



# Mobile Thermographics

## Thermal Imaging Report Dresdan

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



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



### **Mobile Thermographics**

9509 Chadwick Road  
Laingsburg, MI 48848  
PH: 989-627-3236

WEB: [www.mobilethermographics.com](http://www.mobilethermographics.com)

EMAIL: [mobileinfrared@gmail.com](mailto:mobileinfrared@gmail.com)



PATIENT : Dresdan

THERMOGRAPHY DATE:4-28-14

IMAGING TIME:10:15

August 29, 2014

Donna Rothman - Stonehaven Farms  
351 W. Samaria Rd.  
Temperance, MI 48182

Dear Donna Rothman - Stonehaven Farms:

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

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,

Joy White, Certified Infrared Thermographer

PATIENT : Dresden

THERMOGRAPHY DATE:4-28-14

IMAGING TIME:10:15

## EQUINE CLIENT INFORMATION

CLIENT NAME:Donna Rothman - Stonehaven Farms  
MAILING ADDRESS: 351 W. Samaria Rd., Temperance, MI 48182  
CLIENT EMAIL:tenacityfarm@yahoo.com  
CLIENT PHONE:419-460-5724

HORSE AGE:6  
HORSE BREED:Dutch Warmblood, Bay, gelding  
HORSE PRIMARY USE:hunter/jumper

## SURVEY INFORMATION

THERMOGRAPHER :Joy White  
INFRARED CERTIFICATION #:9810  
INFRARED CAMERA MODEL: T420 CAMERA SERIAL NUMBER: 62106634  
NUMBER OF THERMAL IMAGES SUBMITTED:30

WEATHER: Light breeze, cloudy, humid  
APPROXIMATE TEMPERATURE:73 °F  
IMAGING LOCATION:Barn aisle

EXERCISED PRIOR:Yes HOW LONG: 20 minutes WHEN: 45 minutes prior  
TYPE OF EXERCISE :lunged at walk, trot, canter 20 minutes. Owner states he had a "free run" around arena as well, then hand walked 15 minutes

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

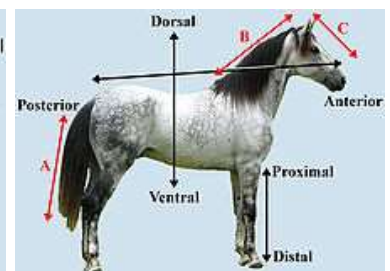
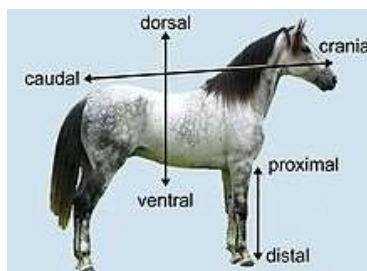
REASON FOR SCAN or HISTORY RECEIVED :Dresden was injured about 1 year ago, a fall we assume when turned out. He has damage to right shoulder, neck, stifle area and SI joint all on the right side. He also recently fell in the wash rack on the right side. Since the first fall, he has been on and off for the last year; he does not travel as well when tracking to the left. He is currently on Previcox. Past injections are as follows: SI joint – April 2014, Bursa in shoulder-May 2014, Neck – June; owner says the front end was a little better after that. Most recently, both stifle joints were injected on July 28, 2014. His farrier is Roger Brown, and his last visit was July 24, 2014. He has shoes only on the front. Client requested the scan to find out the exact area(s) that are bothering him, with knowledge on how to proceed with a treatment plan.

## INTERPRETATION INFORMATION (Completed by Veterinarian)

INTERPRETATION TYPE:Full Enhanced Survey

DATE OF INTERPRETATION:8/29/2014

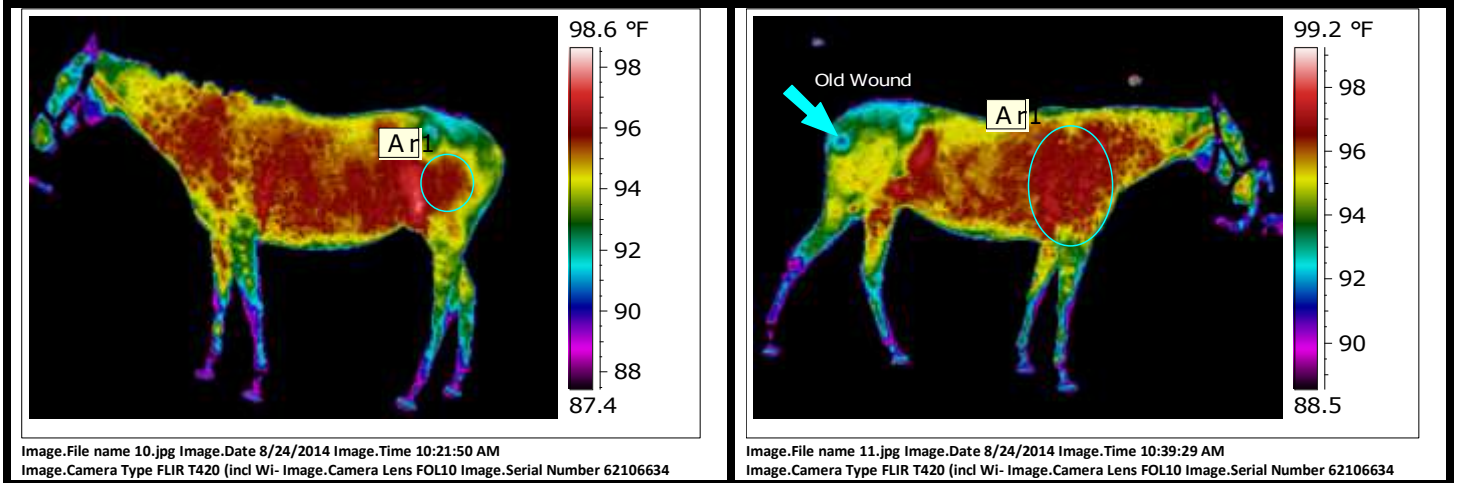
REVIEWING VETERINARIAN: Dr. Debra K Tibbitts



