

Intranasal mass in a dog

Contributors

Manuela Zanetti, DVM ¹, Giulia Mangiagalli, DVM ¹, Gaia Vichi, DVM, Dipl. ECVP ¹, Riccardo Ferriani, DVM ², Silvia Rossi, DVM, Dipl. ECVCP ^{1,2}

¹ BiEsseA Laboratorio Analisi Veterinarie, a company of scil animal care company Srl, Milano, (Italy)

² Ospedale veterinario San Francesco, Milano (Italy)

Manuela Zanetti - manuela.zanetti@scilvet.com

Specimen

- Intranasal mass cytology-squash preparation from endoscopic biopsy

Signalment

4 years old neutered female mixed breed dog.

History

Dea is a 4-year-old female dog adopted 2 years ago from South Italy. When adopted, leishmaniosis had been diagnosed by the referring veterinarian based on the presence of compatible clinical signs, a serological positivity to a quantitative enzyme-linked immunosorbent assay (ELISA) for the detection of antibodies against *Leishmania infantum*, and a compatible electrophoresis.

The dog had been placed under treatment various time for the persistence of symptoms despite of the therapy. The last treatment was withdrawn a few weeks prior to the presentation to San Francesco veterinary hospital, apparently leading to resolution of clinical signs. Vaccinations and anti-parasitic prophylaxis were up to date.

The referring veterinarian send the dog to San Francesco veterinary hospital for the investigation of a nasal discharge causing inspiratory dyspnoea and stertor. Clinical signs appeared during the previous month and led to difficulty in resting and sleeping.

Clinical findings

Serology for *Leishmania infantum* was performed some weeks before the onset of respiratory signs, immediately after withdrawal of the last treatment. At the same time, urinalysis and serum protein electrophoresis (SPE) were performed.

Complete urinalysis was unremarkable, while the quantitative ELISA used for serology still revealed a low positivity; also, a polyclonal peak in beta-gamma regions was evident on SPE (**figure 1**).

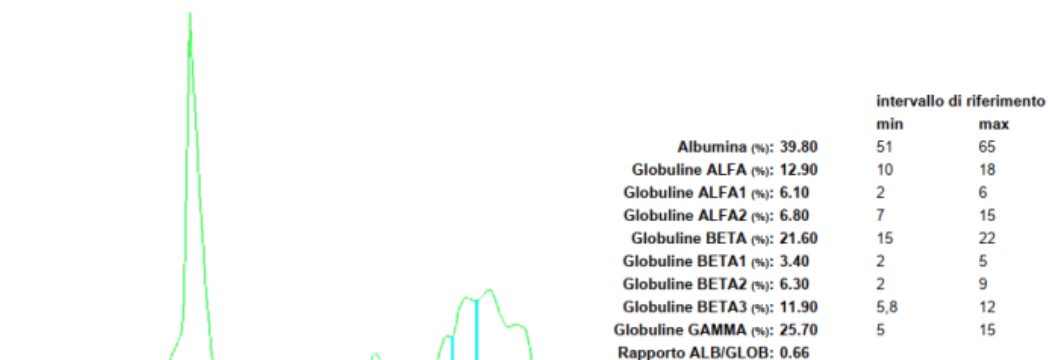


Figure 1. Capillary zone SPE.

TEST	RESULT	REFERENCE INTERVAL
Quantitative ELISA	4,5	<0,7: negative 0,7-1,5: ambiguous >6: high positive

Hematological and biochemical exams were performed a few days before the presentation at San Francesco veterinary hospital by the referring veterinarian. Hematology showed a moderate leukocytosis with neutrophilia, eosinophilia and monocytosis. No morphological alterations were reported on the blood smear evaluation. On biochemistry profile, only mild hyperglobulinemia was recorded. Data are shown in the table below.

TEST	RESULT	REFERENCE INTERVAL	UNITS
Hematology			
HCT	38,4	37,3-61,7	%
RBC	5,75	5,65-8,87	M/uL
Hb	13,5	13,1-20,5	g/dL
MCV	66,8	61,6-73,5	fL
MCHC	35,2	32-37,9	g/dL
WBC	32,43	5.6-14	K/uL
Segmented neutrophils	22,31	3,8-8,9	K/uL
Band neutrophils	0	0-0.3	K/uL
Lymphocytes	4,1	1,2-4,1	K/uL
Monocytes	3,01	0,2-0,75	K/uL
Eosinophils	2,07	0,15-1,1	K/uL
Platelets	216	103-395	K/uL
Biochemistry			
ALT	27	15-64	IU/L
ALP	53	20-120	IU/L
Urea	18	11-43	mg/dL
Creatinine	0,8	0,7-1,3	mg/dL
Total Protein	7,33	5,5-7,6	g/dL
Albumin	2,56	2,4-3,8	g/dL
Globulin	4,77	2,5-4,3	g/dL

