



NationWide LABORATORIES

CANINE MAST CELL TUMOURS - 50 SHADES OF GRADING

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Canine mast cell tumours (cMCTs) are common tumours in dogs, arising in the skin, subcutis and other sites such as mucous membranes and viscera. The biologic behaviour of cMCTs arising in the skin (cutaneous cMCTs) is extremely variable: some display a benign biologic behaviour and can be cured by marginal excision, while others demonstrate malignant behaviour, with recurrence despite wide margins, and metastatic spread to lymph nodes and other viscera. Predicting the behaviour of these neoplasms can be challenging for vets and pathologists alike.

This talk will provide a brief overview of the background to cutaneous cMCTs, followed by a discussion of the various means by which the potential biologic behaviour can be predicted. These include clinical assessment of the appearance and behaviour of the neoplasm, histologic grading (with both the three-tier/Patnaik and two-tier/Kiupel grading system), mitotic count, the immunohistochemical prognostic indicator Ki67, KIT staining pattern and PCR for mutations in exons 8 and 11 in the c-kit gene. This will give vets in practice an understanding of the various prognostic indicators available for assessment of these neoplasms, their potential limitations and in which practical scenarios they may be useful.

Learning outcomes:

- Recap of general background information re cMCTs
- How cMCTs are diagnosed
- Gain an understanding of the histologic parameters used to predict the biologic behaviour of cMCTs
- Gain an understanding of further laboratory tests used in the assessment of cMCT biologic behaviour:
- Immunohistochemical staining for Ki67
- KIT staining patterns
- c-kit PCR



About the author

Alison studied veterinary medicine in University College Dublin (UCD). She also undertook an intercalated degree in veterinary pathology at the Royal Veterinary College. After a year in small animal practice she completed her anatomic pathology residency in UCD and became a diplomate of the American College of Veterinary Pathology. Her interests include oncology and exotic animals.