



Cornell University

Institutional Animal Care and Use Committee

Document: ACUP104.03	Issue Date: 21 SEP 17; Effective Date: 21 SEP 17
Authorization: Dr. N. Place, IACUC Chair	Author: E. Silvela (Revision)

CAT AND DOG ANESTHESIA

1. PURPOSE

- 1.1. The purpose of this Animal Care and Use Procedure (ACUP) is to describe commonly used methods to anesthetize cats and dogs. This ACUP is approved by the Cornell Institutional Animal Care and Use Committee (IACUC). Any deviation must be approved by the IACUC prior to its application.

2. SCOPE

- 2.1. This ACUP is intended for use by all Center for Animal Resources and Education (CARE) at Cornell University staff and investigators who anesthetize cats and / or dogs.

3. INTRODUCTION

- 3.1. This ACUP presents considerations and anesthetic protocol options commonly used with cats and dogs; refer to Appendices for specific examples of anesthetic drugs. For protocols not using Cornell University Hospital for Animals (CUHA) anesthesia service or CARE anesthesia service ([ACUP 806 Anesthesia Administered by CUHA or CARE](#)), all drugs must be approved by the IACUC prior to use. Contact CARE at care@cornell.edu for more information or for assistance.

4. MATERIALS AND EQUIPMENT

- 4.1. Patient medical record file and health assessment materials (e.g., stethoscope, scale, syringes, needles, blood tubes)
- 4.2. Intravenous catheter placement (e.g., clippers, antiseptic solution, IV catheter and cap, bandage tape, IV drip set (regular 15 drops/ml or pediatric 60 drops/ml), sterile 0.9% saline or Lactated Ringer's Solution (LRS))
- 4.3. Induction (e.g., anesthesia drugs, needles and syringes)
- 4.4. Intubation (e.g., cuffed endotracheal tubes, lidocaine lubricant or spray, laryngoscope, roll gauze, sterile eye lubricant)
- 4.5. Maintenance (e.g., inhalant anesthesia machine, anesthesia monitoring devices, anesthesia record sheet)

5. PROCEDURE

NOTE: Expired surgical materials or pharmaceuticals cannot be used in, or applied to, animals undergoing survival procedures. See [ACUP 210 Non-Survival Surgery](#) for applicable restrictions with non-survival procedures.

5.1. General Considerations

- 5.1.1. When creating an anesthetic protocol, consider factors that can affect the choice of anesthetics. These include:
 - 5.1.1.1. Species, breed, age and relative size of the patient, health status and current medications, demeanor / disposition of patient, and presence of pain or distress.
 - 5.1.1.2. Length and type of operation or procedure to be performed.
 - 5.1.1.3. Possible effect of the anesthesia on the scientific objectives of the study.
 - 5.1.1.4. Special facilities and equipment required (e.g., volatile anesthetics).
 - 5.1.1.5. Personal knowledge, experience, preference and skill with available agents.
- 5.1.2. Maintain records for all anesthetic events, including time of anesthesia, drugs used, monitoring parameters, and any significant events.
- 5.1.3. Use only anesthetic machines with valid inspection certificates (<12 months).
- 5.1.4. For assistance with anesthesia protocols, or applicable training, contact CARE at care@cornell.edu.
- 5.1.5. Anesthesia services may be provided by CUHA anesthesia or CARE anesthesia service as per [ACUP 806 Anesthesia Administered by CUHA or CARE](#).

