE OF INTERPRETATION: 9/11/2013
REVIEWING VETERINARIAN: Joanna Robson, DVM, CIT



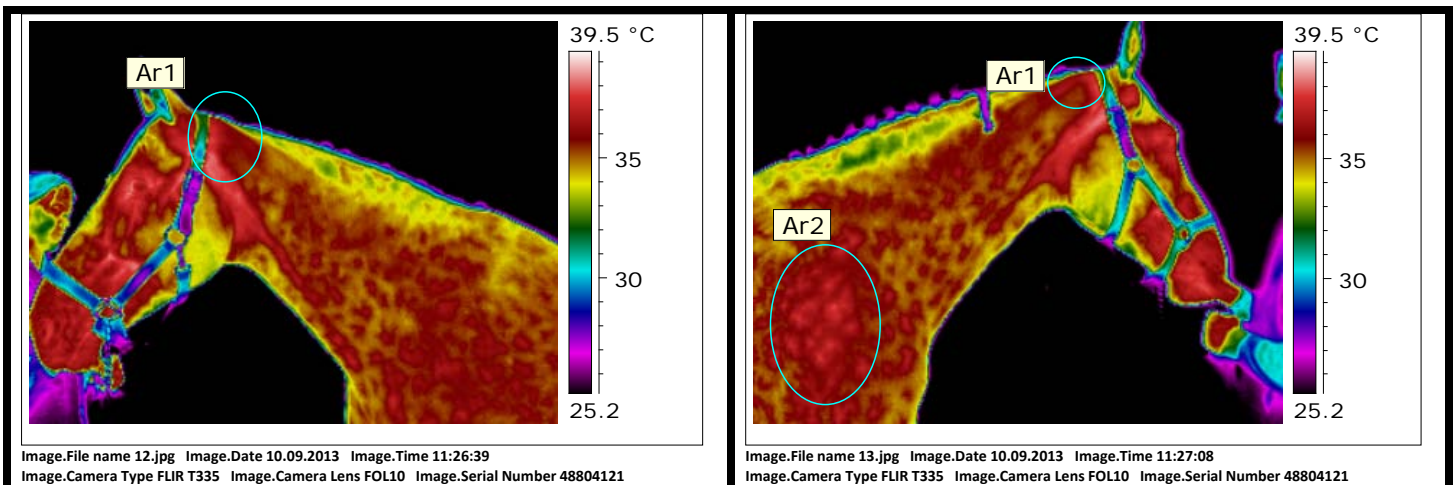
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Patient appears generally symmetrical in the whole horse views, though with some patterning over the withers and shoulders both sides, especially at the left, consistent with focal irritation.

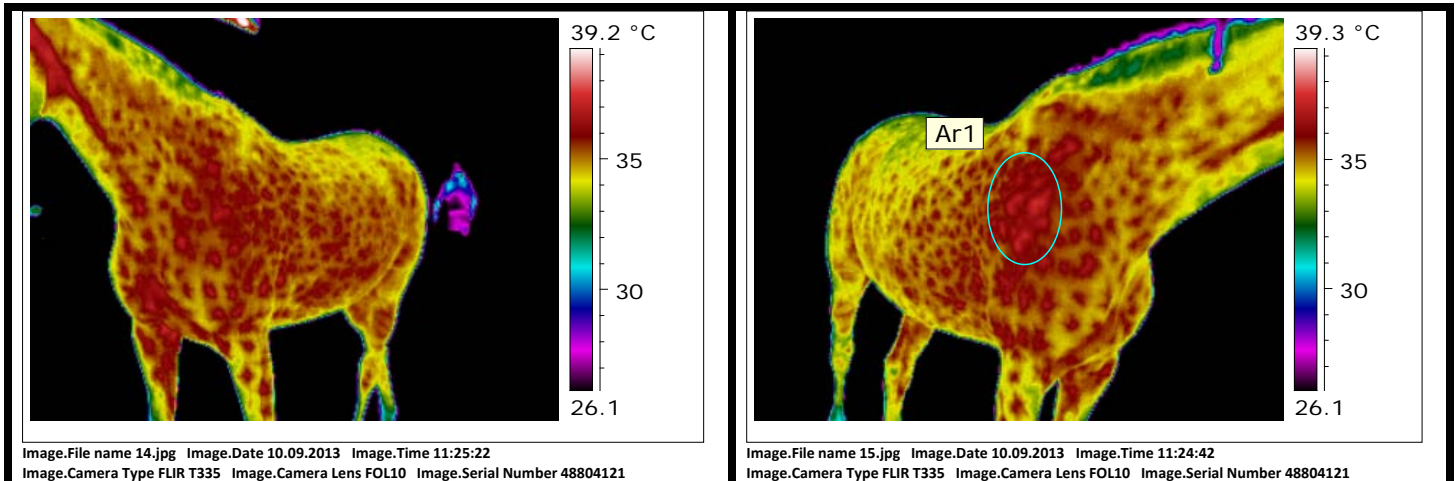


Good face and neck views (thank you for braiding!). Patterning is generally typical, though palpation of the atlas/poll is suggested as there is a slight bulge, especially left, which could suggest muscle tension or chiropractic changes. Increased focal heat at right shoulder, not likely pathologic, palpate for pain ore reactivity.

