



S E R V I C E

SPOTLIGHT

SURGERY



When Pets Require Advanced Surgery, Specialized Training Is Key

That's why BEVS offers a full range of surgical services performed under the care and guidance of a board-certified veterinary surgeon and a team of highly trained and licensed technicians. When patients are referred to BEVS, primary care veterinarians and their clients can breathe easier knowing that our surgical team has the skill, the confidence, the compassion, and the most advanced diagnostic and monitoring equipment available in the region to ensure optimal outcomes.

24/7/365 Emergency and Critical Care • Acupuncture • Dentistry • Diagnostic Imaging
Internal Medicine • Oncology • Radioiodine • Rehabilitation • Surgery

802.863.2387 | bevsvt.com



A Full Range of Progressive Surgical Care

BEVS offers a breadth and depth of veterinary surgical expertise unique to the Champlain Valley and beyond. Our board-certified surgeon, Jacob Helmick, DVM, DACVS-SA, and a team of licensed and experienced technicians offer the most advanced procedures, sophisticated diagnostic imaging equipment, and leading-edge modalities for personalized pain management and rehabilitation, all within our new, award-winning hospital and state-of-the-art surgical suites.



COMMON SURGERIES PERFORMED AT BEVS:

Orthopedic

- Achilles tendon repair
- Arthrodesis (joint fusion)
- Cranial cruciate ligament repair
- Developmental abnormalities, limb lengthening
- Femoral head and neck excision
- Fracture/luxation repair
- Juvenile pubic symphysiodesis (JPS)
- Patella luxation, medial (MPL) or lateral (LPL)
- Tibial plateau leveling osteotomy (TPLO)

Soft Tissue

- Abdominal exploratory surgery
- Airway surgery (nares, staphylectomy, laryngeal sacculotomy, cricoarytenoid lateralization)
- Cardiothoracic/cardiopulmonary
- Emergency/trauma
- Hernia repair
- Laparoscopic liver biopsy
- Laparoscopic ovariectomy
- Neurosurgery
- Portosystemic shunt attenuation
- Reconstructive
- Thoracic surgery
- Total ear canal ablation (TECA)
- Urinary tract
- Ventral bulla osteotomy (VBO)
- Wound/reconstructive surgery

Oncology

- Amputation
- Biopsy
- Palliative surgery
- Tumor debulking
- Tumor/mass removal

ADDITIONAL ADVANCED PROCEDURES:

Stifle Stabilization for Canine Cranial Cruciate Ligament Injuries

Cranial cruciate ligament injuries are the most common cause of pelvic limb lameness in dogs – and new surgical techniques are being researched every year for effective treatment. Current commonly used surgical techniques include extracapsular repair (ECR), tibial plateau leveling osteotomy (TPLO), and tibial tuberosity transposition (TTA).

In most cases, we prefer to perform a TPLO procedure because of its superiority over other treatments when it comes to stifle stabilization, reduction of osteoarthritis development, rate of return to function, force plate gait analysis, and owner-assessed outcome measures. Also, patients as small as 5kg can now undergo the procedure.

Laparoscopic Spay (Ovariectomy)

This advanced procedure is becoming a popular method of sterilization in canines – and is widely used at BEVS not only for its many benefits, but at-risk breeds have the option for laparoscopic-assisted gastropexy performed simultaneously.

Several studies indicate that laparoscopic sterilization offers less pain, lower surgical stress, and faster return to activity. Studies also show a lower complication rate with minimally invasive laparoscopic procedures over open ovariohysterectomy procedures commonly used.

Minimally Invasive Osteosynthesis (MIO) for Fracture Repairs

This complex procedure utilizes intraoperative fluoroscopy to visualize the fractures and placement of implants through small incisions, eliminating the need for a large incision and dissection through muscle to visualize the actual fracture. When possible, our surgical team utilizes MIO when treating fractures of the long bones (radius, humerus, tibia, and femur) of adult and juvenile pets, as well as certain growth plate fractures in younger pets.

Our minimally invasive surgical approach has many benefits, including reduced patient discomfort and improved fracture healing times.

Ultramodern Surgical Suites

Every inch of our award-winning hospital design is utilized for the care, comfort, and safety of our patients, and this includes our surgical suites.

Each suite is equipped with the most advanced surgical and monitoring equipment available. During each procedure, a devoted licensed veterinary technician is responsible for employing and monitoring the latest anesthesia protocols. Throughout surgery, and recovery, our team carefully monitor a pet's vital signs, stability, and overall comfort level.

Diagnostic Imaging

Our sophisticated diagnostic imaging equipment provides the most accurate pre-surgical planning available. The diagnostic imaging modalities utilized include computed tomography, magnetic resonance imaging, digital radiograph, endoscopy, fluoroscopy, and ultrasonography. All images are interpreted by ACVR or ACVIM diplomates, typically within hours, to ensure accuracy and the highest level of patient care in the area.

