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T N M

CLASSIFICATION OF TUMOURS

IN

DOMESTIC ANIMALS

EDITED

BY

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PREFACE

An International Histological Classification of Tumours of Domestic Animals complementing the classification of tumours of man was completed in 1975 and published in the Bulletin of the World Health Organization.¹ Since that time great advances have been made in other aspects of comparative oncology, notably in prognosis and therapy.

The TNM Classification of Malignant Tumours in man was first published in 1968 by the International Union against Cancer (UICC). As part of the WHO Programme on Comparative Oncology this method of classification has now been adapted as closely as possible for many of the tumours occurring in domestic animals, allowing for the many anatomical and pathological differences. This was done at two consultations held in Geneva on 18-20 April 1978 and 13-15 March 1979, and the participants who formulated the TNM Classification of Tumours in Domestic Animals are listed on page 5.

The TNM system for domestic animal tumours should be of great value in recording clinical cases and it is proving particularly useful in planning international clinical trials on comparative oncology, some of which (e.g. canine mammary carcinoma) are already in progress.

Like the histological classification, the domestic animal TNM system reflects the present state of knowledge and will require modification in the future but it should provide some essential groundwork in clinical veterinary oncology.

In particular, this classification records the many malignant tumours in domestic animals which have already proved to be useful models for cancer research in man.

¹ Bull. Wld Hlth Org. 1974, 50, (1-2)
" " " " 1976, 53, (2-3)

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The participants are pleased to acknowledge the technical assistance of Miss P.C. Botton, Veterinary Public Health, WHO, in the preparation and editing of this classification.

INTRODUCTION

THE PURPOSE OF CLASSIFICATION

The practice of dividing cancer cases into groups according to "stages" has already been established for tumours of man.* The system arose from the fact that survival rates were higher for cases in which the disease was localized than for those in which the disease had extended beyond the organ of origin. These groups were often referred to as "early cases" and "late cases" implying some regular progression with time. The stage of disease at the time of diagnosis may be a reflection, not only of the rate of growth and extension of the neoplasm, but also of the type of tumour, the tumour-host relationship and the interval between recognition of the first symptom or sign and the diagnosis or treatment.

The principal purpose of international agreement on classification of cancer cases by extent of disease is to provide a method of conveying one person's clinical observations to others without ambiguity.

The veterinary clinician's task is to make a provisional prognosis and a decision on the most effective course of treatment. These require, among other things, an objective assessment of the anatomical extent of the disease.

The objectives of staging animal tumours are:

1. to aid the veterinary clinician in planning treatment
2. to give some indication of prognosis
3. to assist in evaluation of treatment results
4. to facilitate the exchange of information between treatment centres
5. to contribute to the continuing investigation of animal cancer
6. to contribute information that is of comparative value between man and animal.

To meet these objectives a system of classification is required (1) in which the basic principles are applicable to all sites, regardless of treatment and (2) which may be supplemented later by information that becomes available from histopathology or surgery.

The TNM system meets these requirements. It provides an essential communication and information exchange device and a useful guide for prognosis and therapy.

THE TNM SYSTEM

The TNM system is based on the assessment of:

- | | |
|--|---|
| - the extent of the primary tumour | T |
| - the condition of the regional lymph nodes | N |
| - the absence/presence of distant metastases | M |

The addition of numbers to these three components (e.g. T1, T2 ... etc., N0, N1 ... etc., M0, M1 ... etc.) indicates the extent of the malignant disease.

For example, a veterinarian familiar with the system might describe a dog with cancer of the mammary gland as "T3b N2 M0". This would indicate that the tumour was of a certain size (more than 3 cm in diameter) with fixation to the underlying fascia or muscle; that either the axillary or inguinal lymph nodes were palpable and fixed; and that there was no clinical evidence of distant metastases.

In other words it is a kind of shorthand notation for the description of a malignant tumour.

*UICC TNM Classification of Malignant Tumours, Ed. M. Harmer, 3rd ed., Geneva, 1978.

General rules

The general rules applicable to all sites are as follows:

1. In all cases confirmation of malignancy by histological or cytological examination is obligatory. Any cases not so proved must be recorded separately.

At many sites several distinct types of cancer may occur, differing not only in their histological pattern but also in their clinical behaviour. It would clearly be wrong to consider all such types together.

An example is cancer of the mammary gland of the dog. Well differentiated tubular adenocarcinomas have a good prognosis following mastectomy but anaplastic carcinomas have a poor prognosis.

2. All cases are identified by T, N and M categories, which must be determined and recorded prior to definitive treatment. They remain unchanged although they may be qualified by additional histopathological or surgical information.

The reason for this is clear. The condition of many animals with cancer precludes surgery when they first attend for treatment. Consequently they would be excluded from a universal classification if evidence obtained only at operation were required.

