



UTF/077/ZAM: Technical Assistance to the Zambia Aquaculture Enterprise Development Project (ZAEDP)

TiLV Pathology and Histopathology

Win Surachetpong

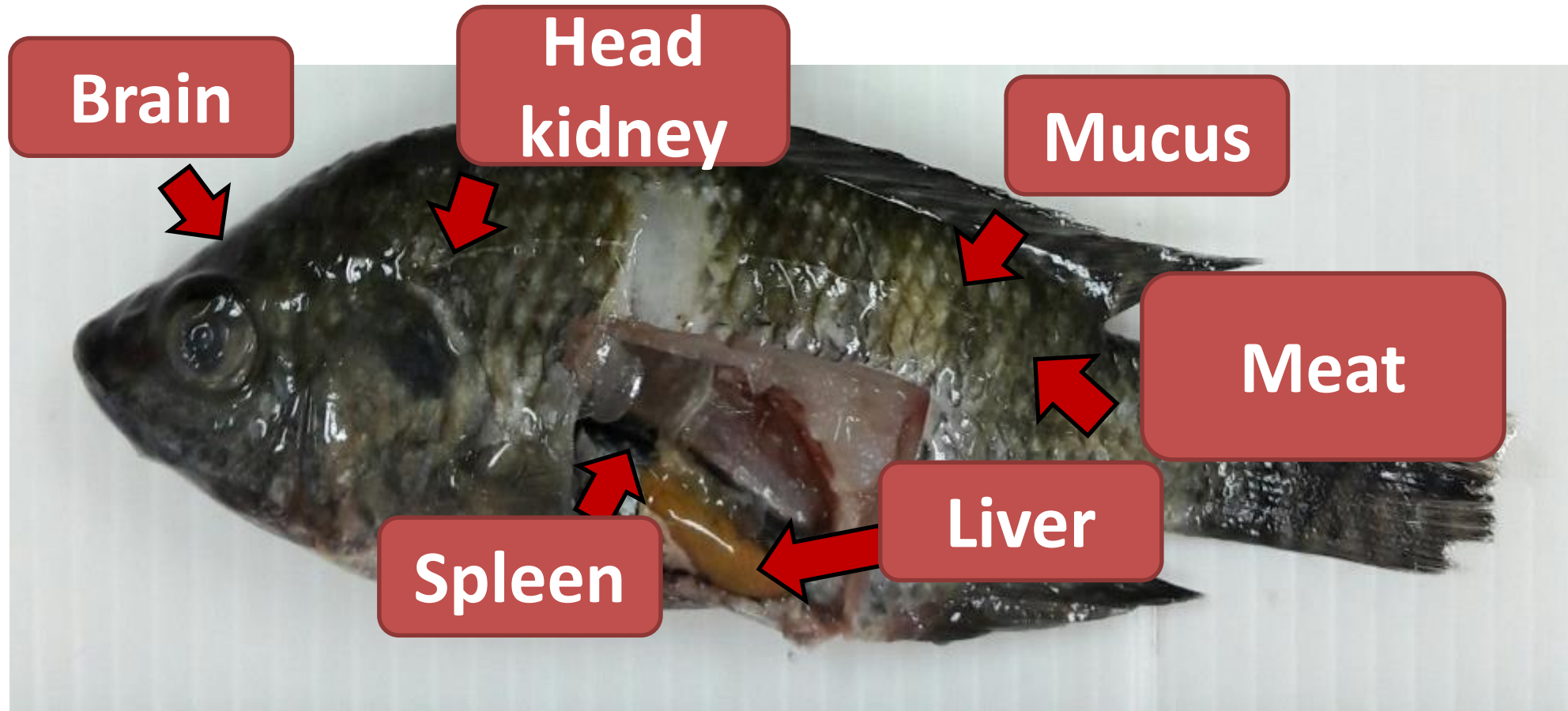
fvetsp@ku.ac.th

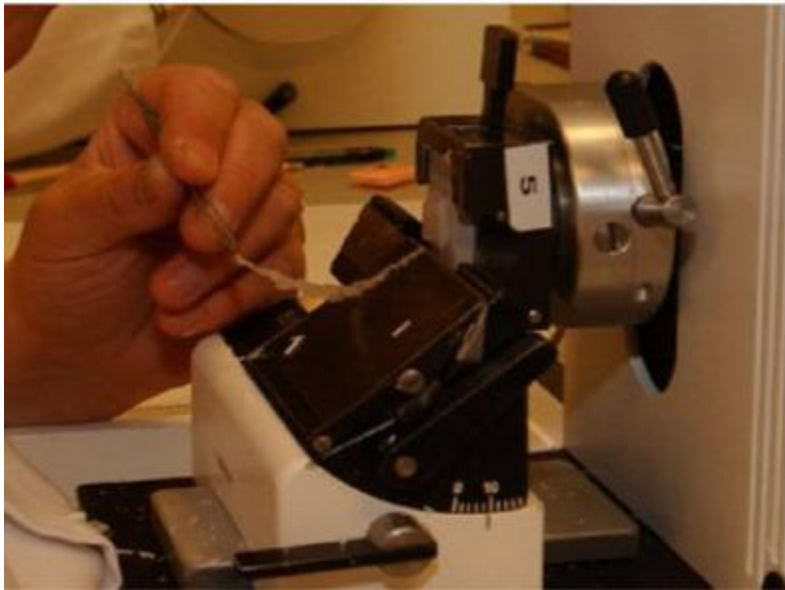
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Sample collection for diagnostic procedures

