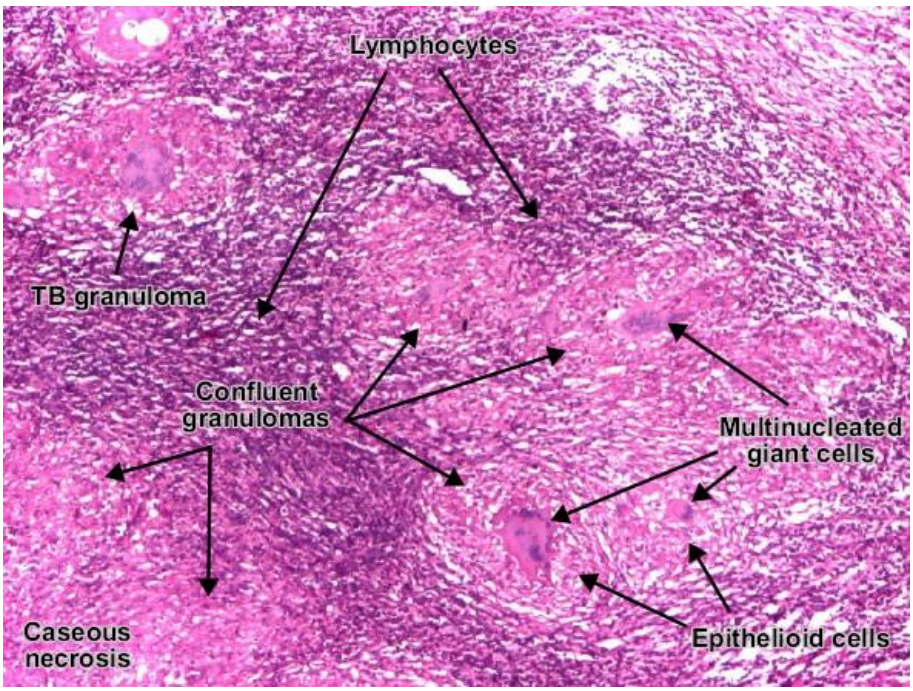
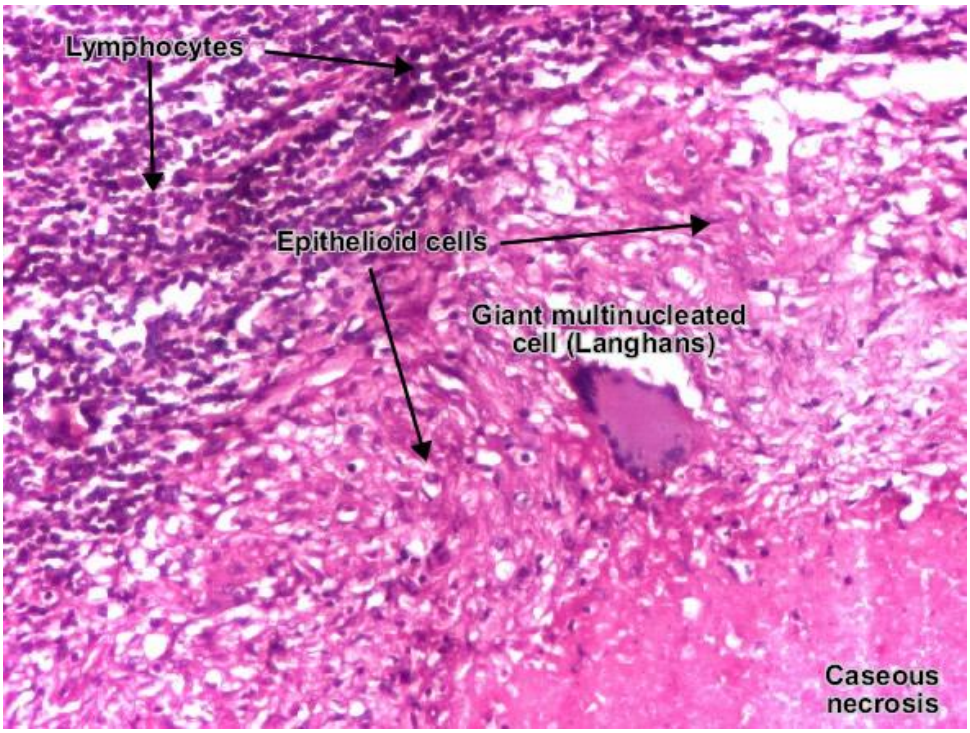