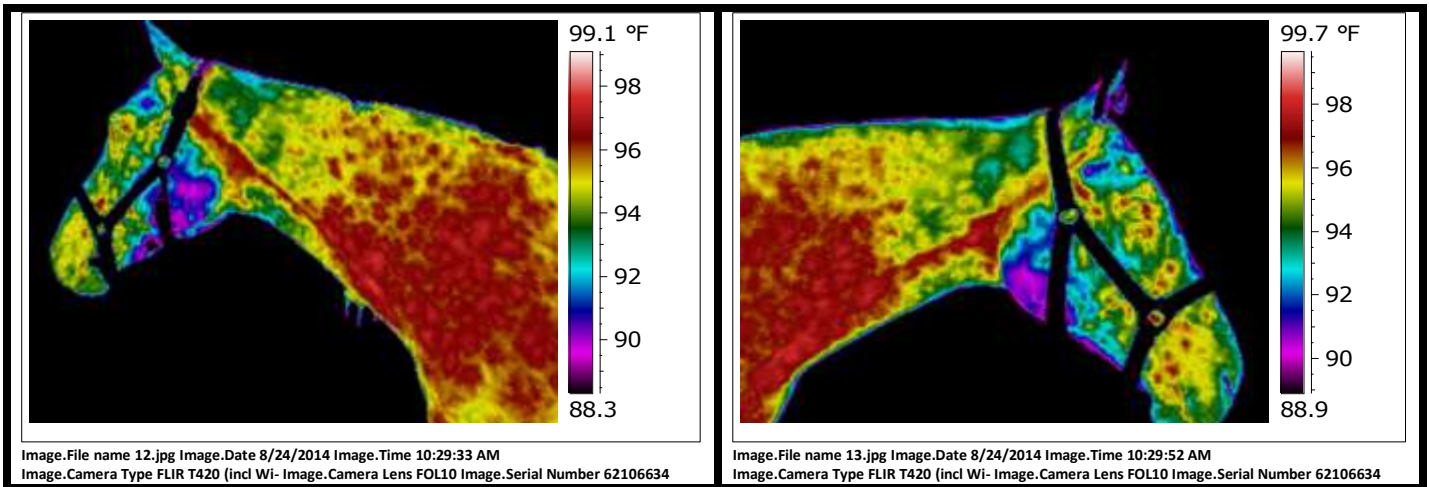
PATIENT : Dresdan

THERMOGRAPHY DATE:4-28-14

IMAGING TIME:10:15



Asymmetry is seen in the shoulder and hindquarters, with heat greater on the right shoulder and left thigh. The right shoulder likely due to primary inflammation. The left thigh may be primary musculoskeletal inflammation or secondary to off-loading of the right hind. Comments are based on images provided, focal view is limited and positioning is less than ideal in these images and several others.

