WSC 2016-2017, Conference 21

Case 1. Tissue from a dog.

MICROSCOPIC DESCRIPTION: Joint capsule **(1pt.)**: Expanding the joint capsule up to 5mm, there is a multilobular, unencapsulated, expansile, moderately cellular neoplasm **(2pt.)** which forms broad-based, occasionally cystic villi which project into the synovial space. **(1pt.)** Neoplastic cells are arranged in poorly defined streams and bundles **(1pt.)** on an abundant often clear myxomatous stroma **(1pt.)**. Neoplastic cells are spindle to stellate **(1pt.)** with long processes, indistinct cell borders and abundant pink vacuolar cytoplasm **(1pt.)**. Nuclei are irregularly round with finely clumped chromatin and 1-3 small blue nucleoli. **(1pt.)** There is moderate anisocytosis and anisokaryosis. **(1pt.)** Mitoses are rare. **(1pt.)** The neoplasm is lined on its synovial face by 1-3 layers of disordered cuboidal synoviocytes **(1pt.)** (hyperplasia) . **(1pt.)** Multifocally, vessels within the neoplasm are surrounded by moderate numbers of lymphocytes, with fewer plasma cells and foamy macrophages. **(1pt.)** There is mild edema of the joint capsule adjacent to the neoplasm.

MORPHOLOGIC DIAGNOSIS: Joint capsule: Synovial myxoma **(5pt.)**

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

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Case 2. Tissue from a calf.

MICROSCOPIC DESCRIPTION: Long bone with growth plate **(1pt.)**: The growth plate is diffusely thickened **(1pt.)**, irregular **(2pt.)**, and there are several long tongues of cartilage **(1pt.)** which extend down into the metaphysis. These retained cartilage cores range up to almost a centimeter **(1pt.)** in length and are populated by well-defined rows of hypertrophic chondrocytes **(2pt.)** embedded in a matrix which ranges from deep blue to light pink **(1pt.)**. Elongated tongues of cartilage are lined by a necrotic coagulum **(2pt.)** which is lilac-colored, vacuolated, infiltrated by few osteoblasts and congested capillaries, small amounts of hemorrhage, and occasional hematoidin crystals. **(1pt.)** Disordered deeply basophilic osteoblasts often fill spaces between cartilaginous cores **(1pt.)** rather than lining surfaces. Only few large osteoclasts **(1pt.)** with up to thirty nuclei are presents within Howship's lacuna. Metaphyseal bone marrow is diffusely and moderately hypocellular and edematous. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Long bone: Physeal dysplasia **(1pt.)** with retained cartilage cores **(1pt.)**, osteoclastopenia **(1pt.)**, and metaphyseal necrosis **(1pt.)**.

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

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Case 3. Tissue from a horse.

MICROSCOPIC DESCRIPTION: Bone. The section of bone is composed of medullary bone **(1pt.)** and lacks any apparent cortex in the section **(1pt.)**. Medullary trabeculae are maloriented, occasionally anastomosing, and scattered unevenly throughout the section **(1pt.)**. Trabeculae are often lined by a single layer of osteoblasts, numerous large osteoclasts in Howships' lacunae **(1pt.)**, and intervening spaces contain moderate amounts of collagen **(1pt.)** and no apparent marrow elements **(1pt.)** (may or may not be important without knowing where this section came from). Cement lines within the trabeculae are haphazardly arrayed **(1pt.)**, and lamellar and woven boneare arrayed in a haphazard fashion thoughout the section **(1pt.)**. Scattered islands of deep blue cartilaginous matrix are present randomly within trabeculae **(1pt.)**. Along one edge of the section, deep to a tendinous insertion, there is a focal cavity containing necrotic bone **(1pt.)** which is brightly eosinophilic, lacking in viable cells either within the granular debris or remaining fragments of lamellar bone. **(1pt.)** Occasionally fragments of bone are surrounded by osteoclasts and multinucleated macrophages. **(1pt.)** The cavity is surrounded by a layer of dense maturing fibrous connective tissue **(1pt.)** which contains numerous fibroblasts, small capillaries, low numbers of macrophages, lymphocytes, and plasma cells, and multifocal hemorrhage and siderophages. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: 1. Bone: Osteodystrophy, diffuse, severe, with osteopenia, abnormal bony remodeling **(1pt.)** and myelofibrosis **(1pt.)**. 2. Bone: Necrosis **(1pt.)**, focally extensive with involucrum formation. **(1pt.)**

NAME THE CONDITION: Bone fragility syndrome **(1pt.)**

CAUSE: Silicosis

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

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CASE 4. Tissue from a cat.

MICROSCOPIC DESCRIPTION: Lymph nodes, presumably mesenteric: 75% of the node is replaced **(1pt.)** by haphazardly arranged, anastomosing trabeculae **(2pt.)** of mature collagen **(2pt.)** which contain few plump fibroblasts. Trabecular spaces contain loosely arranged fibrous connective tissue, and numerous plump fibroblasts **(2pt.)**, and often contain few to moderate numbers of eosinophils and few lymphocytes, plasma cells, and rare mast cells. Fibrous connective tissue is haphazardly arranged at the periphery and eosinophils **(2pt.)** markedly increase in number in these areas, where they form aggregates. There is marked follicular and paracortical hyperplasia of the remaining node **(2pt.)**, and sinuses are edematous and contain low to moderate numbers of macrophages and eosinophils. There is multifocal hemorrhage **(1pt.)** within the perinodal adipose tissue.

MORPHOLOGIC DIAGNOSIS: Lymph nodes: Lymphadenitis **(1pt.)**, eosinophilic **(1pt.)**, diffuse, moderate, with marked anastomosing fibroplasia **(1pt.)**, and moderate follicular and paracortical hyperplasia. **(1pt.)**

NAME THE CONDITION: Feline sclerosing eosinophilic fibroplasia **(3pt.)**

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