The importance of developing a logical grading and staging diagnostic approach to common equine tumours

Katie Snalune
BSc MA VetMB Cert EIM Cert ESTS MRCVS

Kent Equine Hospital, United Kingdom

ksnalune@hotmail.com

Tumour nomenclature has provided clinicians with very useful terms that have aided the understanding of oncology and facilitated communication among medical professionals. It also provides a uniform and universal means of identifying tumours and contributes meaningfully to their management and prognosis. Terms such as tumour, cancer, benign and malignant, have different connotations to clients, and based on their personal experiences of "cancer", can alarm and misinform.

Understanding tumour nomenclature and applying grading and staging principles to equine tumours would enable us to better select appropriate treatment modalities and prognosticate effectively, so clients can make informed decisions.

Benign neoplasms remain confined to the original site, but this does not mean that their effect will not be clinically serious. Factors such as size, location, susceptibility to trauma and/or functionality of the tumour, have a strong bearing on the tumour's significance. Malignant neoplasms destructively invade local and surrounding tissues and metastasise to remote sites.

The terms, benign and malignant, form the basis of nomenclature of tumours of all species, but represent the broadest of categorisation. This simple classification is not always clear and may have little clinical value than more detailed further sub-classifications. Not every tumour will fit precisely into these categories and the transition to malignancy is probably best regarded as a continuum. The classification of the severity and clinical nature of a neoplasm can be made through the process of grading/staging. This expresses the level of differentiation (grade) and the extent of spread of the tumour (stage). The objective of a grading system is to provide useful guidance about the probable growth rate of the tumour and its tendency to spread. This is achieved through attempting to quantify the degree of cell differentiation and the number of mitoses within the tumour. This description from the pathologist is often the part of the lab report that clinicians do not read!

Applying a stage to the spread of the tumour relies on performing examinations and tests to establish the extent of tumour within the body and it particularly refers to whether the disease has spread from the original site to other parts of the body, i.e. whether it has metastasised. It is therefore an index of the degree of tumour progression. The size of the primary lesion, extent of spread into adjacent tissues and local lymph nodes, and presence of remote metastatic dissemination are incorporated into this system. It is important to know the stage of tumour to provide a likely prognosis, to plan the best treatment and to monitor effects of treatment procedures.

There are two recognised staging systems in human medicine, the TNM system and the Ann Arbor system. Neither is ideal for equines and sadly neither is widely employed in equine practice. However, attempting to apply some form of classification to equine tumours, logically approaching each case, can facilitate better understanding for the client regarding the treatment options available and the prognosis.

The TNM system, uses tumour size (T), involvement of regional lymph nodes (N) and extent of metastases (M) to numerically express some concept of severity of tumour. This system is not widely used in horses, possibly because the overall prevalence of tumours is low. The system does enable better comparisons between treatments and prognosis and there is, therefore, merit in development of a suitable dedicated system in equine oncology. Attempts have been made to develop logical standardised grading/staging approaches in penile/preputial tumours and in Equine Lymphoma and these will be discussed. When we have staged and graded a tumour in a logical way, we are well equipped to explain the pros and cons of different treatment options to the owner. Thus, we may help the owner to decide which treatment is most suitable for their horse.