5.2. Pre-Anesthesia

- 5.2.1. Perform a thorough equipment check, including anesthesia circuit leak test.
 - 5.2.1.1. See Appendix 9.3 for an example of a pre-anesthesia checklist

NOTE: A leak in the anesthesia circuit or the ET tube cuff inflation system can result in leakage of anesthetic gases and under ventilation of the animal. Always check these systems for leaks prior to anesthetizing your patient.
- 5.2.2. Perform a pre-anesthetic evaluation of the animal.
 - 5.2.2.1. Examine historical information, including the vendor health record, and clinical and experimental history.
 - 5.2.2.2. Perform a thorough physical exam.
 - 5.2.2.3. Consider medical profiling (e.g., complete blood count and/or serum chemistries) as indicated by the medical history, physical exam, age of the animal, and type of procedure to be performed.
- 5.2.3. Fasting (to reduce the risk of respiratory aspiration of stomach contents)

- 5.2.3.1.** Animals over 10 weeks old and greater than 2 kg: fast for approximately 6-12 hours prior to anesthesia.
- 5.2.3.2.** Animals less than 10 weeks of age and/or less than 2 kg: fast for 1-2 hours prior to anesthesia.
- 5.2.4. Drug Calculations**
 - 5.2.4.1.** Calculate the dosage of analgesic, anesthetic, and emergency drugs before the start of anesthesia.
- 5.2.5. Injections**
 - 5.2.5.1. Administering intramuscular injections:**
 - 5.2.5.1.1.** Give intramuscular injections carefully to avoid damage to nerves. If injecting into the caudal thigh muscles, direct the needle posteriorly to avoid the sciatic nerve (preferably inject in the quads, cranial to the femur, and not in the hamstrings).
- 5.2.6. Premedication**
 - 5.2.6.1.** Administer premedication per Appendix, 0-5 minutes before induction if given IV and 10-30 minutes before induction if given SC or IM.

NOTE: An analgesic must be administered preoperatively for procedures that may result in pain.
- 5.2.7. Intravenous catheter placement:** place an intravenous catheter to maintain venous access and for administration of intravenous fluids.
 - 5.2.7.1.** Shave and aseptically prepare the catheter site
 - 5.2.7.2.** Cannulate and secure IV catheter in one of the following locations:
 - 5.2.7.2.1.** Peripheral IV access: cephalic or lateral saphenous vein.
 - 5.2.7.2.2.** Central venous access: external jugular vein.
 - 5.2.7.3.** Depending upon the procedure, its length, or possible blood loss, administer IV fluids (e.g., 0.9% saline or Lactated Ringer's Solution) between approximately 2.5-10 ml/kg/hour.
 - 5.2.7.3.1.** Procedures lasting less than 30 minutes typically don't require IV fluids

5.3. Anesthesia

- 5.3.1.** Injectable anesthesia (see Appendix can be used alone for short, non-invasive procedures.
- 5.3.2.** Induction of anesthesia

- 5.3.2.1. Use injectable agent/combination as per Appendix or
- 5.3.2.2. Administer inhalant anesthetic agent, as per Appendix, using a tight-fitting mask or induction chamber (induction chambers can only be used for animals <2 kg.).

5.3.3. Intubation

- 5.3.3.1. Following induction, place an appropriately sized endotracheal (ET) tube to maintain a level plane of anesthesia. Larger tubes provide better ventilation and should be used so long as trauma does not result.

- 5.3.3.1.1. Lubricate the distal end of the ET tube with lidocaine gel.
 - 5.3.3.1.2. Have assistant restrain the animal in sternal recumbency with the head and neck extended, holding the upper jaw open (e.g., with a long piece of roll gauze), and pulling the tongue forward and down out of mouth.
 - 5.3.3.1.3. Use a laryngoscope to disengage the epiglottis from the soft palate, exposing the glottis and vocal chords.

NOTE: Cats are especially prone to laryngospasm. Prior to inserting the lubricated ET tube, apply lidocaine directly to the vocal folds via lidocaine soaked cotton swab or lidocaine spray. Wait 30-90 seconds for full effect before intubation.

