

Marie Curie Training Courses

Summer School 2007 – Avian T5/T6/T7/T8

MYELOCYTOMATOSIS IN CHICKEN

- Histological lesions: Practical
 - ☑ Various Tissues from a 22 weeks old laying Hen

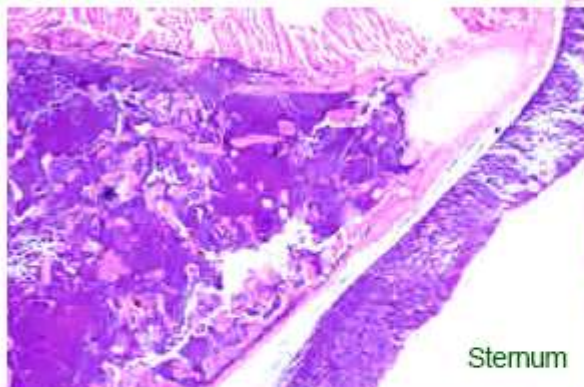
⌘ T5: Bone (Sternum)

⌘ T6: Bone (Pelvis)

⌘ T7: Liver + Kidney

MYELOCYTOMATOSIS IN CHICKEN

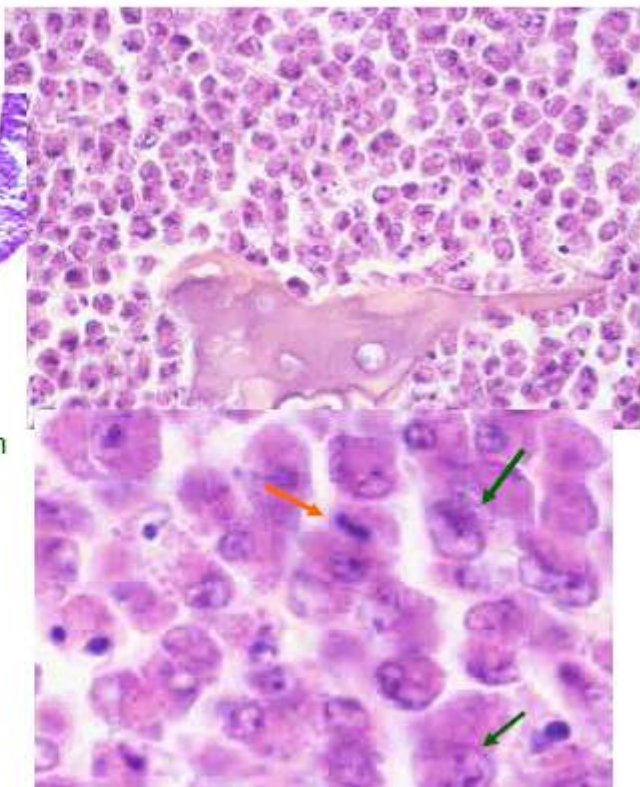
- Histological lesions: Bones



Massive, diffuse tumoral infiltration of bone marrow extending to periosteum, periosseous muscle and connective tissue

