## **Nuclear Scintigraphy**

https://www.youtube.com/watch?v=d50c3QpLjew

Nuclear scintigraphy uses very small, tracer amounts of radioactive molecules to diagnose diseases involving bone, soft tissues and vessels. Aradiopharmaceutical is given IV and these molecules bind to areas of exposed hydroxyapatite in the bone, soft tissue tumours and sites of infection. Bone scans are useful for horses with multiple limb lameness, subtle lameness or lameness of the proximal limb, back or pelvis. The radioactive isotope travels to bone and abnormal uptake is detected as "hot" or "cold" spots. Uptake of the isotope helps pinpoint sites of injury or problems. This very sensitive technique can often diagnose diseases not visible with other imaging methods.

A more diffuse area is imaged (whole body, including axial skeleton and limbs) than other types of scans, and scintigraphy can provide a "road map" of the horse in its entirety that, in turn, helps direct the course of nerve blocks and localization of lameness. Once the veterinarian localizes the lameness using blocks, he or she will know the exact area to image further.

The technique offers the major advantage of increased sensitivity over standard radiographic imaging. Scintigraphy in horses offers the other major advantage of affording accurate imaging of the upper limbs, pelvis, and vertebral column without general anesthesia. Therefore, it has a final advantage of increased safety over conventional radiography. For athletic horses suspected of having lameness due to localized myositis, scintigraphy not only allows confirmation of muscle inflammation but also identifies the muscle bellies injured reasonably accurately so that specific local treatment may be given. The technique is safe and comparatively inexpensive also.