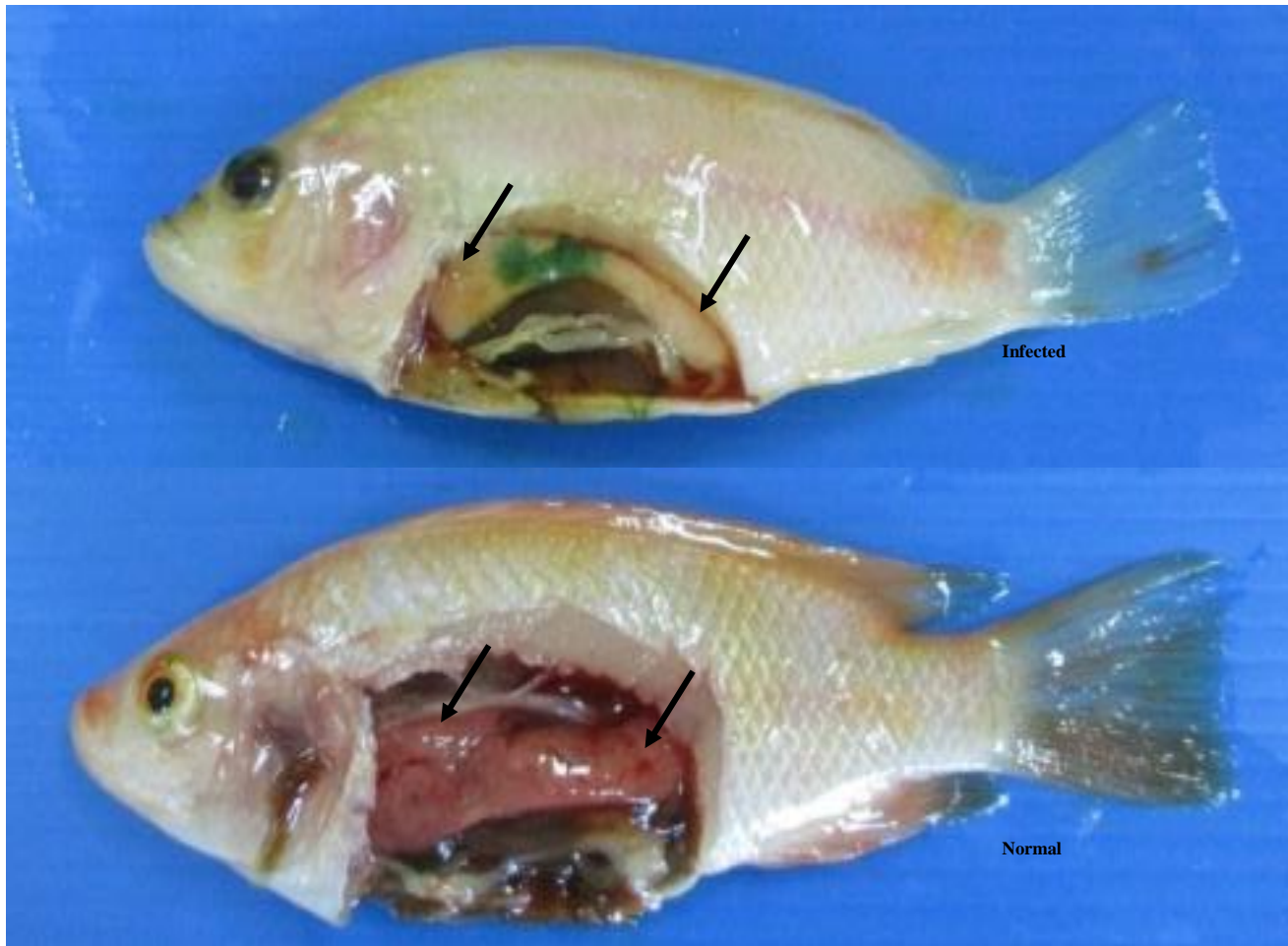
Organs for TiLV diagnosis





Source: <http://tupac.tue-image.nl/node/2>

Gross pathology



Surachetpong et al., 2017 *Emerging Infectious Diseases*

10/14/2019-10/17/2019

Training Course on EUS/TiLV Surveillance and Diagnostics



**KASETSART
UNIVERSITY**
FACULTY OF VETERINARY MEDICINE

Cross pathology

Ascites

Pale liver/gills

Corneal opacity