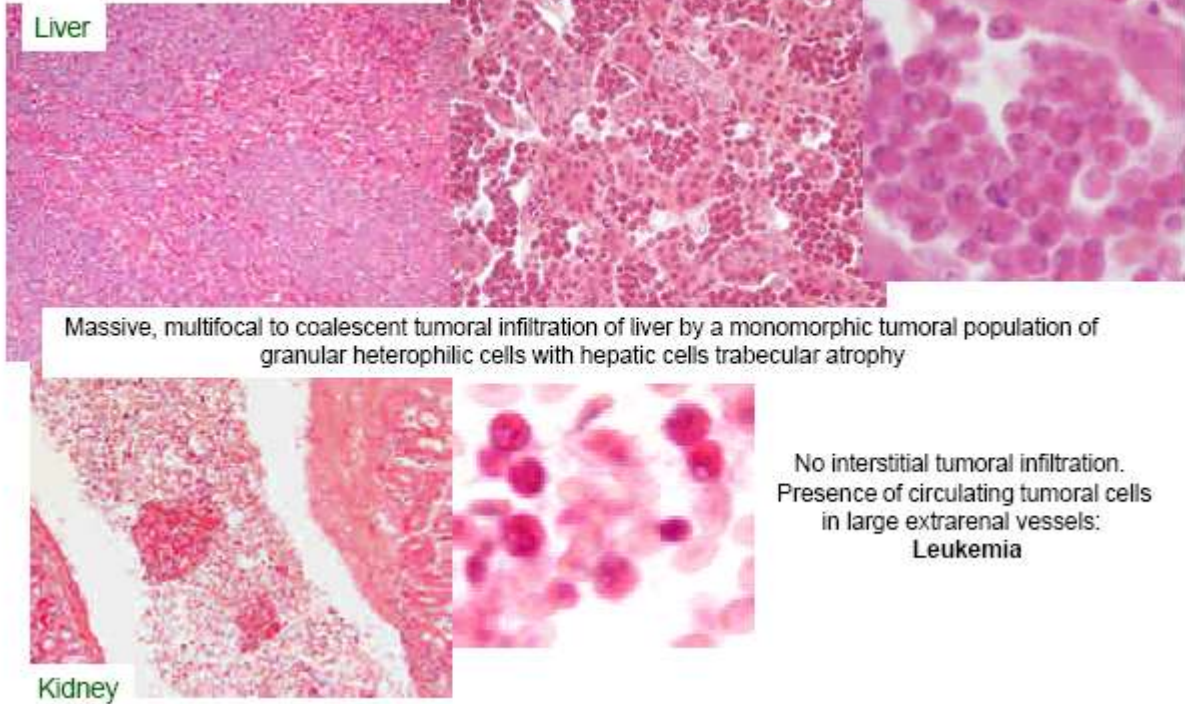
Monomorphic tumoral population of granular heterophilic cells

Tumoral myelocytes with anisocaryosis and mitotic figures



MYELOCYTOMATOSIS IN CHICKEN

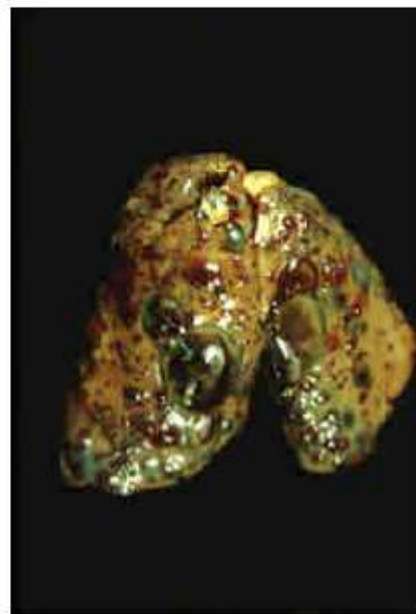
- Histological lesions : Organs



NON HEMATOPOIETIC RETROVIRUS INDUCED TUMOURS



Nephroblastoma



Hemangiosarcoma

OSTEOPETROSIS

- Non neoplastic proliferation of bone tissue associated with production of ALV by osteoblasts
- Bilateral symetric hypertrophy of the tibia and tarsometatarsus diaphysis with regular fusiform enlargement and obliteration of bone marrow cavity by newly formed spongy bone
- Lymphoid leukosis often occurs



AVIAN TUMOURS

- **Classification**

- ☒ **Viral induced tumours**

- ⌘ Herpesvirus: Marek's Disease

- ⌘ Retrovirus

- ◆ ALV/RSV group

- ⌘ Lymphoid leukosis: Lymphomatosis

- ⌘ Erythroblastosis and Myeloblastosis/Myelocytomatosis

- ⌘ Sarcomas and other connective tissues tumours

- ⌘ Nephroblastomas, hemangiomas, hepatocarcinomas...

- ⌘ Osteopetrosis

- ◆ REV group

- ⌘ Spontaneous lymphoid neoplasms in turkeys ?