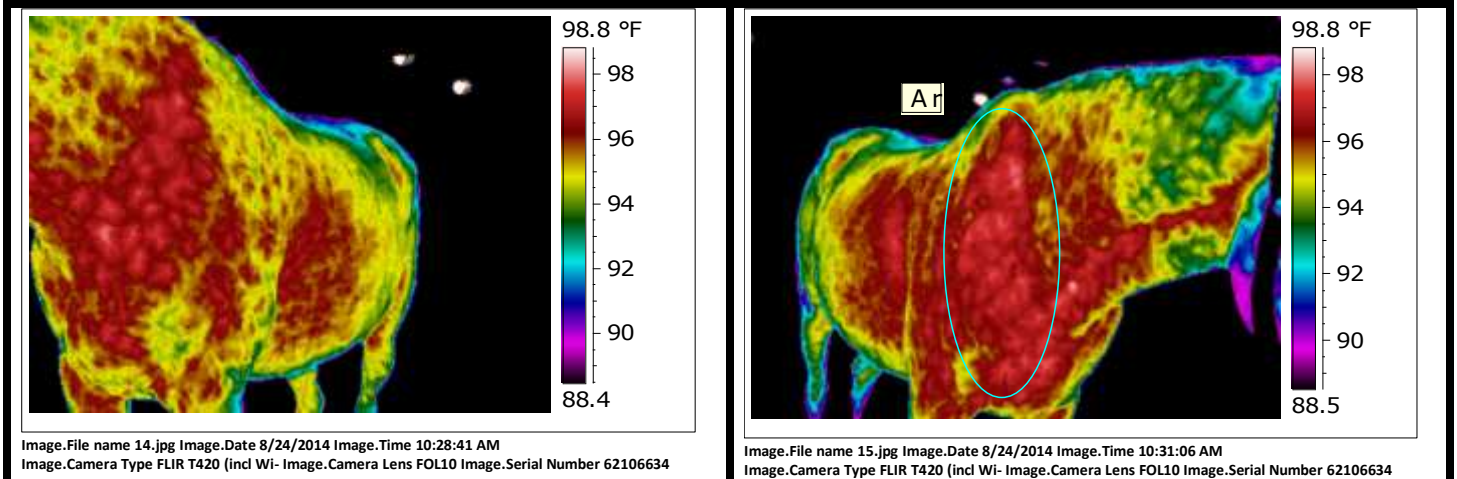


**NSF: No Significant Findings**

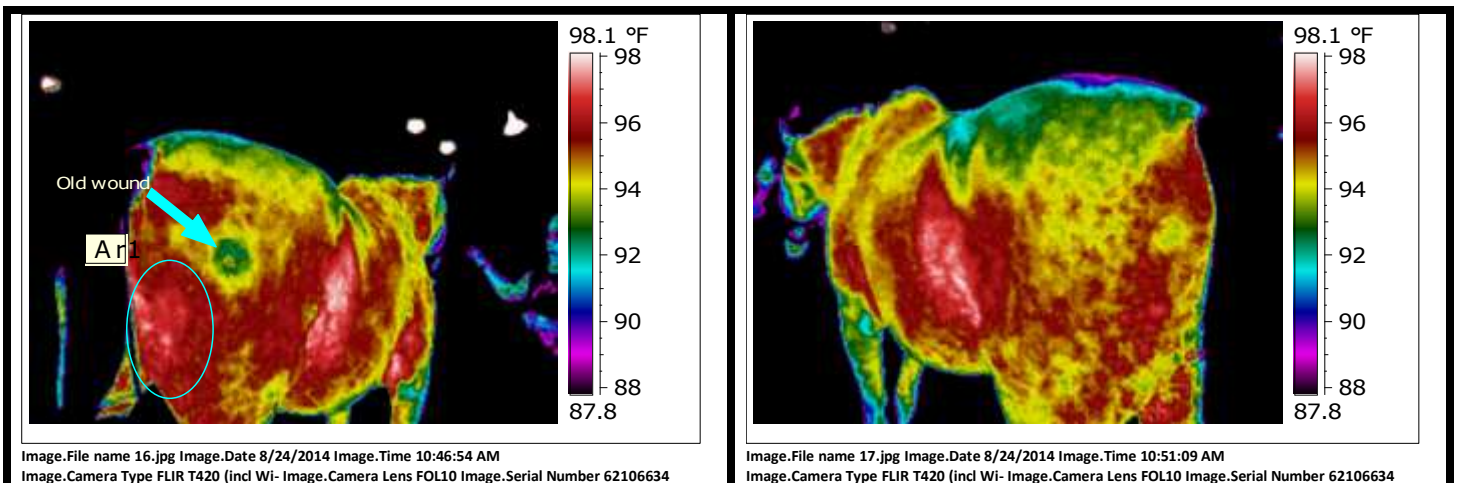
PATIENT : Dresden

THERMOGRAPHY DATE:4-28-14

IMAGING TIME:10:15



Asymmetry seen again in the shoulders and chest with heat greater on the right. Primary musculoskeletal inflammation likely. Palpation, motion palpation, and possibly ultrasound of the area warranted. Manual therapies such as osteopathy, myofascial release and laser therapy are all possibilities to help diagnose and treat the area.

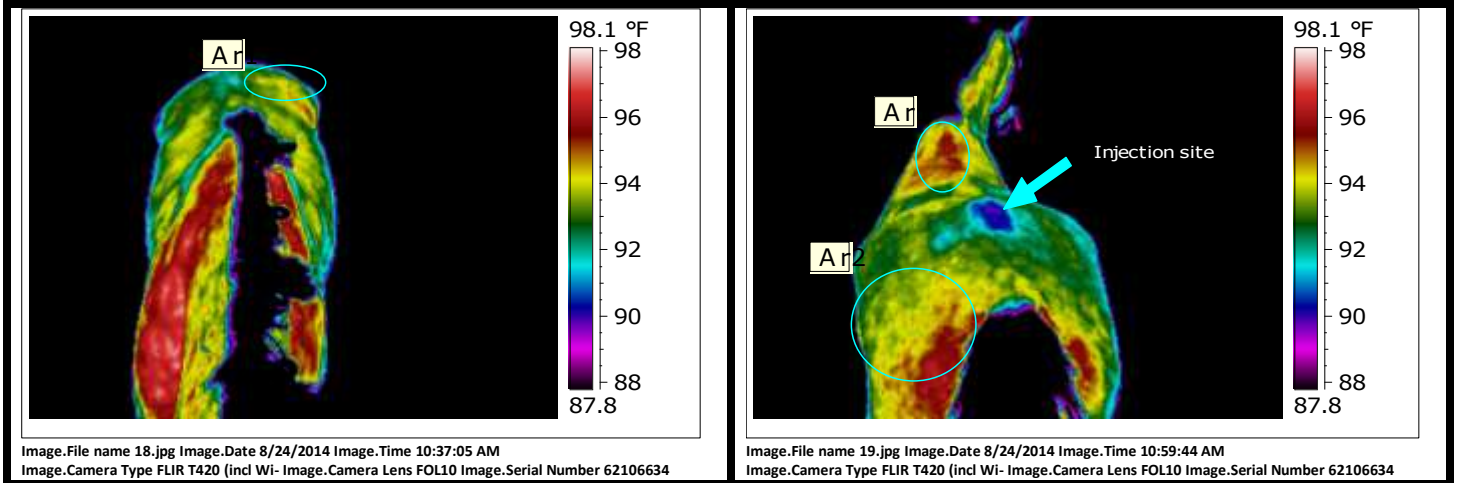


Comments are based on images provided. There is asymmetry in the hindquarter with the right semitendinosus having greater heat than the left. Primary inflammation/strain , chiropractic issues of the hip or stifle. Thorough palpation of the area recommended.