Pain Management

A pet's comfort and safety are always our priority. That's why we use leading-edge pain management techniques that do not involve systemic opioids. By reducing the use of opioids, our surgical team's goal is not only to help combat the current epidemic, but to help the patient avoid associated side effects. The extensive use of peri-incisional liposome-encapsulated bupivacaine, combined with a multimodal approach to pain management that includes NSAIDs, NMDA receptor antagonists, and GABAergic drugs, helps ensure patient comfort, safety, and surgical success.

Rehabilitation

By working together, our surgical and rehabilitation teams aim to reduce pain, improve muscle mass, and enhance range of motion, while focusing on patient comfort and quality of life, post surgery. Positive evidence of incorporating physical rehabilitation into surgical treatment plans is increasing rapidly, especially for orthopedic and neurologic conditions. Patients that benefit the most include those with osteoarthritis of the hips, stifles, elbows, and other joints – and patients with ligamentous or tendinous injuries, fractures, and spinal cord injuries.

Case Study:

Using Fluoroscopy and an Intra-Abdominal Catheter to Treat Lil Barn Cat's Severe Pelvic Injuries

Patient: Lil Barn Cat, a two-year-old spayed DSH female, was presented to BEVS Emergency Department after being hit by a car two days prior. She had gone missing for 36 hours after being hit and was found by her owner, dragging her pelvic limbs.

Referred By: Lil Barn Cat was seen by her pcDVM and referred to BEVS for immediate further care.

Presentation: Radiographs provided by her pcDVM revealed multiple pelvic fractures including sacroiliac luxation and pre-pubic tendon rupture (Fig.1).

(Additional) Diagnostics: Uroabdomen was suspected due to worsening azotemia and hyperkalemia. Confirmed by contrast cystourethrogram.

Diagnosis/Findings: Uroabdomen secondary to ruptured urinary bladder. An indwelling urinary catheter was inserted and IV fluids started.

Treatment: Lil Barn Cat was transferred to BEVS Surgery Department the morning following admission via Emergency. Due to a persistently elevated potassium level, she was deemed too unstable for general anesthesia. An over-the-wire MILA thoracostomy tube was placed intra-abdominally, minimally invasively under sedation, and connected to a drain bulb to provide active abdominal drainage. After 24 hours, her potassium had improved adequately for general anesthesia. Two days after presentation, Lil Barn Cat underwent anesthesia for an exploratory laparotomy with bladder repair and pre-pubic tenorrhaphy. The peritoneum was severely inflamed secondary to uroabdomen. The apex of the bladder contained a 1cm round defect with necrotic edges. The defect was debrided and closed over a Foley catheter. A watertight seal was unable to be achieved, and the Foley catheter was left in place.

The length of the pre-pubic tendon was avulsed from the pubis. This was repaired with 2-0 PDS tension-relieving sutures closed to the fascia of the gracilis muscles. The remainder of the closure was standard.

Throughout the procedure, Lil Barn Cat experienced significant hypotension; therefore, pelvic injury repair was delayed.

The following day, her PCV continued declining and the decision was made to perform a packed RBC transfusion, which was completed without complication.

Over the next several days, Lil Barn Cat continued to stabilize and strengthen, and on day six at BEVS, she was determined to be adequately stable for pelvic injury repair. Pelvic radiographs confirmed pubic fractures and a right sacroiliac luxation resulting in pelvic canal collapse (Fig. 2).

Lil Barn Cat underwent general anesthesia for sacroiliac screw fixation using C-arm fluoroscopy for intraoperative visualization of screw placement.

Fig. 3A and 3B show immediate postoperative radiographs.

Outcome: Lil Barn Cat recovered uneventfully from surgery and was discharged home to her owner the day following pelvic injury repair. At her week four postoperative check, she was noted to be doing very well and displayed only mild left pelvic limb lameness.

Takeaway: Despite critical injuries and medical setbacks, the surgical team at BEVS was able to successfully repair Lil Barn Cat's ruptured bladder and fractured pelvis with the use of cutting-edge surgical techniques, such as the intra-abdominal catheter that was placed to help keep potassium levels within normal limits and C-arm fluoroscopy for intraoperative visualization of screw placement to aid in pelvic injury repair. With 24-hour intensive care and monitoring by a BEVS veterinarian, the patient was able to undergo each surgical procedure at the appropriate time, therefore providing optimal results. By Lil Barn Cat's postoperative check-up, she had made amazing progress and continues to do well today. If you would like to watch a video about Lil Barn Cat produced by the pet owner, visit https://www.youtube.com/watch?v=D-Q4a_lupS0.

