

Endoscopy

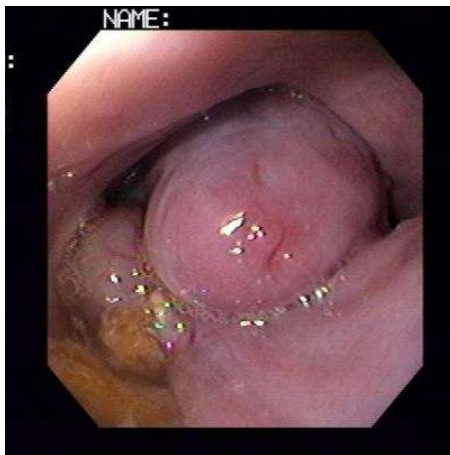


What is endoscopy?

Endoscopy is the use of scopes to look into body cavities or organs. Endoscopy is a minimally invasive way to collect biopsy samples, perform procedures, and remove foreign material. Endoscopy is performed with either rigid or flexible scopes. Flexible scopes are usually used to evaluate the stomach and intestines while rigid scopes are typically used to evaluate the nasal passages and female urinary and reproductive tracts. Rigid scopes are also commonly used for exploratory evaluation and biopsy of abdominal and thoracic organs such as the liver or pericardium.

Why is endoscopy used in veterinary medicine?

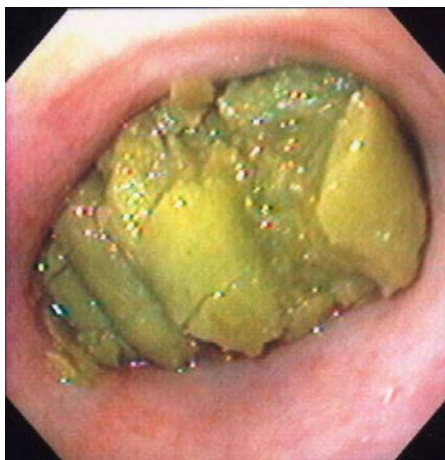
Endoscopy provides a minimally invasive alternative to surgical procedures. Depending on the procedure in question, endoscopy provides for excellent results with less pain and quicker recovery than surgery. At SCVSEC, endoscopes are commonly used to collect biopsies of the intestines, stomach, colon, nasal cavity, liver, bladder, and urethra. Foreign material lodged in the esophagus, stomach, or trachea can also be removed. Because endoscopes allow for magnified views of the internal aspects of the organs, unique information can be gathered with the scopes. Finally, because endoscopy is rapid and minimally invasive, it is well suited to critically ill patients.



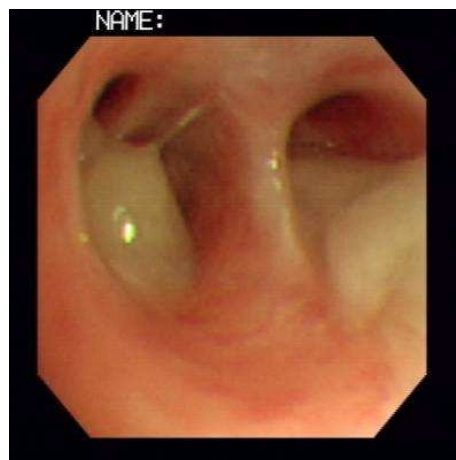
Mass in the esophagus of a dog



Small intestine of dog with inflammatory Bowel Disease



Foreign body in the esophagus of a dog (later removed with an endoscope)



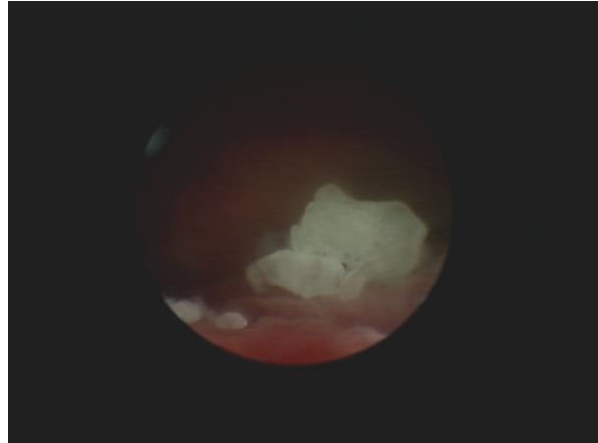
Infected material in the lunc of a dog with bronchopneumonia

What are the limitations of endoscopy?

