

# EXPRESSION OF SOX-10 AND TYRP-1 IN FELINE MELANOMAS

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In feline species, ocular and non-ocular melanomas are uncommon tumors that represent a diagnostic challenge for pathologists, especially when amelanotic. To date, the definitive diagnosis of amelanotic melanomas relies on the use of specific melanocytic markers (Melan-A and PNL-2), and a nonspecific but sensitive marker (S100).

## TYRP-1

An enzyme involved in melanogenesis and recently used in humans and dogs as a specific melanocyte marker.

## SOX-10

In human medicine, Sry-related HMg-Box gene 10 (SOX-10), a nuclear transcription factor involved in the differentiation of neural crest progenitor cells to melanocytes, has been validated as a sensitive antibody used for the detection of lymph nodal micrometastasis.

- 1) Validate cross-reactivity of SOX-10 and TYRP-1 in normal feline tissue
- 2) Evaluate **SOX-10** and **TYRP-1** immunolabeling in feline melanocytic tumors in comparison with other markers (Melan-A, PNL-2 and S100)



31 cases

Nuclear expression

SOX-10

**NORMAL TISSUE**

Epidermal, subepidermal, hair bulb, stromal iris melanocytes. Dermal nerve structures.

Oral (6/7; 85,7%)  
Ocular (11/12; 91,6%)  
Cutaneous (12/12; 100%)

**MELANOMA**

TYRP-1

Cytoplasmic expression

**NORMAL TISSUE**

Epidermal and bulbar melanocytes; Lining pigmented epithelium of iris and in its stroma.

**MELANOMA**

Oral (3/7; 28,5%)  
Ocular (9/12; 75%)  
Cutaneous (4/12; 33,3%)

## CONCLUSION

First study that assess and validate the cross-reactivity of SOX-10 and TYRP-1 in normal feline tissue and melanomas from different sites.

In particular:

- Nuclear staining of SOX-10 simplify identification even in highly pigmented neoplasms.
- For both antibodies, no increase in sensitivity and specificity when combined with Melan-A, PNL-2, S100

Prospective studies on higher number of melanomas from different sites and a follow-up for each are recommend to evaluate a possible association between expression of these markers and the biological behavior of the neoplasm.

confirmed by histopathological examination and by immunolabelling with Melan-A and/or PNL-2.