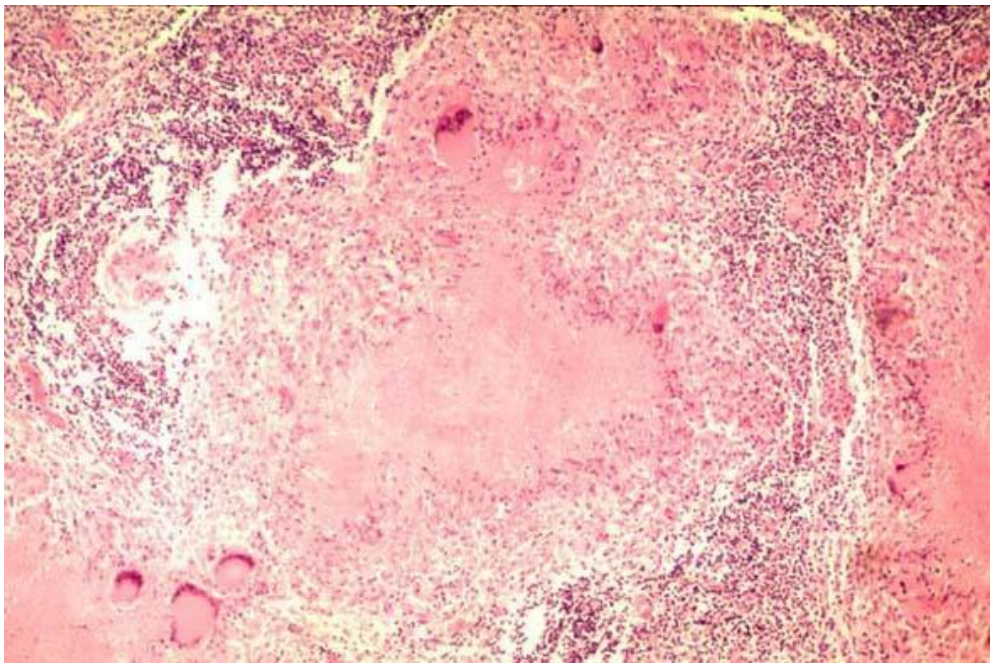
Organ: Lymph node

