

The Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL) now offers digital cytology at the College Station laboratory to account-holding clients. This provides rapid evaluation of digital cytology photos taken with microscope cameras or smart phone technology. This option offers STAT evaluation of samples to allow for appropriate clinical treatment and diagnostic steps. In general, cytologic evaluation is a rapid, minimally-invasive technique to characterize lesions and determine if more invasive or expensive techniques are indicated (i.e. biopsy and advanced imaging). Cytology is intended to provide preliminary information on masses and effusive processes. With digital cytology, preliminary results can be acquired in hours, instead of days. To enhance this service, submission of glass slides for evaluation is still encouraged and *included in the price* of the digital cytology test.

Name: Digital Cytology Interpretation

Cost: \$65.00 with a \$6.00 accession fee

Cytology preparation:

Smears for digital cytology can be prepared in the same manner as glass slides. Monolayers (thin areas) will be very important for capturing high-quality images. Stain with standard in-house methods (Diff-Quik, etc.). If possible, retain some unstained preparations for follow-up submission.

Cameras:

There are several options for taking microscopic images in-house. Options include: built-in microscope cameras, cameras with eye-piece adapters, and smart phones (alone or with stabilizer).

Image acquisition:

Digital cytology will be most rewarding for identification of infectious agents, inflammatory lesions, and monomorphic population of cells (neoplasia). When multiple populations of cells are present, or when cellularity is low, evaluation of digital images may be less rewarding. However, glass slides should be submitted following the initial digital cytology interpretation, which may increase the diagnostic utility of cytology.

Include:

- A minimum of 2 and maximum of 10 images at varying magnifications.
- RBCs, neutrophils, or note magnifications to allow evaluation of size.
- Multiple microscopic images and images of the gross lesion is encouraged.

Submission of images: (see examples on page 2)

- Submit via email: digitalcytology@tvmdl.tamu.edu
- Include the digital cytology submission form found on tvmdl.tamu.edu/forms
- Images should be saved as JPEG or PNG files
 - Smart phone "medium" size / reduced file
- The total number of images should be noted on the submission form, if multiple emails are sent.

Digital cytology results:

Images submitted Monday-Friday between 8 a.m. and 4 p.m., will typically have results within a few hours.

Preliminary reports will be released similarly to standard cytology submissions.

Submission of glass slides is recommended following digital cytology, as examination of the whole smear can provide further diagnostic information. Submit *the same accession form for both digital and glass slides* to ensure additional charges are not accrued.

Please do not hesitate to contact us with any questions.

Best Quality

Poor Quality