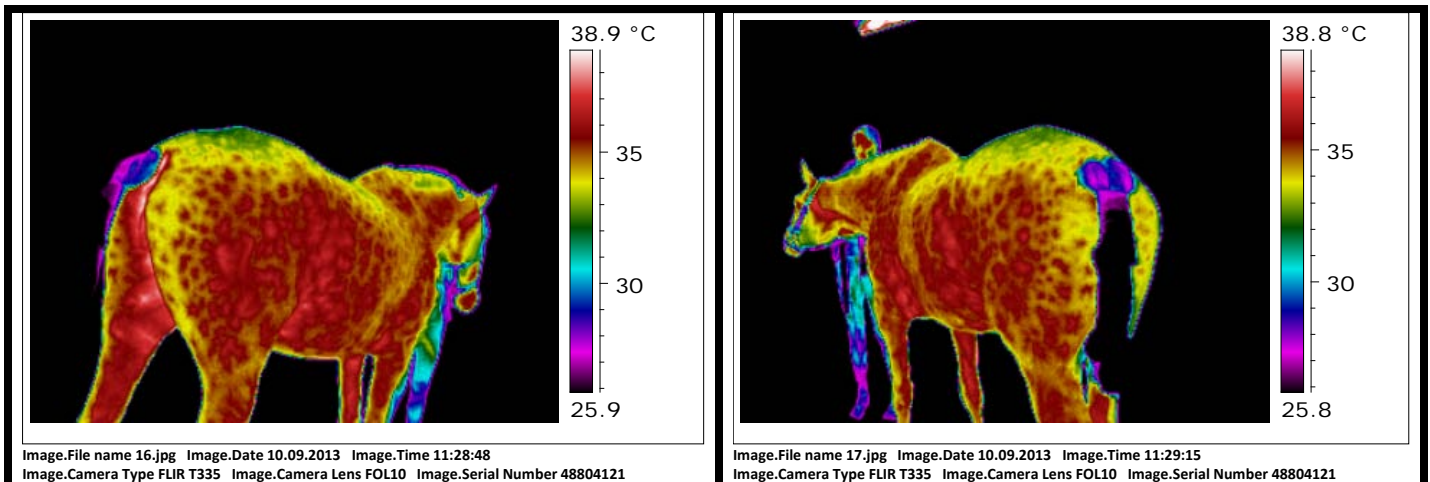
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Right lateral shoulder – increased heat as noted above, could be artifact or represent local muscle inflammation. Palpate for pain or reactivity.

