

WSC 2026-2027
Conference 6, Case 1
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Heart, ventricular free wall **(1pt.)**. One section of heart containing the epicardium, myocardium, and endocardium, as well as a partial section of large artery and epicardial fat, is submitted for examination. Approximately 10% of cardiac myofibers, most commonly in perivascular areas **(1pt.)**, are lost **(1pt.)** and replaced with loosely arranged collagen populated by numerous fibroblasts (reactive interstitial fibrosis) **(1pt.)**. Areas of fibrosis often contain mature adipocytes. **(1pt.)** In some areas, myofibers are replaced by dense bands **(1pt.)** of collagen (replacement fibrosis). **(1pt.)** Within and adjacent to the areas of fibrosis, cardiac myofibers, which are swollen and hypereosinophilic and have lost cross striations (degeneration) **(1pt.)** or less commonly, swollen and anucleate or with pyknotic nuclei (necrosis) **(1pt.)** and occasionally shrunken, hypereosinophilic (atrophy) **(1pt.)**. In areas of fibrosis, there are occasional macrophages with granular green-brown cytoplasmic granules (likely lipofuscin). **(1pt.)**

MORPHOLOGIC DIAGNOSES: Heart, ventricular free wall: Fibrosis, multifocal to coalescing, marked with cardiomyocyte degeneration, **(1pt.)**, necrosis **(1pt.)**, and loss **(1pt.)**

NAME AN APPROPRIATE BREED: Toy, Manchester terrier (that's what this is), Boxer, Doberman, Cocker spaniel, Great Dane, Standard Schnauzer, Portuguese water dog, and many more. **(3pt)**

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

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Conference 6, Case 2

Tissue from a rhesus macaque.

MICROSCOPIC DESCRIPTION: Heart, right ventricle and interventricular septum **(1pt.)** The subepicardial right ventricular myocardium **(1pt.)** and multifocal areas within the myocardium of the interventricular septum **(1pt.)** is replaced by sheets of well-differentiated adipocytes **(2pt.)** which efface myofibers. In other areas, myofibers are separated and surrounded by abundant mature fibrous connective tissue **(1pt.)** (replacement fibrosis) **(1pt.)**, and occasionally, cardiomyocytes are replaced by a combination of both fatty and fibrous tissue. **(1pt.)** At the advancing edge of the infiltrating adipocytes, remnant cardiomyocytes are compressed, shrunken (atrophy) **(1pt.)**, often with loss of cross-striations and decrease (degeneration) **(1pt.)**. At the periphery of infiltrated areas, there is marked variation in fiber size with clear cytoplasmic vacuoles, and nuclei are often enlarged up to 2-3 times normal **(2pt.)**, with a wavy irregular nuclear membranes, coarsely stippled chromatin and prominent nucleoli. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Heart: Fibrofatty infiltration **(1pt.)**, focally extensive, severe, with myofiber karyomegaly**(1pt.)**, hypertrophy **(1pt.)**, degeneration, and loss. **(1pt.)**

Name the condition: Arrhythmogenic right ventricular hypertrophy **(2 pt.)**

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

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Conference 6, Case 3.
Tissue from a cat.

MICROSCOPIC DESCRIPTION: Liver: Within the liver, there is an infiltrative, unencapsulated, moderately cellular, poorly demarcated round cell neoplasm. Neoplastic cells fill and expand sinuses, occasionally forming small sheets, predominantly within portal areas but also scattered throughout the hepatic parenchyma. Neoplastic cells are round with distinct cell borders and a moderate amount of finely granular eosinophilic cytoplasm. Nuclei are irregularly round hyperchromatic and often eccentric. Anisocytosis and anisokaryosis are mild. Mitoses: average 4 per 2.37 mm² field. Occasional neoplastic cells contain erythrocytes within their cytoplasm. Hepatocytes are swollen by small amounts of cytoplasmic glycogen and occasionally one or more variably sized discrete lipid vacuoles and occasionally small amounts of brown granular pigment (iron or lipofuscin). The cytoplasm of C-cells is occasionally swollen by brown granular pigment (iron or bile). Multifocal small areas of hemorrhage are scattered throughout the section. There is mild ductular reaction within portal areas and scattered aggregates of lymphocytes and plasma cells in proximity to portal areas. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Liver: Mast cell tumor. **(3pt.)**

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

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Conference 6, Case 4.

Tissue from a rainbow (Gouldian) finch.

MICROSCOPIC DESCRIPTION: Liver: The liver is diffusely infiltrated by an infiltrative, unencapsulated, poorly demarcated, and densely cellular round cell neoplasm **(1pt)**, which markedly expands sinusoids **(1pt)** and effaces the normal hepatic sinusoidal architecture. Neoplastic cells are arranged in sheets **(1pt)** on a pre-existing stroma. **(1pt)** Neoplastic cells have indistinct cell borders and a moderate amount of finely granular eosinophilic cytoplasm. **(1pt)** Nuclei are irregularly round to oval, occasionally indented, and have moderately stippled chromatin with one to two prominent nucleoli. **(1pt)** Anisocytosis and anisokaryosis are moderate with occasional pleomorphism **(1pt)**, and mitoses average 2 per 2.37 mm² field. **(1pt)** Rarely, neoplastic cells contain erythrocytes or brown granular pigment within their cytoplasm (likely hemosiderin). Numerous islands of hyperchromatic cells (erythroid precursors, extramedullary hematopoiesis) are scattered throughout the neoplasm. **(1pt)** Hepatocytes are often compressed in areas of sinusoidal infiltration, with occasional karyomegalic nuclei and bright pink cytoplasmic granules. **(1pt)** Multifocal areas of hemorrhage and necrosis are scattered throughout the neoplasm. **(1pt)** Islands of neoplastic cells are present within the lumen of hepatic vessels. **(1pt)**

Kidney: Diffusely, the cytoplasm of proximal convoluted tubules is markedly expanded by numerous discrete brightly eosinophilic droplets **(1pt)** (lysozyme) **(1pt)**. There is brown granular pigment (likely lipofuscin) within the cytoplasm of occasional tubular epithelial cells.

MORPHOLOGIC DIAGNOSIS: Liver: Histiocytic sarcoma **(4pt)**.

2. Kidney, proximal convoluted tubules: Hyaline droplets, numerous. **(1pt)**

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