- ☒ **Tumours of unknown aetiology**

- ⌘ Benign and malignant neoplasms of various tissues

Tumours of unknown aetiology

- Skin tumours

- ☑ **Dermal Squamous Cell Carcinoma: Keratoacanthoma in chicken**

- ↖ Young broiler chickens

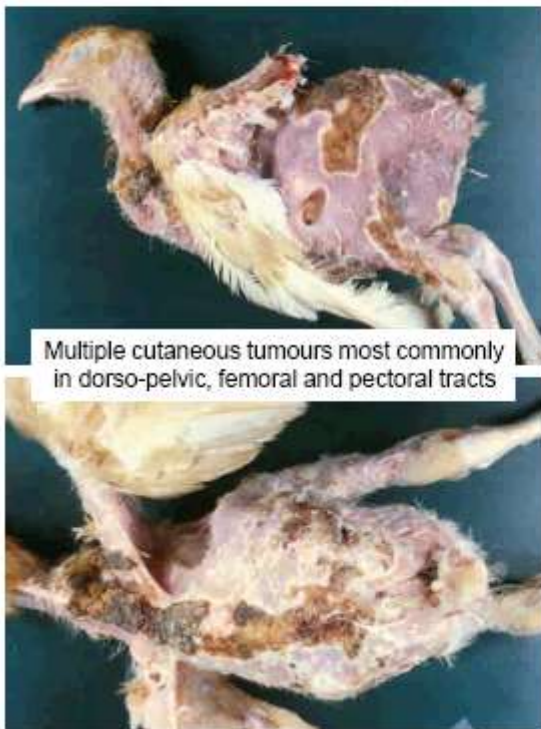
- ↖ Most of the time identified at slaughterhouse on dressed carcasses (1p1000 or more in some individual flocks)

Tumours of unknown aetiology

- Skin tumours

- ☑ **Dermal Squamous Cell Carcinoma: Keratoacanthoma in chicken**

- ↖ Gross



Tumours of unknown aetiology

•Skin tumours

☒ Dermal Squamous Cell Carcinoma: Keratoacanthoma in chicken

- ☞ Young broiler chickens
- ☞ Most of the time identified at slaughterhouse on dressed carcasses (1p1000 or more in some individual flocks)
- ☞ **Gross**
- ☞ No metastasis, may regress spontaneously
- ☞ **Histo** : Well differentiated keratinized squamous cell Carcinoma : kerato-acanthoma
- ☞ **Aetiology** ?
 - ◆ Avian pox genoma identified in tumour cell nuclei using PCR

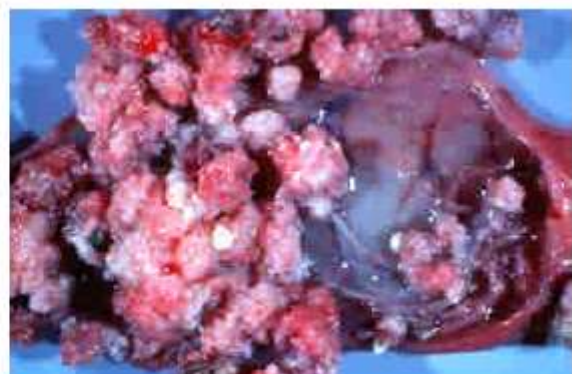
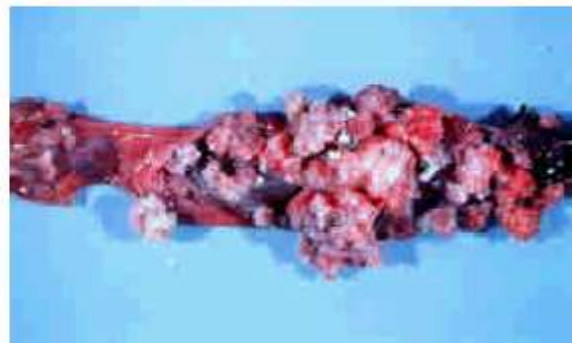
Tumours of unknown aetiology