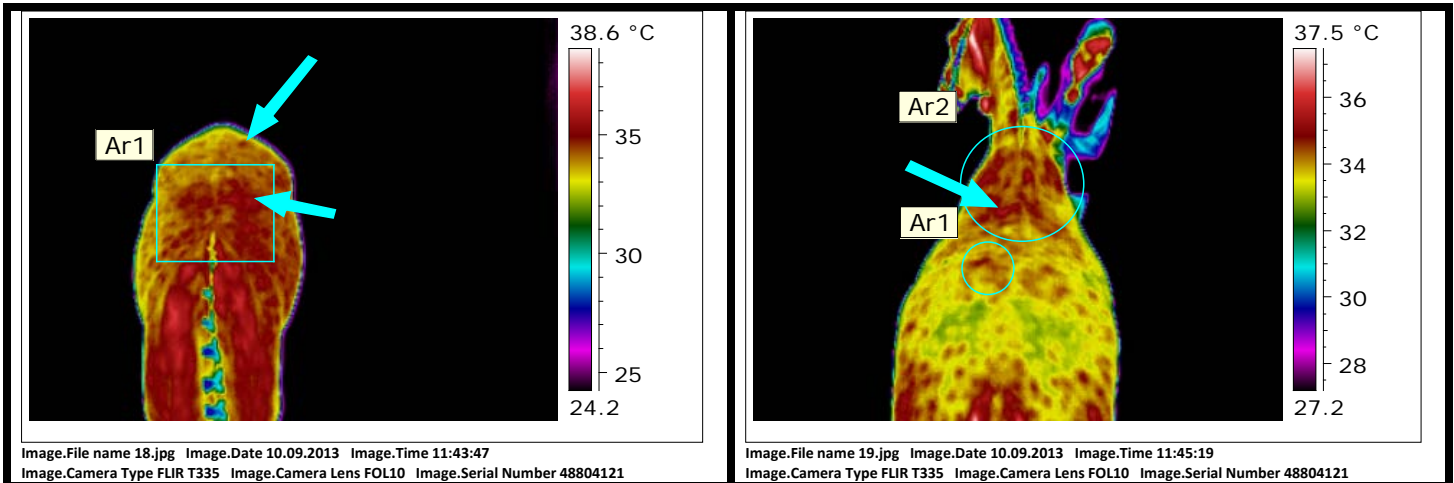


NSF: No Significant Findings

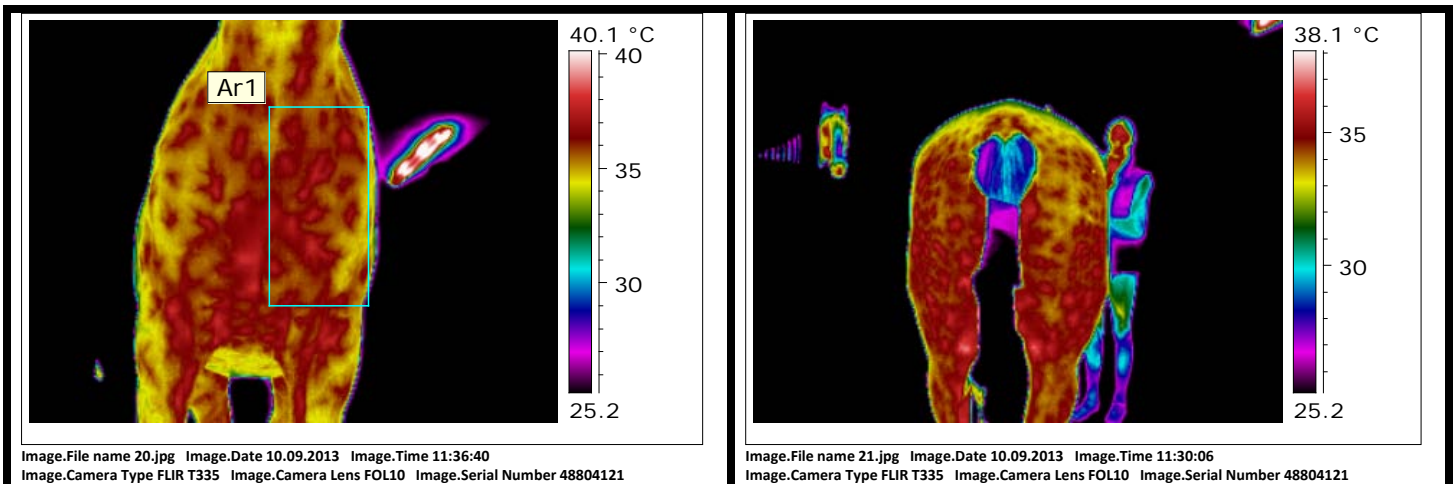
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Good dorsal views. Patterning is consistent with inflammation at the withers, and thoracic spine, especially left sided, and is consistent with saddle-fitting issues or other focal trauma. The left tuber sacrale hot spot appears to be a large brown dot on her croup as seen in the plain view.