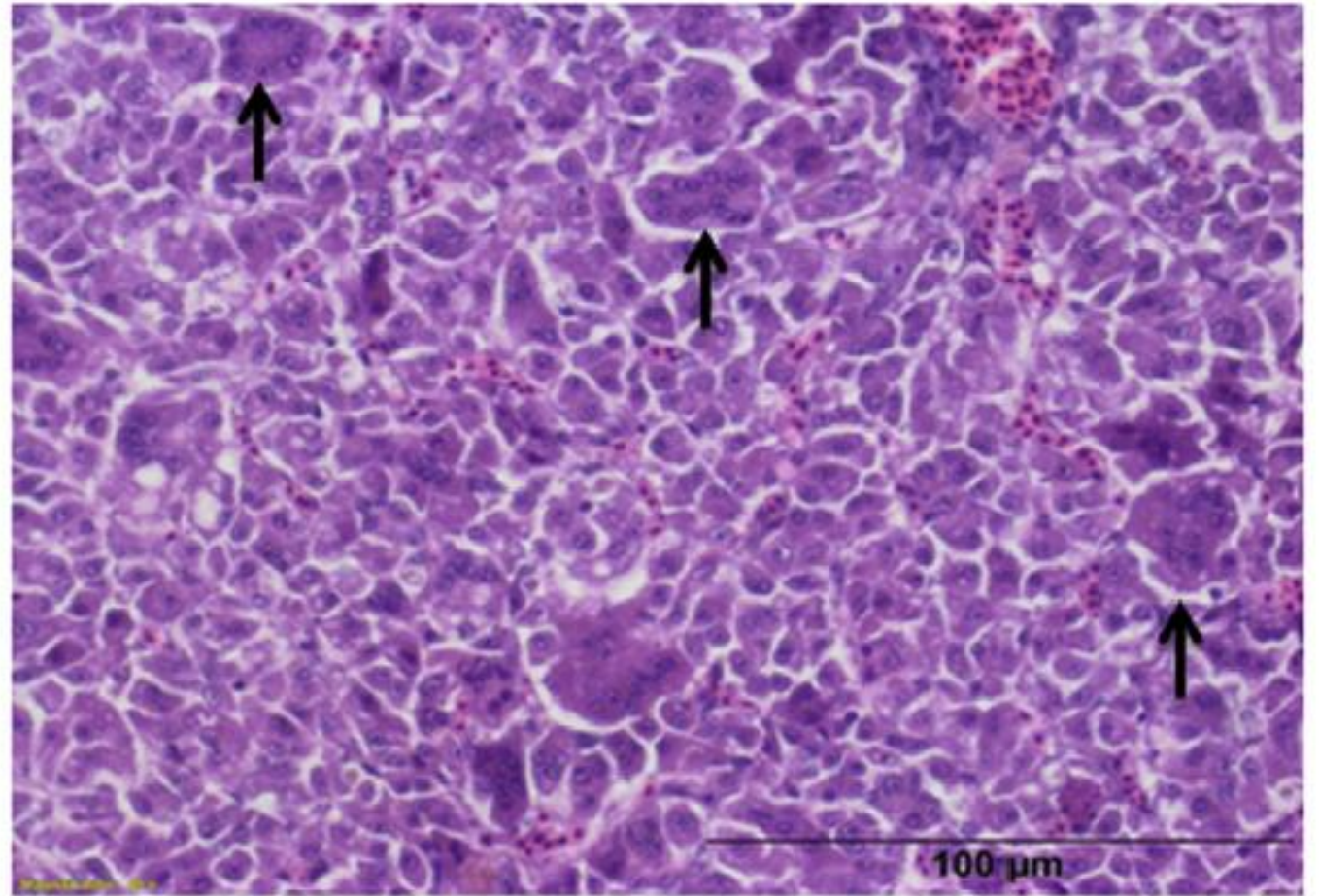
Brain → show redness





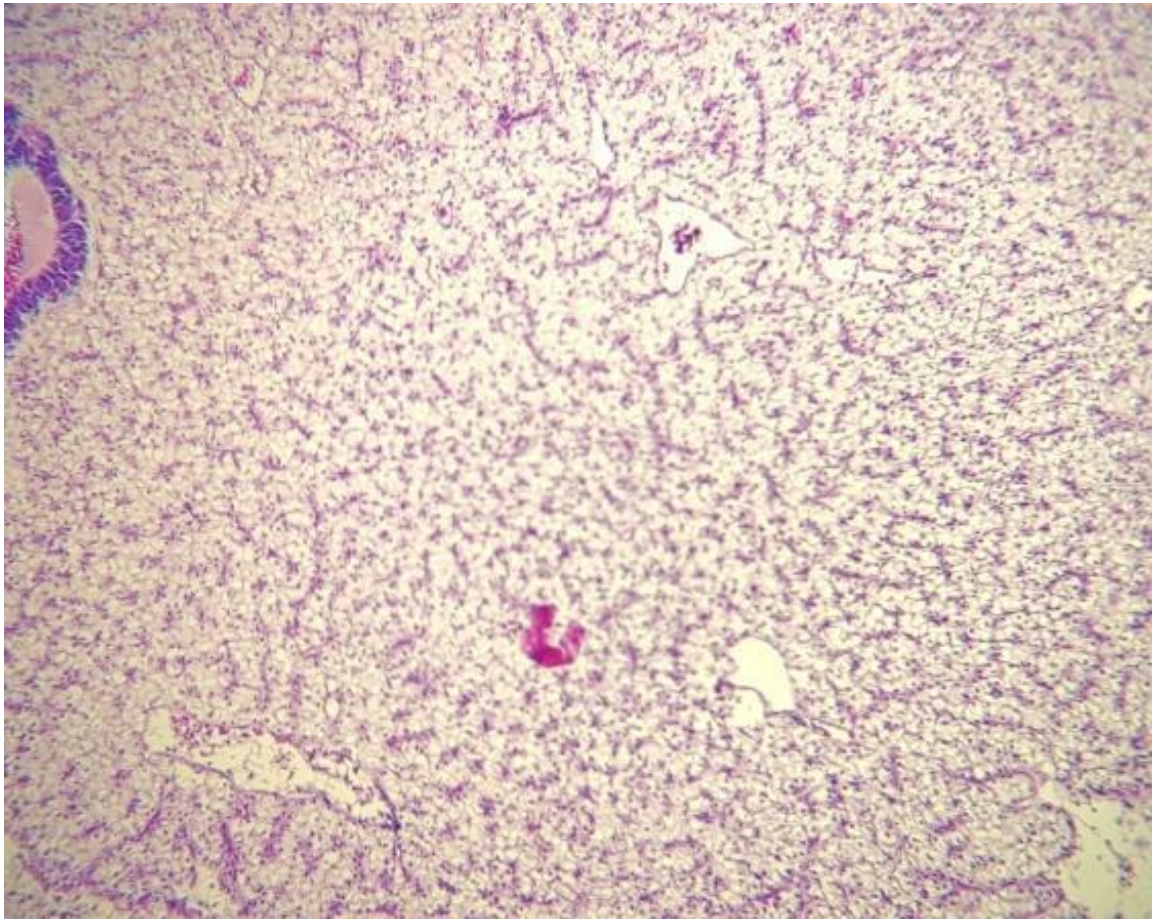


- Ascitic fluid, pale liver
- Corneal opacity

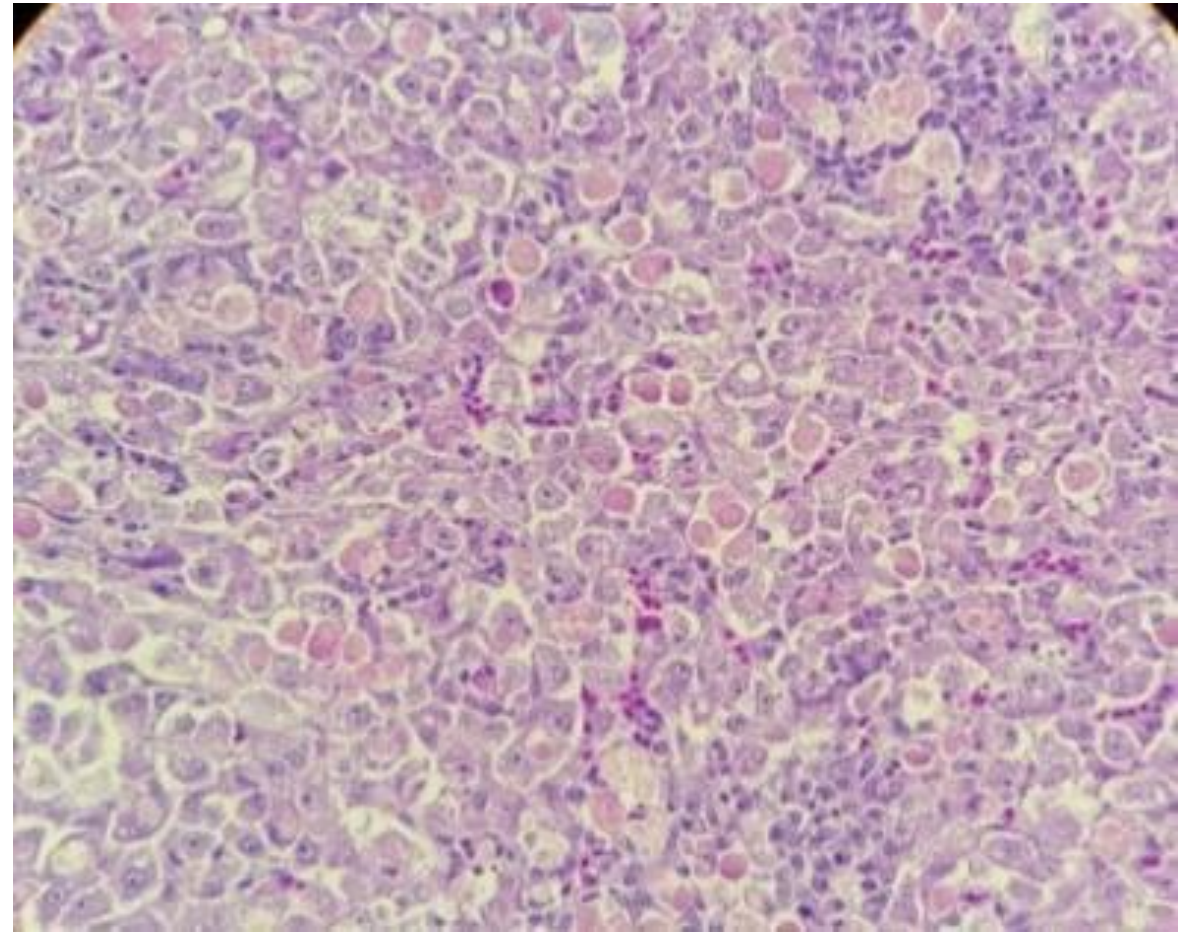


c

- Syncytial cells
- Increase sinusoidal spaces



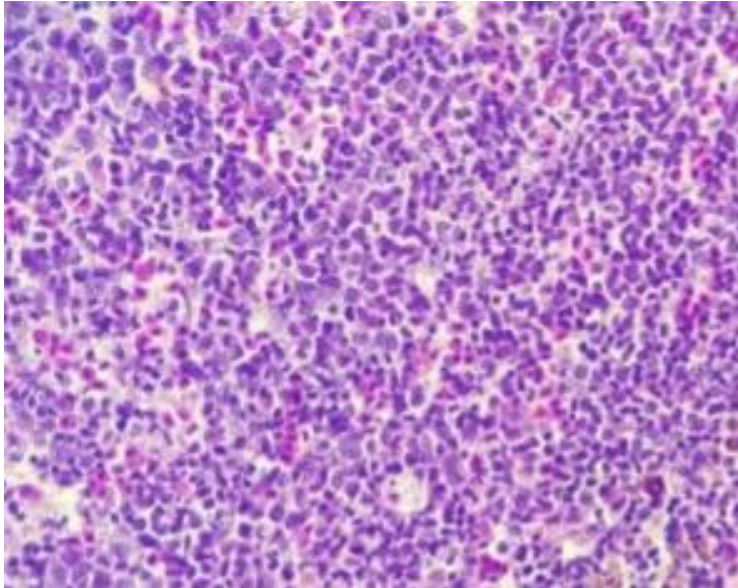
Normal



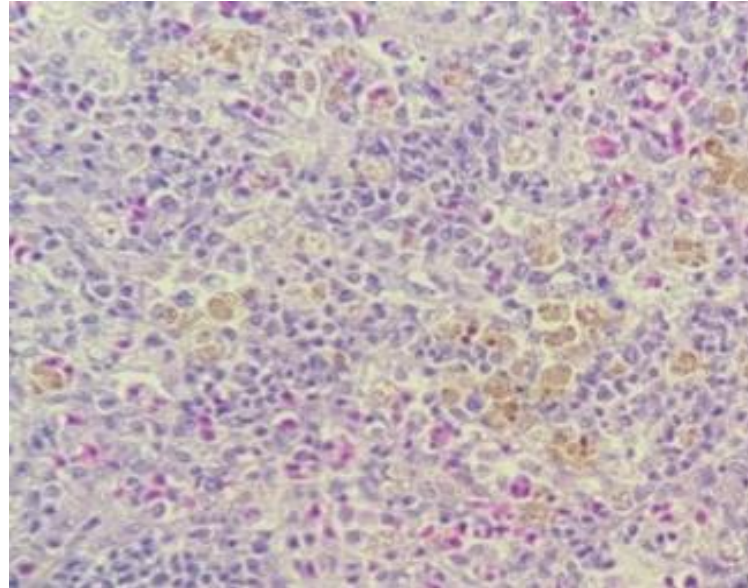
TiLV-infected

Win Surachetpong

