

How you can differentiated between Inflammatory lesions and non Inflammatory lesions (infectious, birth defect, metabolic, or degenerative) ?

Microscopical examination

Do you see abundant inflammatory cells?

Yes: Go to Inflammation, active / section

No: Go to Non-inflammatory, non-neoplastic / section

1. Inflammation, active section

Do you see a preponderance of:

Neutrophils:

ACUTE INFLAMMATION, BACTERIAL INFECTION, IMMUNE VASCULITIS, RECENT INFARCT, ULCER, PSEUDOMEMBRANE

Eosinophils:

ALLERGY, WORMS

Lymphocytes:

VIRUS, RICKETTSIA, CELL-MEDIATED IMMUNE INJURY

Plasma cells:

SYPHILIS, LYME DISEASE

Macrophages:

TYPHOID, TB, DEEP FUNGI

Fibroblasts, angioblasts, macrophages:

GRANULATION TISSUE

2. Non-inflammatory, non-neoplastic section

Look for:

Cell ghosts, crumbly:

CASEOUS NECROSIS (TB, DEEP FUNGI, ETC.)

Cell ghosts, solid:

COAGULATION NECROSIS (INFARCT, CANCER, GAS GANGRENE ETC.), APOPTOSIS

Cholesterol needles:

ATHEROSCLEROSIS-ATHEROEMBOLI, CASEOUS NECROSIS

Connective tissue elements separated by fluid: EDEMA  
Damaged elastic in a scarred blood vessel:

OLD NEUTROPHILIC VASCULITIS

Dead, calcified fat: ENZYMATIC FAT NECROSIS  
Dense collagen where it doesn't belong:

OLD SCARRING, FIBROSIS

Distended business cells: STORAGE DISEASE, FATTY CHANGE  
Fibrin with laminations ("lines of Zahn"):

PRE-MORTEM THROMBUS

In a blood vessel but not liquid blood:

THROMBUS, EMBOLUS (THROMBO-, OTHER),  
FIBRIN-PLATELET THROMBI (DIC, TTP, ETC.)

Lipid-laden macrophages:

LIPID PNEUMONIA, XANTHOMA, DAMAGE IN CNS  
OR FAT

"Hyaline":

alpha-1PI, AMYLOID, BASEMENT MEMBRANE,  
FIBRIN, FIBRINOID, KELOID, MALLORY'S  
HYALINE, OSTEOID, RUSSELL BODY, VIRAL  
INCLUSION

Hyaline larger vessels, large hyperchromatic nuclei:

RADIATION INJURY

Normal mucosa herniating through a weak spot in a wall:

PSEUDO-DIVERTICULUM

Pigment:

CARBON, LIPOFUSCIN, HEMOSIDERIN, MALARIA,  
MELANIN

Red cells not in a vessel: HEMORRHAGE  
Too many cells of one kind: HYPERPLASIA  
Too-small cells: ATROPHY

If you're here and you're still stumped, look for the most distinctive feature on the slide.