There are still cases where surgery is required to accomplish our medical goals in the most expedient manner. Examples of this include foreign material that cannot be removed with the scope or cases in which multiple abdominal organs need to be biopsied at the same time. While the biopsy samples collected with endoscopy are generally adequate to attain a diagnosis, there are also situations in which surgical biopsies may be superior. The specifics of your case will be discussed at the time of your appointment.



Nasal tumor in a cat (White Material)



Nasal foreign body in a dog (white Material)



Crystals in the bladder of a cat



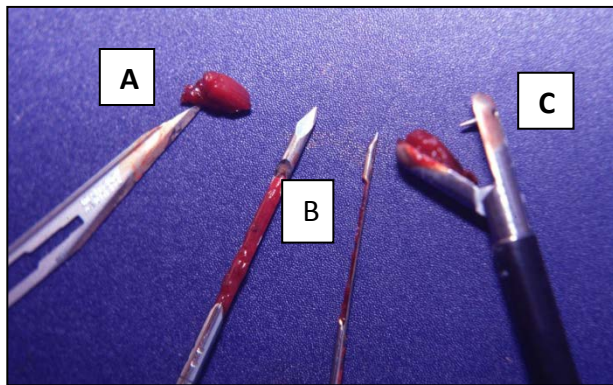
Liver of a dog with severe liver disease

How is endoscopy performed?

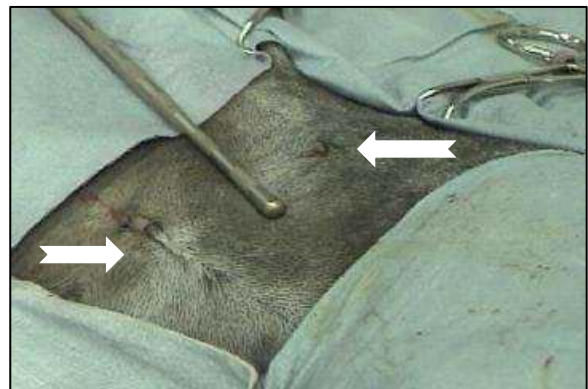
Except in rare situations, endoscopy generally requires the use of anesthesia. The scopes are passed into the areas of interest and cameras transfer the images to video monitors. Instruments can then be guided through or next to the scopes to attain biopsies, collect fluid or cellular samples, or remove foreign material. The scopes are then removed and the animals allowed to recover from anesthesia. The collected samples are then submitted to laboratories for analysis.

What is the benefit of laparoscopic liver biopsy over surgical or ultrasound-guided liver biopsy?

There are three main ways to collect a biopsy of the liver: laparoscopy (with scopes), ultrasound-guidance, and laparotomy (surgery). Ultrasound-guided biopsies are the least invasive way to collect liver biopsies. The biopsy samples are very small, however, and the pathologic diagnosis can be inaccurate. Additionally, this method carries the highest risk of internal bleeding. Surgery allows for excellent biopsy samples with minimal risk of bleeding. Unfortunately, it is the most invasive method and causes the most short-term pain. Laparoscopy provides a minimally invasive way to collect excellent biopsy samples with minimal bleeding risk or pain. For this reason it is the preferred method of collecting liver biopsy in all but the rarest instances.



Comparison of surgical (A), ultrasound-guided (B), and laparoscopic (C) liver biopsies



Closed port sites after laparoscopy (less than 1 cm)

What side effects can endoscopy cause?

Every effort is made at SCVSEC to minimize risks and complication. Endoscopy is generally considered very safe and very useful for critically ill patients. Endoscopic procedures that involve going into the abdomen (laparoscopy) or chest (thoracoscopy) will cause mild discomfort that can be effectively managed with pain medication. Although extremely rare, as with any procedure, there can be anesthetic complications. In animals with severe intestinal disease that are undergoing scoping for biopsy of the stomach or small intestine, there is a very small risk of perforation that would require surgery to repair. Animals with foreign material lodged in the esophagus are at increased risk of perforation, especially if the material has been stuck for over 24 hours. Specific concerns for complications will be discussed at the time of your appointment.

What is the cost of endoscopy?

The scopes and associated technology used to perform endoscopy are very expensive. As such, the procedures can also be costly. The benefits of the minimally invasive nature of these procedures in terms of reduced pain and improved recovery far outweigh the costs, however.

We will discuss the cost estimates of any recommended procedures and answer any questions you have at the time of your visit.



Laparoscopy at SCVSEC