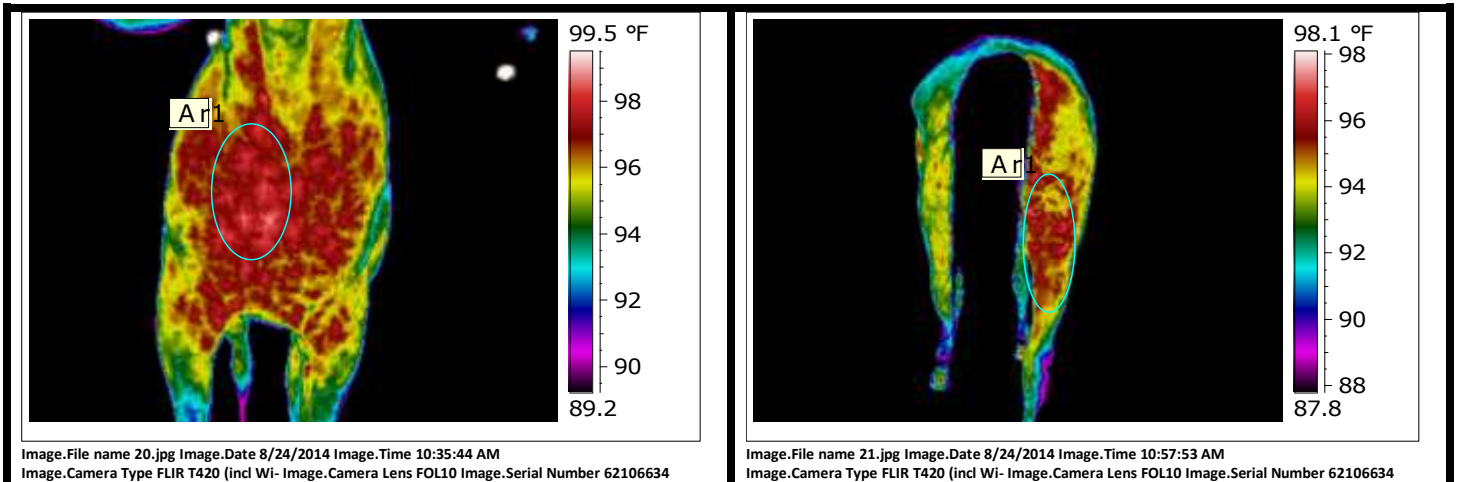
PATIENT : Dresdan

THERMOGRAPHY DATE:4-28-14

IMAGING TIME:10:15



There is asymmetry in the gluteal muscles with heat greater on the left likely due to off-loading of the right hind. Right side appears to have a bit of atrophy. There is asymmetry along the thoracic spine, some of which is possibly due to close proximity of the dorsal spinous processes to the skin but there is extension of the heat on to the left side which makes it more likely to be inflammation from saddle fit issues, chiropractic or muscle imbalances. Direct palpation of the musculature in that area as well as motion palpation of the spine recommended. Saddle fit check would also be of value. The cooler area over the sacroiliac is from prepping of the area for injection.



Asymmetry seen in the chest view with heat greater on the right extending into the shoulder. Palpation of the musculature along with the scapulohumeral joint, bicipital bursa, scapula and scapulothoracic junction warranted as well as motion palpation of elbow, scapulohumeral joint and scapulothoracic junction. Though it is difficult to assess from image provided there appears to be asymmetry in the hindquarters with heat greater on the right semitendinosus and gastrocnemius muscles. Palpation for possible myositis recommended.

PATIENT : Dresdan

THERMOGRAPHY DATE:4-28-14

IMAGING TIME:10:15

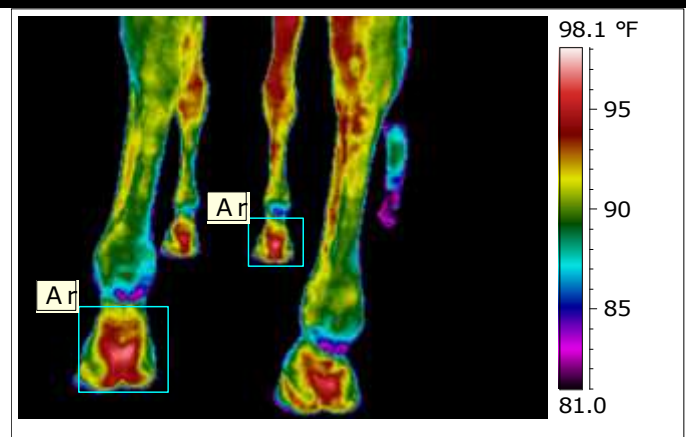
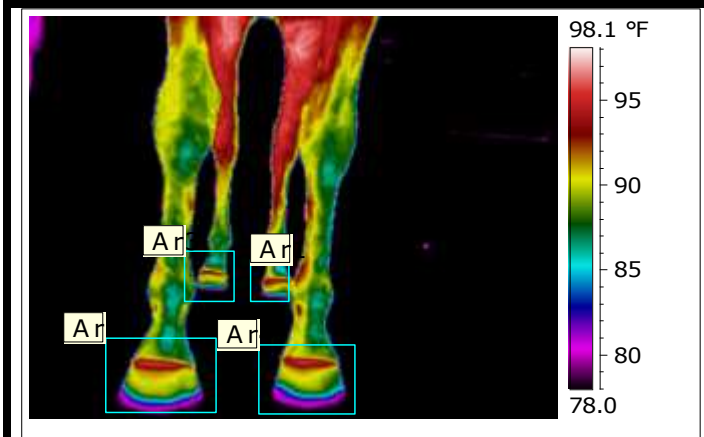


Image.File name 22.jpg Image.Date 8/24/2014 Image.Time 10:32:25 AM  
Image.Camera Type FLIR T420 (incl Wi- Image.Camera Lens FOL10 Image.Serial Number 62106634

Image.File name 23.jpg Image.Date 8/24/2014 Image.Time 10:54:36 AM  
Image.Camera Type FLIR T420 (incl Wi- Image.Camera Lens FOL10 Image.Serial Number 62106634

**There is uneven pressure all four feet at the coronary bands which may be due to uneven limb loading but more likely due to hoof imbalances. There is increased heat at the right front and left hind heels which may be due to imbalances, inflammation or infection.**

