The Diagnostic Challenge
Definitive diagnosis of amelanotic melanocytic tumors is often difficult; these tumors can closely mimic poorly differentiated malignant neoplasms such as carcinomas, soft tissue sarcomas, and round cell tumors. However, it is crucial to accurately diagnose melanocytic tumors, as prognosis and therapy vary greatly between the differentials. Immunohistochemistry (IHC) is often required to confirm the diagnosis.

The Prognostic Challenge
Accurately determining the prognosis for canine melanocytic tumors, especially those of the oral cavity, is difficult. Recent evidence suggests that a subset of canine oral melanocytic tumors may have a more favorable prognosis than historically thought. Nuclear atypia is a predictive histological feature for oral and cutaneous melanocytic tumors; however, it is subject to inter-observer variation and is difficult to assess in some tumors. Mitotic index is also helpful in predicting prognosis, but is not as predictive as nuclear atypia or Ki-67 index. The nuclear protein Ki-67 (MIB-1) is expressed in all proliferating cells and has been shown to be highly predictive of prognosis, based on survival times, for both oral and cutaneous melanocytic tumors by IHC.

Diagnostic and Prognostic Panels Offered
We offer a diagnostic melanocytic tumor panel that includes IHC staining using a cocktail of antibodies against Melan-A, PNL-2, TRP-1, and TRP-2. This IHC cocktail is highly sensitive and specific in detecting amelanotic melanocytic tumors and is efficient and cost-effective. A prognostic melanocytic panel includes immunolabeling with Ki67, and assessment of nuclear atypia, mitotic index, and degree of pigmentation for prognostic information.

What Sample Should Be Submitted?
All tests can be performed on routine formalin-fixed biopsy material as well as previously submitted biopsy samples. Alternatively, clients can request to have another pathology service submit the paraffin block to our laboratory if the tissue was originally processed elsewhere.

For more information, please contact the Anatomic Pathology lab at 517.353.1683, or visit our website at animalhealth.msu.edu.
The MSU VDL is a full-service veterinary diagnostic laboratory, fully accredited by the AAVLD for all species.

Sample Submission Forms
Visit our website at animalhealth.msu.edu to access our most current submittal forms. Customized forms preprinted with your clinic information are also available at no cost via the Product Order Form.

Unbeatable Shipping
The MSU VDL offers a variety of shipping options. Our mailers comply with U.S. Postal Service, UPS, and FedEx regulations. All UPS mailers include prepaid overnight weekday delivery. All U.S. Postal Service mailers include prepaid delivery; delivery time will vary depending on your location.

Order Mailing Supplies
Standard, insulated, and biopsy mailers are available. Contact us at 517.353.1683 or complete the Product Order Form available online at animalhealth.msu.edu. You can also place an order by completing the SUPPLIES section on a submittal form.

Packaging and Mailing Samples
For shipping recommendations for individual tests, please refer to the information provided at animalhealth.msu.edu under “Available Tests.”

Speak Directly to Experts
Our veterinary professionals are available for consultation and can help you interpret your test results to better manage the health of animals entrusted to you.

Get Results by Email and Online
HAD it with the fax machine? Contact us at 517.353.1683 to have results delivered by email.

All MSU VDL clients also have free, quick access to view results online through WebView. Reports are posted to the web hourly. Visit animalhealth.msu.edu and click “Log In” to request access to your diagnostic results.

Expect Quality in Testing and Service
The MSU VDL is a leader in establishing technical guidelines for public veterinary diagnostic laboratories in the United States and maintains a quality assurance team dedicated to promoting accuracy and reliability.