

ESVCP/ECVCP Mystery Case

CONTRIBUTOR NAME*	Samantha J.M. Evans, DVM, PhD
CONTRIBUTOR EMAIL*	samantha.jm.evans@colostate.edu
COAUTHORS	Linda M. Vap, DVM, DACVP
COMPANY OR UNIVERSITY	Colorado State University

* Corresponding contributor

VIRTUAL SLIDE: A link to the virtual slide for this case can be provided to conference participants.

SPECIMEN: Pericardial fluid; direct smear

SIGNALMENT: 13 y/o MC Domestic Shorthair

HISTORY AND CLINICAL FINDINGS: One month history of hyporexia to anorexia; recent diarrhea. No significant findings on bloodwork. Has been treated for hyperthyroidism for nearly three years.

LABORATORY DATA:

Pericardial Fluid Analysis:

Fluid Color: Red
Supernatant Color: Orange
Fluid Clarity: Opaque
Supernatant Clarity: Clear
Nucleated Cell Count: 33,800/ μ l
Red Blood Cells: 350,000/ μ l
Refractometer protein estimate: 6.9 g/dl
Fluid hematocrit: 13%

Fluid total protein: 6.8 g/dl
Fluid albumin: 3.2 g/dl
Calculated fluid globulins: 3.6 g/dl
Calculated A:G ratio: 0.89

QUESTIONS:

1. What are your top differentials for these cells type based on morphology?
2. Do the results of fluorescent multiplex immunocytochemistry help narrow down the list of differentials?
3. What additional diagnostic tests on this fluid would you recommend?

Images from the direct smear:

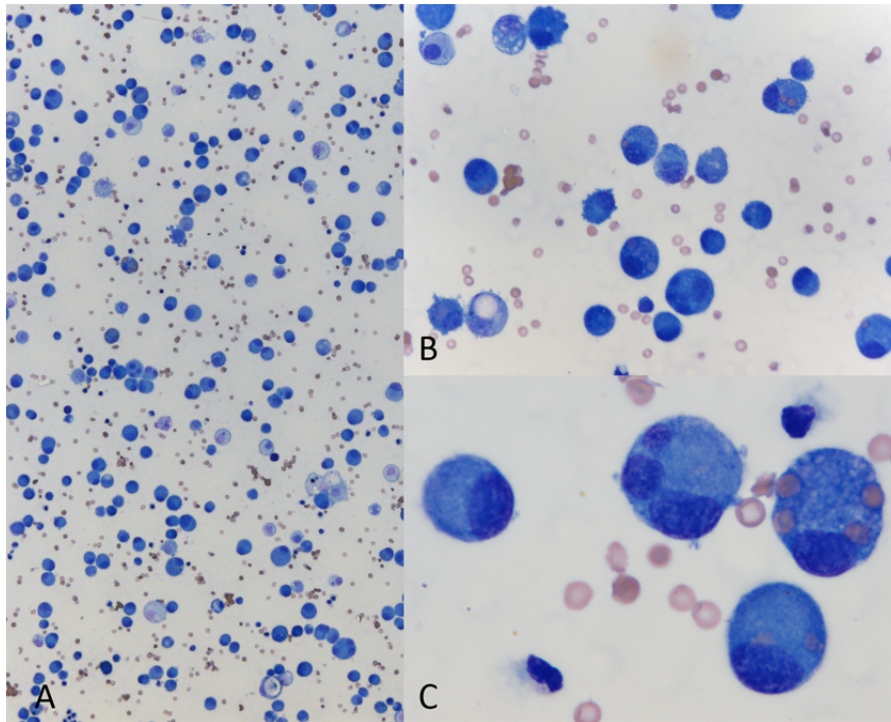


Figure 1. Pericardial fluid from a cat. Wright-Giemsa stain.

A) Magnification = 100x

B) Magnification = 500x

C) Magnification = 1000x

ADDITIONAL DIAGNOSTIC TESTS:

Multiplexed fluorescent immunocytochemistry for pancytokeratin and vimentin was performed on cytocentrifuged samples of this pericardial fluid.

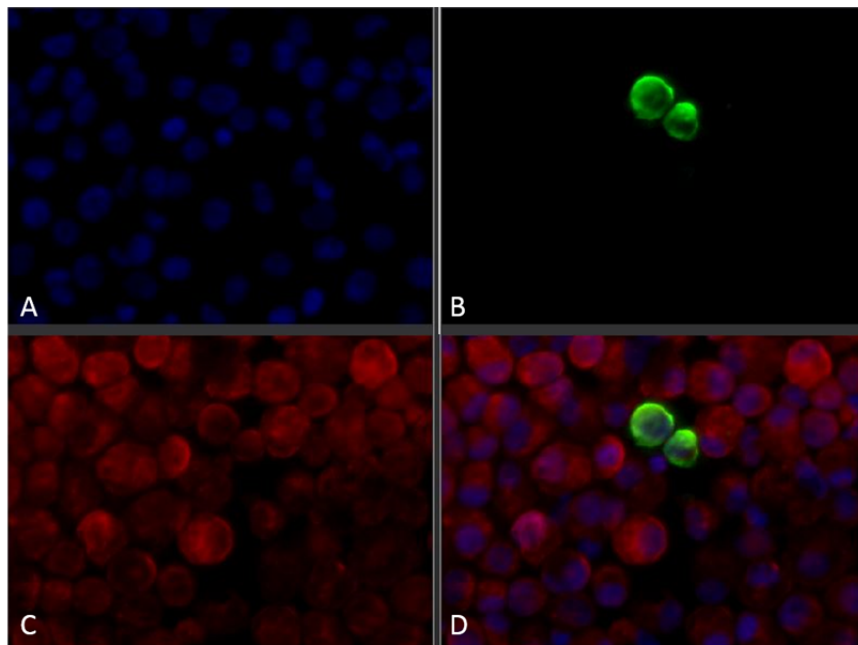


Figure 2. Multiplexed fluorescent immunocytochemistry. Magnification = 400x. Isotype negative control stained appropriately (not shown).

A) Cell nuclei (DAPI, blue)

B) Cytokeratin (FITC, green)

C) Vimentin (Alexa 594, red)

D) Overlay