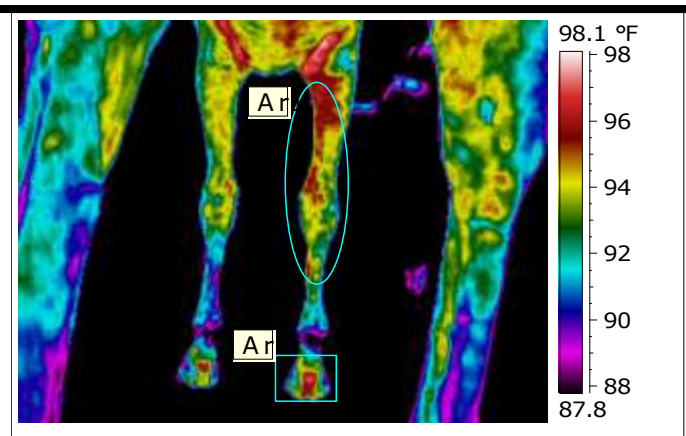
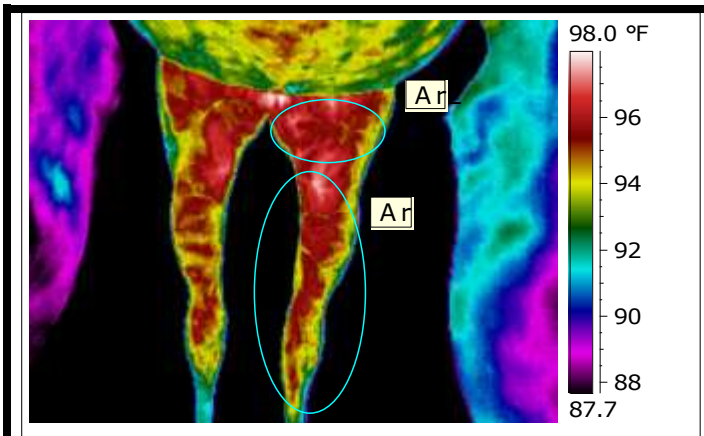


Image.File name 24 (1).jpg Image.Date 8/24/2014 Image.Time 10:35:14 AM  
Image.Camera Type FLIR T420 (incl Wi- Image.Camera Lens FOL10 Image.Serial Number 62106634

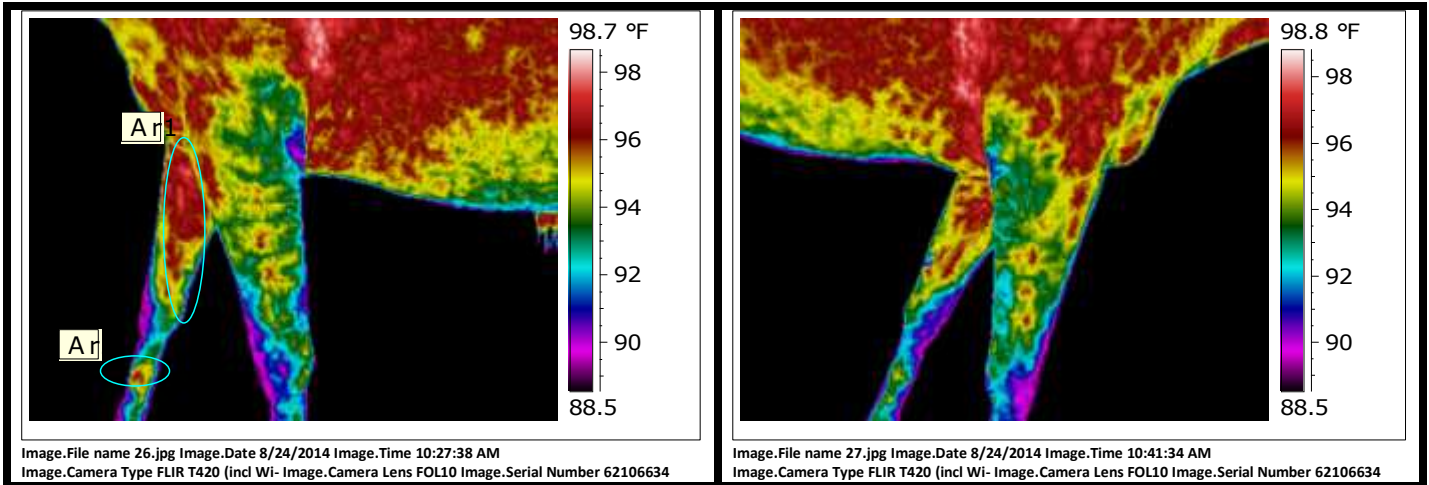
Image.File name 25.jpg Image.Date 8/24/2014 Image.Time 10:55:24 AM  
Image.Camera Type FLIR T420 (incl Wi- Image.Camera Lens FOL10 Image.Serial Number 62106634

**There asymmetry in the hind limbs, with heat greater on the left thigh and hock. This may be due to off-loading of the right hind or there may be tarsitis present and possibly gonitis. Gait analysis and flexion testing recommended for further evaluation. There is asymmetry in the forelimb with heat greater on the right medial forelimb, carpus, cannon and foot. Thorough evaluation of the foot via visual exam, digital pulse analysis and hoof tester pressure tests recommended. The heat in the forelimb may be primary strain, secondary to hoof imbalances or secondary to the shoulder inflammation seen.**