- 5.3.3.1.4. Insert the endotracheal tube gently past the vocal folds into the trachea. The tip of the ET tube should not be inserted past the cranial aspect of the shoulder blade.
 - 5.3.3.2. Ensure that the ET tube is positioned within the trachea (vs. esophagus) by observing for air exiting the tube upon exhalation, and/or the use of a Beck Airway Airflow Monitor (BAAM). Secure the endotracheal tube by tying the gauze around the tube and behind the animal's head or around its muzzle.
 - 5.3.3.3. Gently inflate the ET tube cuff, attached the ET tube to the anesthesia machine, start oxygen flow, inflate the reservoir bag, close the pop-off valve, and compress the reservoir bag to ~15-20 cm H₂O and listen for air escaping from the trachea. Ideally, the cuff should be inflated with just enough air to prevent leakage from around the ET tube cuff.

NOTE: Always open the pop-off valve after testing!

- 5.3.3.4. Adjust the carrier gas (typical oxygen) flow rate (generally: 400-800 mL/min for cats; 1-2 L/min for dogs), attach anesthesia circuit to the ET tube, and open flow through the anesthetic vaporizer at an initial setting of approximately 2-4%.
 - 5.3.3.5. Place sterile ophthalmic lubricant in both eyes once intubated.

5.3.4. Maintenance of Anesthesia and Monitoring

- 5.3.4.1.** Maintain the depth of anesthesia at the desired level by increasing or decreasing the amount (%) of inhalant anesthetic delivered to the patient.
- 5.3.4.2.** Continually monitor the patient during anesthesia and record appropriate data at regular intervals.
 - 5.3.4.2.1.** Minimal parameters include: depth of anesthesia (e.g., pedal and eye reflexes, jaw tone), ventilation (e.g., visualization of chest wall and breathing bag), and blood circulation (e.g., auscultation of heart with stethoscope, or palpation of heart or peripheral pulse).
 - 5.3.4.2.2.** Other parameters that can be monitored include: Oxygen saturation, capnography, blood pressure, body temperature, and ECG.
 - 5.3.4.2.3.** See Appendix 9.4 Anesthesia Record.
- 5.3.4.3.** Keep the animal warm by providing a controlled heat source and insulation throughout the anesthetic procedure and until the animal has fully recovered from anesthesia. Heat sources must be sufficient to maintain body temperature while not causing thermal burns.
- 5.3.4.4.** Never leave the animal unattended while anesthetized.

5.4. Post Anesthesia

- 5.4.1.** If applicable, turn off the anesthetic vaporizer when anesthesia is no longer needed. However, keep oxygen running for about 5 minutes to assure adequate oxygenation. Observe mucous membrane color or pulse oximetry values to assure membranes are pink and SpO₂ values are above 90% prior to discontinuing oxygen supply.
- 5.4.2.** Disconnect the ET tube from the breathing circuit and move the animal to the recovery area.
- 5.4.3.** In order to reduce aspiration risk, do not deflate the ET tube cuff until the animal exhibits a gag reflex.
- 5.4.4.** Continuously monitor the animal until extubation and then at regular intervals until the patient can maintain itself in sternal position.
- 5.4.5.** Once a gag reflex is present, or swallowing is observed, the ET tube cuff can be deflated and the tube can be removed (i.e., extubate).

NOTE: Use caution at this time since the animal may reflexively bite during extubation.

- 5.4.6.** Maintain thermal support until body temperature reaches 99° F or the animal is ambulatory.
- 5.4.7.** Isolate the animal in a warm and quiet area until it is able to stand without difficulty.
- 5.4.8.** Monitor the animal for any post anesthesia or post procedural complications by appropriate criteria (e.g., visual assessment, periodic vitals) until expected recovery is observed.

6. PERSONNEL SAFETY

- 6.1. Medical Emergencies: **CALL 911.**
- 6.2. When working with animals wear appropriate PPE, observe proper hygiene, and be aware of allergy, zoonosis, and injury risks. Refer to the [CARE Occupational Health and Safety webpage](#) for more information.
- 6.3. Contact Cornell Environmental Health and Safety at dehs-mailbox@cornell.edu or (607) 255-8200 for concerns regarding the use of chemical agents, including use of controlled substances.
- 6.4. Human health concerns related to chemical exposure (e.g., waste anesthetic gases), see also [ACUP 712 Waste Anesthetic Gas Scavenging Systems](#).

