RODENT TUMOR RESECTION

1. PURPOSE

The intent of this Standard Operating Procedure (SOP) is to describe procedures for the surgical resection of encapsulated soft tissue masses in rodents.

2. RESPONSIBILITY

Principal investigators (PI) and their staff, veterinary care staff or any individual performing surgery on rodents, or assisting in those procedures.

3. MATERIALS

3.1. Analgesics

3.2. Anesthetic: isoflurane

3.3. Sterile ophthalmic ointment

3.4. Electric clipper or depilatory cream

3.5. Gauze

3.6. 70% Alcohol

3.7. Chlorhexidine 2% solution or povidone-iodine solution

3.8. Sterile cotton swabs

3.9. Sterile surgical instruments

3.10. Dry bead sterilizer

3.11. 7mm or 9mm wound clips (Autoclips®) or non-absorbable suture material

3.12. Heating disc/pad, red heat lamp or incubator

4. PROCEDURES

4.1. Refer to Rodent Surgery SOP.

4.2. Administer analgesia as per Rodent Analgesia SOP.

4.3. Anesthetize animal using isoflurane as per Anesthesia SOP.

4.4. Apply ophthalmic ointment in both eyes to prevent corneal desiccation. Reapply as needed.

4.5. Remove hair over the surgical area with a clipper, depilatory cream or by plucking allowing a perimeter of at least 1cm around tumor site. Remove loose hair with gauze.

4.6. Wipe the skin surface with 70% alcohol followed by 2% chlorhexidine solution or povidone-iodine solution.

4.7. Tumor resection:

    4.7.1. Locate the tumor to remove and make the smallest skin incision allowing tumor removal.

    4.7.2. The skin and the internal cavity membrane are gently separated from the tumor using cotton swabs, a blunt probe or by blunt dissection using scissors (scissors are inserted with closed tips, blades are opened separating tissue connections, scissors tips are removed without closing the blades to prevent uncontrolled cutting, the process is repeated as needed).

    4.7.3. Remove the tumor and reserve for processing.

4.8.   Apply topical local analgesic inside the incision site.

4.9.   Hold the edges of the incision together with forceps and use wound clips or sutures to close the skin.

4.10.   Allow animals to recover in a clean cage. Provide supplemental heat (use a heating disc or pad, heating lamp or incubator) for approximately 30 minutes and monitor the animals until they have fully recovered prior to returning them to their housing room.

4.11.   Administer post-operative analgesia as per Rodent Analgesia SOP.

4.12.   Remove wound clips or sutures once the incision is completely closed, usually 7-10 days following tumor resection.

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Investigator:	Protocol:
Procedure: Tumor Resection	Performed by:

Instructions: complete this log for rodent procedures requiring anesthesia, analgesia or post-procedure care (ex. surgeries, experimental infection). Keep the log in the housing room while active and in your files for 3 years for future review by the Quality Assistant and/or the FACC.

ANALGESIA

☐ carprofen: mouse: 20mg/kg, rat: 5-10 mg/kg, SC, every 24 hrs

☐ buprenorphine: mouse: 0.1mg/kg SC or IP every 4-8 hrs;
    rat: 0.05mg/kg, SC or IP, every 8-12 hrs

☐ lidocaine/bupivacaine (local analgesic)

☐ other:_____

ANESTHESIA

☐ isoflurane 2-2.5%

☐ ketamine/xylazine/acepromazine*:
    mouse: 100 mg/kg (K)- 10 mg/kg (X)- 3 mg/kg (A) IP
    rat: 50 mg/kg (K)- 5 mg/kg (X)- 1 mg/kg (A); IP or IM

☐ other:_____

OTHER AGENTS ADMINISTERED

☐_____

☐_____

☐_____

	Animal ID	Date	Anesthesia		Analgesia		Other _____		Heat Source Provided		Recovery time	Comments/observations	Initials
			dose	time	dose	time	dose	time	procedure	recovery			
1									☐	☐			
2									☐	☐			
3									☐	☐			
4									☐	☐			
5									☐	☐			
6									☐	☐			
7									☐	☐			
8									☐	☐			
9									☐	☐			
10									☐	☐			
11									☐	☐			
12									☐	☐			
13									☐	☐			
14									☐	☐			

Comments/footnotes:

*Dose can vary with the sex, the age, the strain, and the body condition of the animal.

Revised: 2014-01-06

Rodent Procedure Log

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ANALGESIA

☐ carprofen: mouse: 20mg/kg, rat: 5-10 mg/kg, SC, every 24 hrs

☐ buprenorphine: mouse: 0.1mg/kg SC or IP every 4-8 hrs; rat: 0.05mg/kg, SC or IP, every 8-12 hrs

☐ OTHER_____

Initial the appropriate boxes when completed

	Animal ID	Date	Analgesia			SC fluids			Wet food			Time			Remove Sutures (Day 7-10)
			Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															

Comments/footnotes:

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