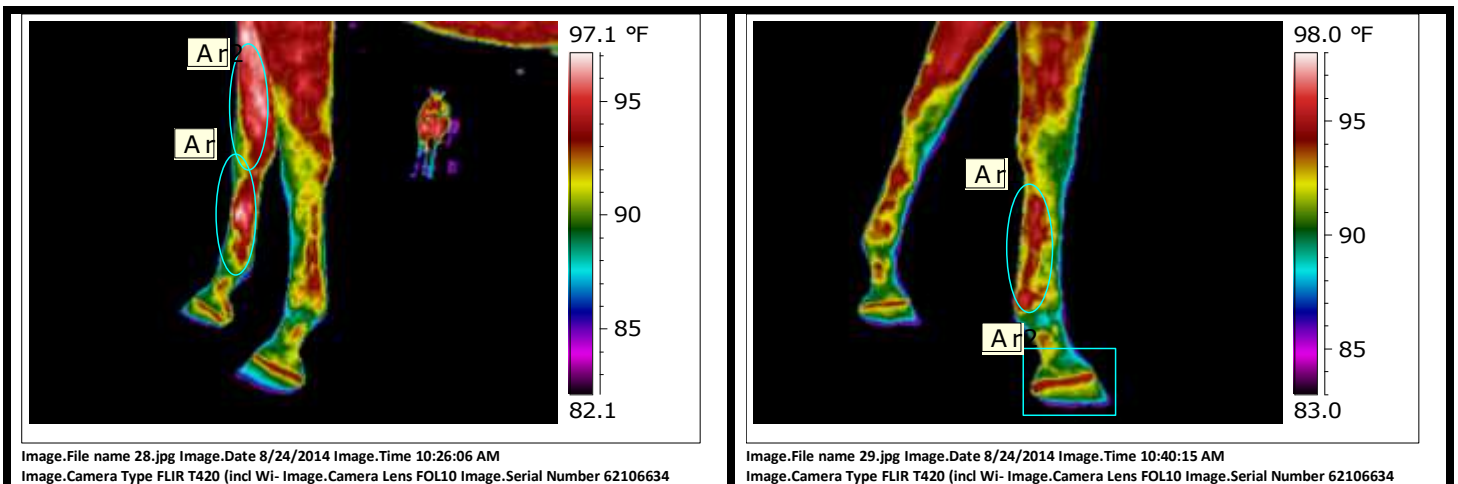
PATIENT : Dresdan

THERMOGRAPHY DATE:4-28-14

IMAGING TIME:10:15



**Asymmetry in medial forearm and proximal cannon with heat greater on the right. Palpation recommended.**



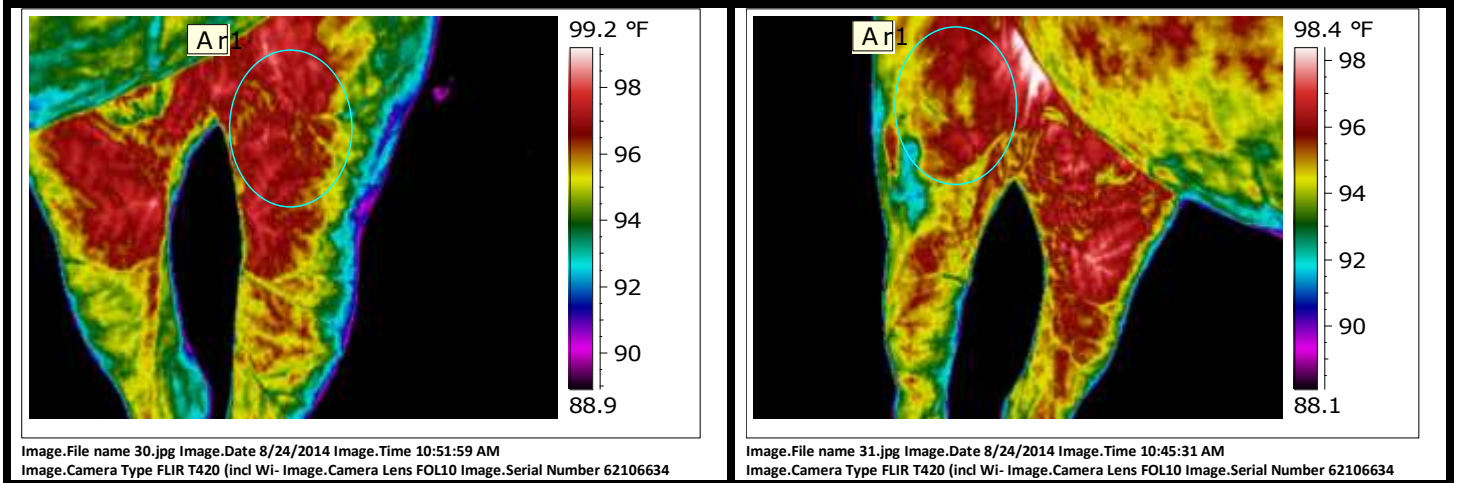
**There is asymmetry in the front limbs with heat greater in the right medial forelimb, cannon, foot, inferior check ligament and both areas of attachment of the suspensory ligament laterally, and the medial proximal suspensory ligament. Comments are based on images provided. Direct palpation of the lower limb tendons and ligaments recommended. Ultrasound of any suspicious areas may also be warranted based on gait analysis and palpation. See previous comments on the right front foot page 7, image 25.**



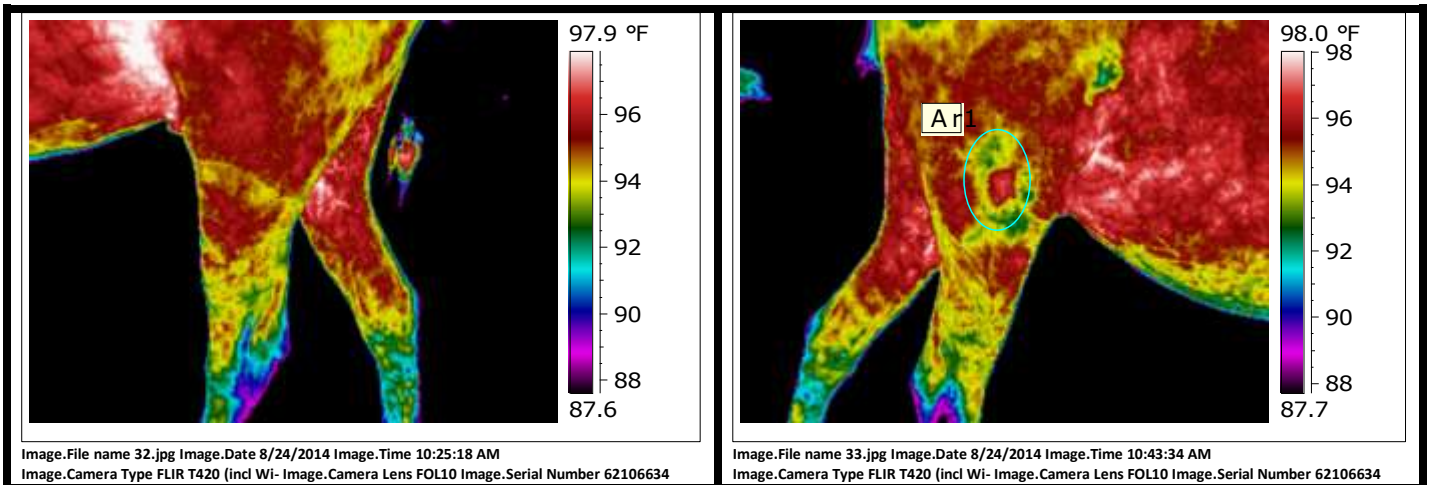
PATIENT : Dresden

THERMOGRAPHY DATE:4-28-14

IMAGING TIME:10:15



**Increased heat both stifles. Palpation of the joints checking for joint effusion and thickening of the ligaments recommended. Flexion stress tests of the structures of the stifle may also be helpful in ruling out gonitis.**