7. ANIMAL RELATED CONTINGENCIES

- 7.1. Post contact information for emergency assistance in a conspicuous location within the animal facility.
- 7.2. Emergency veterinary care is available at all times including after working hours and on weekends and holidays by calling the CARE pager (1-800-329-2456).
- 7.3. Non-emergency veterinary questions and requests for care, email CARE veterinary staff at care@cornell.edu.

8. REFERENCES

- 8.1. *Anesthesia and Analgesia in Laboratory Animals*, 2nd edition. Ed. Kohn, et al. New York: Academic Press, 2008.
- 8.2. Harvey, R.C., et al. *Anesthesia and Analgesia in Dogs and Cats and Ferrets. In Anesthesia and Analgesia in Laboratory*. San Diego: Academic Press, 2008.; p 365-384.
- 8.3. Muir, et al. *Handbook of Veterinary Anesthesia*, 4th edition. New York: Mosby, 2007.
- 8.4. Plumb, D.C. *Veterinary Drug Handbook: 8th edition*; Ames, Iowa: Wiley-Blackwell, 2015.
- 8.5. *Anesthesia for the Pet Practitioner*, Revised 3rd Edition; 2011 Banfield Pet Hospital: http://editiondigital.net/publication/?i=92358#{%22issue_id%22:92358,%22page%22:0}
- 8.6. ACUP 542 Maintaining Health and Procedure Records for Research & Teaching Animals: http://ras.research.cornell.edu/care/documents_k/ACUPs/ACUP542.pdf
- 8.7. ACUP 712 Waste Anesthetic Gas Scavenging Systems: http://ras.research.cornell.edu/care/documents_k/ACUPs/ACUP712.pdf
- 8.8. ACUP 806 Anesthesia Administered by CUHA or CARE: http://ras.research.cornell.edu/care/documents_k/ACUPs/ACUP806.pdf
- 8.9. CARE Occupational Health and Safety webpage: <http://ras.research.cornell.edu/care/OHS.html>

9. APPENDIX

9.1. Commonly Used Medications

9.1.1. Sedatives and Tranquilizers

- 9.1.1.1.** Use in the period prior to anesthesia to facilitate handling, reduce anxiety, provide muscle relaxation, and to reduce the amount of anesthetic drugs needed to maintain an adequate plane of anesthesia.

9.1.2. Injectable Pre-anesthetics, Anesthetics and Combinations

- 9.1.2.1.** Use to induce anesthesia prior to maintenance of anesthesia with inhalant anesthetics. This is the most common use of injectable anesthetic drugs as it provides a smooth, rapid induction of anesthesia and facilitates intubation.
- 9.1.2.2.** Use as sole agents administered by single injection to induce a short period of restraint. This allows minor, usually non-painful procedures, such as physical examination, collection of blood and body fluids, radiology and ultrasound examination, to be undertaken.
- 9.1.2.3.** Use as sole agents administered by repeated injection or continuous infusion to induce a longer period of restraint. This facilitates longer procedures such as CT or MRI.

NOTE: The advantages are ease of administration, low cost, and lack of need for sophisticated equipment. The major disadvantage is that once some drugs are given, the substance remains in the body until it is metabolized or excreted.

9.1.3. Cat and Dog Anesthetic

- 9.1.3.1.** Inhalation anesthesia has the advantages of rapid response to changes in dosage.

9.1.4. Analgesics

- 9.1.4.1.** Analgesics must be administered in the preoperative period, before the painful stimuli. Common analgesics are opioids, NSAIDs, ketamine and local anesthetics. They are sometimes used in certain combinations to provide optimal pain management.