The TNM system in man describes two classifications for each site:

- (a) pre-treatment, clinical classification
- (b) post-surgical histopathological classification designated pTNM

For most tumours the pTNM categories correspond to the TNM categories but differences have been noted and additions made for thyroid, breast, oesophagus, stomach, bladder, prostate and melanoma. This dual classification has not been attempted at this stage for tumours in domestic animals. It is the pre-treatment clinical TNM classification which is of paramount importance for purposes of reporting and evaluation.

It is recognized, however, especially in the allocation of animals with certain tumours in clinical trials, that detailed histopathological information supplementing the clinical diagnosis is essential, e.g. grading of mastocytomas, invasion or lack of invasion by mammary tubular adenocarcinoma.

3. In the clinical assessment of an animal tumour numerous investigations may be done. It is important to distinguish obligatory investigations from those which add refinement to the diagnosis of the extent of the malignant disease. For each site minimum criteria for TNM classification are listed. The regional lymph nodes for each site are defined.

4. After assigning T, N and M categories (with degree of extension) these may be grouped into a number of clinical stages for certain tumours.

It is obvious that tumours of some sites lend themselves more easily and satisfactorily to classification than others. These are the accessible sites where eye and hand can assess by direct vision, palpation and measurement the primary tumour and its regional lymph nodes. The mammary gland, the upper air and food passages, the skin and long bones are examples. The least satisfactory sites for classification of their tumours are the deep-seated viscera, e.g. stomach, colon, kidney and ovary.

It is necessary therefore that, although the rules of the TNM system should be rigidly observed, there must be, for any particular site, some method for the identification and recording of additional information considered essential for that site. The following is an example of such additional information.

Most dogs with mammary cancer of posterior glands have a mastectomy, which usually means the inguinal lymph node is removed and examined histologically. If mobile nodes are palpable clinically before operation the designation N1 is applied to the case. If these nodes are found on histological examination to be tumour-free, the cypher (-) (minus) is added, thus: N1(-). If they contain tumour deposits, the cypher (+) (plus) is added, thus: N1(+).

PRIMARY TUMOUR (T)

T1, T2, T3, T4 indicate increasing degrees of extent of the primary tumour. The number of these T categories may vary according to the particular site but it is recommended that in general there should be four. For each site the ideal situation is when tumours can be accurately defined, accurately assessed on clinical examination and have precise "boundaries", such as a size-limitation or a "yes or no" distinction, e.g. movable or fixed.

1. The tumours easiest to classify are those which arise in a single organ. In these the tumour can be simply described in terms of its anatomical extent.

In the mammary gland of the dog for instance, the three main qualities which determine the T category are size, involvement of skin and involvement of underlying tissues. There are four degrees of T and any agreed clinical feature can determine the degree of T, as indicated in the following simplified table:

	T1	T2	T3	T4
Size	Less than 3 cm	3-5 cm	More than 5 cm	
Skin	Minor involvement			Major involvement
Fascia, Muscle and Thoracic wall	with or without fascia or muscle fixation			Thoracic or abdominal wall fixation

It is not known if the localization of the tumour within the mammary gland(s) is as important in animals as it is in women. However, although position is not included in the T definitions, there is no difficulty in comparing, for example, a group of T3 outer half cases and a group of T3 inner half cases, provided this information is recorded in the animal's hospital chart.

2. A second group of tumours occurs in situations which are not so circumscribed and in which the size and extent cannot be so easily ascertained, e.g. tumours of the bladder are assessed on cystoscopy, radiography, manual examination under anaesthesia and the extent of penetration of the bladder wall by the tumour (as indicated by the microscopic examination of tissue removed for biopsy).

3. A third type cannot be diagnosed at all without taking operative findings into account, e.g. laparotomy in ovarian tumours and surgico-pathological findings in colon and bone tumours.

Multiple tumours have to be considered under several headings:

- (a) those occurring simultaneously in paired organs (e.g. chain of mammary glands) should be classified independently.
- (b) those occurring simultaneously in the skin should have the actual number recorded. The tumour with the highest T category is selected and the number of tumours indicated in parenthesis, thus T2(5).
- (c) those occurring in hollow viscera or cavities, e.g. bladder, vagina, penis, and in which the exact number is immaterial, are denoted by addition of the suffix (m) thus: T3(m). This may also be applied to the histopathological classification, thus: P2(m) - see "Histopathological extent and grading, page .

In addition to the degrees of T needed to describe the local extent of a tumour, other T symbols require mention:

T0 means "no evidence of primary tumour". This category is necessary to cover cases where lymphatic or blood-borne metastases occur while the primary neoplasm remains occult.

TX means that it is impossible to assess fully the extent of the primary tumour.