The physical examination at the first presentation to San Francesco veterinary hospital revealed severe respiratory distress; the dog showed mouth breathing. The airflow seemed to be obstructed in both of the nostrils. The other organic functions were normal. The same day it was decided to submit the dog to diagnostic imaging to investigate the nasal discharge. In particular, computed tomography (CT) scan of the whole body and rhinoscopy were performed. CT scan of the head revealed the presence of a mass in the nasopharynx, associated with mild osteolysis of the hard palate region and rostral endo-nasal mild invasiveness.

Rhinoscopy revealed bilateral catarrhal rhinopathy, hyperaemic nasal-pharyngopathy, and an irregular, smooth, soft nasal mass which completely obstructed the choanae.

CYTOLOGY

During rhinoscopy, several biopsies were performed to submit to histopathology. One of the biopsies was used to prepare two cytological smears using the squash preparation's technique (figures 2-7).

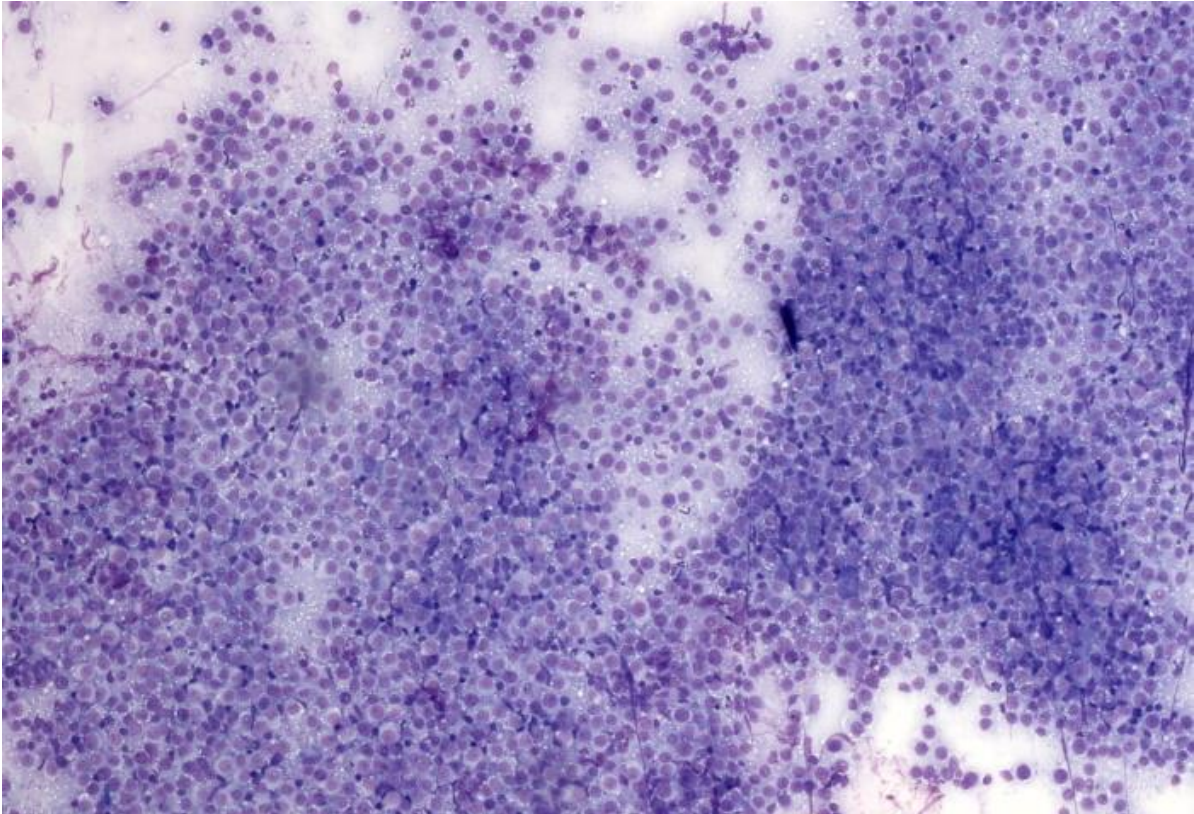


Figure 2. Squash preparation of the intra-nasal mass, May-Grunwald Giemsa stain, 10x objective.

