



# Surgical services

## Large animal models

Envigo offers cost-effective solutions to save you time and resources with:

- + High-quality surgically-modified models
- + Availability at convenient locations to reduce transit time
- + Access to surgical experts for model development and technical trouble shooting
- + Offers flexibility and a consultative approach
- + Innovative software system to track and monitor surgical model development

### Barrier locations

Envigo currently operates dedicated surgical units. These surgery units are strategically located to serve North America and Europe.

### Highly-skilled surgeons

Envigo is dedicated to providing the highest quality surgically-modified animals. Surgery personnel undergo rigorous training and evaluation prior to performing surgery. Surgical skills are continuously monitored. Our surgeons regularly receive outside educational training to improve their skills and increase their surgical knowledge.

### Surgery tracking software

Envigo partnered with a technology company to develop a first-in-class animal, staff and surgical model tracking software system. The innovative system was created to track and monitor the entire spectrum of animals used in the laboratory including surgical model development to improve animal welfare and realize efficiencies.

### Animal welfare

Envigo is dedicated to the humane care and use of research animals. All surgical modifications are reviewed and approved in advance by Envigo's Institutional Animal Care and Use Committee (IACUC). Envigo's veterinarians provide oversight and technical and professional support to surgical personnel.

All surgical procedures are performed by trained and tested surgeons using aseptic technique in dedicated surgical facilities. Surgically-modified models are monitored postoperatively to ensure complete recovery from surgery. All animals undergoing major survival surgery (as defined by the Guide for the Care and Use of Laboratory Animals) receive postoperative analgesia to further ensure their humane and ethical care. Envigo recognizes the need to enhance enrichment to those animals needing to be singly housed after surgery. These enrichment items are provided to animals immediately postoperatively and depending on the animal model remain with them until delivery to the client.

Surgical models transported in special shipping containers via an environmentally controlled vehicle.

### Envigo offers surgical services on the following species





## Catheterizations

Envigo offers several options for accessing catheterized vessels. While each option offers unique advantages, Envigo's standard catheterization closure is a vascular access port (VAP). Catheter patency is verified by our surgical staff postoperatively and at the time of shipment. All catheters are guaranteed completely patent at time of shipment and clients should follow Envigo's recommended flushing regimen to obtain optimal patency results.

## Catheterization procedures

### Vascular catheterizations

- + Femoral vein
- + Jugular vein
- + Carotid artery
- + Femoral artery

*Combination surgeries are available upon request.*

## Multiple procedures – single animal

Multiple surgical procedures, including catheterizations, can be performed on a single animal during a single surgical time point. If you require an unlisted combination, pricing is provided upon request.

### Double vascular catheterizations

- + Jugular vein and femoral vein

### Other surgery models

- + Telemetry
- + Medical device implants
- + Soft tissue removal

## Soft tissue surgical procedures

### Reproductive

- + Castration
- + Hysterectomy
- + Ovariectomy
- + Oviduct ligation
- + Ovariohysterectomy
- + Vasectomy

*Surgical procedures are in addition to the cost of animals and shipping. Sham operations are priced at 75% of the surgery cost.*

## Anesthesia options

We recognize the success of surgical modification is dependent on variables including the type of anesthesia. Envigo is prepared to provide both injectable and inhalation anesthesia options to assist in meeting your research needs. No additional charges are assessed based upon the use.

## Contact us for customized surgery

Contact our Global Head of Surgery at [317.806.5622](tel:317.806.5622) to discuss your specific surgical requirements. In some cases, a surgical procedure development fee is assessed and includes the provision of surgically-modified animals for evaluation.

## Contact us

The Americas +1.800.345.4114 +1.609.452.4440

Europe / Africa +44 (0)1869 243241

Envigo RMS Division, 8520 Allison Pointe Blvd., Suite 400, Indianapolis, IN 46250, United States

© 2019 Envigo



[envigo.com](http://envigo.com)