Tis is reserved exclusively for carcinoma in situ (preinvasive carcinoma). This is an essential category in some sites, e.g. cornea and sclera, eyelids and nose.

REGIONAL LYMPH NODES (N)

N1, N2, N3 indicate the characteristics of lymph nodes, which may be assessed by palpation, lymphangiography or other procedures. The number of these categories varies according to site.

Example of N classification: oral cavity

- N0 No palpable regional lymph nodes, i.e. no regional lymph nodes are palpable or they appear to be normal on other diagnostic procedures
- N1 Movable regional ipsilateral lymph nodes
- N2 Movable contralateral or bilateral lymph nodes
- N3 Fixed lymph nodes

Histological information concerning the state of the lymph nodes obtained from a biopsy or following operation may be added to any N category by the use of the cyphers (-) (minus) or (+) (plus), indicating the absence or presence of metastatic involvement. This is also applicable to NX, thus: NX- or NX+.

When regional lymph nodes are palpable they must be classified as N1 or N2 but an examining clinician may wish to include his assessment of whether a lymph node contains metastatic tumour or not. Thus for all lymph nodes draining head and neck tumours the definitions are:

- N1 Movable regional nodes
 - N1a nodes not considered to contain growth
 - N1b nodes considered to contain growth
- N2 Movable ipsilateral or bilateral nodes
 - N2a nodes not considered to contain growth
 - N2b nodes considered to contain growth

DISTANT METASTASES (M)

The absence or presence of metastases is indicated by the letter M.

- M0 No metastases are detected clinically
- M1 Metastasis other than to regional lymph nodes is present

If necessary M1 may be subdivided into further categories to indicate the type of metastasis, e.g. to bone, liver, lung etc.

MX Impossible to assess the presence of metastases.

Histopathological extent (P) and grading (G)

Information obtained at operation is not generally considered admissible for clinical classification but may be used as an addition. Two aspects of histopathology may be recorded. The symbol P refers to the depth of infiltration of the tumour within the organ or tissue, while the symbol G refers to the pathological grading of the tumour.

For example, for tumours of some hollow organs the histopathological extent is expressed in four degrees of P:

- P1 Tumour confined to the mucosa
- P2 Tumour involves the mucosa and the submucosa and extends to or into the serosa, but does not penetrate through the serosa
- P3 Tumour penetrates through the serosa with or without invasion of contiguous structures
- P4 Tumour diffusely involves the entire thickness of the organ wall without obvious boundaries.

Pathological grading is expressed in three degrees:

- G1 Low grade malignancy
- G2 Medium grade malignancy
- G3 High grade malignancy

Additional pathological categories may be used in certain sites, for example, to record invasion of lymphatics or veins in urological sites. These are designated L and V.

Thus for tumours of the bladder the definitions are:

- L0 No lymphatic invasion
- L1 Superficial lymphatics invaded
- L2 Deep lymphatics invaded

For tumours of the kidney the definitions are:

- V0 The veins do not contain tumour
- V1 Renal vein contains tumour
- V2 Vena cava contains tumour

Stage grouping

As stated earlier the "staging" of tumours has been practised for many years in medicine, and the system can be applied equally well to animal tumours. Classification by T, N and M aims at a more precise recording of the apparent extent of the disease and the cases can then be grouped according to criteria that are statistically predictive. In a tumour with four possible degrees of T, four degrees of N and two degrees of M, the number of groups, extending from T1 N0 M0 at one end of the scale to T4 N3 M1 at the other, is 32. To record individual cases in these groups is simple; to reproduce tables containing that number is impractical except for very large series.

A theoretical example may contain the following stage-grouping:

<u>TNM Groups</u>	<u>Clinical Stage</u>	<u>No of Groups per Stage</u>
T1 NO MO T2 NO MO	I	2
T1 N1 MO T2 N1 MO	II	2
T1 N2,3 MO T2 N2,3 MO	III	12
T3 NO,1,2,3 MO T4 NO,1,2,3 MO		
Any TN symbols + M1	IV	16

It will be seen that the 12 TNM groups in Stage III span a range from T1 N2 MO to T4 N3 MO. The one-year survival of the first group may be about 60% while of the last group only 15%. This shows the limitation of staging where it includes such dissimilar groups and demonstrates at the same time the advantage of TNM categories.

THE ANATOMICAL SITES

The sites now classified cover the greater part of the veterinary field for dogs and cats and most are suitable for other animals. Each site is considered in the same general manner, the following details being set out in short introductory remarks:

1. Description of the site and regions
2. Definition of the regional and, where applicable, the juxta-regional lymph nodes for each site
3. Where necessary, the clinical and surgical methods recommended for establishing the TNM categories.

