A jejunal mass in a 2-year-old dog

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Case Presentation: A two-year-old, spayed female mixed breed dog presented to the Purdue University Veterinary Teaching Hospital Small Animal Internal Medicine Service for chronic regurgitation and diarrhea with intermittent vomiting, which had been waxing and waning for approximately six months. Endoscopy of the gastrointestinal tract revealed no significant abnormalities, and endoscopic biopsies returned as lymphoplasmacytic enteritis. An abdominal ultrasound revealed a small 1cm x 1 cm x 1 cm mass on the serosal aspect of the jejunum; however, the owners declined further evaluation at this time. She was initially prescribed Cisapride and Omeprazole and was monitored at home.

The patient presented again for a recheck two weeks later, at which point her clinical signs had resolved. Initial physical exam findings were unremarkable except for an episode of coughing during the exam. The owners noted that the patient was developing a cough at home as well. CBC findings were within normal limits except for a mild leukopenia (5.8 k/µL [6-17 k/µL]), with lymphocytes (1.2 k/µL [1-5 k/µL]) and monocytes (0.17 k/µL [0.15-1.35 k/µL]) at the lower end of the reference interval. A SNAP 4Dx Plus Test was negative. Thoracic and abdominal radiographs also revealed no significant findings. On abdominal ultrasound, the jejunal nodule was identified again and appeared static in size. Fine needle aspiration of the nodule was performed and submitted for cytologic evaluation (figures 1 and 2). The mass was later removed, and impression smears of the mass were performed with identical findings (figure 3).

Figure 1: FNA from jejunal mass (60x magnification, Modified Wright).

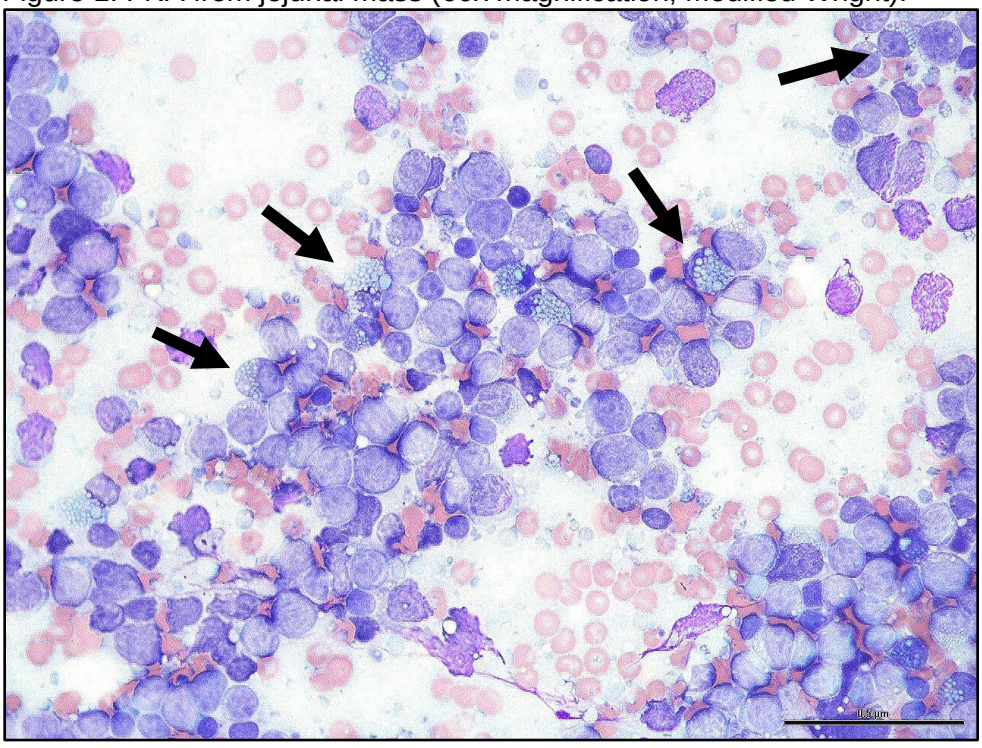


Figure 2: FNA from jejunal mass (100x magnification, Modified Wright).