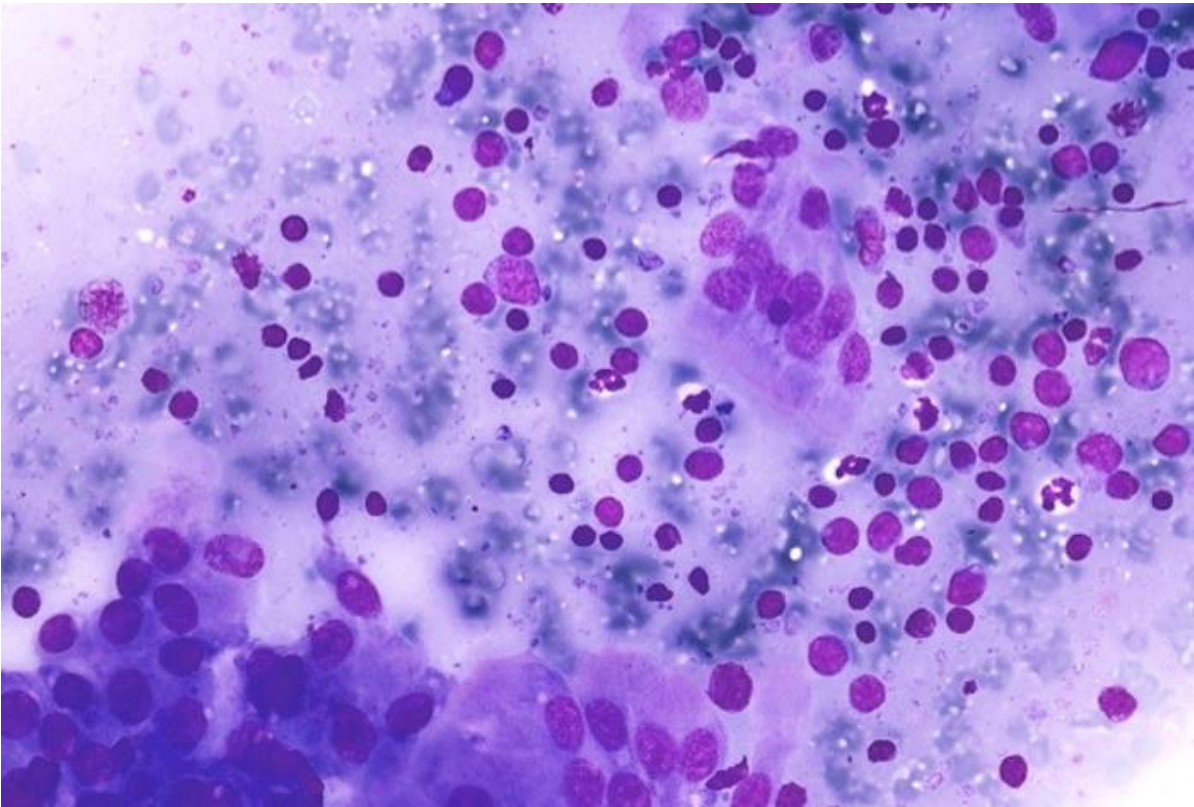


Figure 3. Squash preparation of the intra-nasal mass, May-Grunwald Giemsa stain, 40x objective.