Normal

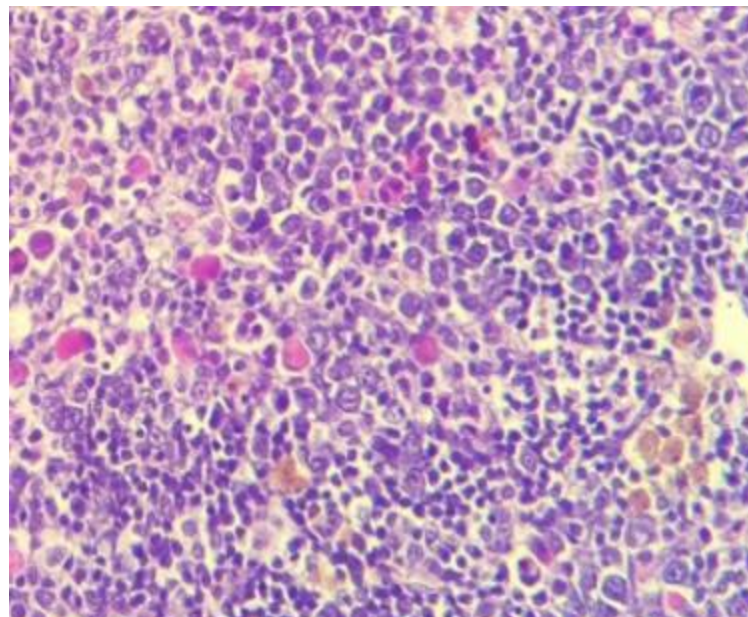
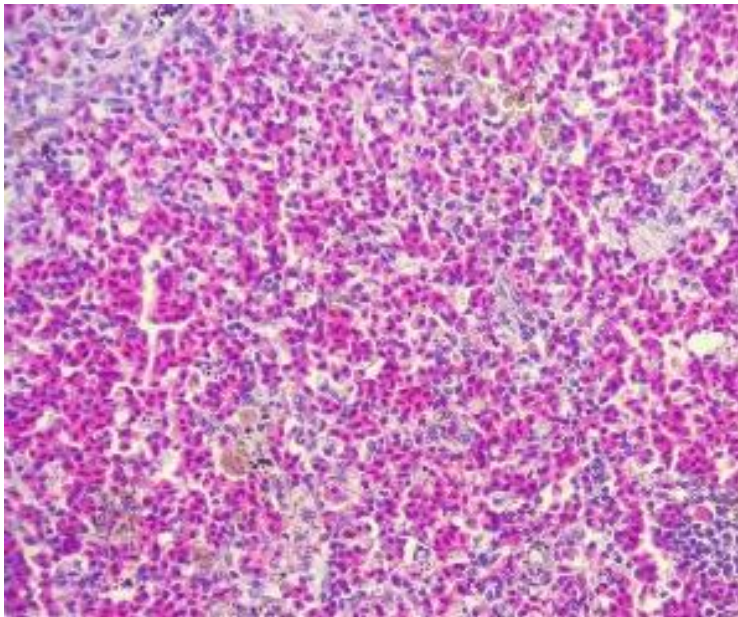


TiLV challenged



Anterior kidney

- Increase melanomacrophage
- Foamy cells



Spleen

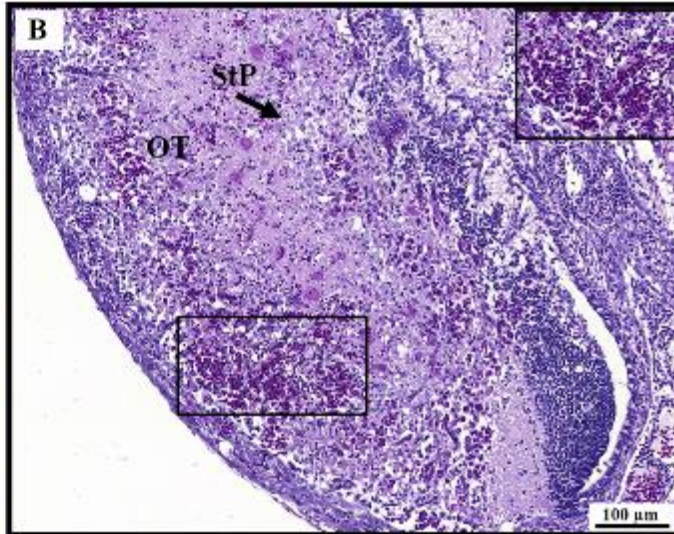
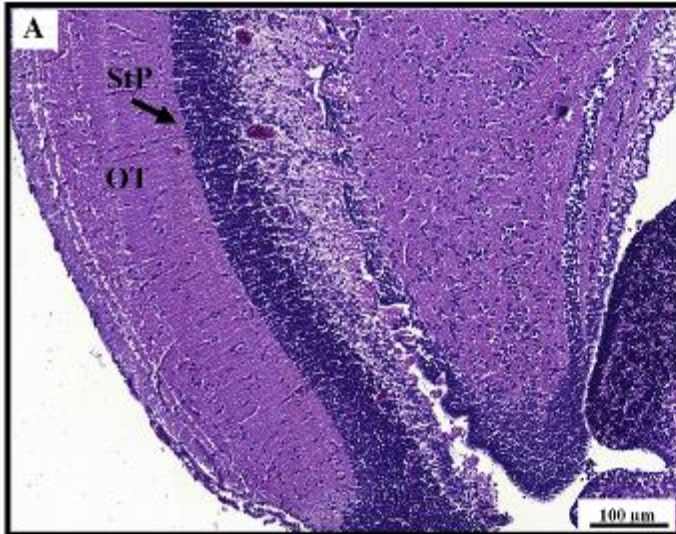
- Increase melanomacrophage
- Foamy cells, enlarge nucleus
- Loss of Red blood cells
- Accumulation of proteinaceous material

