

## Equine Thermography Case Study

### Injury Investigation/Monitoring

#### 16 hh six-year-old SJ Warmblood

A terrible road traffic accident one year previous had left this mare with scarring to both carpal (knee) joints and front fetlock joints and the left tarsal (hock) joint. The mare was now being ridden and despite being sound was rushing and breaking out in sweat after only 20 minutes of walking. The owner wanted to know if these apparently healed injuries were causing the mare trouble.

Pre- and post-exercise scans were taken (about 120 images) at an ambient temperature of 20°C.

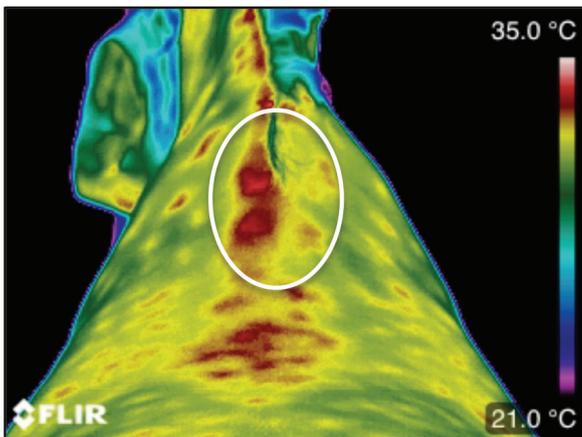


Figure 1. Thoracic back view – pre-exercise

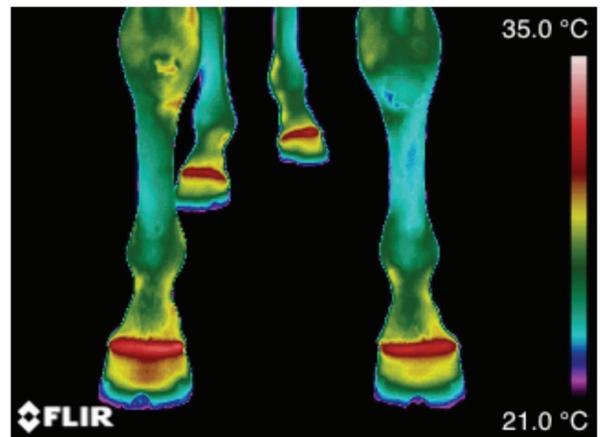


Figure 2. Distal fore limb dorsal view – post-exercise

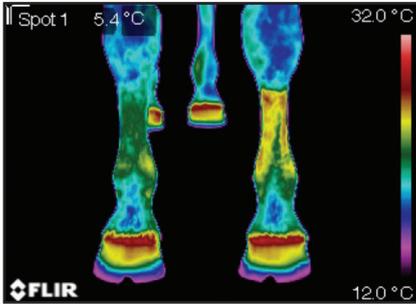
Taking all the images into consideration, looking at symmetry and the analysing pre- and post-exercise images, it was possible to see that despite the scarring this horse showed a remarkable ‘normal’ thermal pattern in the areas affected by the accident. An asymmetric and abnormal thermal pattern was seen in the thoracic back views both pre and post exercise on the left side and base of the withers (circled white). This added to the evidence that the previous injury sites were not a cause for present concern and suggested a new area for further investigation. Following physiotherapy treatment in the wither area this mare went on to enjoy a successful competitive career.

#### 15 hh ten-year-old Irish Cob

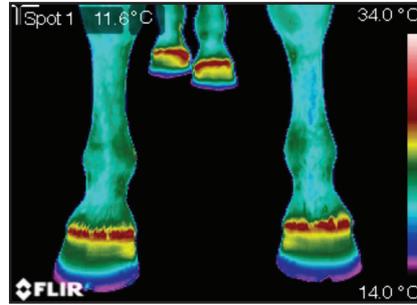
This cob was diagnosed with acute mild laminitis in the left front foot. The owner wanted to monitor the condition and images of the front distal limbs were taken about every six to eight weeks for almost two years.

The images showed an improvement in the thermal pattern after two months (Figure 3) followed by ‘normal’ thermal patterns for a further seven months. At nine months post diagnosis (Figure 7), the red thermal pattern of the coronary band showed a progression down the foot; the owner had changed the horse’s diet. With the thermal evidence, the owner reverted back to the original diet but it was a further five months before the horse once again showed a ‘normal’ thermal pattern (Figure 11) and in fact was shown to be in ‘thermal cut-off’ (a process not usually seen in horses

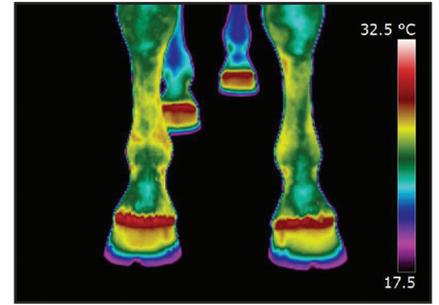
diagnosed with laminitis in this thermographer's experience). All images taken after that time showed a 'normal' thermal pattern. (Note: in Figure 13 the horse had 'banged' his right fetlock joint.)