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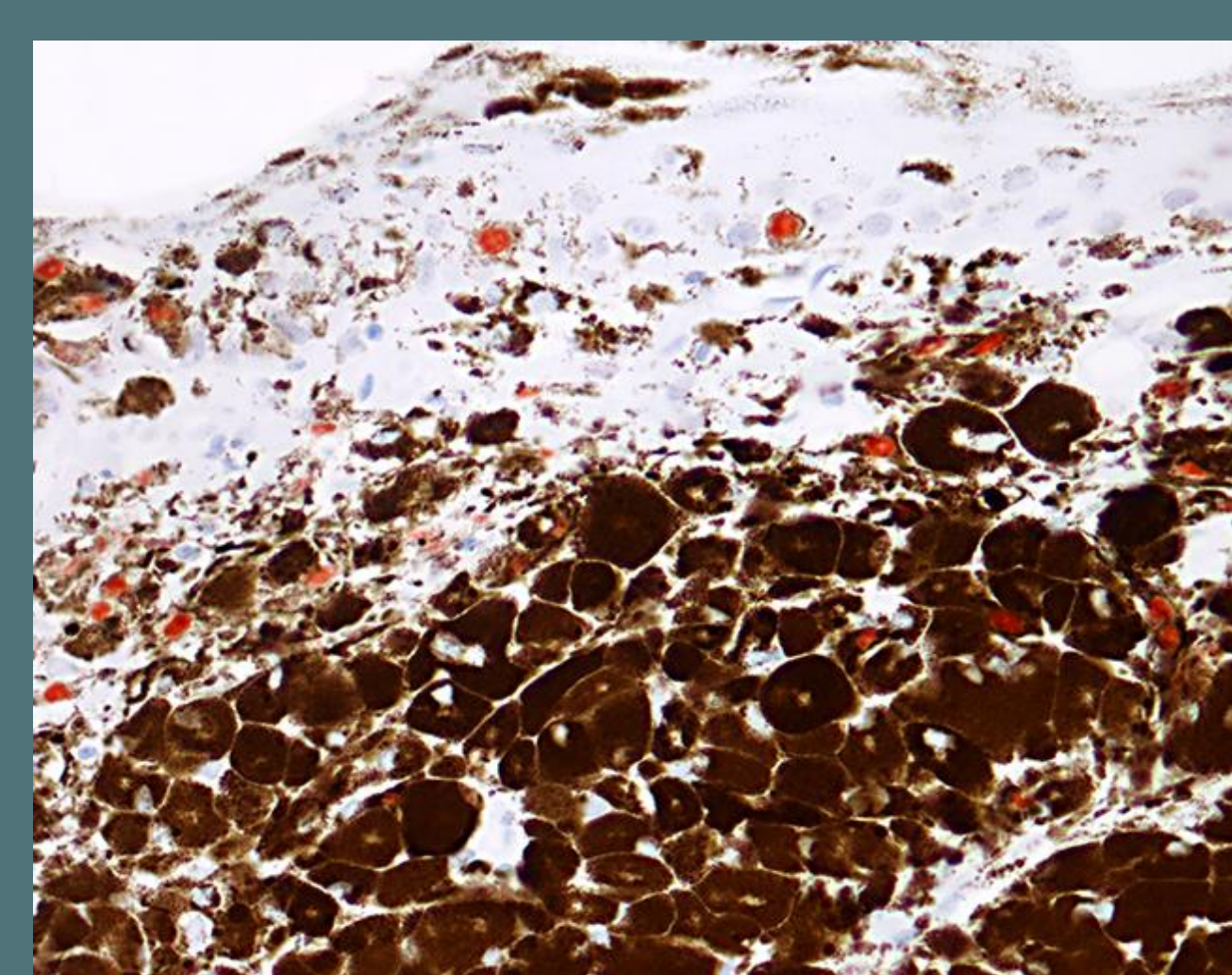