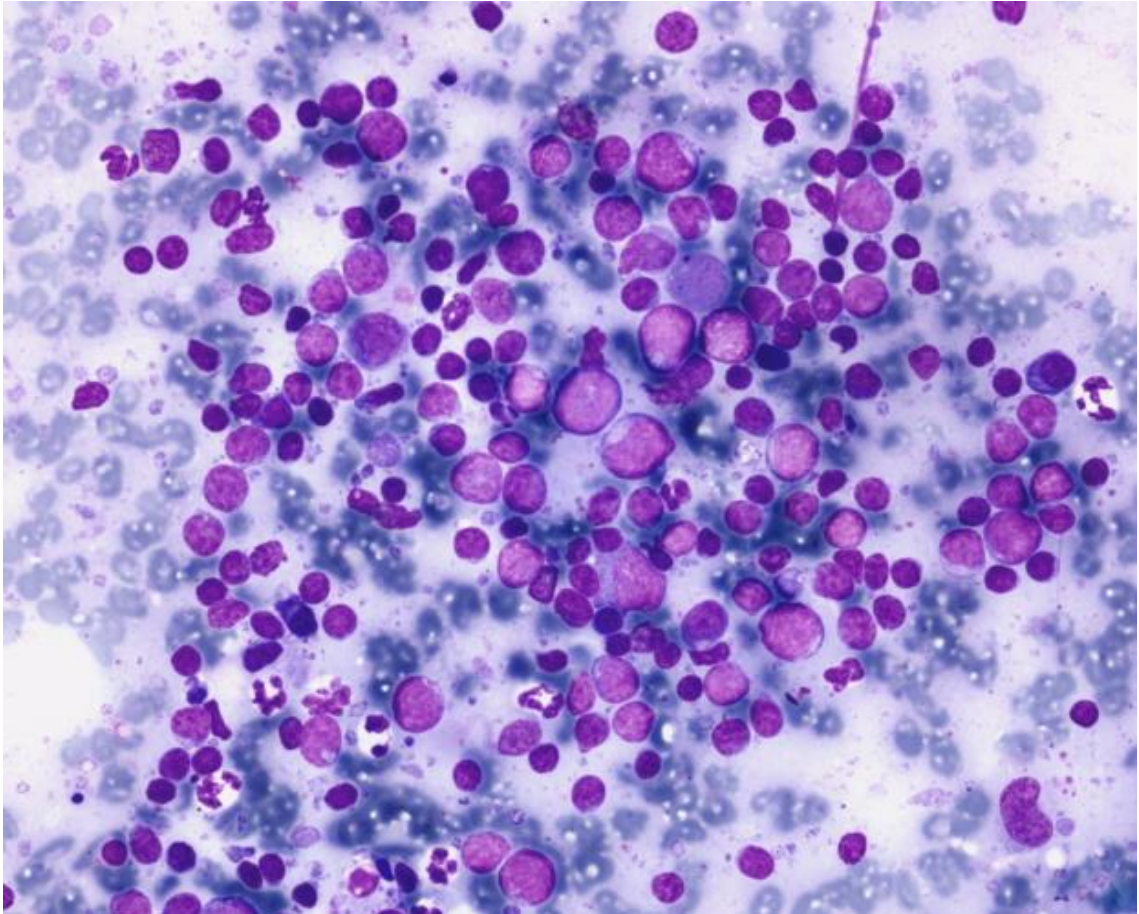


Figure 4. Squash preparation of the intra-nasal mass, May-Grunwald Giemsa stain, 40x objective.