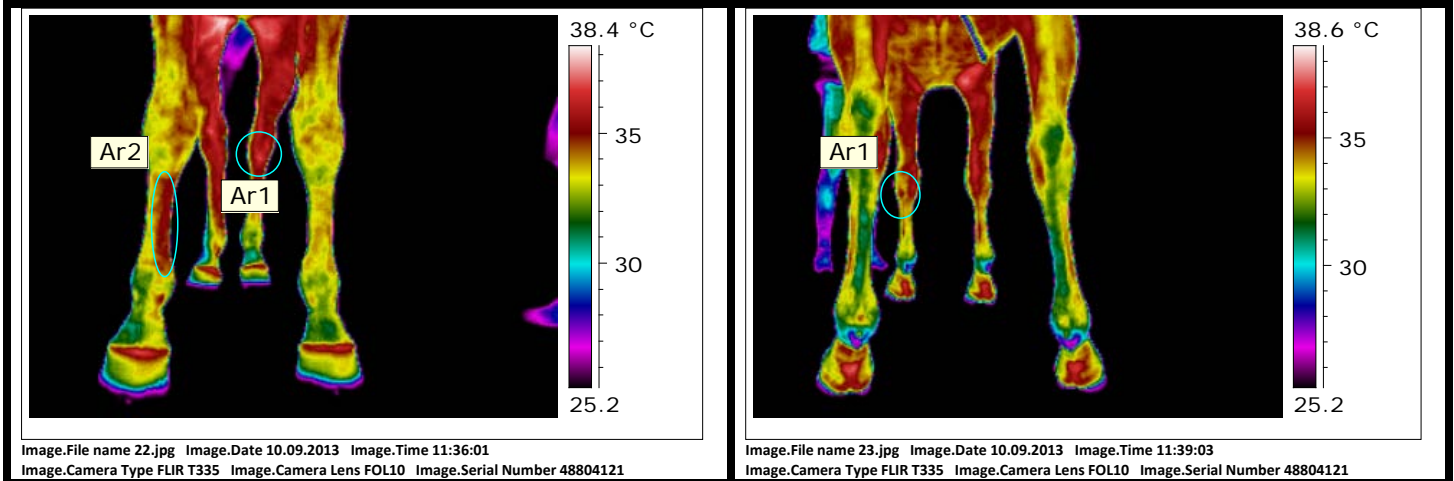


Very subtle left sided pectoral increase could suggest focal muscle tension and strain, or be related to inflammation in the hooves; hamstring view good.

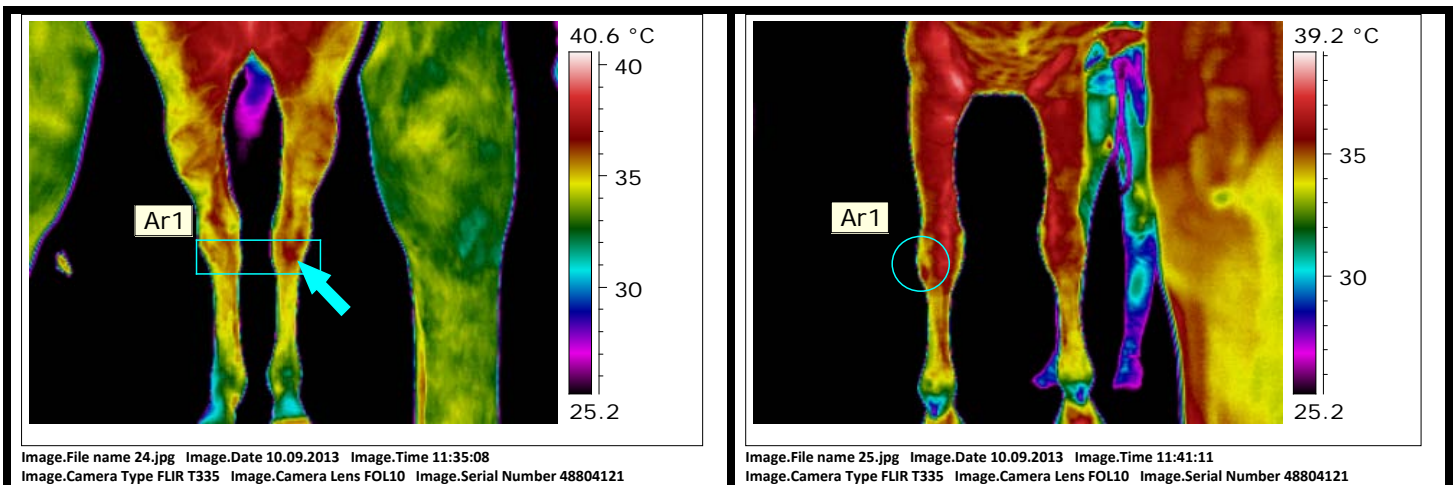
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Heels increased all around – low grade inflammation is present in the feet. The LH shows primary inflammation at the hock. Increased heat at the RF cannon bone medially – could be artifact but should be palpated. LF carpus shows focal spot – palpation warranted.



Tarsitis is suspected, especially at the LH (could that be related to the hind lameness reported in the history?). Palpation/flexion with baseline radiographs would be useful, though patterning may be increased prior to boney changes. Joint support (oral/injectable) would be useful, though in healing the patient's back and addressing saddle-fit, the hind limbs may no longer be stressed. Focal spot LF lateral carpus again noted, significant unknown, palpation is warranted – rule out soft-tissue injury.