9.1.5. Anti-cholinergic Agents

- 9.1.5.1.** Used to counteract the parasympathetic system in order to improve intra-operative heart rate and blood pressure. May also be used to decrease pharyngeal secretions (i.e., salivation). These agents (atropine or glycopyrrolate) are typically administered only if heart rate is low (<90 bpm). Glycopyrrolate is preferred over atropine in geriatric patients.

COMMONLY USED MEDICATIONS				
See references in 8. *IV = intravenous, IM = intramuscular, SQ= subcutaneous, PO = oral				
Drug	Species	Dose / Route*	Duration of Effect	Notes
Acepromazine	Dog	0.01-0.2mg/kg IV slowly, IM, or SQ onceOral dosing is 0.55-2.2mg/kg q6-q12hr	4 hrs.	Moderate sedation, no analgesia. Must be given at least 15-45' prior to desired effect.
	Cat	0.01–0.2 mg/kg IV, IM, SQ (max. 3 mg total dose)	4 hrs.	Moderate sedation, no analgesia. Must be given at least 15-45' prior to desired effect.
Atropine	Dog	0.02–0.04 mg/kg IV, IM, SQ	30-60 min.	Elevated heart rate will result.
	Cat	0.04 mg/kg IM, SQ 0.01–0.02 mg/kg IV	30-60 min.	Elevated heart rate will result.
Buprenorphine (Buprenex®)	Dog	0.01–0.02 mg/kg IM, IV	6-12 hrs.	Good analgesia
	Cat	0.01-0.03 mg/kg IM, SQ, IV	6-12 hrs.	Good analgesia
Buprenorphine (Simbadol®)	Cat	0.24mg/kg SC	24+ hrs	Good analgesia Can be given once daily for 3 days. Can cause hyperactivity
Butorphanol	Dog	0.1-1 mg/kg; IV, IM, SC	1-3 hrs.	Moderate analgesia
	Cat	0.1-1 mg/kg; IV, IM, SC	1-3 hrs.	Moderate analgesia
Dexmedetomidine (Dexdormitor®)	Dog	0.001-0.008mg/kg IV, IM	Dose dependent; 15-60 min.	(labeled by m ² - see section 9.2 for body conversion to m ²); Reduced heart rate.
	Cat	0.01-0.04 mg/kg IM	Dose dependent; 15-60 min.	Animals with high body condition score (BCS) require a lower dexmedetomidine dosage rate. A profound drop in heart rate may result. The sedative effects can be reversed with atipamezole
Glycopyrrolate	Dog	0.011mg/kg IM, IV, SQ	1-2 hrs.	Elevated heart rate may result. Try half dose first and monitor for 5-10 minutes and then administer to effect.
	Cat	0.011 mg/kg IM, SQ, IV	1-2 hrs.	Elevated heart rate may result. Try half dose first and monitor for 5-10 minutes and then administer to effect.
Propofol		2-6mg/kg IV to effect	5-10 min	Effect within approximately 1 minute, can cause significant respiratory depression

