

## What is medical imaging?

Medical imaging is a diagnostic tool that allows veterinarians to take pictures of the inside of your pet to diagnose an ailment or injury. A major benefit of medical imaging is that it is noninvasive, which means that no incision is necessary to produce an image of your pet.

Medical imaging is usually recommended when a veterinarian believes there is a problem with your pet that cannot be detected using a basic physical exam or blood test.



### See more clearly.

Medical imaging is a low-risk way of gaining insight into your pet's health. By looking at medical images, veterinarians can make quick and accurate diagnoses in order to treat your pet as soon as possible.

**IDEXX Telemedicine Consultants**  
**radiology | cardiology | specialty service**

© 2012 IDEXX Laboratories, Inc. All rights reserved. • 09-71743-00  
 All ®/TM marks are owned by IDEXX Laboratories, Inc. or its affiliates in the United States and/or other countries. The IDEXX Privacy Policy is available at [idexx.com](http://idexx.com).






[www.pethealthnetwork.com](http://www.pethealthnetwork.com)

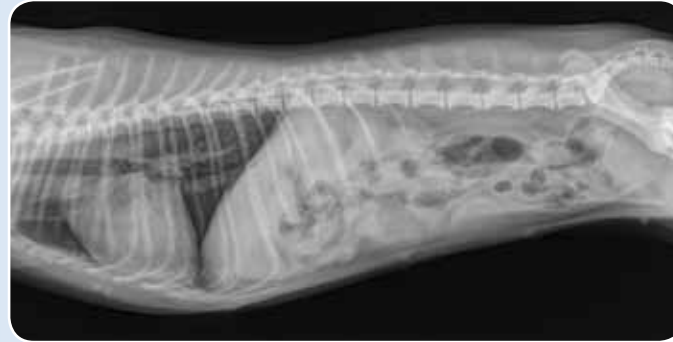
## Medical Imaging in Veterinary Medicine



There are four types of medical imaging typically used in veterinary medicine to diagnose ailments or injuries:

### X-rays

X-rays, also known as radiographs, are the most common form of imaging used by veterinarians. Taking an x-ray involves exposing your pet to a beam of x-rays and taking a picture of their distribution as they pass through your pet. They are particularly useful for diagnosing fractures, arthritis, and pneumonia. The amount of radiation your pet is exposed to during x-rays is minimal and harmless.



### Ultrasound

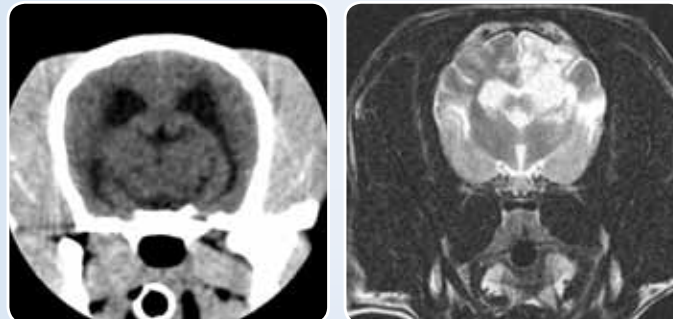
Imaging with sound waves is called ultrasound imaging, and is the second most common form of medical imaging in veterinary medicine. When an ultrasound examination is performed, a harmless, high-frequency sound beam is projected into the body of your pet. Ultrasound examinations are complementary to x-rays: They are especially useful in detecting abdominal diseases and are often able to provide a diagnosis when x-rays cannot.



### CT and MRI Scans

**CT scans**, also known as "CAT scans," are a special type of x-ray exam in which a series of x-ray images, or "slices," of your pet are obtained. CT scans are most useful when evaluating very complex parts of the body, such as the head, chest, and joints.

**MRIs**, by contrast, use a magnetic field and radio waves, rather than x-rays, to make images. MRIs can detect changes in body tissue by revealing increases in water and fluids due to inflammation or bleeding. MRIs are most useful in veterinary medicine to detect brain conditions, such as strokes and spinal cord abnormalities, like herniated disks.



## Common questions about medical imaging and your pet



### Does medical imaging always provide the final diagnosis?

That's the goal, and occasionally it is possible to obtain a final answer from an imaging test. For example, x-rays might reveal a fracture as the cause of a limp or an ultrasound examination might clearly show a kidney stone.

However, many times the results of multiple tests are needed to determine a diagnosis. In fact, imaging tests often reveal the need for a totally different type of test, such as a biopsy. As a pet owner, you should be prepared for a logical progression of fact-finding, through multiple tests, to determine a final diagnosis of your pet's ailment.

### Getting to know your radiologist

Medical images are very complex and a veterinary radiologist may be needed to interpret the results accurately. Radiologists are licensed veterinarians who have completed 3-4 years of post-DVM training in diagnostic imaging interpretation and have passed a comprehensive certification examination.

### Will my pet need anesthesia or sedation?

This depends on how nervous or comfortable your pet is during the procedure, and to some degree on the type of imaging test performed.

For most x-ray procedures, no sedation or anesthesia is needed unless your pet is in pain and such options make your pet more comfortable. The same goes for ultrasound examinations.

On the other hand, anesthesia is almost always needed for CT and MRI examinations because it is very important that your pet remains still while images are being acquired. With some newer CT scanners, images are obtained very quickly, which has allowed veterinarians and specialists to develop techniques to perform the tests with only sedation.