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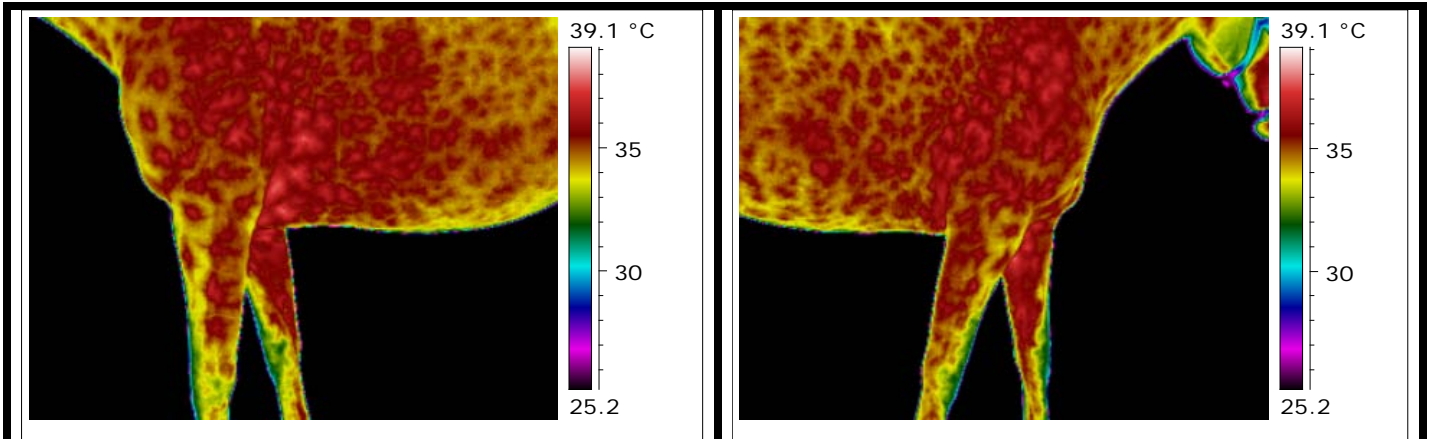


Image.File name 26.jpg Image.Date 10.09.2013 Image.Time 11:20:14
 Image.Camera Type FLIR T335 Image.Camera Lens FOL10 Image.Serial Number 48804121

Image.File name 27.jpg Image.Date 10.09.2013 Image.Time 11:23:32
 Image.Camera Type FLIR T335 Image.Camera Lens FOL10 Image.Serial Number 48804121

