## Reminder - Creating a Morphologic Diagnosis for Inflammatory Lesions

| Organ and Process | Generally speaking = Organ + itis  
| Egs: Hepatitis, Pleuritis, Nephritis, Gastritis..... |
| Exudate | Serous, Fibrinous, Suppurative, Necrotizing, Fibrinonecrotizing, Hemorrhagic, Granulomatous |
| Distribution | Focal, multifocal, locally extensive, coalescing, diffuse |
| Duration | Peracute, Acute, Subacute, Chronic, Chronic-active |
| Severity | Mild, Moderate, Severe |
What is the term for pus in the thorax? Pyothorax
Morphologic Diagnosis?

Peritonitis, serofibrinous, diffuse, acute, marked
A little practice....

Is this acute or chronic?  
- CHRONIC suppurative inflammation – Skin abscess!

What is the exudate?  
- CHRONIC suppurative inflammation – Skin abscess!

What form of necrosis does this represent?  
- Liquefactive
A little practice....

What is inflamed?

Tonsils = Tonsillitis
Pharynx = Pharyngitis
Tongue = Glossitis
A little practice....

Is this acute or chronic?  ACUTE – Fibrinous pleuritis
What is the term for this pattern of inflammation in the lung?

Bronchopneumonia – cranioventral distribution
Inflammation – Case 1

- Heart and lungs from a pig
- History: ‘Poor doing’, cyanosis of the ears and tail
The aortic valve is completely effaced by exophytic (vegetative) irregular masses (1-2 cm) of friable to firm tan material with a roughened surface. There is narrowing of the valve orifice.

Description?

- The aortic valve is completely effaced by exophytic (vegetative) irregular masses (1-2 cm) of friable to firm tan material with a roughened surface. There is narrowing of the valve orifice.
There is diffuse firm adhesion of the visceral pericardium (epicardium) and the parietal pericardium by a 0.5 to 1 cm thick layer of tough tan tissue.
1. Valvular endocarditis, fibrinosuppurative, diffuse (aortic valve), subacute/chronic-active, severe
2. Fibrous pericardial adhesions, diffuse, chronic, moderate

Possible sequellae?
Inflammation – Case 2

- Lungs and heart from a ewe (you may have seen this before!)
- History of respiratory disease (coughing, dyspnea)
The right lung is firm, with diffuse thickening and white discolouration of the pleura. Similar changes are present in the left lung, but affecting only the craniocaudal portion.
• On cut section, similar white firm tissue replaces the parenchyma and contains multiple round pockets of viscous yellow-tinged material surrounded by thick connective tissue capsules.
Morphologic Diagnosis?

- Diffuse pulmonary and pleural fibrosis with multifocal abscesses, chronic, severe (right lung – In the left lung it’s locally extensive)
Inflammation – Case 2

Morphologic Diagnosis?

- Pneumonia, suppurative, multifocal, chronic, severe, with extensive pulmonary and pleural fibrosis
Inflammation – Case 3

- Urinary tract from a dog.
- History of hematuria, lethargy, anorexia
Inflammation – Case 3

**Description?**

- The left kidney is moderately enlarged with roughening of the capsular surface, mild adhesion of the capsule and dilation of the pelvis. The renal papilla is tan and friable and the surrounding medullary tissue is red to dark brown with a small cleft separating the two. The urothelial lining is granular/roughened.
Morphologic Diagnosis?

- Pyelonephritis, necrohemorrhagic, diffuse (unilateral), acute/subacute, severe
Inflammation – Case 4

- Heart from a 3 month old calf
- History of ‘not doing well’ – murmur detected on PE
Inflammation – Case 4

Description?
Within the papillary muscle of the LV is a 2.5 x 3 cm irregular region of pale tan discolouration with extension through the endocardium just beneath the left AV valve. The endocardial surface is raised and roughened in the affected area.
Morphologic Diagnosis?

- Myocarditis/mural endocarditis, necrotizing, locally extensive, subacute/acute, severe
Inflammation – Case 5

- Tongue, larynx, trachea from a lamb
- History of respiratory distress
Description?

- A 4 x 3 cm raised mass of slightly friable tan material is focally adhered to the mucosal surface of the larynx at the level of the right vocal fold. On the opposing surface is a similar smaller lesion.
Inflammation – Case 5

Morphologic Diagnosis?
• Laryngitis, fibrinonecrotizing, locally extensive (multifocal), subacute, severe

Additional info:
This was caused by *Fusobacterium necrophorum*
*Disease name = Necobacillosis*
Inflammation – Case 6

- Bladder and penis from a 2 year old male cat
- History of oliguria (not able to urinate)
Inflammation – Case 6

Description?

• The bladder is distended with thickening of the wall and extensive bright red discolouration of the mucosa. Friable tan material is present in the lumen/loosely adhered to the roughened mucosa.
Description?

- Within the penis, yellow-tan friable to pasty material occludes the urethral lumen and there is thickening of the wall of the urethra.
Inflammation – Case 6

Morphologic Diagnosis?

• Cystitis, fibrinohehorrhagic, diffuse, acute, severe
• Urethritis, fibrinous, locally extensive, acute, severe

Note: Much of the ‘exudate’ in the urethra (and bladder) is likely struvite uroliths, protein, and sloughed epithelial cells. This is case of FLUDT and urethral obstruction (‘blocked cat’).
Liver from a lamb
Found dead
Inflammation – Case 7

Description?

• Numerous, multifocal to coalescing pale, tan, discrete, 0.5-1 cm in greatest diameter foci are scattered randomly throughout the liver. These areas extend deep into the parenchyma on cut surface.
Inflammation – Case 7

Morphologic Diagnosis?

• Hepatitis, necrotizing, multifocal to coalescing, acute, severe

Additional info:
This was caused by *Fusobacterium necrophorum*
*Disease name = Necobacillosis*
Inflammation – Case 8

- Cranial mesenteric artery from 16 year old mare
- History of intermittent colic
Inflammation – Case 8

- Cranial mesenteric artery from 16 year old mare
- History of intermittent colic
Description?

- The proximal 8 – 10 cm of the cranial mesenteric artery is irregularly dilated and a small amount of friable tan material is adhered to the thickened, roughened intimal surface.
Inflammation – Case 8

Morphologic Diagnosis?

- Cranial mesenteric arteritis, necrotizing (eosinophilic?) segmental, chronic, severe
Inflammation – Case 8

Additional info: Slender worms were embedded in the fibrin in the lumen (thrombus): *Strongylus vulgaris* (L4)
Inflammation – Case 9

- Liver from a caribou
- No history provided
Several round cyst-like cavities, each surrounded by a thick fibrous capsule, are present multifocally within the liver. Within these structures, there are coiled trematodes (dorsoventrally flattened, measuring ~5 – 8 cm x 3 – 4 cm with a ventral sucker). Fine black linear tracts are also present multifocally.
Morphologic Diagnosis?

- Hepatitis (cholangiohepatitis), necrotizing/eosinophilic (?), multifocal, moderate / severe, chronic

These tend to be associated with bile ducts
Inflammation – Case 9

Morphologic Diagnosis?

- Hepatitis (cholangiohepatitis), necrotizing/eosinophilic (?), multifocal, moderate / severe, chronic

Extra info: *Fascioloides magna*

This is a tough one: there really is no visible exudate – parasites induce eosinophils so it’s a valid choice. Also there must have been necrosis in order for the ‘cysts’ to get large (and replace parenchyma).