Histopathology (level II)

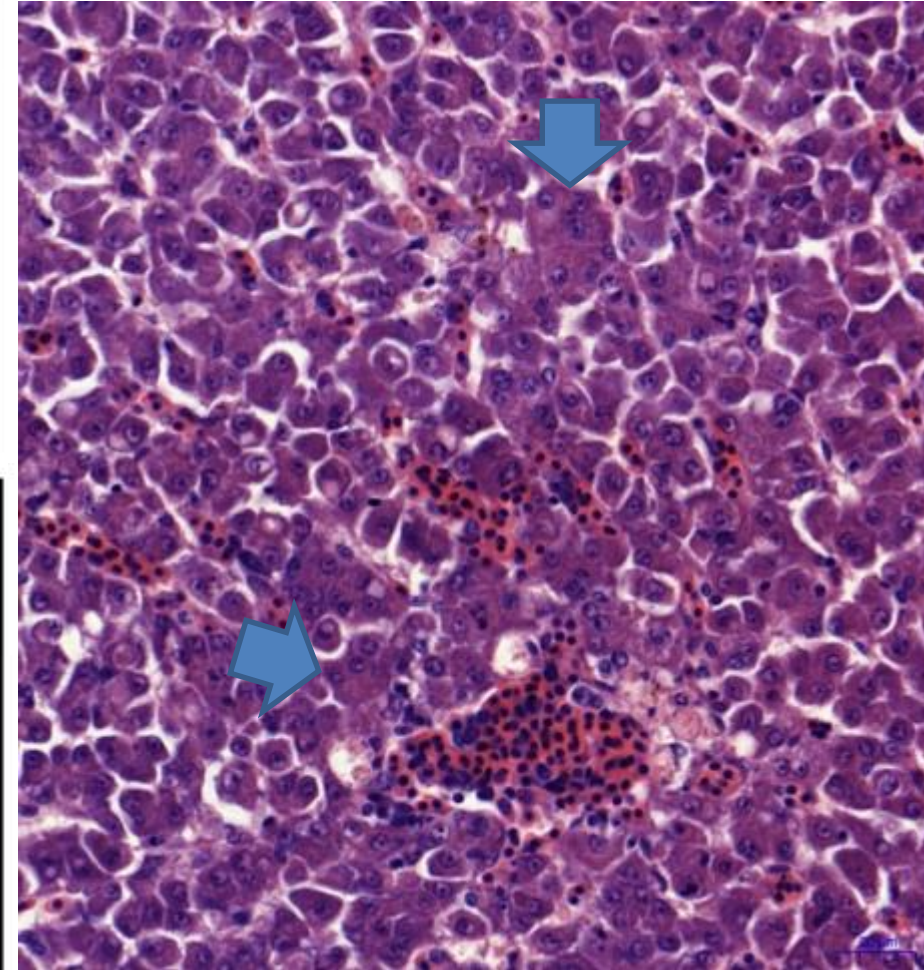
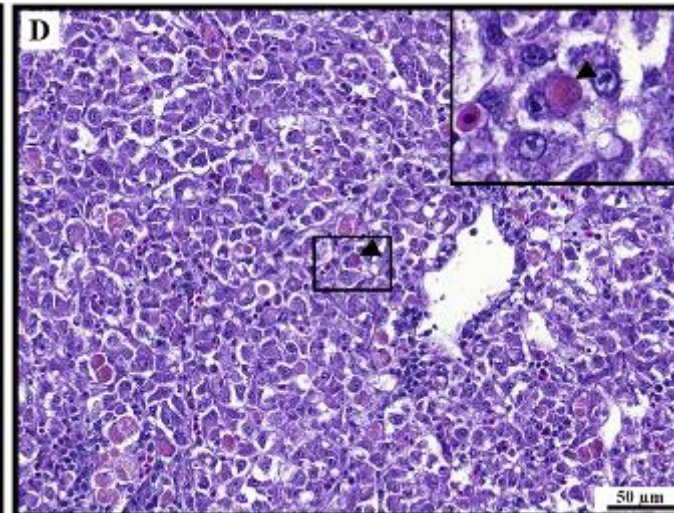
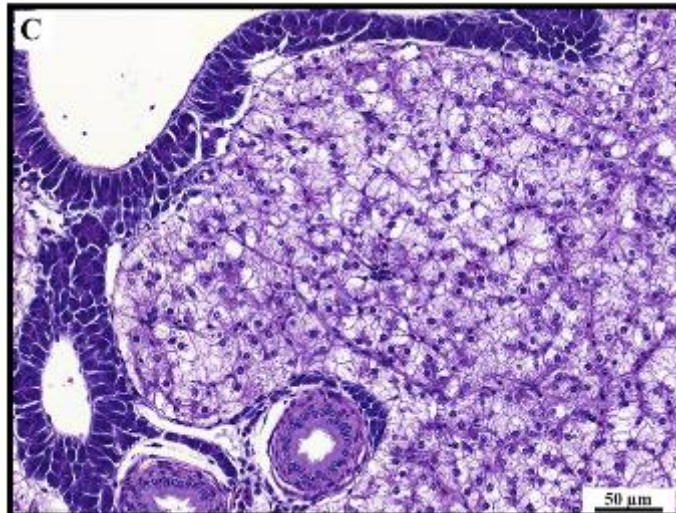
Normal

