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## Removal of the Female Reproductive System En Bloc

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**Protocol status:** Working

**We use this protocol and it's working**

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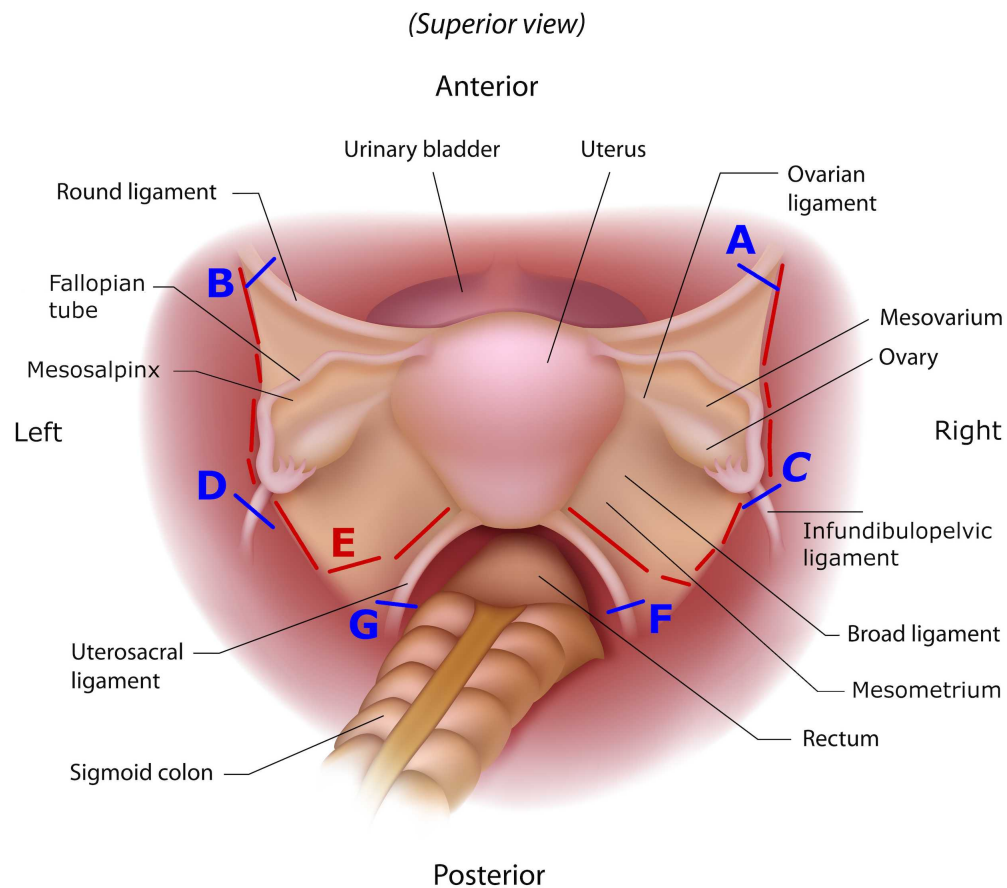
## Abstract

This protocol describes removal of the ovaries, Fallopian tubes, and uterus as a whole from the pelvis.

## Materials

- Ice
- Sutures (0 vicryl)
- Serrated tissue forceps
- Needle driver
- 2-0 vicryl (polyglactin 910) suture on a CT-2 needle
- 0-vicryl suture on a CT-1 needle
- Heavy curved clamp (i.e. curved Heaney clamp)
- Allis clamps
- Metzebaum scissors
- Mayo scissors and/or Statinsky scissors
- Sterile disposable 22 blade scalpels
- Clamps
- Ice bucket
- Phone or camera to obtain pictures of front and back of preservation solution to obtain lot number and expiration date

- 1 Identify right round ligament and suture ligate laterally with 2-0 vicryl (Figure 1a).