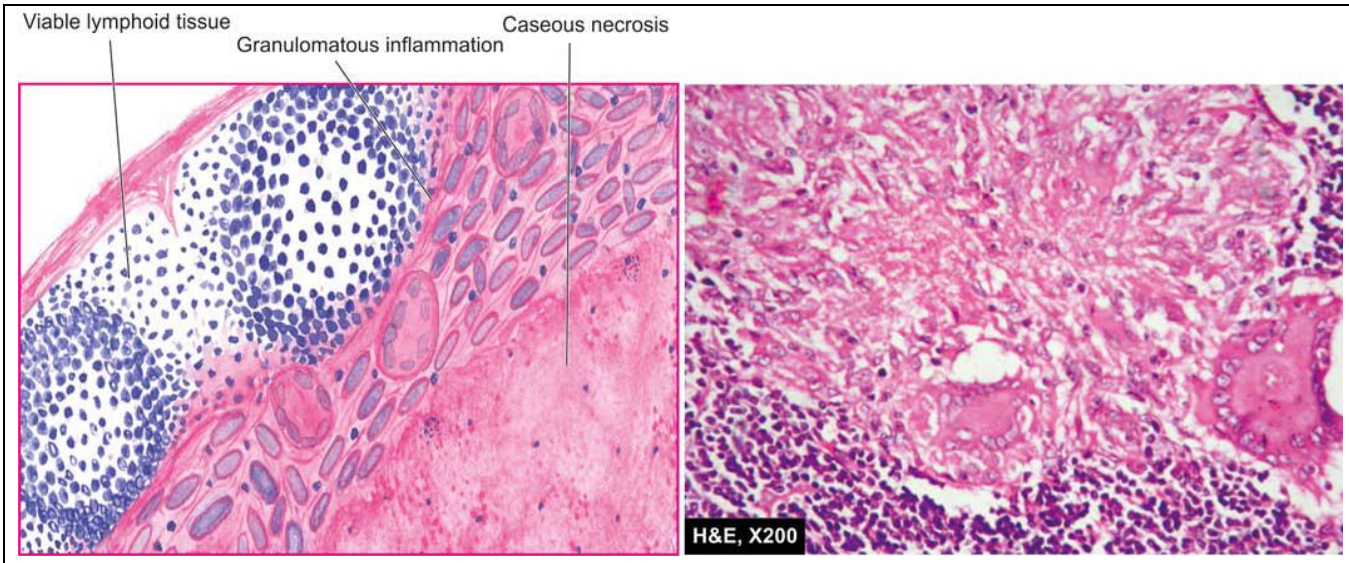
Lesion: The histopathological examination of lymph node showed center of the necrosis focus contain structureless (Loss of cellular & architectural details of tissue), eosinophilic (homogenous pink) material having scattered granular debris of disintegrated nuclei. The surrounding tissue shows characteristic granulomatous inflammatory reaction consisting of epithelioid cells (modified macrophages having slipper-shaped vesicular nuclei). Blue patches in the center of necrotic tissue which represent calcium salt deposition. Droplets of fat can visible.