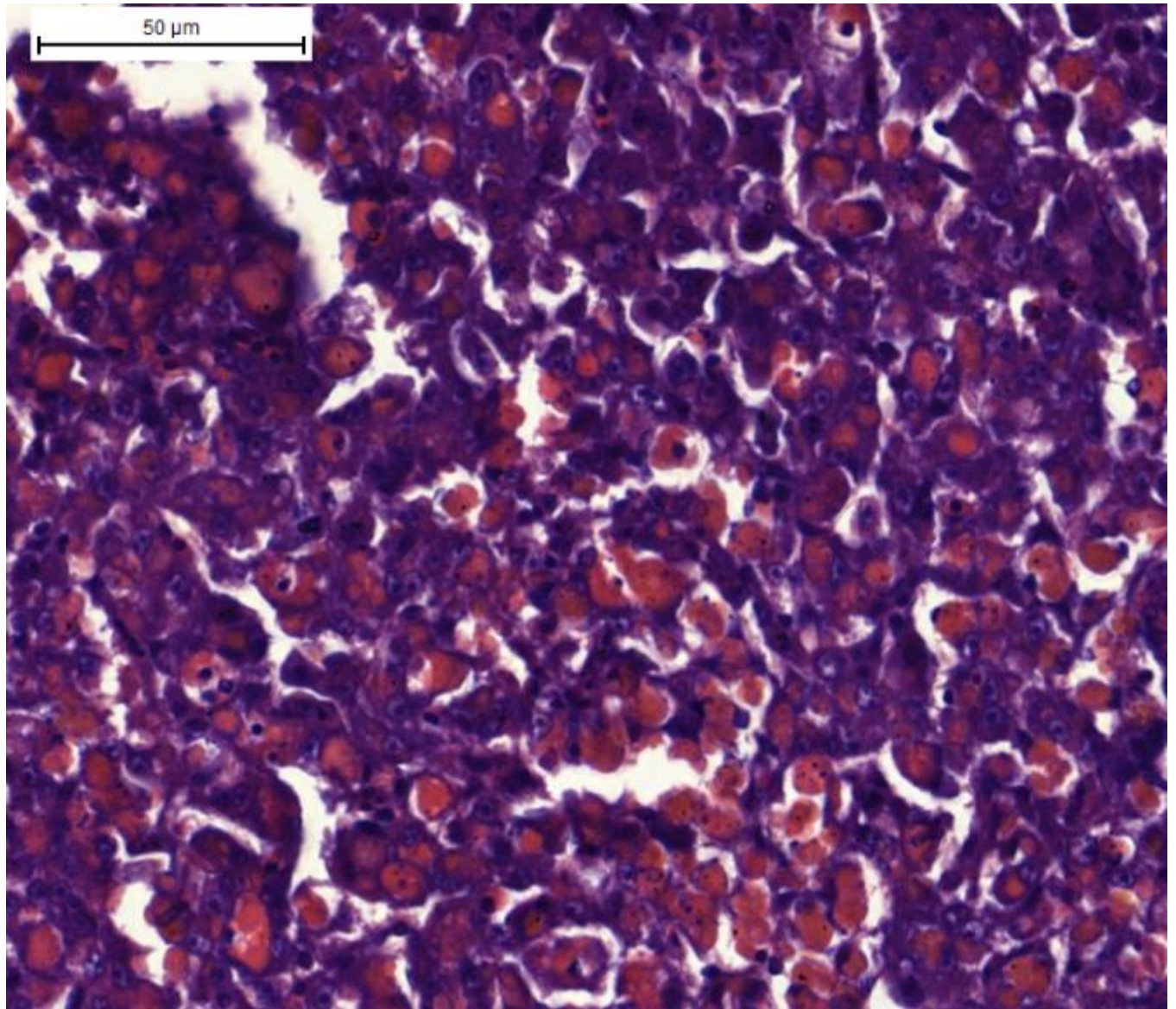
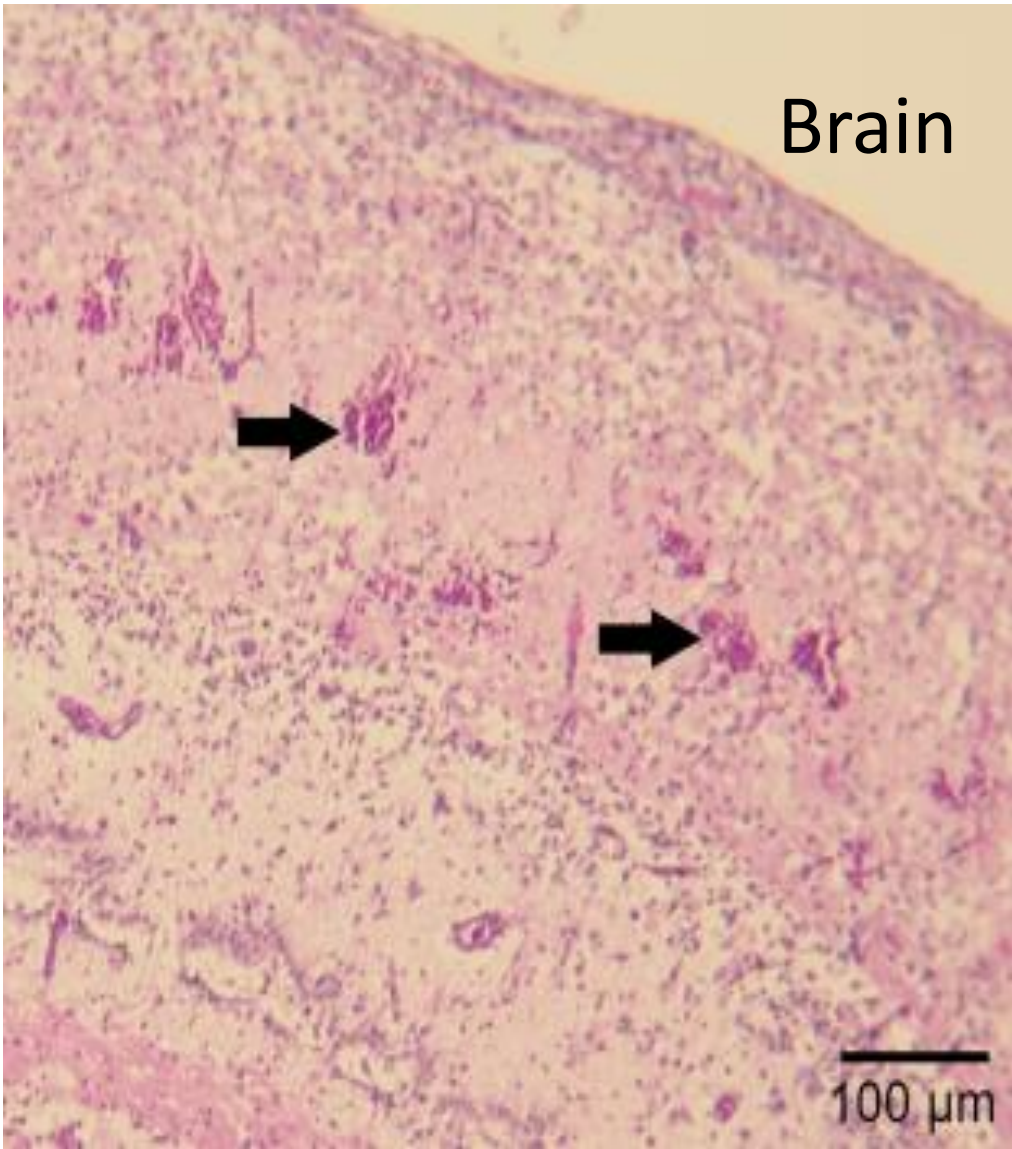
Infected

