

## Large Animal Analgesic Guidelines

If **MARKED** post-surgical/post-procedural pain anticipated, such as:

### Canine Thoracotomy

- Place fentanyl patch 24 hours prior to surgery. Replace at 72 hours.

Patient	Dose	Fentanyl content
Dog <10kg	25mcg/hr	2.5mg
Dog 10-20kg	50mcg/hr	5.0mg
Dog 20-30kg	75mcg/hr	7.5 mg
Dog >30kg	100 mcg/hr	10.0 mg

- Rimadyl at 2.2 mg/kg SQ pre-op (just prior to induction) then once again in 12 hours then PRN at 2.2 mg/kg PO at Q12hrs.
- Fentanyl IV at 10 mcg/kg/hour when thoracic cavity is entered; continuing until closure is about to begin.
- Bupivacaine to infiltrate body wall, skin and intercostal nerves while closing.
- Diazepam at 0.5mg/kg IV can be used as an anxiolytic during recovery.
- Oxymorphone IM 0.1mg/kg for signs of pain not controlled by the fentanyl, Rimadyl, bupivacaine regimen.
- Sucralfate 1 gm Q12hrs PO concurrent with any Rimadyl dosing if any Rimadyl is determined to be necessary beyond the first 24hours.

### Swine Thoracotomy

- Place fentanyl patch 24 hours prior to surgery. Replace at 72 hours.

Patient	Dose
Swine	50mcg/kg

- Rimadyl at 2.2 mg/kg SQ pre-op (just prior to induction) then once again in 12 hours then PRN at 2.2 mg/kg PO at Q12hrs.
- Fentanyl IV at 10 mcg/kg/hour when thoracic cavity is entered; continuing until closure is about to begin.
- Bupivacaine to infiltrate body wall, skin and intercostal nerves while closing.
- Diazepam at 0.5mg/kg IV can be used as an anxiolytic during recovery.
- Oxymorphone IM 0.15mg/kg for signs of pain not controlled by the fentanyl, Rimadyl, bupivacaine, regimen.
- Sucralfate 1 gm Q12hrs PO concurrent with any Rimadyl dosing if any Rimadyl is determined to be necessary beyond the first 24hours.

## Feline or rabbit thoracotomy

- Place a fentanyl patch 24 hours prior to surgery. Replace at 72 hours.

Patient	Dose	Fentanyl content
Cat < 5kg	25 mcg/hr	2.5mg
Cat > 10kg	50 mcg/hr	5.0mg
Rabbit < 2kg	"Half Patch" * note	See note
Rabbit > 2kg	25 mcg/hr	2.5 mg

\* Note: DO NOT cut patches in half for 'Half patch' dosing. Half of the membrane should be covered with tape to prevent contact with skin.

- Rimadyl at 2.0 mg/kg SQ pre-op (just prior to induction) then once again in 12 hours. Long term dosing of cats and rabbits is not advised. Please consult with DLAR veterinary staff for suggestions for NSAID use in multi-modal pain management if necessary beyond 24 hours post-operative.
- Fentanyl IV at 10 mcg/kg/hour when thoracic cavity is entered; continuing until closure is about to begin. For rabbits with procedures lasting less than 1 hour, the IV fentanyl drip may be omitted.
- Bupivacaine to infiltrate body wall, skin and intercostal nerves while closing.
- Diazepam at 0.1-0.5mg/kg IV (cats) or 1.0-4.0mg/kg IM or IV (rabbits) can be used as an anxiolytic during recovery.
- Oxymorphone 0.05-0.1mg/kg IM, SQ, or IV (cats) or 0.2mg/kg IM (rabbits) for signs of pain not controlled by the fentanyl, rimadyl, bupivacaine.

## Primate thoracotomy

- Please consult with DLAR veterinary staff on a case-by-case basis.

If **MODERATE** post-surgical/post-procedural pain is anticipated (i.e. abdominal surgery, large surgical incision with moderate to significant muscle involvement, periosteal irritation, lengthy surgical procedure, etc.), pick **BOTH** one opiate AND one NSAID from table 1. and table 2. to be used in combination to provide 'multi-modal' therapeutic analgesia. Please consult with DLAR veterinary staff for specific questions.

If **MINOR** post-surgical/post-procedural pain is anticipated (i.e small skin incision with minor muscle involvement), pick just **ONE** opiate OR one NSAID depending on procedure. Please consult with DLAR veterinary staff for specific questions.

Table 1.

<b>OPIATE</b>	<b>Buprenorphine Agonist/antagonist</b>	<b>Nalbuphine Agonist/antagonist</b>	<b>Oxymorphone Pure agonist</b>
Dog	0.01-0.02 mg/kg IM, IV, or SQ Q6-12hrs	0.5-2.0mg/kg SQ,IM, or IV Q3-8hrs	0.1-0.2 mg/kg IM or IV Q1-3 hrs
Cat	0.005-0.01 mg/kg IM,IV, or SQ Q6-12hrs	1.5-3.0mg/kg IM or IV Q3hrs	0.05-0.1 mg/kg IM, IV, or SQ Q1-3hrs
Rabbit	0.02-0.05 mg/kg SQ or IM Q6-12hrs	1.0-2.0mg/kg IM or IV Q4-5hrs	0.2 mg/kg IM Q2-4hrs
Primate	0.01mg/kg IM, IV Q12hrs		0.15 mg/kg IM, IV, SQ Q3-4 hrs
Sheep	0.005-0.01 mg/kg IM Q4-6hrs		
Swine	0.005-0.01 mg/kg IM, or IV Q 6-12hrs		0.15 mg/kg IM Q3-4 hrs

Table 2.

<b>NSAID</b>	Carprofen	Flunixin	Ketorolac	Meloxicam	Ketoprofen
Dog	2.2mg/kg PO,SQ,IM or IV Q12hrs	1mg/kg IV,SQ, IM Q24 hrs	0.4mg/kg IM Q24hrs	0.2mg/kg once then 0.1 mg/kg PO, IV, or SQ Q24 hrs	2mg/kg IM Q24 hrs
Cat	2.2mg/kg PO,SQ,IM or IV Q12hrs	0.25mg/kg SQ. 2 dose max. Consult with DLAR	Not recommende d for use.	0.2mg/kg once then 0.1 mg/kg PO,Q24 hrs 4 days max.	1-2mg/kg IM Q24hrs
Rabbit	2.2mg/kg PO,SQ,IM or IV Q12hrs	1.1 mg/kg SQ or IM Q12 hrs		0.1-0.5mg/kg PO or SQ Q12-24 hours	1-2mg/kg IM Q24hrs
Primate		0.5 mg/kg IM Q24hrs	5-15mg/kg IM Q24hrs		
Sheep	2.0-4.0 mg/kg SQ or IM Q12hrs	1.7 mg/kg IM Q12hrs			1mg/kg IM Q 24 hrs 3 days max.
Swine	2.0-4.0 mg/kg IV or SQ Q24hrs	2.0mg/kg SQ or IV Q12hrs	0.8mg/kg IM Q24hrs		2-3mg/kg IM Q 24 hrs 3 days max.