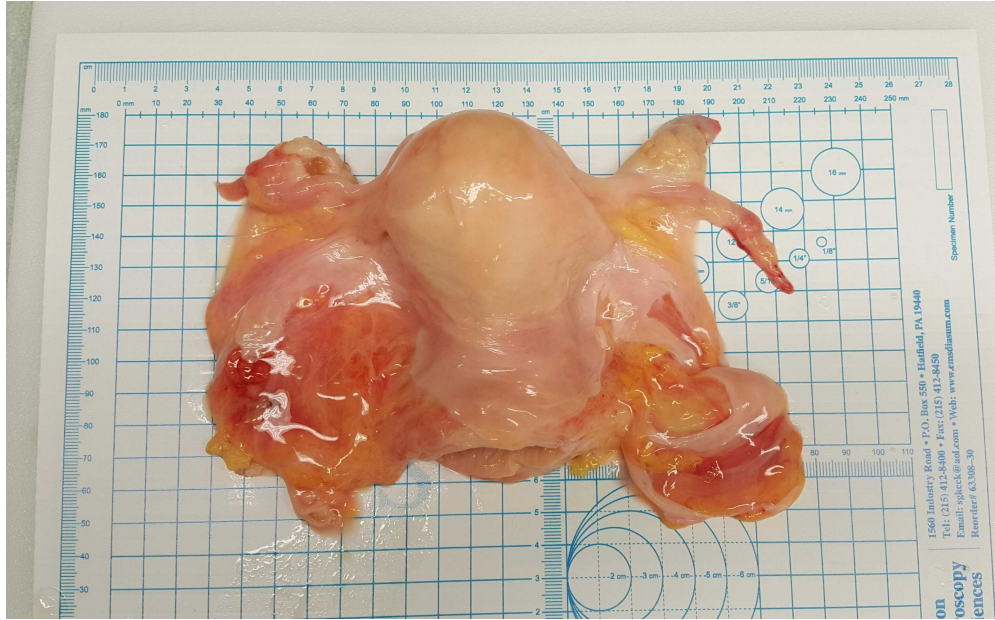


**Figure 1. Female Reproductive System.** (modified from original image by Alila Medical Media). Visual depiction of the anatomic landmarks divided during *en bloc* recovery of the female reproductive system (FRS) from a brain-dead donor. The FRS is comprised of the ovaries, Fallopian tubes and uterus which is covered by visceral peritoneum (i.e., the broad ligament) and supported in the pelvis by fibrous and/or vascular structures (i.e. the round, infundibulopelvic, and uterosacral ligaments). Peritoneum and support structures must be sequentially divided in order to remove the FRS from the pelvis and maintain orientation of the organs comprising it.

- 2 Divide right round ligament and continue dividing broad ligament cephalad toward the vesicouterine peritoneal reflection using Metzebaum scissors.
- 3 Similarly identify, ligate, and divide left round ligament and incise broad ligament cephalad toward the cervix to meet the right side (Figure 1b).
- 4 Using two fingers, push bladder cephalad to separate it from the uterus and cervix.

**Note:** Prior cesarean deliveries can make this difficult.

- 5 Identify, clamp, and cut right and left ovarian arteries and veins (also called the infundibulopelvic ligaments) using curved clamps and Mayo scissors (Figure 1c, 1d).
- 6 Divide the broad ligament laterally, keeping ovaries and Fallopian tubes medial to and attached to the uterus using scalpel or Mayo scissors (Figure 1e).
- 7 Further mobilize bladder off the cervix and proximal vagina with blunt dissection.
- 8 Clamp and cut the uterine artery and vein and surrounding parametrium bilaterally.
- 9 Clamp and cut the uterosacral ligaments (Figure 1f, 1g).
- 10 Palpate the bottom of the cervix between the bladder and rectum using a thumb and forefinger.
- 11 Place two curved Heaney clamps beneath the cervix across the vagina.
- 12 Use a scalpel or Statinsky scissors to transect vagina and remove FRS en bloc from the pelvis.
- 13 Use Allis clamps to grasp the anterior and posterior walls of the vagina.
- 14 Close vagina using a running 0-vicryl suture.
- 15 Obtain pictures of front and back of preservation solution to obtain the lot number and expiration date.
- 16 Measure organs and place in a bag on ice and prepare for transport, keeping individual organs on ice throughout the following protocols, when not actively working with them (Figure 2).



**Figure 2. Measurement of Female Reproductive Organs.** Width (shown) and length of the FRS en bloc is recorded transport of the specimen back to the laboratory prior to collection of organ and tissue samples. Width, length, height, and weight of Individual organ are collected as the ovaries, Fallopian tubes and uterus are isolated prior to tissue collection.