Brain



Liver

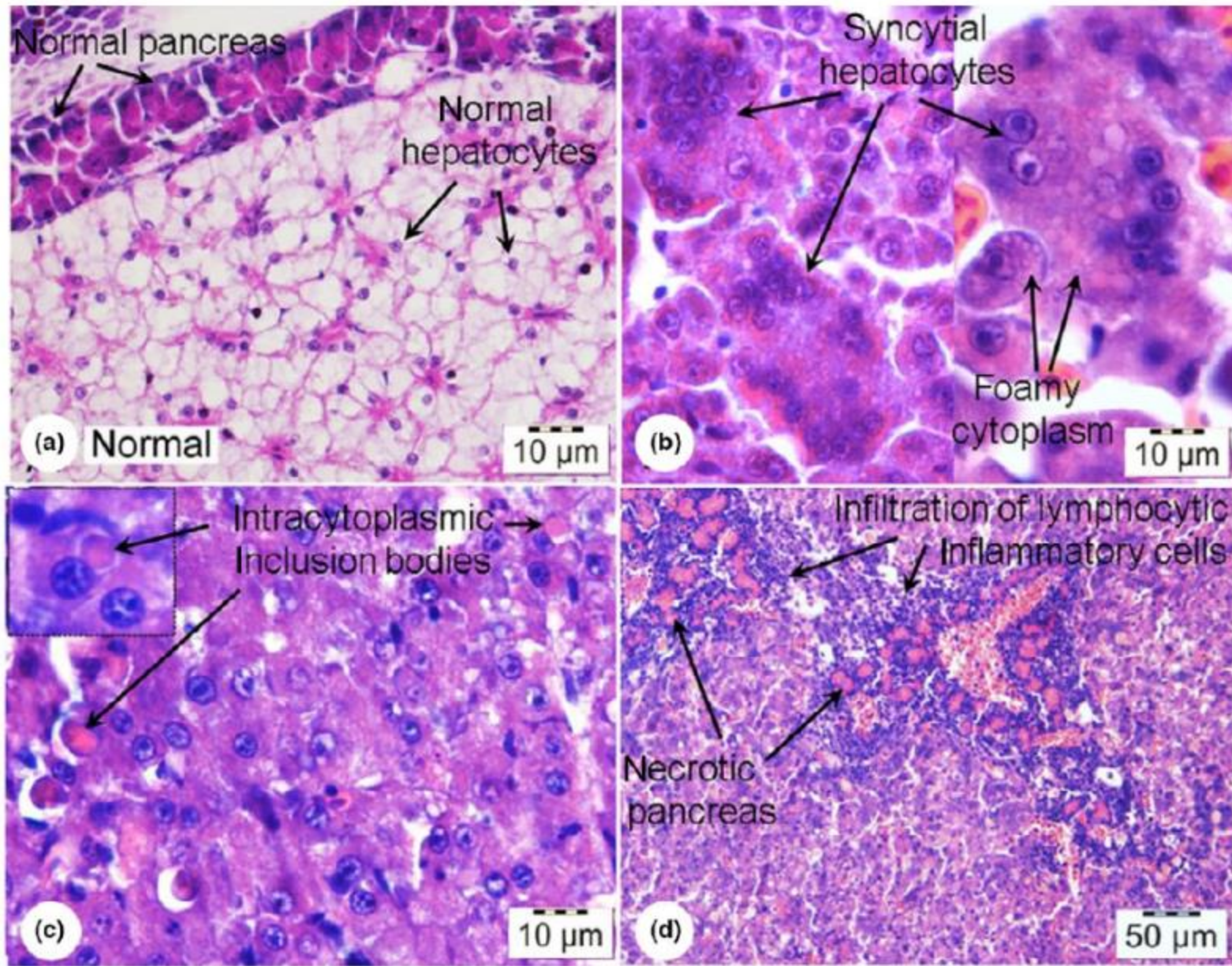




Surachetpong et al., 2017 *Emerging Infectious Diseases*

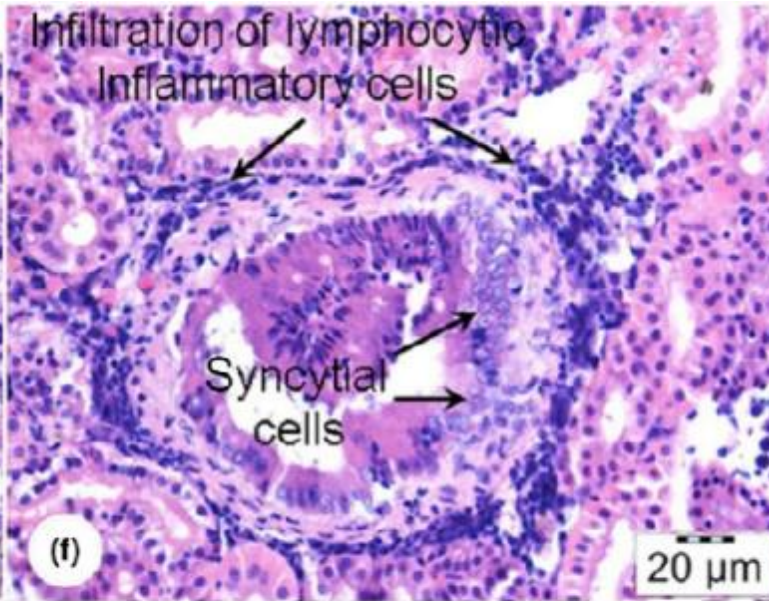
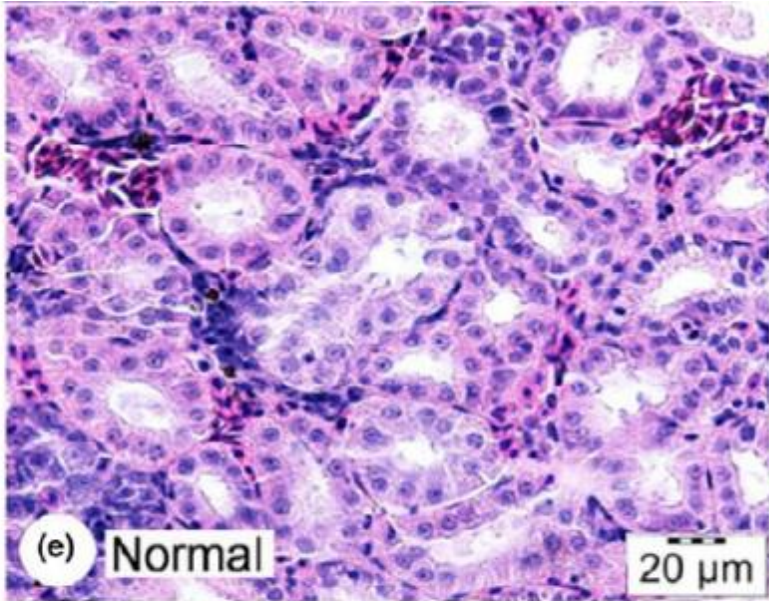
Liver