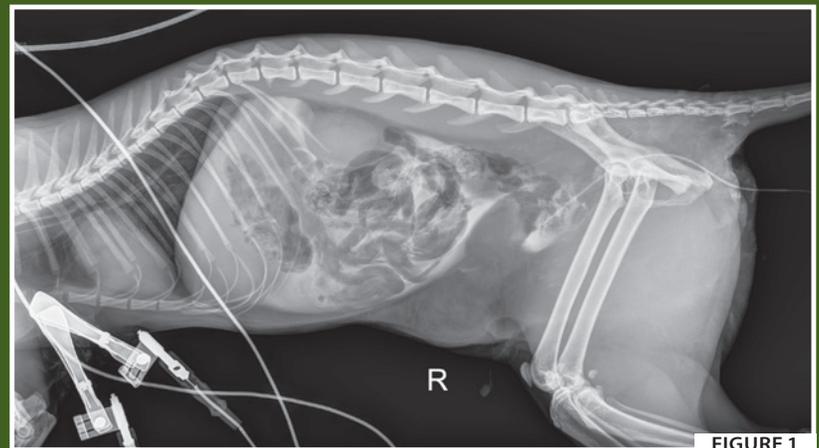


FIGURE 1

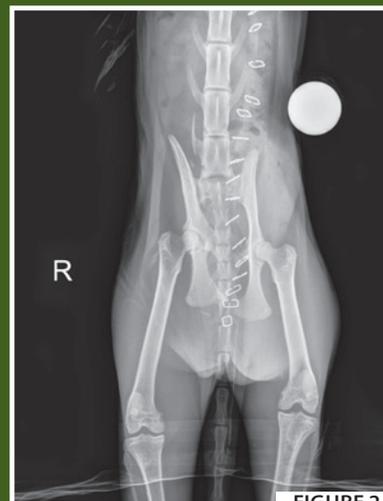


FIGURE 2

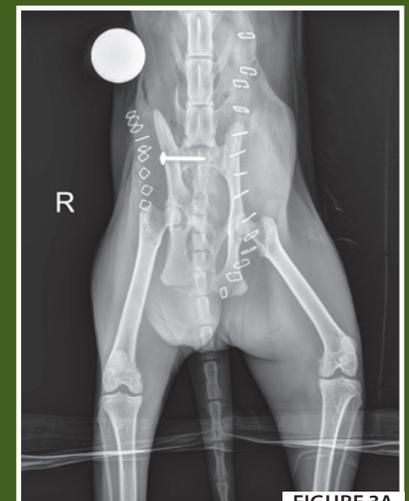


FIGURE 3A

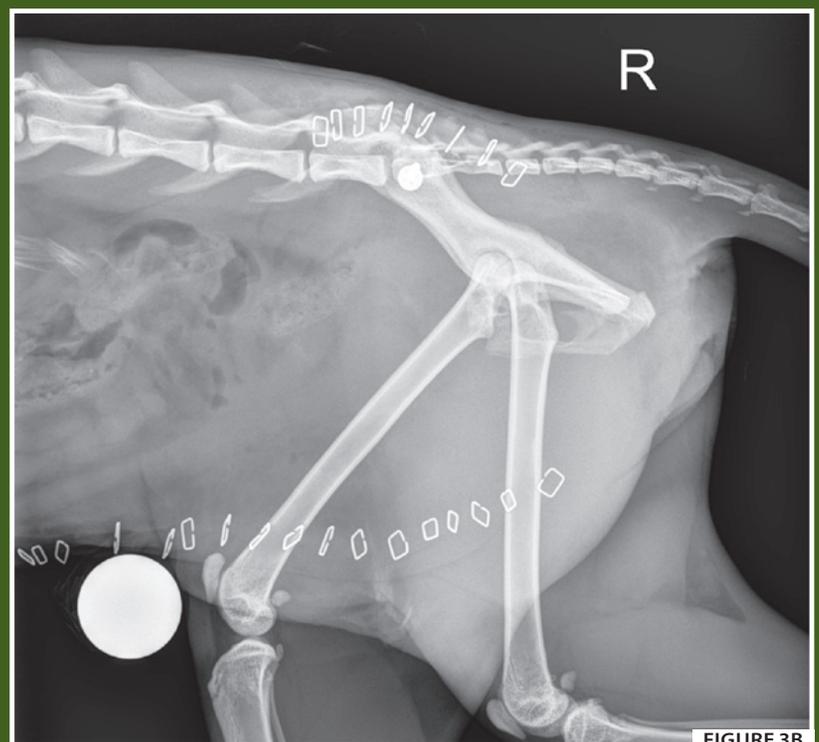


FIGURE 3B

Meet Our Surgeon: **Jacob Helmick**, DVM, DACVS-SA



Dr. Helmick joined the BEVS family and became a Vermont resident in 2020. He has a special interest in orthopedic surgery, including Tibial Plateau Leveling Osteotomy (TPLO) and long bone fractures. When he's not at work, Dr. Helmick enjoys mountain biking and hiking. He and his wife share their home with two rescued mixed breed dogs, Millie and Bernie, and two cats, Karma and Hubert.

Surgical consults and appointments are available Monday – Thursday. Please call 802.863.2387 for more information or to make a referral.

S E R V I C E SPOTLIGHT

Fall 2020
SURGERY



Referring Patients and Clients to BEVS

We appreciate the opportunity to partner with you in the care of your patients. As a referral practice, our aim is to complement your practice by providing advanced diagnostics, specialty services, and 24/7 emergency care when you and your clients need us. To help expedite the referral process, please visit our website at bevsvt.com to access our "Patient Referral Portal." For your convenience, you can either complete and submit the form online or fax it to us at 802.863.2348. If you have any questions, or would like to discuss imaging capabilities with one of our specialists, please call us at (802) 863-BEVS (2387). We're here to help in whatever way we can.

