Case Number: AP12-3106

[Digital Scan]

Mac Law, DVM, PhD, DACVP
Professor of Pathology
North Carolina State University
College of Veterinary Medicine
Raleigh, North Carolina
mac_law@ncsu.edu

Meyer et al., 2006

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Case History: AP12-3106

- **Presenters:** Mac Law, Allison Boone and Jennifer Davis
- **Signalment:** 13-year-old Walking Horse mare
- **History**
  - Tissues reported to be from a “swelling in the perineum/mammary gland region.”
  - Tru-cut biopsies and excisional biopsies submitted.
Microscopic Findings

- Sheets of small- to medium-sized lymphocytes
- Background of fine, fibrillar, eosinophilic, extracellular stroma
- Numerous macrophages, scattered multinucleate giant cells, some binucleate cells
  - Giant cells have 10 or more peripheral nuclei
Special Stains

- **Negative** on
  - Acid fast
  - Fite’s stain
  - PAS
CD3 Immunohistochemistry
Morphologic Diagnosis

• T-cell lymphoma

• Tissues were also submitted for flow cytometry and were confirmed as predominantly T cells
Log Data Units: Linear Values
Sample ID: EQUINE MASS
Patient ID: DIAMOND CD79b
Acquisition Date: 21-Dec-12
Gate: G1
Gated Events: 8975
Total Events: 15000
X Parameter: FSC-Height (Linear)
Y Parameter: CD79b FITC (Log)
Quad Location: 0, 29

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96.57% positive for CD3 (T-cell lymphoma)

Log Data Units: Linear Values
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Patient ID: DIAMOND CD3
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CD79b (B cells) 5.43%

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Equine Lymphoma

- Meyer et al. (2006) – 37 cases
  - Weight loss and ventral edema most common history
  - Laboratory abnormalities
    - Hyperfibrinogenemia
    - Hypoalbuminemia
    - Anemia
    - Leukemia
    - Hyperglobulinemia
    - Thrombocytopenia
Equine Lymphoma

- Meyer et al. (2006) – 37 cases
  - Significant proportion (21%) had marked histiocytic and multinucleate giant cell infiltrates, as in this case
  - No organisms seen using Ziehl-Neelsen and PAS
- 26 of 37 were T-cell lymphomas
  - 25 of these 26 had a low mitotic rate
Equine Lymphoma – diagnostic challenges

• Meyer et al. (2006) – 37 cases
  – Significant proportion (21%) had marked histiocytic and multinucleate giant cell infiltrates, as in this case
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• 26 of 37 were T-cell lymphomas
  – 25 of these 26 had a low mitotic rate
Equine Lymphoma

- Jan., 2013 Vet Path (Durham et al.)
  - 203 cases of equine lymphoma classified using WHO
    - Multicentric lymphomas most common (41%)
    - T-cell-rich large B-cell lymphomas most common subtype (43%)
    - Peripheral T-cell lymphomas (22%)
    - Diffuse large B-cell lymphomas (13%)

- For B cells, anti-CD20 antibody preferred over CD79a due to better staining of equine B cells

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References
