

All staff have read and will follow the ASC Policy: Rodent Survival Surgery. Six to ten week old mice are anesthetized using isoflurane inhalation or Avertin (2.4mg/10g IP injection). Confirm that the animal is asleep through gentle pinching of the toe pad. When asleep, tape will be applied to the appendages to maintain the position of the animal on its stomach. The region on the back below the shoulder blades will then be shaved if necessary (i.e. NOD SCID mice). The surrounding skin is disinfected with betadine and chlorhexidine solution. Pre_operatively, before the first incision, Bupivacaine 8mg/kg will be injected into the SC space below the planned incision site. A small (~3 mm) incision is made in the skin below the shoulder blades and a small pocket is produced by gently teasing the dermis from the underlying layer. Forceps are used to place a small piece of human tumor tissue within the pocket. The skin surrounding the incision is gathered and closed with a wound clip. The approximate duration of the procedure is 3 minutes. To maintain body temperature, mice will be put on bubble wrap during surgery. Wound clips will be removed after healing has occurred, no later than 10 days after surgery. Steps will be made prior to and during surgery to maintain aseptic conditions.

Pre_surgical steps include:

1. Shaving hair if necessary and disinfecting the skin with betadine and chlorhexidine.
2. Cleaning the surgery area and disinfecting it with chlorhexidine solution.
3. Subdividing the area so that there are specific places for preparing mice for surgery, performing the surgery, and recovering from surgery.
4. Sterilization of surgical instruments by autoclaving or chemical reagent (Chlorine dioxide)
5. Use of sterile surgical gloves by the surgeon.

Steps taken during surgery to maintain aseptic conditions include:

1. Gloved hands will be held elevated above the waist and will touch only the surgical incision and sterile objects.
2. Once gloved, surgeon will not touch or lean over a non sterile area.
3. Surgeon will always lift an instrument from a sterile pouch or sterile surface and will not drag instruments over the pack/drape edges.
4. Surgeon will not allow surgical instruments to fall below the edge of the table. If an instrument does fall, the instrument will be considered unsterile and will not be picked up and reused until resterilized.
5. Sterile surfaces will be kept dry.

To alleviate postoperative pain, proper surgical techniques will be used to minimize complications of surgery and tissue trauma which contribute to postoperative pain. The surgeon will:

1. Minimize contamination of the operative field during surgery by restricting the movement of gloved hands and sterile instruments.
2. Plan the incisions to avoid large vessels in the skin or body wall.
3. Handle tissues gently and avoid excessive force in tissue retraction, which can cause necrosis.
4. Avoid or minimize hemorrhage.
5. Use qualified surgical instruments.
6. Subcutaneously inject Carprofen following surgery, 5mg/kg or give Carprofen PO