

WSC 2010-2011. Conference 11

Slide 1. Tissue from a rhesus macaque.

**MICROSCOPIC DESCRIPTION:** Fibroadipose tissue (mesentery) **(1 pt.)**: There are dense bands of fibrous connective tissue **(1 pt.)** dissecting mesenteric adipose tissue which contain numerous tortuous endometrial glands **(2 pt.)** surrounded by abundant, densely cellular endometrial stroma **(2 pt.)**. The endometrial glands are lined by simple to pseudostratified columnar, ciliated epithelial cells with a moderate amount of clear to pale eosinophilic cytoplasm and prominent basilar vacuolation **(2 pt.)**. Nuclei are anti-basilar and oval with finely stippled chromatin and frequently exhibit nuclear regimentation **(2 pt.)**. The endometrial stroma is composed of spindle cells with indistinct cell borders, scant eosinophilic, fibrillar cytoplasm and an oval to elongate nucleus with finely stippled chromatin **(2 pt.)**. Glands contain small amounts of eosinophilic protein, admixed with low numbers of degenerated epithelial cells and hemorrhage **(1 pt.)**. There are low numbers of lymphocytes and plasma cells subjected to glandular epithelium scattered throughout the section, as well as rare perivascular aggregates **(1 pt.)**. Vessels adjacent to and within areas of glands and stroma are dilated, tortuous, and congested.

**MORPHOLOGIC DIAGNOSIS:** Mesentery: Endometriosis. **(5 pt.)**

O/C: **(1 pt.)**

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Slide 2. Tissue from a rabbit.

MICROSCOPIC DESCRIPTION: Gonad (no pre-existent tissue, no adjacent structure) **(1 pt.)**: The gonad is effaced by a moderately cellular, unencapsulated, poorly demarcated, infiltrative, multilobulated neoplasm **(2 pt.)**. Neoplastic cells are arranged in sheets **(2 pt.)** and prominent rosettes **(2 pt.)** and acini within pre-existent tubules **(1 pt.)**, and occasionally palisade **(1 pt.)** along the tubular basement membranes. The tubules are separated by moderate bands of fibrous connective tissue. Neoplastic cells are round with a moderate amount of finely granular eosinophilic cytoplasm and indistinct cell borders **(2 pt.)**. Within rosettes and along the basement membrane, neoplastic cells attain a columnar appearance. Nuclei are round with coarsely clumped chromatin and 1-2 large basophilic nuclei **(2 pt.)**. Mitotic rate averages 20/10 400X fields **(1 pt.)**. There is marked apoptosis throughout the neoplasm **(1 pt.)**.

MORPHOLOGIC DIAGNOSIS: 1. Gonad: Gonadoblastoma **(4 pt.)**

O/C: **(1 pt.)**

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Slide 3. Tissue from a dog.

**MICROSCOPIC DESCRIPTION:** Uterus: The endometrium is diffusely expanded **(1 pt.)** by an infiltrate of large numbers of lymphocytes, plasma cells **(1 pt.)**, and fewer macrophages and neutrophils which surround and separate, and replace ectatic glands and numerous congested vessels. **(2 pt.)** Ectatic glands are often filled with varying combinations and concentrations of degenerate and non-degenerate neutrophils, foamy macrophages, necrotic debris, and brightly eosinophilic proteinaceous secretory materials. **(1 pt.)** Glands are often lined by tall columnar epithelium **(1 pt.)** (attenuated to cuboidal in dilated glands) with abundant eosinophilic foamy cytoplasm and vesiculate nuclei **(1 pt.)** (progestational epithelium) **(1 pt.)**. Multifocally, within all layers of the uterine wall, there are extensive areas of lytic necrosis **(1 pt.)** containing large numbers of viable and degenerate neutrophils, necrotic debris, hemorrhage, fibrin, and edema **(1 pt.)**. Additionally within all layers, vessels (both veins and lymphatics) are markedly dilated and often contain fibrin thrombi **(2 pt.)** which are composed of abundant polymerized fibrin and numerous neutrophils, often with mural effacement and numerous viable and degenerate neutrophils, bright pink protein, and cellular debris within the vessel wall (vasculitis) **(1 pt.)**. Hemorrhage, edema, fibrin, and numerous viable and degenerate neutrophils with fewer expand the submucosa and muscularis, markedly separating submucosal collagen fibers and smooth muscle fibers **(1 pt.)**. Smooth muscle fibers are often swollen, brightly eosinophilic, and fragmented, with pyknotic or lytic nuclei, and low numbers of infiltrating nuclei (degeneration and necrosis). **(1 pt.)** The adjacent broad ligament is infiltrated with low to moderate numbers of neutrophils and there is abundant hemorrhage. **(1 pt.)**

**MORPHOLOGIC DIAGNOSIS:** Uterus: Endometritis, chronic-active and suppurative, diffuse, severe, with mild chronic endometrial hyperplasia, vasculitis, and thrombosis. **(3 pt.)**

O/C: **(1 pt.)**

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Slide 4. Tissue from a mini-mule.

**MICROSCOPIC DESCRIPTION:** Testis. Diffusely, seminiferous tubules are present in appropriate numbers **(1 pt.)**, but are hypocellular **(1 pt.)** and occasionally dilated. Tubules are lined by a single layer of Sertoli cells **(1 pt.)**, but few spermatogonia **(2 pt.)**. Spermatocytes are occasionally swollen with abundant wispy cytoplasm (degenerate) **(1 pt.)** or have pyknotic nuclei (apoptosis)**(1 pt.)**, and rare mitotic figures are present **(1 pt.)**. The central lumen of each tubule is devoid of maturing spermatocytes and spermatids. **(1 pt.)** Multinucleated degenerate spermatocytic syncytia are present within some tubules. **(1 pt.)** Interstitial cells are rare with dark grey granular cytoplasm (atrophy) **(1 pt.)**. The testicular interstitium is expanded low to moderate numbers of fibroblasts, collagen, edema **(1 pt.)**, and low to moderate numbers of lymphocytes **(2 pt.)**, with multifocally form aggregates **(1 pt.)**. At one edge of the section, tubules are separated and the interstitium is expanded by acute hemorrhage **(1 pt.)**.

**MORPHOLOGIC DIAGNOSIS:** 1. Testis, seminiferous tubules: Hypoplasia, diffuse, severe. **(3 pt.)**

2. Testis: Hemorrhage, focally extensive, severe. **(1 pt.)**

O/C: **(1 pt.)**