

Waggin Wheel Vet Clinic  
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### **The Ultrasound Examination**

Ultrasound uses high frequency sound waves to image internal organs. During the ultrasound exam, the doctor moves a device called a transducer over the part of the body being imaged. This transducer sends out sound waves, which bounce off the tissues inside the body. The transducer then captures the waves that bounce back creating an image that allows the doctor to evaluate the size, shape and position of the soft tissues being examined.

Ultrasound does not replace traditional x-ray examination of the organs. Instead, it compliments the x-ray images and can provide information that x-ray does not, and vice versa. Certain tissues do not image well on ultrasound, such as bone, and lung tissue (which show up excellently on x-ray). However, we can visualize other tissues, such as lymph nodes, adrenal glands, and the pancreas on ultrasound. Another benefit to ultrasound is that images can be seen in real time, which can be beneficial in diagnosing a problem.

An abdominal ultrasound is useful in detecting abnormalities in the abdomen. Unlike in human medicine, we study the entire abdomen including the stomach, intestines, kidneys, urinary bladder, lymph nodes, liver, spleen, adrenal glands, and pancreas - making the abdominal ultrasound one of our most useful and valued tests. When an organ looks abnormal, it is sometimes useful to obtain an aspirate of that abnormality. The aspirate does not usually require sedation, and is no more painful than a blood sample collection. Once the aspirate is obtained, the cells are put on a slide and sent to a pathologist, who reads the slide under a microscope.

The cardiac ultrasound, which is also called an echocardiogram, measures the thickness of the heart wall and the size of the individual heart chambers. The heart valves can also be examined for normal motion, which can determine the ability of the heart to move blood through the body. Blood flow through the heart valves and chambers can be visualized using Doppler technology.

If an abdominal ultrasound is being done, your pet should be fasted overnight (no food past 9 pm the night before; water is ok). No special preparation is needed if your pet is getting a cardiac ultrasound. Please do not let your pet urinate before dropping off, due to the fact that the urinary bladder is best visualized if it is full.

During preparation at our hospital your pet's hair will be clipped over the area of interest. Before the ultrasound begins, a water based gel is smoothed over the skin to improve contact between the skin and the transducer; this improves visibility of the tissues. The transducer is then moved over the skin, and the reflected sound waves create an image that is viewed on a screen.