COMMONLY USED MEDICATIONS				
See references in 8. *IV = intravenous, IM = intramuscular, SQ= subcutaneous, PO = oral				
Drug	Species	Dose / Route*	Duration of Effect	Notes
Alfaxalone		2-5mg/kg IV to effect, given over 60 sec	5-15 min	Effect in approximately 1-2 min, can cause respiratory depression
Isoflurane		2%-5% induction 1%-3% maintenance	Until discontinued	Doses are approximate. Use individually effective rate for each case.
Meloxicam	Dog	Load: 0.2 mg/kg PO/SC, once; 0.1 mg/kg PO/SC subsequently	24 hrs.	Animals must be well hydrated and with normal kidney function.
	Cat	Load: 0.2 mg/kg PO/SC, once; 0.05 mg/kg PO/SC subsequently up to 4 more doses OR Single dose of 0.3mg/kg SC	24 hrs.	Animals must be well hydrated and with normal kidney function.
Robenacoxib (Onsior®) tablet	Cat	6mg tablet PO for cats 4mo+, 2.5-6kg	24hrs	NSAID - Can be given daily for up to 3 days
Robenacoxib (Onsior Injection®)	Cat	Loading 2mg/kg injectable SC	24hrs	NSAID - Given only once at this dose
Dexmedetomidine + Ketamine + Butorphanol (induction to surgical plane; a.k.a. "kitty magic" or "DKT")	Cat	Ill Patients: 0.0175 mg/kg IM + 3.5 mg/kg IM + 0.35 mg/kg IM Healthy Patients: 0.0325 mg/kg IM + 6.5 mg/kg IM + 0.65 mg/kg IM Dosed by volume at 0.035ml/kg for ill patients Or 0.065ml/kg for healthy patients	Takes effect in 5-10 min. and can have another half dose if necessary. Duration is dose dependent.	-See notes for Dexmedetomidine, and Dexmedetomidine + Butorphanol. -Cocktail may be made with equal volume dexmedetomidine (0.5mg/ml), ketamine (100mg/ml), and butorphanol (10mg/ml) for volume dosing -This cocktail is good for 2 months at room temperature. Reverse with 1/3 volume atipamazole, repeat in 10min if necessary.

9.2. Conversion Table for Canine Weight in Kilograms to Body Surface Area (m²)

9.2.1. The table is used for dexmedetomidine administration and is derived from the equation:

$$\text{Approximate surface area in m}^2 = \frac{10.1 \times (\text{weight in grams})^{2/3}}{1000}$$

Weight in Kg	M ²
0.5	0.06
1	0.10
2	0.15
3	0.20
4	0.25
5	0.29
6	0.33
7	0.36
8	0.40
9	0.43
10	0.46
11	0.49
12	0.52
13	0.55
14	0.58
15	0.60
16	0.63
17	0.66
18	0.69
19	0.71
20	0.74
21	0.76
22	0.78

Weight in Kg	M ²
23	0.81
24	0.83
25	0.85
26	0.88
27	0.90
28	0.92
29	0.94
30	0.96
32	1.01
34	1.05
36	1.09
38	1.13
40	1.17
42	1.21
44	1.25
46	1.28
50	1.36
54	1.44
58	1.51
62	1.58
66	1.65
70	1.72
74	1.78

9.3. Anesthesia Checklist

ANESTHESIA CHECKLIST ITEMS

For Pre-OP:

Prep Room Anesthesia Machine:

- ☐ O₂ Level >500 psi and turned on
- ☐ Isoflurane level sufficient
- ☐ Bag size appropriate to patient
- ☐ Circuit type (recirc vs. non-recirc) appropriate to patient size
- ☐ Circuit confirmed to not leak
- ☐ Popoff valve confirmed open
- ☐ ET cuff inflator within reach
- ☐ Exhaust / scavenger in place
- ☐ Scavenger monitoring indicates safe to use (if applicable)

Items to Have at Hand for Induction:

- ☐ IV catheter x2
- ☐ IV cath tape
- ☐ IV cath port
- ☐ Induction agent drawn up
- ☐ Heparinized saline flush
- ☐ Clippers
- ☐ ET tube confirmed not to leak and size appropriate
- ☐ ET tube lube
- ☐ ET placement lidocaine (if applicable)
- ☐ ET tube tie in material cut to length
- ☐ Laryngoscope with working light
- ☐ Table
- ☐ Vacuum
- ☐ Sharps container
- ☐ Non-sterile gauze sponges
- ☐ Eye lube
- ☐ Surgery caps
- ☐ Surgery masks

Items Confirmed in the Room:

- ☐ Emergency drugs (epi, lidocaine, atropine or glycopyrrolate, dexamethasone, diazepam)

Patient:

- ☐ Pre-Op exam done by veterinarian
- ☐ Perioperative drug dose calculation sheet completed
- ☐ Anesthesia monitoring sheet information filled in (patient, protocol, premedation vitals, premed and induction drugs / doses)

Notes:

For Intra-Op:

Sx Room Anesthesia Machine:

- ☐ O₂ level >500 psi and turned on
- ☐ Isoflurane level sufficient
- ☐ Bag size appropriate to patient
- ☐ Circuit type appropriate to patient size (recirc vs. non-recirc)
- ☐ Circuit confirmed to not leak
- ☐ Popoff valve confirmed open
- ☐ ET cuff inflator within reach
- ☐ Exhaust / scavenger in place
- ☐ Scavenger monitoring indicates safe to use (if applicable)
- ☐ Ventilator tidal volume set for patient size (if applicable)
- ☐ Ventilator turned on to confirm proper functioning and settings (if applicable).

Equipment, Required:

- ☐ All sterile items' color indicator consistent with sterilization
- ☐ Surgery gloves
- ☐ Surgery gowns
- ☐ Surgeon scrub
- ☐ IV fluid ready to go
- ☐ Surgery pack
- ☐ Sutures
- ☐ Scalpel blade
- ☐ Irrigation saline and sterile bowls (if applicable)
- ☐ Large disposable drape (if applicable)
- ☐ Huck towels
- ☐ Cautery ground plate (if applicable; in place, plugged in, electrolyte on plate, unit turned on)
- ☐ Cautery and coag set at ~55)
- ☐ Table ready with tie downs, heating units in place and operational, insulating pad on table and underneath all heating units, disposable diaper type pad over water blanket and underlying insulating pad, monitoring equipment in place and powered up.

Equipment to Have at Hand:

- ☐ Cautery equipment
- ☐ Suction equipment (pump, tubing, and wand)
- ☐ Extra sterile gauze sponges
- ☐ Lap sponges
- ☐ Extra sterile instruments

Post-Op Tasks:

- ☐ Anesthesia form is completed and initialed
- ☐ O₂ tank(s) turned off
- ☐ Sx procedure added to patient records (if applicable)
- ☐ Post-Op treatment sheet is placed in animal housing area (if applicable)

ANESTHESIA RECORD

Center for Animal Resources and Education (CARE) at Cornell University

1-800-349-2456 CARE Pager

Date:

Surgeon(s):

Anesthetist(s):

Pre-Operative Status:

Animal ID#:

Procedures:

Position:

1.

2.

Investigator(s):

Protocol #:

Species:

Sex:

Location:

Pre-Anesthesia Values:

H.R.

R.R.

M.M. Color

Temp.

Weight

PRE-ANESTHETIC DRUGS

Time Drug Dose Route

ANESTHETIC DRUGS

Time Drug Dose Route

MAINTENANCE

Method: Mask ☐
Intubated ☐
Size Tube: _____ mm
Extubated Time: _____

NOTES

TIME 00 15 30 45 00 15 30 45 00 15 30 45 00

Isoflurane (%)

O₂ (L/M)

TIMES

Start Anes.:

Start Proc. 1:

Start Proc. 2:

End Surgery:

End Anes.:

CODE

- Pulse
- Total Resp.
- ▼ Systolic BP
- Mean BP
- ▲ Diastolic BP
- Temperature

Assisted / Controlled Ventilations

O₂ Sat.

Remarks / Complications:

CARE-VET-FORM-001-0-V00

10. HISTORY

Date:	Event:
21 SEP 17	Revised – Revision Author: E. Silvela; Referees: Dr. L. Campoy & Dr. N. Kollias
04 MAY 17	Most Recent Annual Review – Reviewed by: E. Silvela
24 JUN 16	New Format – Converted by: J. Kirby
31 AUG 13	Revised – Revision Author: E. Hildebrand
31 JAN 06	New Issued – Original Author: Dr. M. Martin; Referee: Dr. J. Spears