



**Courtney Pierce, DVM, Greensboro Veterinary Hospital, 336-299-5431** See our ads on pages 15 & 35.

Originally from New England, Dr. Courtney Pierce earned both her B.S. in Animal Science and her DVM from North Carolina State University. Since graduating from veterinary school in 2008, Dr. Pierce has practiced small animal general and emergency medicine and has also worked with shelter pets through a variety of volunteer opportunities. She and her husband Whit recently settled in Greensboro with their young son Evan,

their two dogs Spencer and June, and their two house lions, Odetta and Sticky.

Dr. Pierce got her start in veterinary medicine volunteering in a shelter and has always enjoyed giving back to pets in need. She volunteers locally with the Feral Cat Assistance Program and has traveled around the country and internationally

to spay and neuter pets. In 2010 she was featured as a "Local Hero" on WFMY Channel 2 for helping an injured dog from Nicaragua. She and her dog June frequently visit local classrooms to teach children about how to care for, and interact safely, with pets.

An avid runner and hiker, Dr. Pierce enjoys exploring all of the parks and trails in Greensboro while pushing her son in a jog stroller. When they can, she and her husband love to travel to Asheville where their family operates a whitewater rafting and zip-lining company. They love any excuse to get outside!

Dr. Pierce has a wide variety of professional interests but especially enjoys surgery, managing chronic pain, and wellness care. She loves being a part of the bond between people and animals and considers her role as a veterinarian an honor and a privilege!

## Laparoscopic Surgery in Veterinary Medicine

**What is laparoscopic surgery?** Laparoscopic, or "minimally invasive" surgery is a specialized way of performing surgery, typically within the abdomen. This type of surgery has long been the standard of care in human medicine, and only more recently has been adopted by the veterinary field. With traditional, or "open," surgical techniques, one large incision is made to gain access to the abdomen. With laparoscopic surgery, multiple 0.5-1.0 cm incisions are made. At each incision (which are called "ports") an instrument called a trocar is inserted into the abdomen. A fiber-optic camera is then inserted into the patient's abdomen, and the abdomen is inflated with carbon dioxide. This provides a working space and increased visibility for the surgeon. The camera transmits high-quality, magnified images to a video screen in the operating room, allowing for precise maneuvering. Specialized, long-handled instruments are used to cut, seal, and remove tissue from the abdomen. This technique allows surgeons to perform procedures with much smaller incisions than traditional surgery.

**What are the advantages of laparoscopic surgery in veterinary medicine?** Smaller incisions generally mean less pain and faster recovery for pets undergoing laparoscopic surgery instead of traditional surgery. For instance, following a traditional spay surgery (where the ovaries and uterus are removed) veterinarians recommend 10-14 days of restricted activity. Following a laparoscopic spay (where only the ovaries are removed) dogs are back to normal activity in as little as three days. Senior pets benefit greatly from the smaller incisions associated with minimally invasive surgery over traditional surgery, as they can take longer to recover from anesthetic and surgical procedures than younger dogs.

Additionally, because of the excellent visualization obtained by the laparoscope during surgery, advanced procedures and diagnostics can be performed that may otherwise be challenging with traditional surgical techniques. For instance, during a laparoscopic bladder surgery (cystotomy) the camera can be used to fully examine the bladder. Small stones or masses can be magnified on the video screen and retrieved or biopsied as needed.

**What kind of procedures can be performed using laparoscopic surgery?** The most common type of surgery performed using minimally invasive technique is the spay. As previously mentioned, spaying a female dog or cat involves removing the ovaries and sometimes the uterus. This procedure is performed to prevent unwanted offspring, and to reduce the risk of infections and cancers of the female reproductive tract. It has been documented that laparoscopic surgery diminishes pain, reduces the risk of hemorrhage and speeds recovery times by up to 65% for female dogs undergoing this procedure versus a traditional spay surgery.

Laparoscopic technique can also be used to perform a procedure called a gastropexy. This is where the stomach is tacked (sutured) to the body wall. This can prevent a condition called gastric dilatation and volvulus (also known as GDV or "bloat"). This condition occurs most often in large-breed dogs like Great Danes, German Shepherds and Labradors, and it is extremely life threatening. In this condition the stomach distends with food, gas, or water and eventually twists into an abnormal position. This causes disruption of the blood supply to the stomach and eventually leads to shock, severe infection and death. Veterinarians often recommend a gastropexy at the time of spay or neuter to prevent GDV from occurring later in the life of the dog. With laparoscopic technique, this can be done in a safe and minimally invasive fashion.

Laparoscopic surgery can also be used in a variety of other ways to diagnose and treat conditions that affect our pets. Liver and splenic biopsies, gall bladder removal, and bladder stone removal can all be performed using minimally invasive technique.

**How safe is laparoscopic surgery?** Laparoscopic surgery is as safe as traditional open surgery. At the beginning of each surgery, the laparoscope is inserted into the abdomen and the surgeon inspects the contents to ensure that the procedure can be safely performed in a minimally invasive fashion. If needed, the procedure can be converted to a traditional, open procedure. All surgeries carry risks, including anesthetic complications, infections, or bleeding. The health status of each patient should be evaluated prior to surgery, and a surgical plan created that addresses each pet's individual needs.

**Is laparoscopic surgery always better than traditional surgery?** Using minimally invasive surgical techniques, most patients experience less pain and faster recovery times. Laparoscopic surgery has become the standard of care in human medicine, and, when indicated, can offer pets significantly better outcomes over traditional surgery. However, not all surgical procedures can or should be performed laparoscopically. For certain procedures, such as those that require opening the intestines or stomach, traditional surgical methods are still required.

**How do I know if my pet would be a good candidate for laparoscopic surgery?** Most pets are good candidates for laparoscopic surgery, as it is as safe and effective as traditional surgery. Should your pet require surgery, discuss with your veterinarian whether minimally invasive techniques could be utilized. There is a small but growing number of veterinarians offering this type of surgery. Currently, Greensboro Veterinary Hospital is the only general practice in the Triad area that offers these types of procedures. Ask your veterinarian if laparoscopic surgery may be right for your pet!