Liver

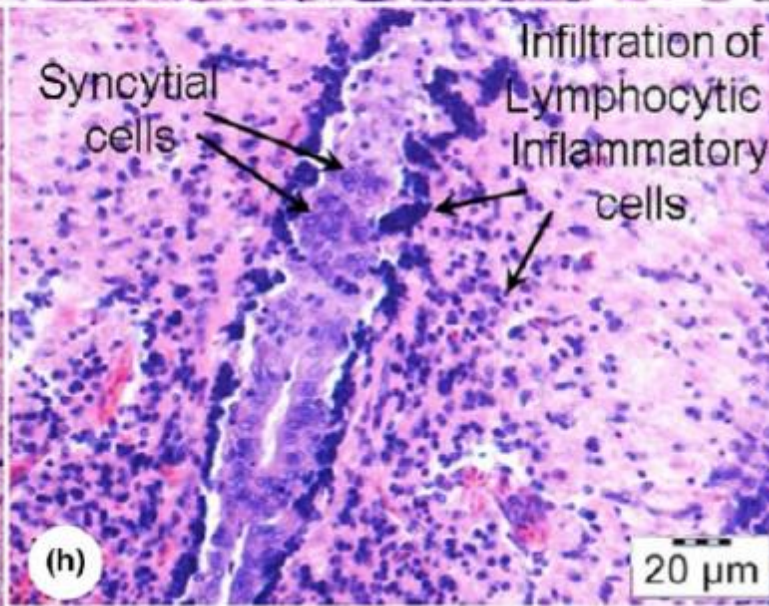
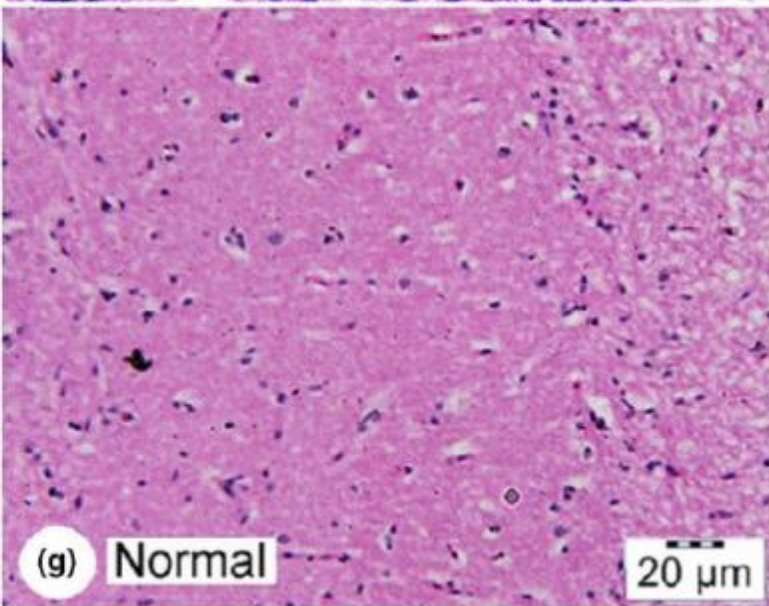


- Foamy cytoplasm
- Syncytial cells
- Intracytoplasmic inclusion body

Kidney

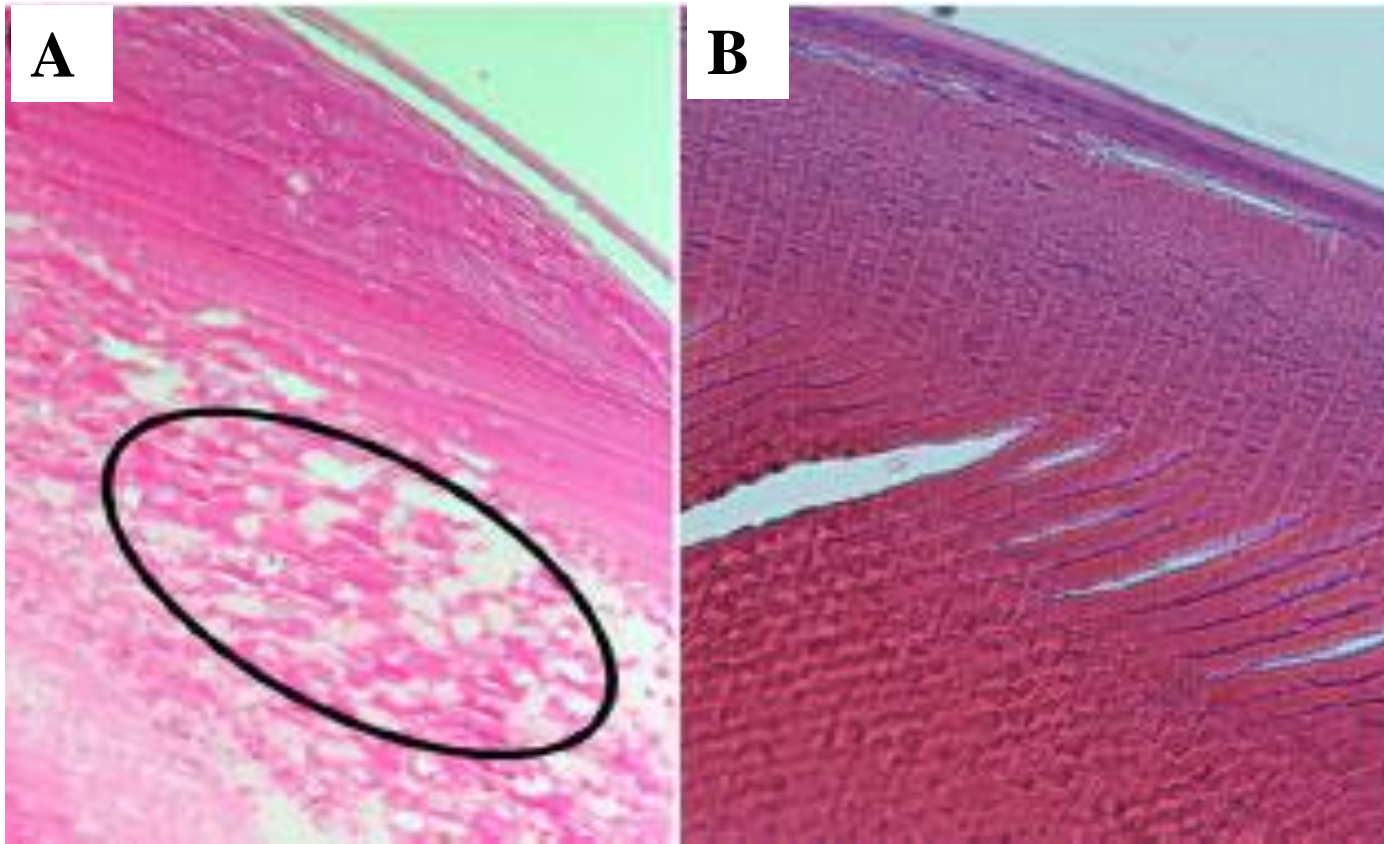


Brain



- Syncytial cells
- Severe infiltration of lymphocytes
- inflammation

Histopathological changes in eye



H&E histology of eye lens in TiLV-infected tilapia. (A) Cataractous changes characterized by formation of eosinophilic spherical structures accompanied by degeneration of crystalline fibers (encircled); (B) control lens from healthy fish.



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Thank you for your attention