Diagnosis: Caseous necrosis (Necrotizing lymphadenitis)

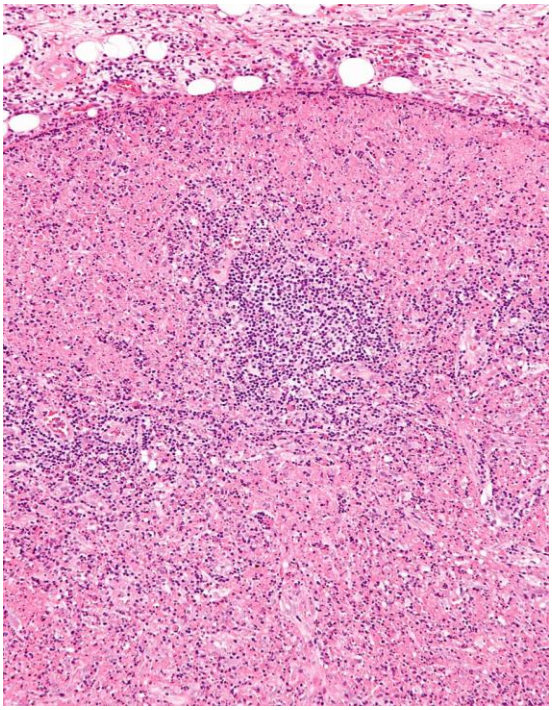


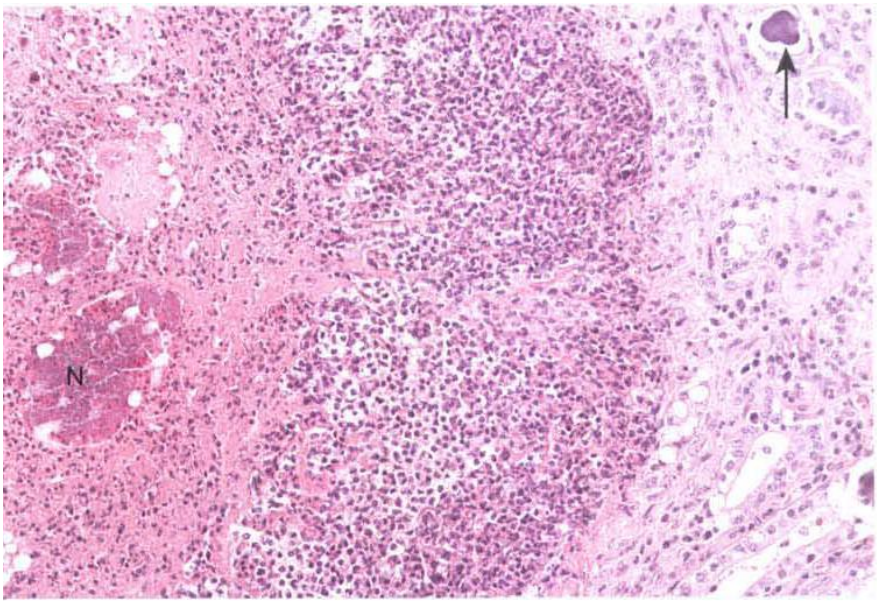

Lymphocytes
Epithelioid cells
Giant multinucleated cell (Langhans)
Caseous necrosis



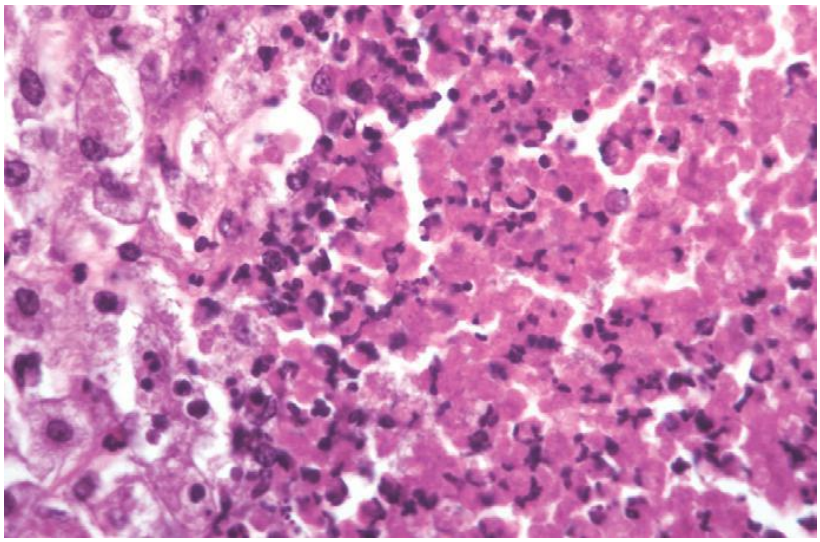


Caseous necrosis lymph node. There is eosinophilic, amorphous, granular material, while the periphery shows granulomatous infl ammation.





Focus of necrosis containing bacterial colonies (N) surrounded by a demarcation zone of intact andnecrotic neutrophils. Mildly inflamed mammary gland tissue at right