NSF: No Significant Findings

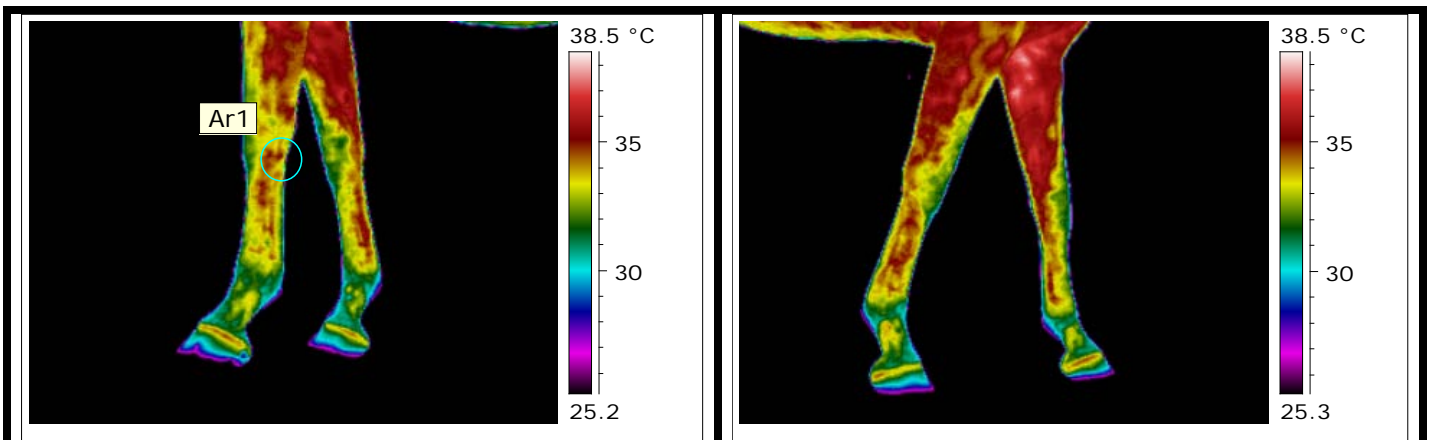


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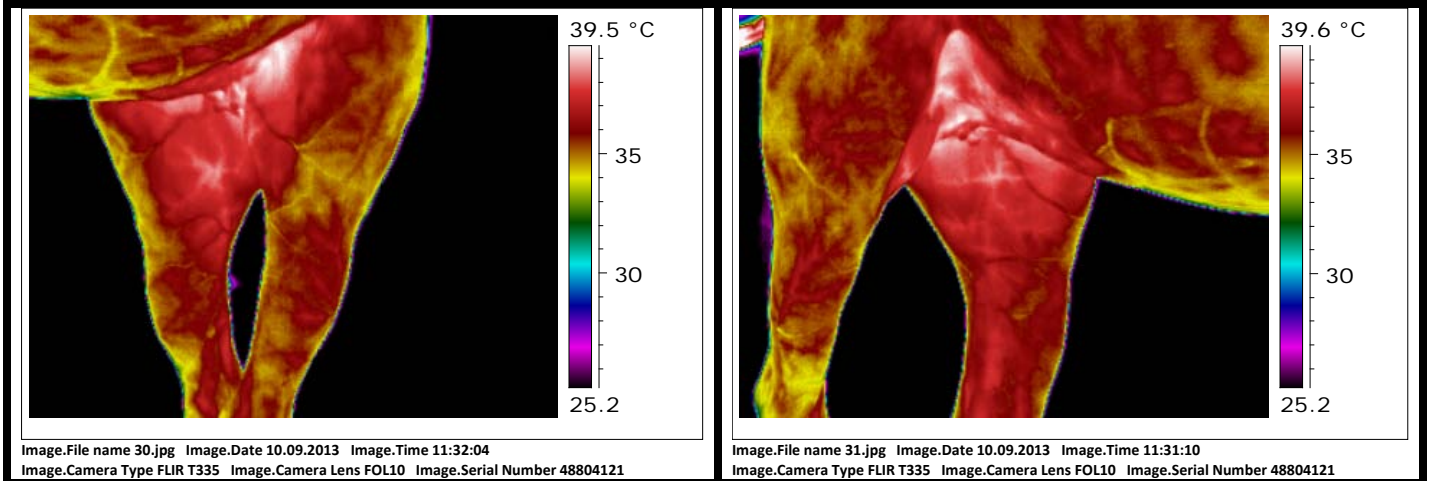
Image.File name 29.jpg Image.Date 10.09.2013 Image.Time 11:23:13
 Image.Camera Type FLIR T335 Image.Camera Lens FOL10 Image.Serial Number 48804121

Subtle increase proximal FT/Suspensory Region LF – palpate for pain or soreness. Ultrasound if reactive.

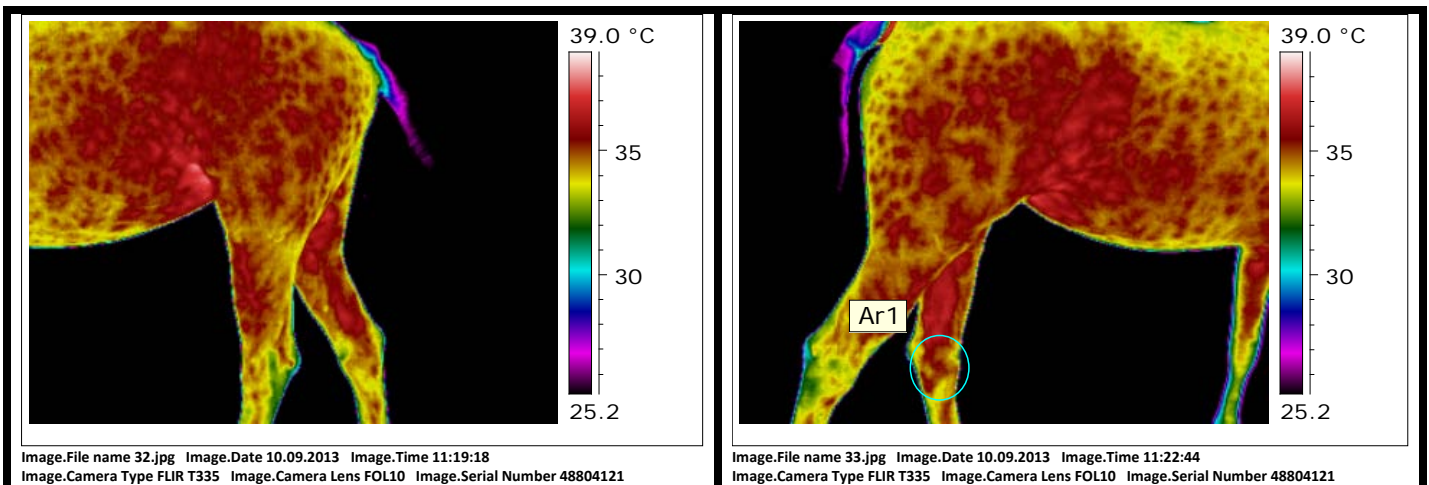
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NSF: No Significant Findings

