

**Instruction Number: VS-WI-03****Title: Intracardiac Puncture for Terminal Blood Collection in Mice and Rats Rv: 07/2017**

- \* These procedures must be followed by euthanasia as it is only permissible as a terminal procedure unless it is scientifically justified and approved in an IACUC protocol
- \* Intracardiac puncture **MUST** be done **UNDER ANESTHESIA**.

## 1. RAT INTRACARDIAC PUNCTURE PROCEDURES

### 1.1 Intracardiac Puncture with Rat in Dorsal Recumbency

- 1.1.1 Anesthetize rat (according to approved protocol)
- 1.1.2 Place rat in dorsal recumbency
- 1.1.3 Prep area just below sternum with alcohol swab.
- 1.1.4 Insert needle at base of sternum on a 20 degree angle under or just left to the xyphoid process (Images 2 & 3)
- 1.1.5 Aspirate syringe slowly while advancing needle
- 1.1.6 Stop needle advance when blood is visualized in syringe tip
- 1.1.7 Hold needle and syringe steady until all blood is collected
- 1.1.8 Perform a bilateral thoracotomy with scissor or a scalpel to insure death

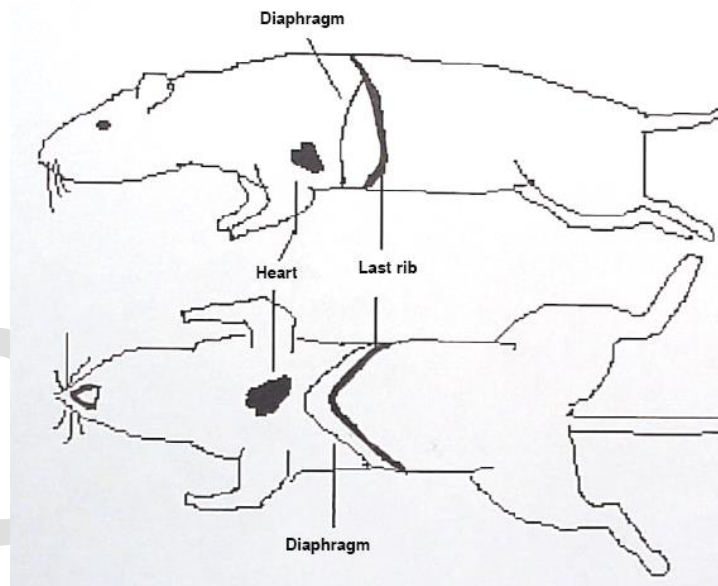


IMAGE 1

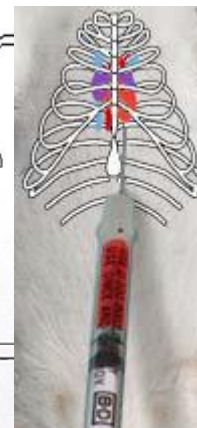


IMAGE 2

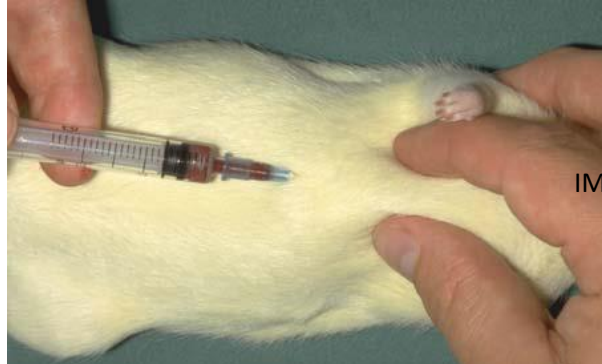
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IMAGE 3

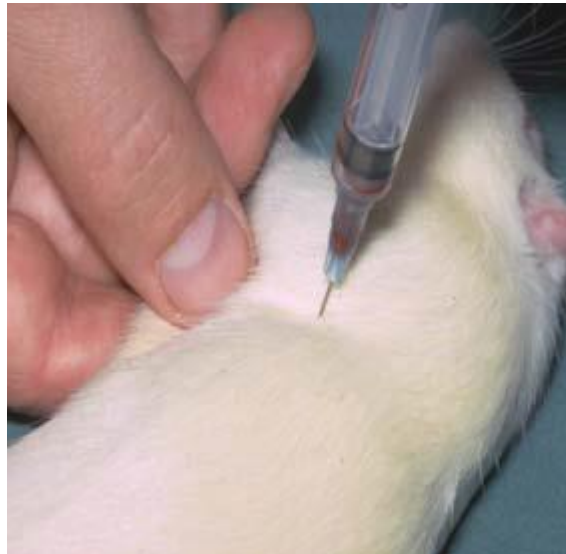


IMAGE 4



IMAGE 5

## 1.2 Intracardiac Puncture with Rat in Right Lateral Recumbency

- 1.2.1 Anesthetize rat (according to approved protocol)
- 1.2.2 Place rat in right lateral recumbency
- 1.2.3 Prep area behind forelimb with alcohol swab.
- 1.2.4 Insert needle just behind the forelimb (Image 4) where the heartbeat is easily felt. The location of the heart is approximately under the elbow when leg is placed on a normal anatomic position (Image 1)
- 1.2.5 Aspirate syringe slowly while advancing needle

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- 1.2.6 Stop needle advance when blood is visualized in syringe tip (Image 4)
- 1.2.7 Hold needle and syringe steady until all blood is collected
- 1.2.8 Perform a bilateral thoracotomy with scissor or a scalpel to insure death

## 2. MOUSE INTRACARDIAC PUNCTURE PROCEDURE

- 2.1 Anesthetize mouse (according to approved protocol)
- 2.2 Place mouse in dorsal recumbency
- 2.3 Prep area just below sternum with alcohol swab.
- 2.4 Insert needle at base of sternum on a 20 degree angle under or just left to the xyphoid process (Image 1)
- 2.5 Aspirate syringe slowly while advancing needle
- 2.6 Stop needle advance when blood is visualized in syringe tip
- 2.7 Hold needle and syringe steady until all blood is collected (Image 2)
- 2.8 Perform a bilateral thoracotomy with scissor or a scalpel to insure death



IMAGE 1



IMAGE 2