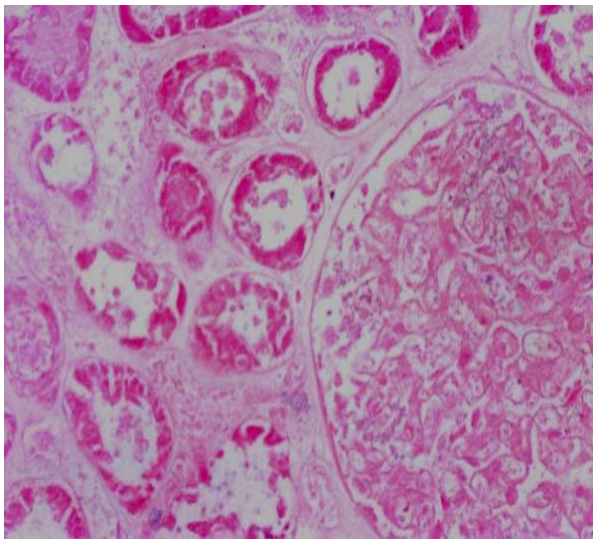


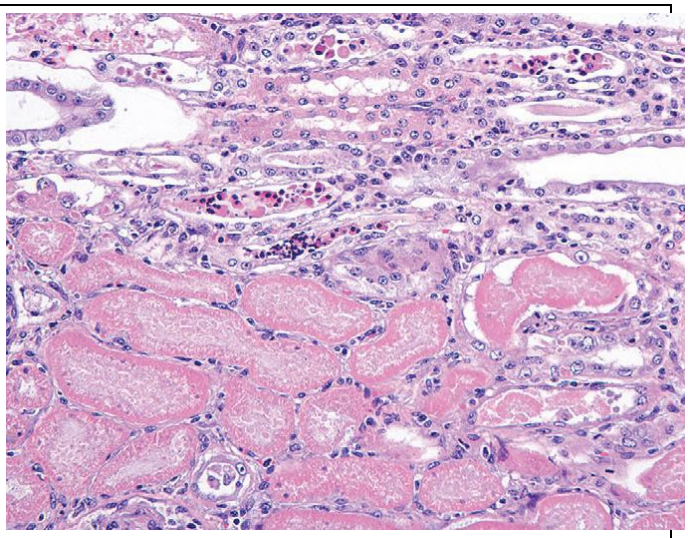
Granulomatous inflammation in caseous necrosis. Cell walls are disrupted and tissue architecture is lost.

Organ: Spleen

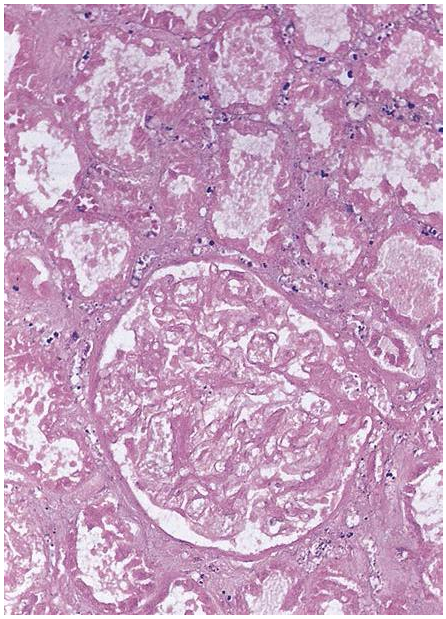
Lesion: The histopathological examination of tissue, shows loss of cellular details of tissue and the outline of the tissue is remained with cell swelling, condensation and dissolution of the nucleus, and cell lysis with accumulation of abundant eosinophilic cytoplasmic.

Diagnosis: Coagulative necrosis (Zenker's degeneration)





Coagulative necrosis of renal tubular epithelial cells. Necrotic cells have homogeneous eosinophilic cytoplasm and more or less retained cell outlines