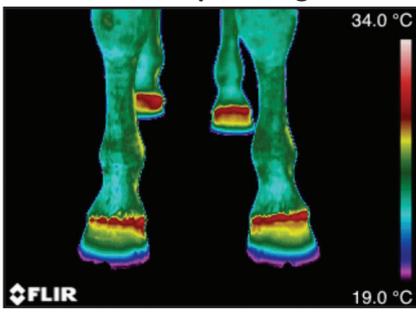
**Figure 3.**  
One month post diagnosis



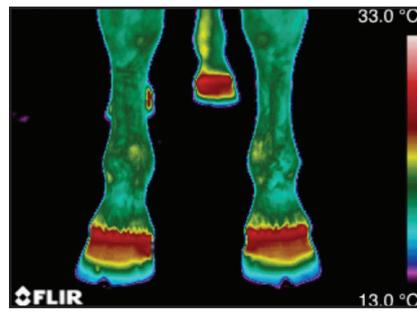
**Figure 4.**  
+2 months



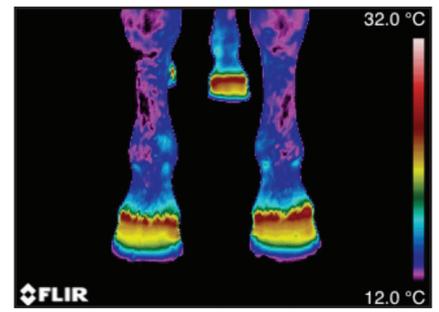
**Figure 5.**  
+4 months



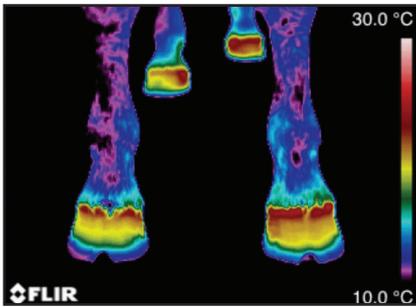
**Figure 6.**  
+7 months



**Figure 7.**  
+9 months



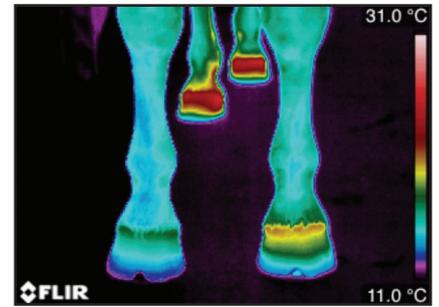
**Figure 8.**  
+11 months



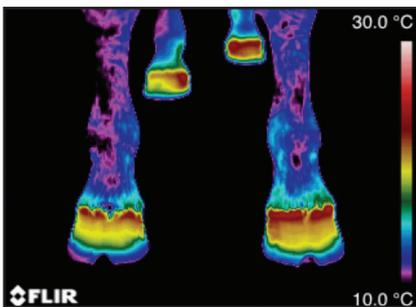
**Figure 9.**  
+12 months



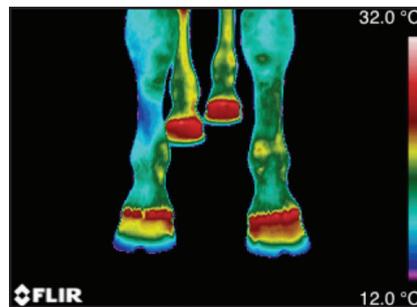
**Figure 10.**  
+13 months



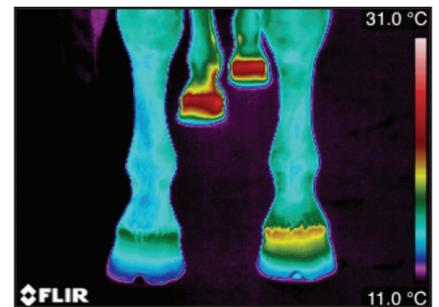
**Figure 11.**  
+14 months



**Figure 12.**  
+15 months



**Figure 13.**  
+17 months



**Figure 14.**  
+21 months

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