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

Liver

Massive, multifocal to coalescent tumoral infiltration of liver by a monomorphic tumoral population of granular heterophilic cells with hepatic cells trabecular atrophy

Kidney

No interstitial tumoral infiltration. Presence of circulating tumoral cells in large extrarenal vessels.

Leukemia

NON HEMATOPOIETIC RETROVIRUS INDUCED TUMOURS

Nephroblastoma

Hemangiosarcoma
OSTEOPETROSIS

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

AVIAN TUMOURS

- Classification
  - Viral induced tumours
    - Herpesvirus: Marek's Disease
  - Retrovirus
    - ALV/RSV group
      - Lymphoid leukemia: 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)

- Skin tumours

  - Dermal Squamous Cell Carcinoma: Keratoacanthoma in chicken
    - Gross

  - Multiple cutaneous tumours most commonly in dorso-pelvic, femoral and pectoral tracts
  - Ulcerated nodules located at the basis of feather follicles and filled with keratin
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 genome 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

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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

- Liver tumours
  - Cholangiocarcinoma, Grey Parrot
  - Hepatocarcinoma, Duck

Ovarian location in Marek’s Disease

Hepatocarcinomas in ducks: Aflatoxicosis and association with Duck Hepatitis B virus
**Tumours of unknown aetiology**

- Last histological case: T8, Guinea fowl

Multinucleolar 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).