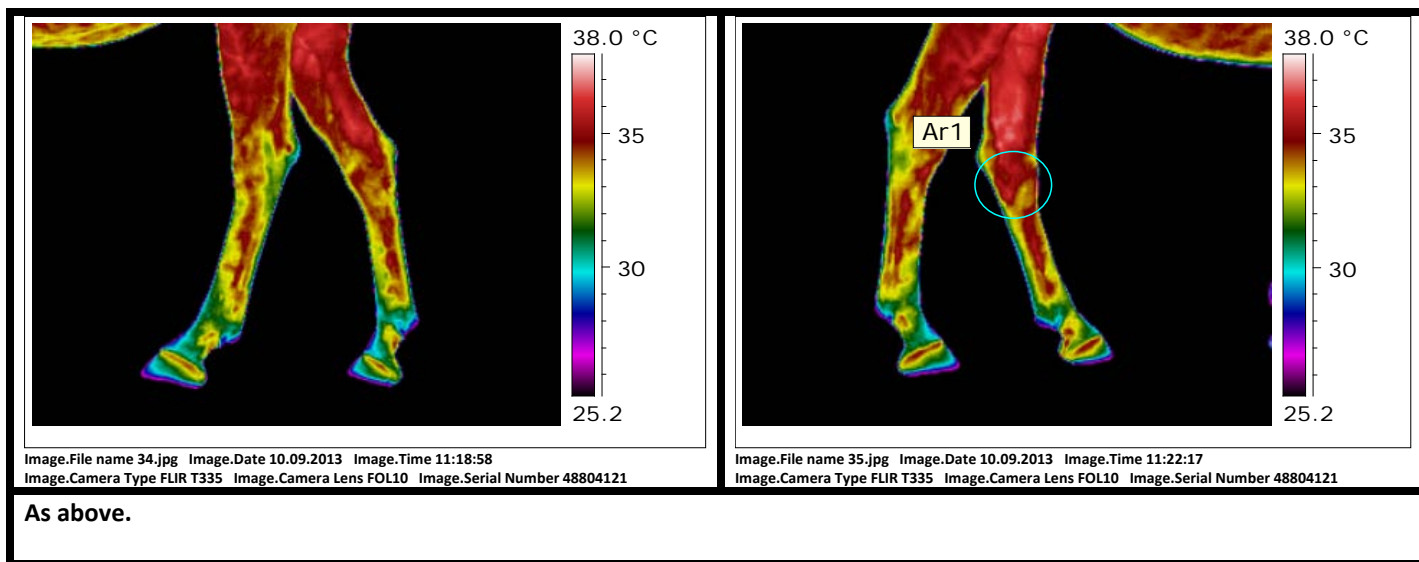


LH hock inflammation, previously noted.

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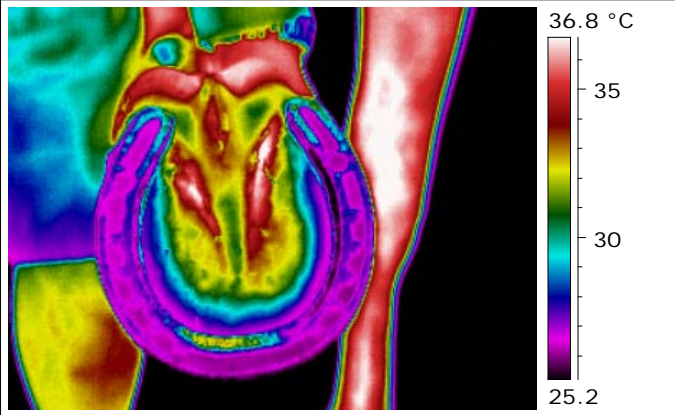


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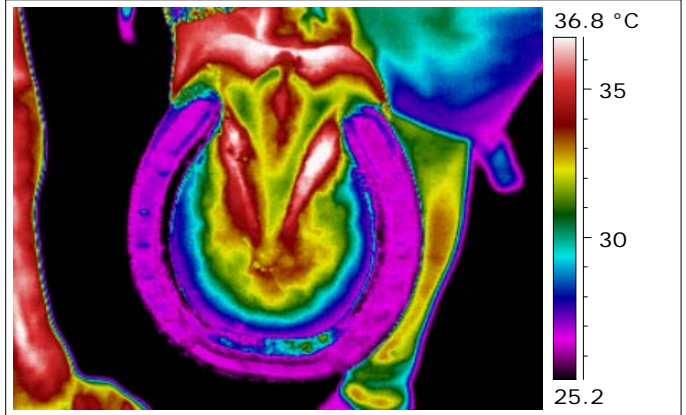


Image.File name 37.jpg Image.Date 10.09.2013 Image.Time 11:52:53
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Narrow frogs, increased heat at the heels and frog sulci and into the soles, suggesting ongoing low-grade inflammation. Thrush, thin sole, pressure from the shoe, could cause this patterning. Patient is more upright on the RF, but the patterning is generally symmetrical between the two front feet in these views. See comments below.