**There appears to be a freshly wounded area at the right lateral stifle.**

PATIENT : Dresden

THERMOGRAPHY DATE:4-28-14

IMAGING TIME:10:15

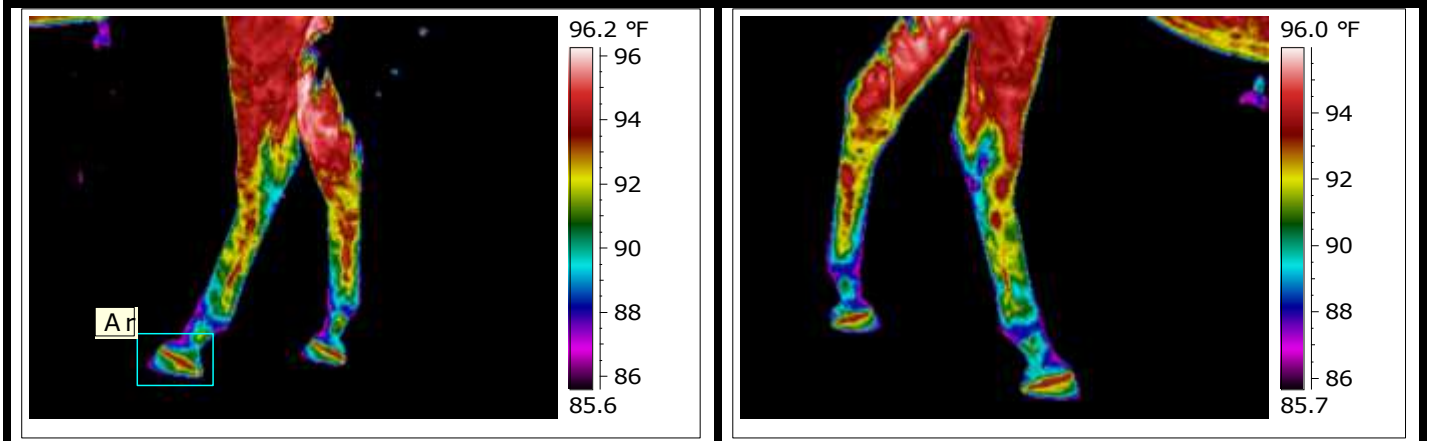


Image.File name 34.jpg Image.Date 8/24/2014 Image.Time 10:23:10 AM  
Image.Camera Type FLIR T420 (incl Wi- Image.Camera Lens FOL10 Image.Serial Number 62106634

Image.File name 35.jpg Image.Date 8/24/2014 Image.Time 10:43:10 AM  
Image.Camera Type FLIR T420 (incl Wi- Image.Camera Lens FOL10 Image.Serial Number 62106634

Increased heat left hind foot may be due to imbalances, inflammation, infection or uneven limb loading.

PATIENT : Dresdan

THERMOGRAPHY DATE:4-28-14

IMAGING TIME:10:15

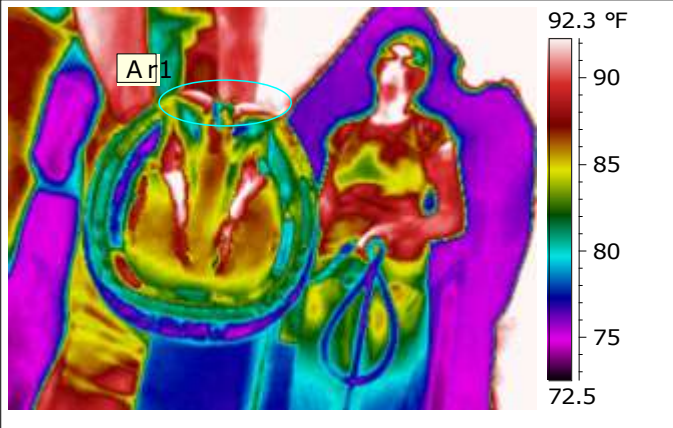


Image.File name 36.jpg Image.Date 8/24/2014 Image.Time 11:01:36 AM  
Image.Camera Type FLIR T420 (incl Wi- Image.Camera Lens FOL10 Image.Serial Number 62106634

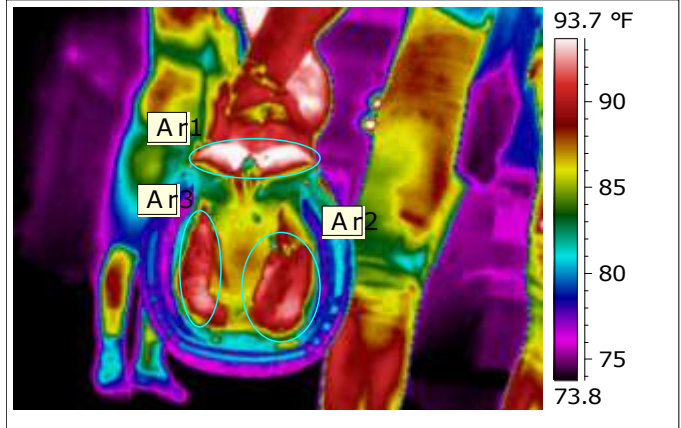


Image.File name 37.jpg Image.Date 8/24/2014 Image.Time 11:03:02 AM  
Image.Camera Type FLIR T420 (incl Wi- Image.Camera Lens FOL10 Image.Serial Number 62106634

Right front has increased heat in the sole and heels. Both front feet the shoes are embedded in the heels. There is hi/lo heel syndrome present with the left front having the higher heel and is perhaps a bit steep. Left front heel appears contracted. Thorough visual exam, hoof tester pressure tests and digital pulse evaluation recommended. Thin sole and/or hoof imbalances may be the cause.