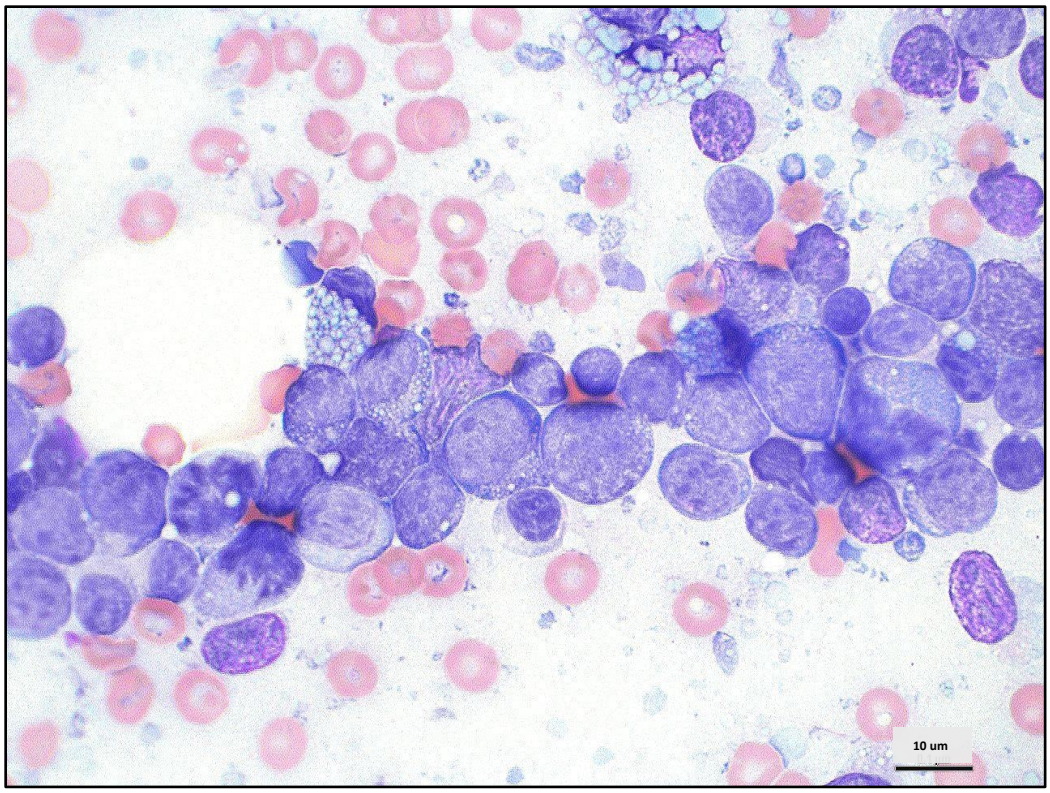
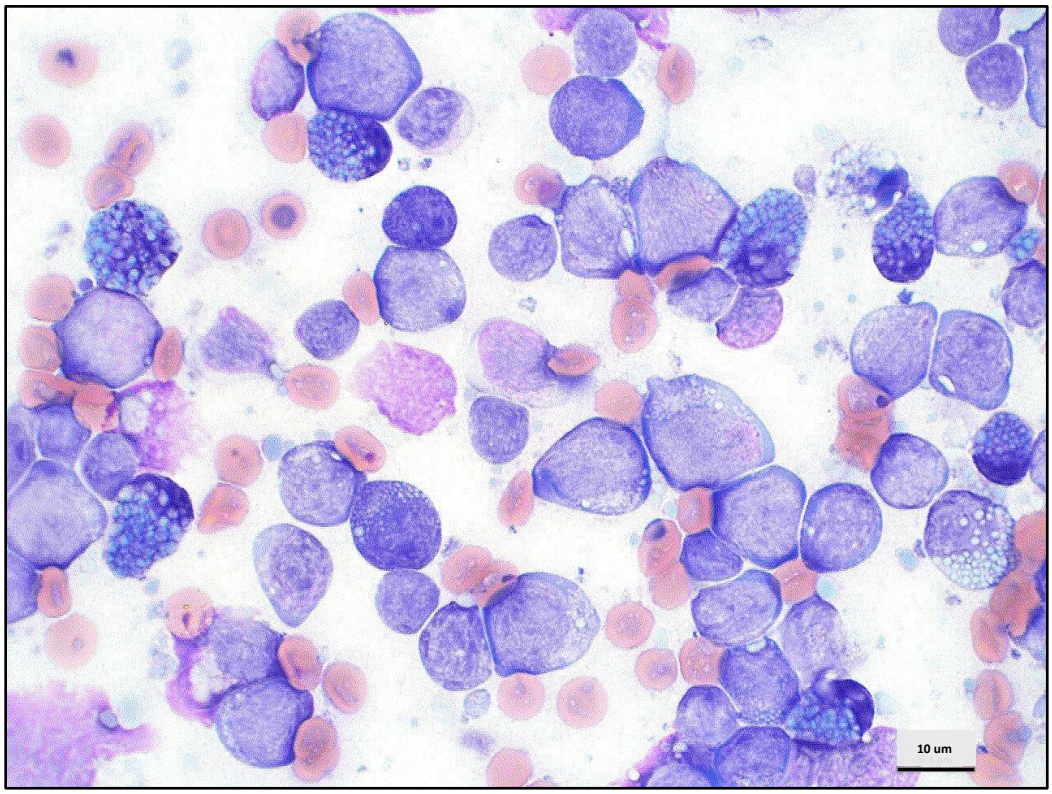


Figure 3: Impression smear from jejunal mass (100x magnification, Modified Wright).



Question 1: Which immunohistochemistry marker is LEAST likely to be positive in plasma cells?

A. MUM1
B. CD79a
C. Pax5
D. CD45

Answer: C. Pax5

1. Ramos-Vara, J. A., Miller, M. A., & Valli, V. E. (2007). Immunohistochemical detection of multiple Myeloma 1/Interferon Regulatory factor 4 (mum1/irf-4) IN CANINE Plasmacytoma: Comparison with CD79a and Cd20. *Veterinary Pathology*, *44*(6), 875–884. https://doi.org/10.1354/vp.44-6-875
2. Lin, P., Mahdavy, M., Zhan, F., Zhang, H.-Z., Katz, R. L., & Shaughnessy, J. D. (2004). Expression of pax5 in cd20-positive multiple myeloma assessed by immunohistochemistry and oligonucleotide microarray. *Modern Pathology*, *17*(10), 1217–1222. https://doi.org/10.1038/modpathol.3800169

Question 2: Which type of lymphoma is considered the feline equivalent to Hodgkin's disease?

A. Marginal zone lymphoma
B. T-cell-rich large B-cell lymphoma
C. Diffuse large B-cell lymphoma
D. Peripheral T-cell lymphoma

Answer: B. T-cell-rich large B-cell lymphoma

1. Meuten, D. J., Moulton, J. E., Valli, V. E., Bienzle, D., & Meuten, D. J. (2017). In *Tumors in domestic animals* (pp. 245–248). Wiley Blackwell.