• Papillomas: Papillomatosis

- ☒ Psittacines ++
- ☒ Skin
- ☒ Mouth, Oesophagus, Crop



- ☒ **Aetiology**: Papillomavirus suspected



Tumours of unknown aetiology

- Kidney tumours
 - ☒ Carcinomas and adenomas
 - ☒ Budgerigars +++
 - ☒ Clinical signs: Unilateral or bilateral lameness and paralysis



Tumours of unknown aetiology

- Kidney tumours:
 - ☒ Geese, Rhenan strain
 - ☒ Females breeders, 4th or 5th laying periods
 - ☒ Metastatic renal adenocarcinoma
 - ☒ Enzootic (30-40% at the slaughter House)
 - ☒ Aetiology ?



Tumours of unknown aetiology

- Ovarian tumours

- Adenocarcinoma in laying females



Hen



Hen

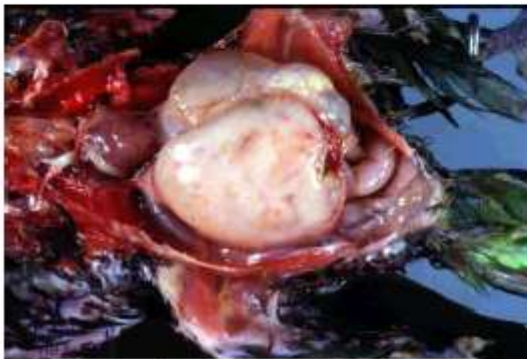


Turkey

Ovarian location in Marek's Disease

Tumours of unknown aetiology

- Liver tumours



Cholangiocarcinoma, Grey Parrot



Cholangiocarcinoma, Duck



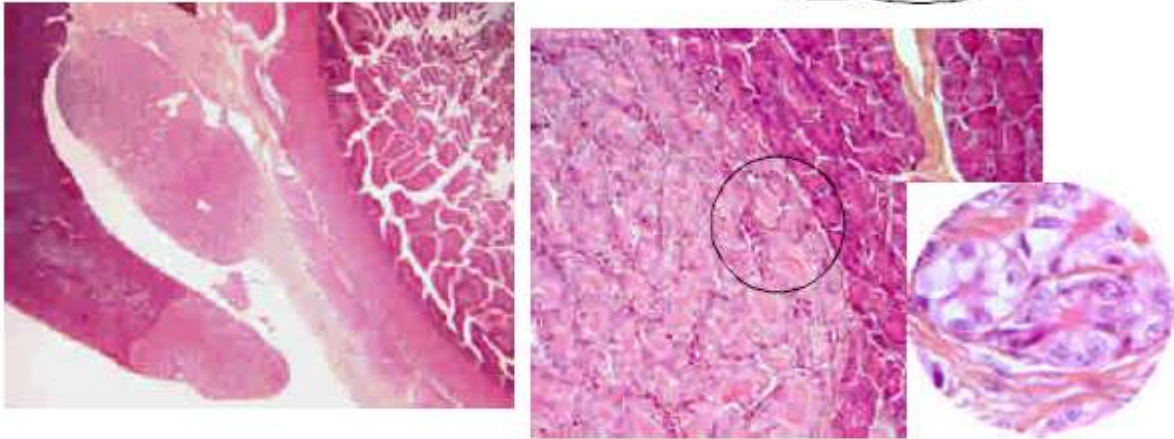
Hepatocarcinoma, Duck

Hepatocarcinomas in ducks :
Aflatoxicosis and association with Duck Hepatitis B virus

Tumours of unknown aetiology

- Last histological case : T8, Guinea fowl

If you are still alive!



Multinodular epithelial tumour, involving the exocrine pancreas and extending to duodenal serosa.
Tubular structures of large neoplastic cells with vesicular basal round nuclei and luminal acidophilic secretion:
Pancreatic acinar cell Adenocarcinoma

Differential diagnosis: Metastatic abdominal adenocarcinoma derived from ovary or oviduct invading the serosa and pancreas parenchyma (no primary genital involvement in the present case).