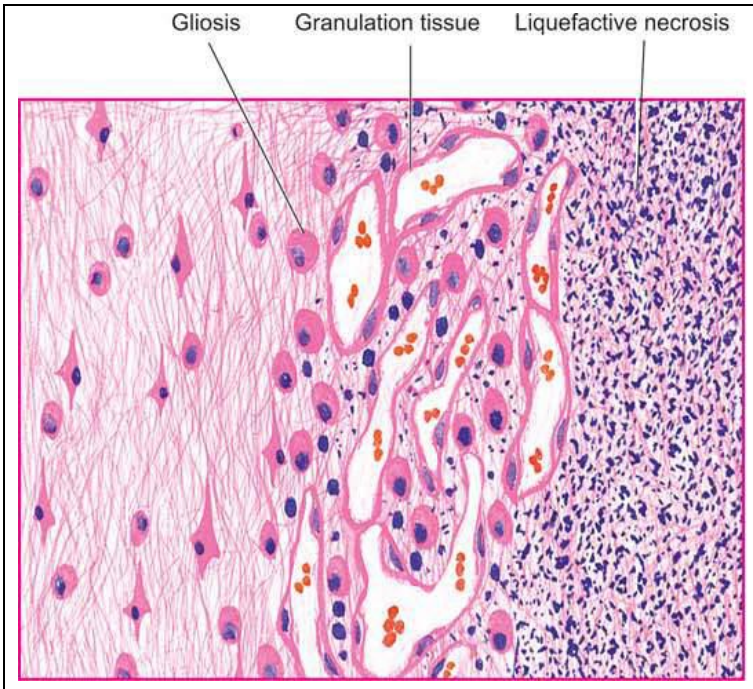


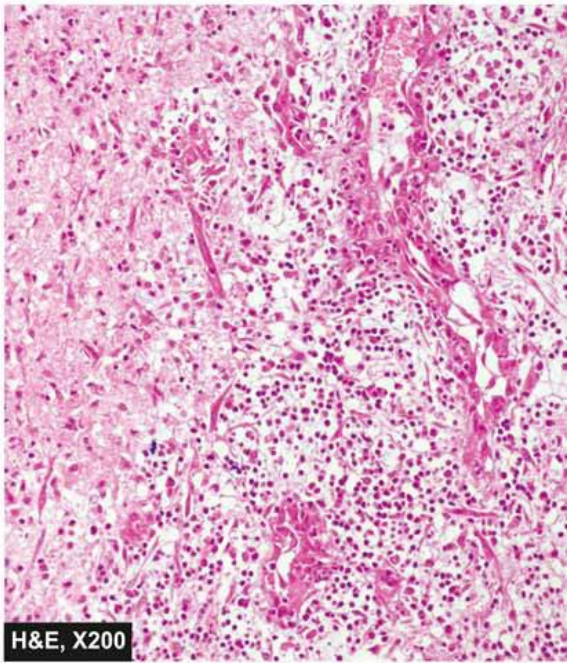
Coagulative necrosis in an area of kidney subject to infarction. Note that the architecture of a glomerulus (G) and surrounding tubules is still recognisable despite the dissolution of nuclear material, except for a few pyknotic and karyorrhectic remnants.

Organ: Brain

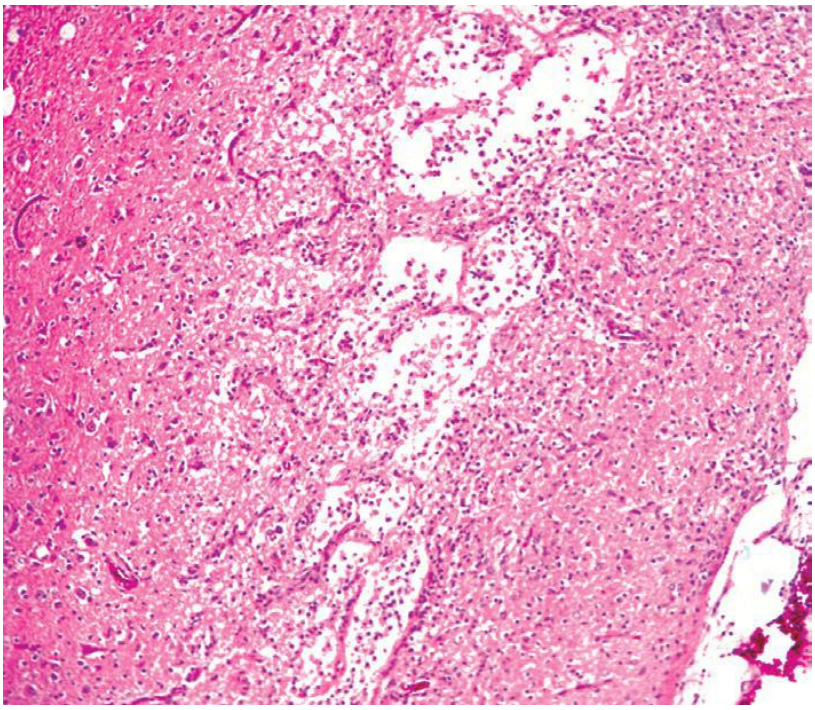
Lesion: The histopathological examination of tissue brain shows, no architectural or cellular detail is visible in the area of necrosis (Sometimes empty spaces). The dead tissue is homogeneous and stains pink with eosin (it is represented the pus). The necrotic area is surrounded by inflammatory cells represented by the live & dead neutrophils (line of demarcation). Necrotic tissue in the central nervous system does not contain neutrophils, unless pyogenic bacteria are present.

