What Are the Patterns of Fluorescence in Distemper Direct FA?

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Two kinds of antemortem samples are most often examined; blood smears and conjunctival smears.

Thin smears of whole blood or (preferably) buffy coat cells should be air dried for 30 minutes and fixed in a mixture of 25% methanol and 75% acetone for 20 minutes at room temperature. Smears should be made with a feathered edge, and the conjugate should be placed at the feathered edge (See Figure). If positive for canine distemper virus antigens, one or more of the following patterns of fluorescence should be observed; lymphocytes with smooth cytoplasmic fluorescence of entire cell; larger blast-like mononuclear cells with one or several sausage-shaped and/or buckshot inclusions and sometimes signet – ring – shaped inclusions; rarely red cells and platelets with particulate inclusions; neutrophils sometimes with dusty fluorescence near the nucleus. Watch for fluorescence of granules in neutrophils and especially eosinophils—this is not distemper specific. Also, nonspecific fluorescence may be seen at the edge where the conjugate dries during incubation. Make certain that the observed fluorescence is uniform throughout the area where the conjugate has been place.

Truly positive samples should be visible at 100-200x·and only require confirmation at 400x. This description is valid for mercury vapor and xenon light sources only. Conjunctival smears are made from scrapings of the conjunctival sac, usually with a cotton swab, which are dried and fixed in· the same way. The inclusions, however, are only occasionally seen in the cell types described above for blood smears. Usually most of the antigen is cell-free and appears as "junk” on the slide. This is due to large quantities of cell-free inclusions mixed with various forms of cell debris.