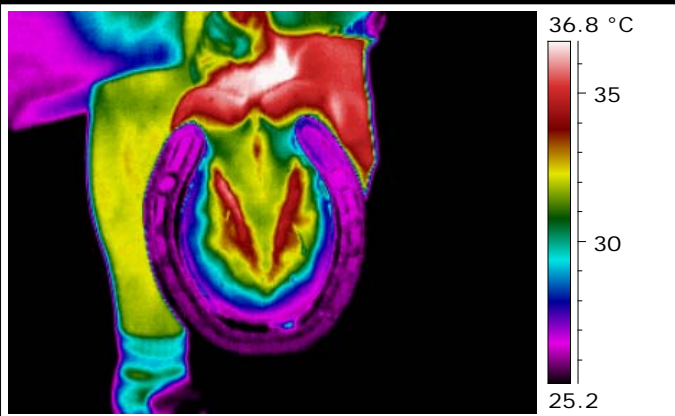


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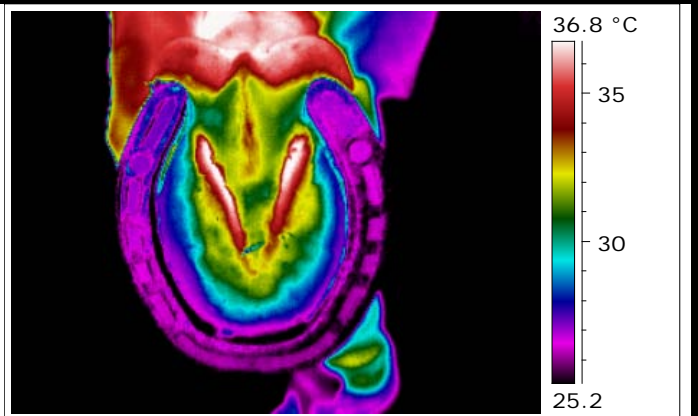


Image.File name 39.jpg Image.Date 10.09.2013 Image.Time 11:51:21
Image.Camera Type No camera Image.Camera Lens No lens Image.Serial Number -

As above.



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SUMMARY AND RECOMMENDATIONS:

This is a pretty Knabstrupper mare and she appears well suited to her job. There are some changes in the report consistent with her history and which require further evaluation.

A high-Low syndrome is noted in the front feet – the RF is more upright/clubby, while the LF is slightly lower and possible under increased strain (the lower foot is also typically on the side of the larger shoulder); the proximal LF soft-tissues and palmar carpus should be palpated as marked, with ultrasound if there is pain or reactivity, especially given the patient’s history of leaning on the L rein. She appears boxy or bull-nosed on the hind feet at the toes, with her coronary band angles pointing to the belly as opposed to the elbows which could suggest a negative plane in the coffin joint behind, although grossly she appears to have heel (not on her heel bulbs). In particular, the LH appears to have an imbalance (high on the inside). Coronary band does not appear level, and these changes may be affecting the hocks and other structures. Medial branch LH shoe is rotated inwards. Thrush and some pressure bruising at the heels are suspected. LF shoe shows the same issue. RH same problem. RF appears to be more balanced overall. Unsure date of last shoeing. Further evaluation is needed, and radiographs would be very useful to assess the internal structures and alignment of all four feet, in case changes to shoeing and overall balance are required. A bump is noted on the RF pastern though does not show inflammation, and could be related to surgery to remove a fragment.

Tamara’s back shows patterning consistent with saddle-fitting issues or other trauma; chiropractic rotations are suspected along with focal inflammation. The leaning on the left rein may be related to saddle fit problems at the withers and shoulders, and patterning supports this. A full saddle-fit evaluation is recommended. It is possible that the focal heat seen at the left TS is creating by a focal brown spot seen in the patient’s coloring.

Her left hock shows patterning consistent with tarsitis, and further evaluation is needed. The atlas/poll may also have tension or chiropractic rotation.

Thank You!

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