Diagnosis: liquefaction (colliquative) necrosis

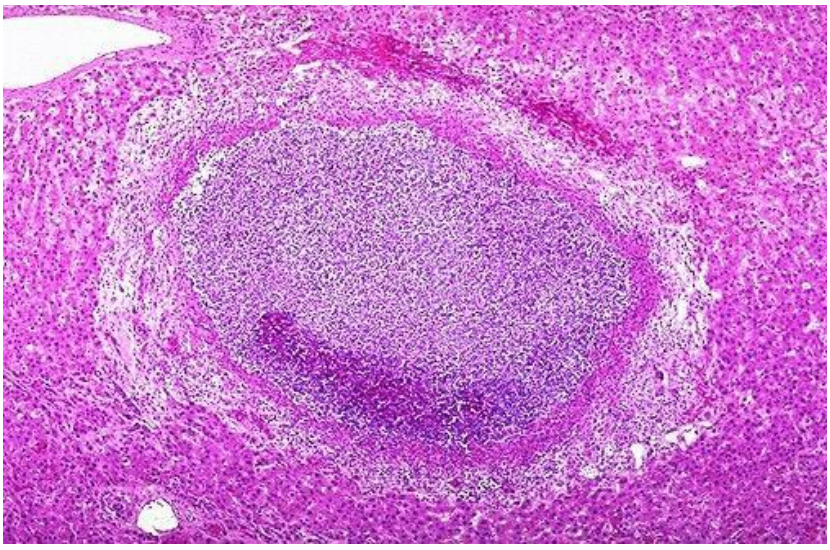




Liquefactive necrosis brain. The necrosis area on right side of the field shows a cystic space containing cell debris, while the surrounding zone shows granulation tissue and gliosis.