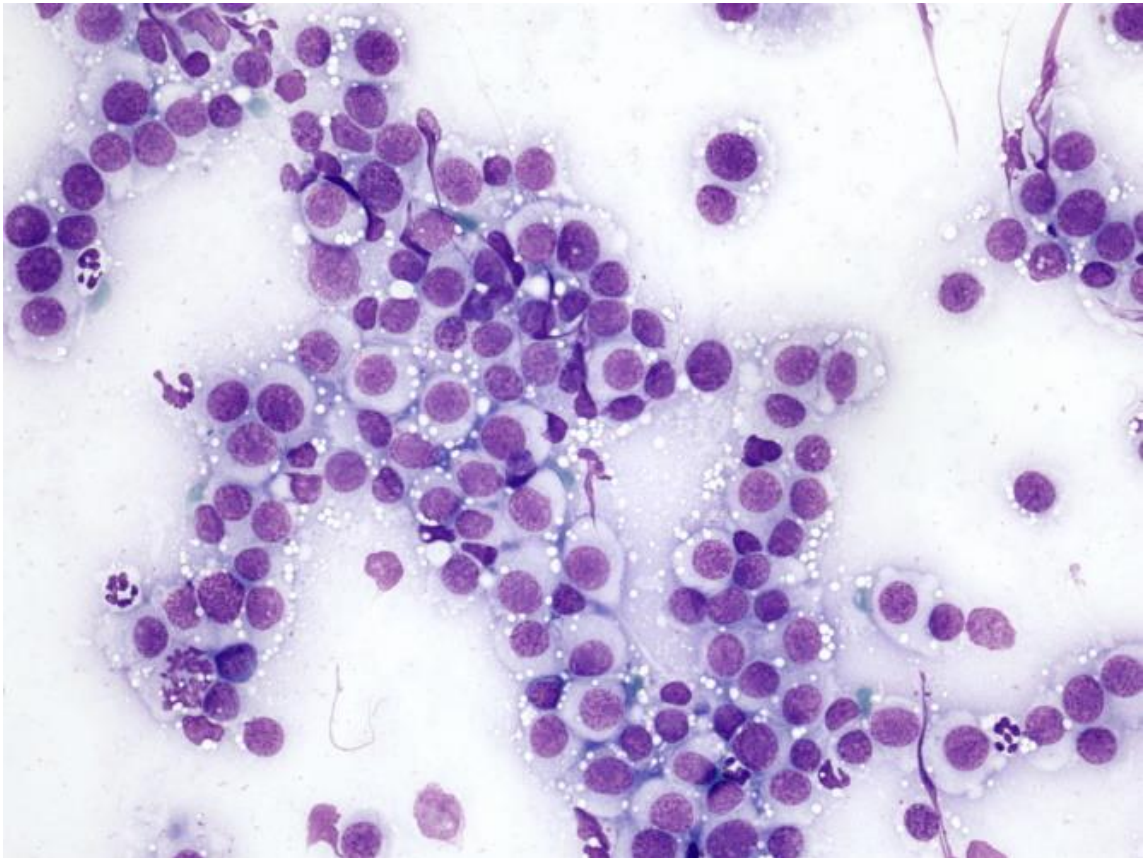


Figure 5. Squash preparation of the intra-nasal mass, May-Grunwald Giemsa stain, 40x objective.

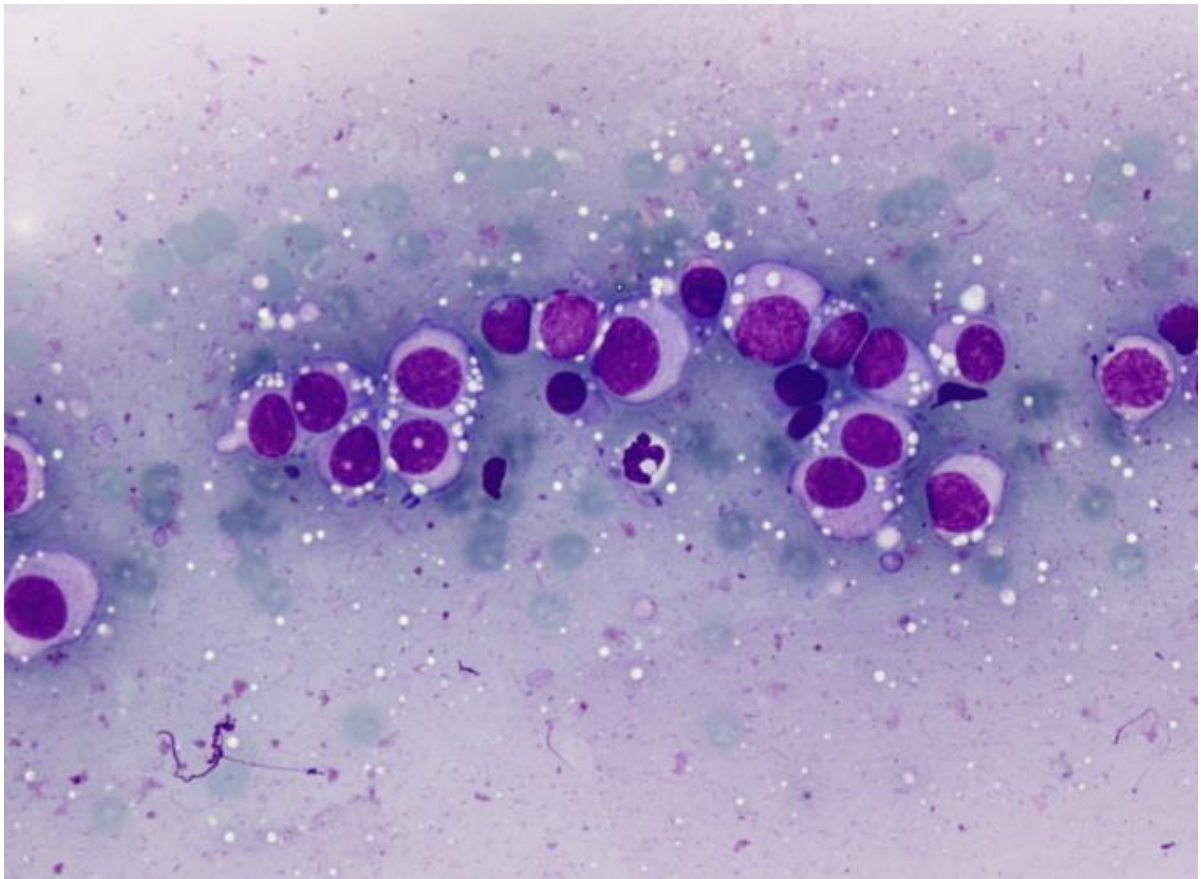


Figure 6. *Squash preparation of the intra-nasal mass, May-Grunwald Giemsa stain, 40x objective.*

