

Preservation of Reproductive Biopsies and Post-mortem Tissues

General Information

- Collect samples for histology AFTER other samples have been collected (e.g. for microbiology)
- Preserve samples for histology in 10 % neutral buffered formalin
- Use a formalin: tissue ratio of 10:1
- Label containers fully
- Aim to include representative sections of all the different anatomical regions and tissues
- Always include sections of any lesions or suspected lesions
- Take a photograph or make a diagram of any lesion
- Place left and right gonads into separate labeled containers, or mark one side securely with a suture tie or ink and indicate this on the container
- Put very tiny specimens (< 2 to 3 mm) in a cell safe or cassette
- For slightly larger specimens, incise the gonads and (if applicable) the tubular reproductive tract prior to placing the whole tract in the formalin solution
- Biopsies of lesions should include either the whole lesion, or if too large, then representative sections including its margin with normal tissue. Biopsies of endometrium should include at least 3 punches of the full thickness of the endometrium. If different reproductive tissues are biopsied, the samples should be placed in separate labeled cassettes or containers.
- For specimens too large to fit in a suitable container, save tissue sections as detailed below.
- Tissue sections should be no more than 5mm to 1cm thick for adequate fixation

Post-Mortem Reproductive Samples from Female Mammals

- Post-mortem samples generally should include both ovaries, the tubular genitalia, the placenta (if present), and mammary tissue.
- Incise large ovaries sagittally and collect a slice section. If cysts or corpora lutea are present, include wedges with an interface with the ovary. For large ovarian masses, take several wedge sections including the interface with normal tissue, the periphery (capsule) and sections of any areas of the mass with a varied appearance. Avoid areas that appear decomposed.
- Open the uterine body or oviducts completely. Take a full-thickness wedge sample of each uterine horn or, if horns are absent, both sides of the uterine body. In ungulates, collect caruncles and inter-caruncular tissue. Take representative full-thickness wedges of any lesion.
- If placenta is present, collect a full-thickness wedge section of all layers. Collect a wedge of any areas with a different appearance.
- Take wedge sections of mammary glands including the nipple, or take a mammary strip and incise each gland transversely for improved fixation. Mark the cranial gland with ink or suture.

Post-Mortem Reproductive Samples from Male Mammals

- Post-mortem samples generally should include both testicles, including epididymis and spermatic cord, the accessory sex glands including the prostate and others as applicable, and may include the penis and mammary tissue.
- Incise large testes sagittally. Place a slice section including all anatomical regions in formalin.
- Take a wedge section of the prostate including the capsule, outer prostate and the urethra. In species with a lobed prostate, take sections of all lobes.
- If collecting the penis, take a transverse slice section of larger specimens at the base and at the head to include the sheath.
- If collecting mammary tissue, take samples as outlined for female mammals, above.