cerebral cortex contains areas of near total loss of cells and tissue loss

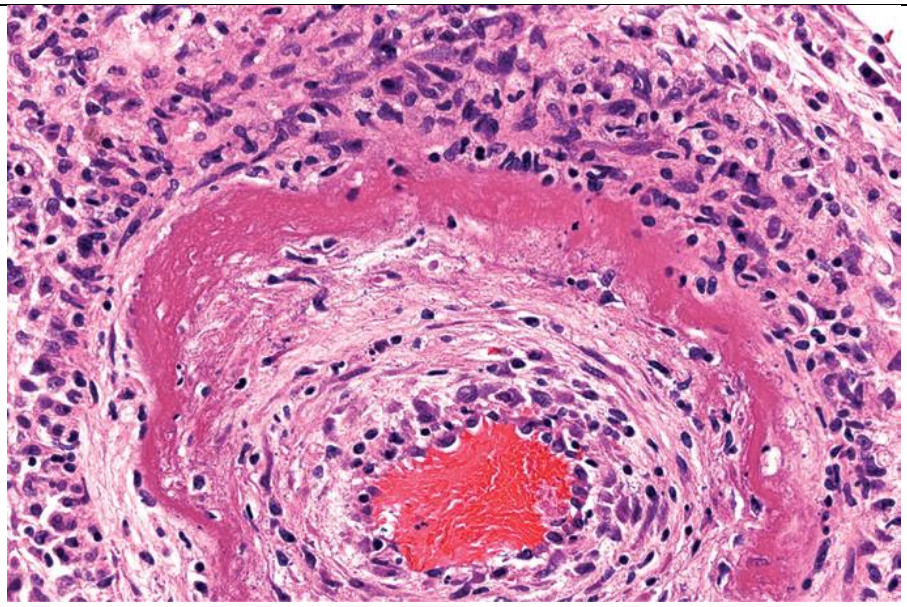


The necrotic area is surrounded by inflammatory cells represented by the live & dead neutrophils (line of demarcation).

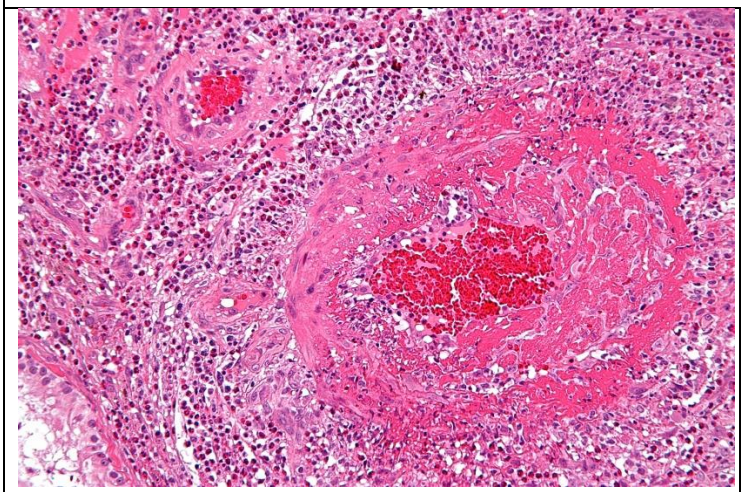
Organ: Blood vessels

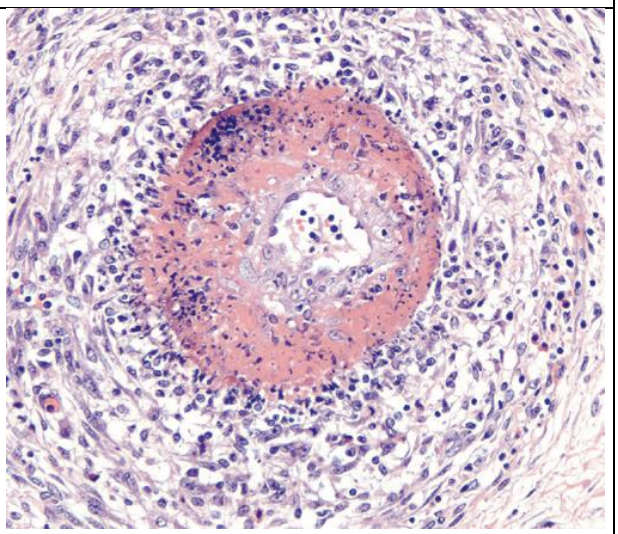
Lesion: The histopathological examination of tissue shows, brightly eosinophilic, hyaline-like deposition in the vessel wall (These proteins, especially fibrin are intensely eosinophilic).

Diagnosis: Fibrinoid necrosis



Fibrinoid necrosis: The wall of the artery shows a circumferential bright pink area of necrosis with protein deposition and inflammation.





Note the deeply eosinophilic circumferential deposits in the arterial tunica media. The fibrinoid change is accompanied by leukocytic infiltration and medial necrosis.