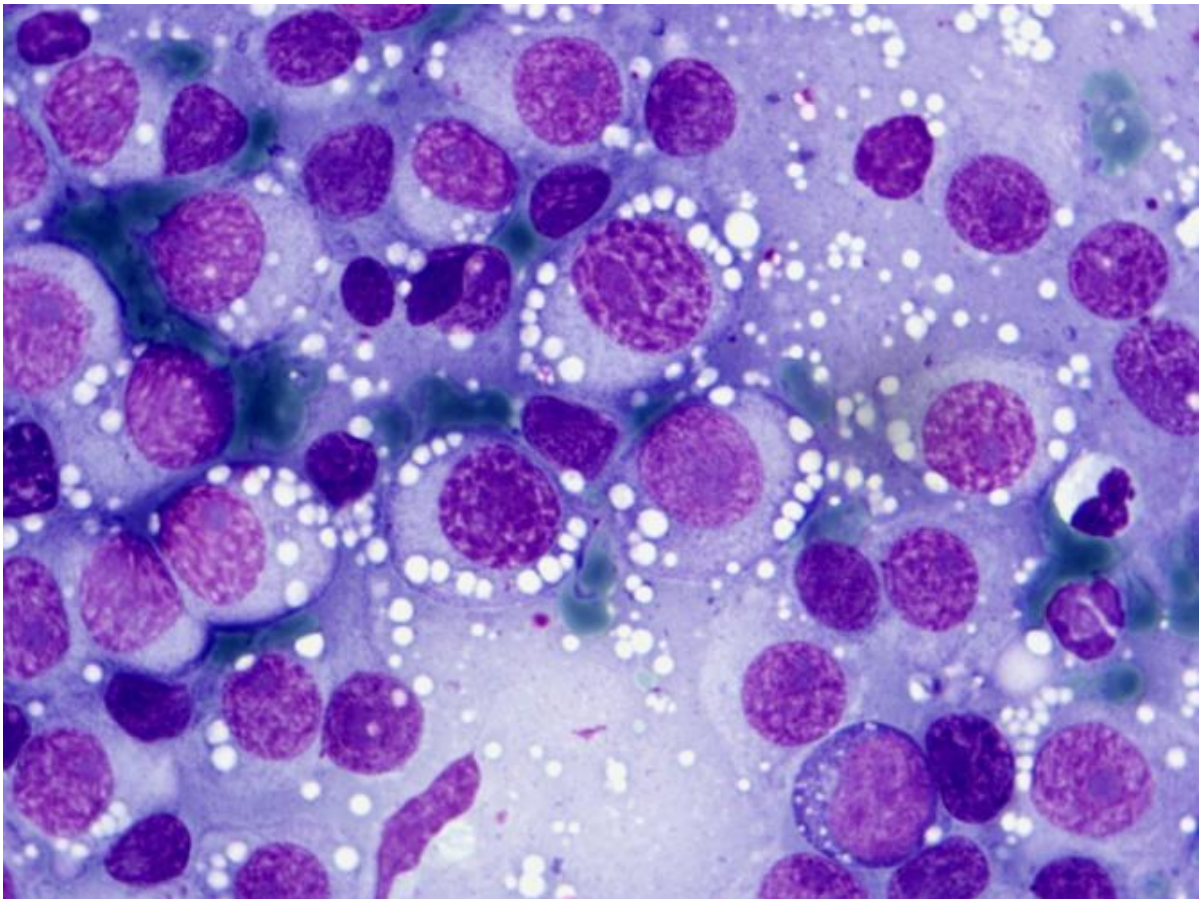


Figure 7. *Squash preparation of the intra-nasal mass, May-Grunwald Giemsa stain, 100x objective.*

Questions

1. What is your cytological description?
2. What is your interpretation of the cytological findings?
3. Which ancillary tests do you suggest to reach a definitive diagnosis?