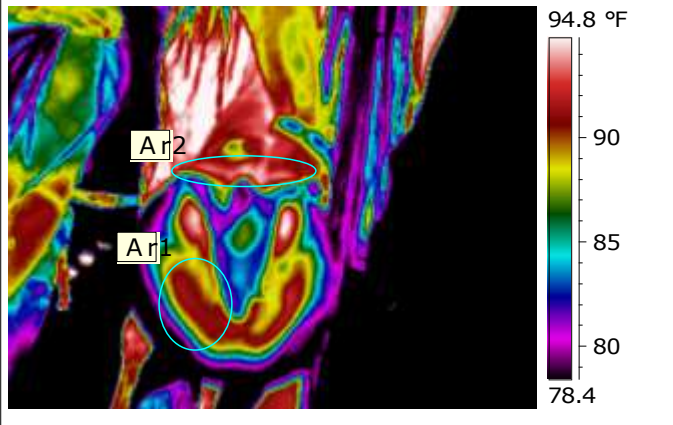


Image.File name 38.jpg Image.Date 8/24/2014 Image.Time 11:04:06 AM  
Image.Camera Type No camera Image.Camera Lens No lens Image.Serial Number -

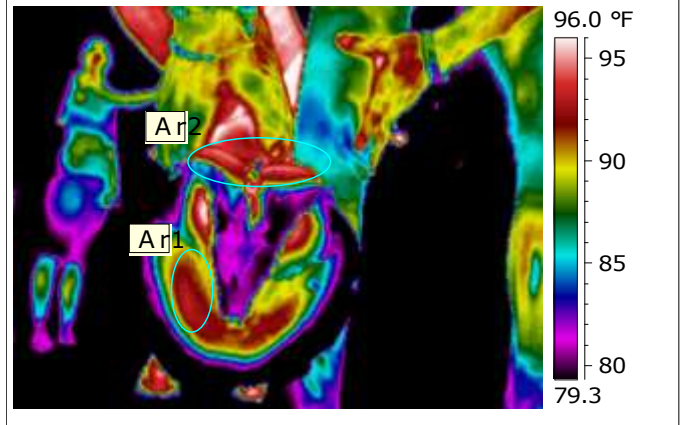


Image.File name 39.jpg Image.Date 8/24/2014 Image.Time 11:03:31 AM  
Image.Camera Type No camera Image.Camera Lens No lens Image.Serial Number -

Wall flare is present in both hind feet with increased heat in the heels. There is uneven sole pressure with the LH lateral quarter and right hind medial quarter having more pressure likely due to hoof imbalances but could also be due to uneven limb loading.

**PATIENT :** Dresdan

**THERMOGRAPHY DATE:**4-28-14

**IMAGING TIME:**10:15

**SUMMARY AND RECOMMENDATIONS:** Dresdan is a nice looking horse but his thermal images give some reasons for concern, much of which aligns with his past history.

There is asymmetry in the shoulder area with heat greater on the right. There is also increased heat in the right scapulohumeral joint, elbow, medial forearm, chest, proximal medial cannon and right front foot. There is likely active ongoing inflammation in the area. Direct palpation of the scapula and scapulothoracic joint as well as bicipital bursa and scapulohumeral joint recommended as well as motion palpation of the same areas. Manipulative and manual therapies could be very helpful for restoration of proper motion. Acupuncture would also be a good adjunctive therapy to decrease inflammation.

Increased heat is also seen in the right front lower limb at the level of the suspensory and check ligaments. Palpation recommended checking for pain and inflammation. Diagnostic ultrasound may be warranted based on examination.

Increased heat both stifles. Palpation of the joints checking for joint effusion and thickening of the ligaments recommended. Flexion stress tests of the structures of the stifle may also be helpful in ruling out gonitis.

The right hind has increased heat along the semitendinosus muscles, hamstrings and gastrocnemius muscle. There is some suggestion from the images of early fibrotic myopathy/myositis. The right hind toe has been dubbed from wear suggesting dragging of the toe. Thorough palpation of the area and gait analysis at the walk is recommended looking for shortened forward stride in the right hind and/or toe dragging. Fibrotic myopathy, if not too advanced may successfully be treated with electroacupuncture and moxibustion. Stifle inflammation also responds well to acupuncture and nutraceuticals specific to connective tissue/ligaments.

There is increased heat in the left hind limb at the thigh and medial hock which may be due to off-loading of the right hind or primary musculoskeletal inflammation/strain of the left hind limb. There is asymmetry in the gluteal muscles with heat greater on the left also suggestive of off-loading of the right hind. Postural analysis recommended for confirmation.

The mid-thoracic spine has increased heat with extension into the left side. Palpation and motion palpation recommended checking for chiropractic lesions. Saddle fit may also be a consideration.

Left front heel appears contracted. Right front there is increased heat in the sole and heels. Both front feet the shoes are embedded in the heels. There is hi/lo heel syndrome present with the left front having the higher heel and is perhaps a bit steep. Wall flare is present in both hind feet with increased heat in the heels. There is uneven sole pressure with the LH lateral quarter and right hind medial

**PATIENT :** Dresdan

**THERMOGRAPHY DATE:**4-28-14

**IMAGING TIME:**10:15

quarter having more pressure. Balancing of the feet and proper shoe support is imperative to restoring soundness.

It appears from the thermal images submitted that the major areas of concern are the right shoulder along with the right front suspensory and check ligaments. The right hind stifle and hamstrings/gastrocnemius muscles evaluating for fibrotic myopathy.

**Thank You!**

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