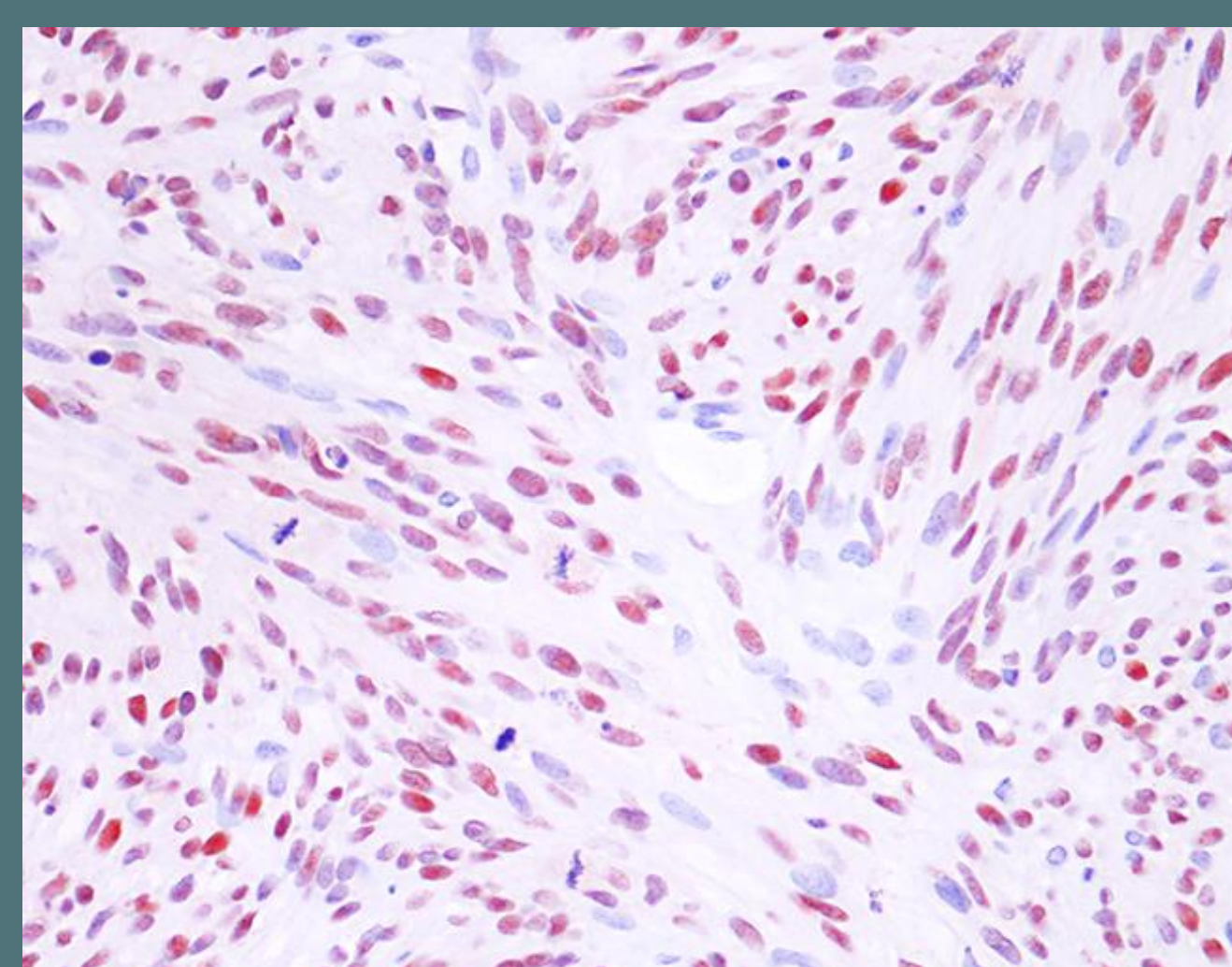
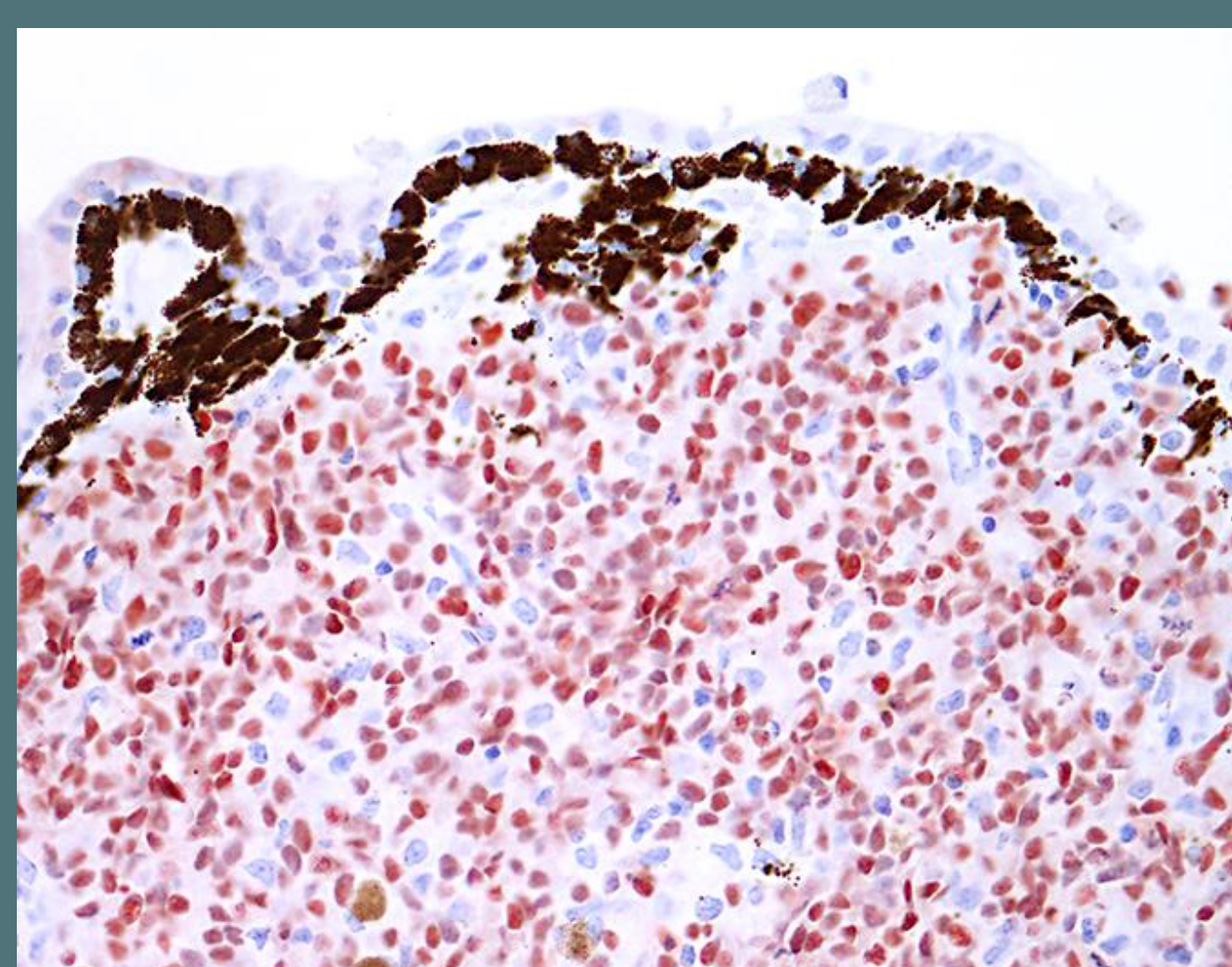
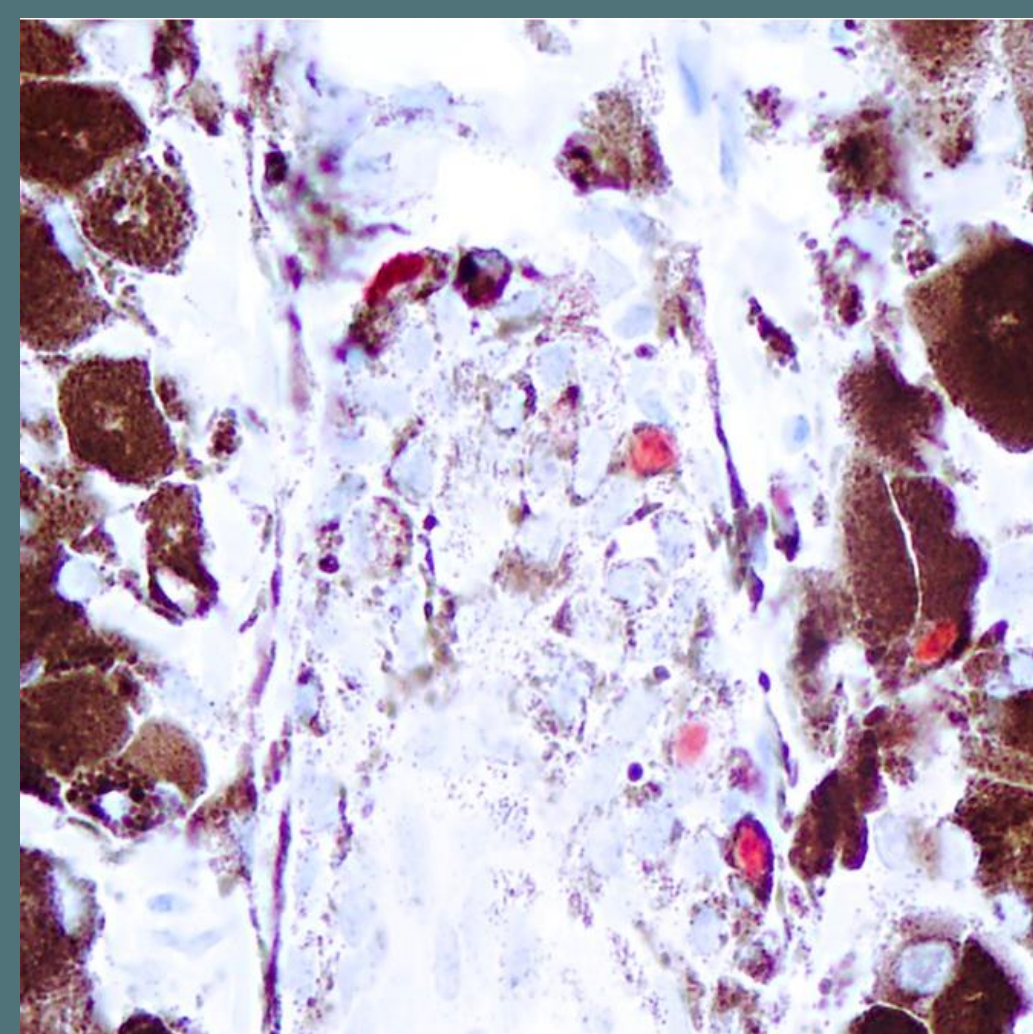
HAIR FOLLICLE

OCULAR MELANOMA

ORAL MELANOMA

CUTANEOUS MELANOMA

SOX-10



TYRP-1