The sites are grouped under 11 headings:

1. Skin (excluding lymphosarcoma and mastocytoma)
2. Skin (mastocytoma)
3. Mammary glands
4. Head and neck
5. Alimentary system, including pancreas, liver
6. Urological system
7. Genital system
8. Bones and joints
9. Lymphoid and haematopoietic tissues (including lymphosarcoma of skin)
10. Respiratory system
11. Endocrine glands (thyroid, adrenal)

Tumours of the eye, CNS, heart and endocrine glands (other than adrenal and thyroid) are not included because it is difficult to classify them clinically at the present time and many of this group are only locally invasive.

1. SKIN

(excluding lymphosarcoma and mastocytoma)

The classification applies to primary tumours of the skin. There must be histological verification to permit grouping of cases by histological type.

The classification is based on division into six regions.

In defining the lymph nodes for each region, the body is divided vertically at the umbilicus.

The regions and regional nodes are as follows:

<u>Regions</u>	<u>Regional nodes</u>
(a) eyelid, ear and nose	cervical (bilateral)
(b) face (excluding "a"), scalp and neck	cervical (bilateral) submandibular (bilateral) auricular (bilateral)
(c) upper limb	axillary and prescapular (ipsilateral)
(d) trunk anterior to the umbilicus	axillary (bilateral) prescapular (bilateral)
(e) trunk posterior to the umbilicus	inguinal (bilateral)
(f) lower limb	inguinal and popliteal (ipsilateral)

The extent of the disease is assessed on clinical examination and radiography. The primary tumour is assessed on size, infiltration of subcutis or involvement of other structures such as fascia, muscle, bone or cartilage. The size, to be recorded in cm., may be measured by caliper.

The pathological grade of tumour should be recorded when available but does not modify the classification.

T0 = no evidence of tumour. Use for rechecks for malignancy after surgical removal of primary tumour.

Multiple tumours

In the case of multiple simultaneous tumours, the tumour with the highest T category should be identified and the number of separate tumours indicated in parenthesis, e.g. (T2(5)). Successive tumours should be classified independently.

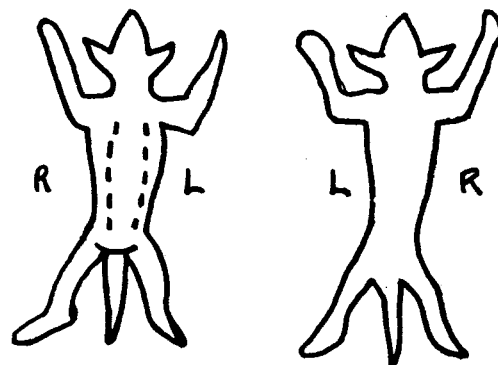
CLINICAL STAGES (TNM) OF CANINE OR FELINE TUMOURS OF EPIDERMAL OR DERMAL
ORIGIN (EXCLUDING LYMPHOSARCOMA AND MASTOCYTOMA)

Case number Name of owner Date
Cat/Dog Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

Circle appropriate category

T: Primary Tumour

- Tis Pre-invasive carcinoma (carcinoma in situ)
- T0 No evidence of tumour
- T1 Tumour < 2 cm. maximum diameter, superficial or exophytic
- T2 Tumour 2-5 cm. maximum diameter, or with minimal invasion irrespective of size
- T3 Tumour > 5 cm. maximum diameter, or with invasion of the subcutis, irrespective of size
- T4 Tumour invading other structures such as fascia muscle, bone or cartilage



Circle site(s) involved

Tumours occurring simultaneously should have the actual number recorded. The tumour with the highest T category is selected and the number of tumours indicated in parenthesis, e.g. T2(5). Successive tumours should be classified independently.

N: Regional Lymph Nodes (RLN)*

- N0 No evidence of RLN involvement
- N1 Movable ipsilateral nodes
 - N1a Nodes not considered to contain growth**
 - N1b Nodes considered to contain growth**
- N2 Movable contralateral or bilateral nodes
 - N2a Nodes not considered to contain growth**
 - N2b Nodes considered to contain growth**
- N3 Fixed nodes

M: Distant Metastasis

- M0 No evidence of distant metastasis
- M1 Distant metastasis detected*** - specify site(s)

STAGE GROUPING: No stage grouping is at present recommended

Comments

*For RLN see introduction
**(-) = histologically negative, (+) = histologically positive
***Including lymph nodes beyond the region in which the primary tumour is situated

2. SKIN

(Mastocytoma)

The extent of disease is assessed on clinical examination and radiography. The primary tumour is assessed on size, infiltration of subcutis or involvement of other structures such as fascia, muscle, bone or cartilage. The size, to be recorded in cm., may be measured by calliper.

In the case of multiple simultaneous tumours, the tumour with the highest T category should be identified and the number of separate tumours indicated in parenthesis, e.g. T2(5). Successive tumours should be classified independently.

The pathological grade of tumour should be recorded when available but does not modify the classification.

Systemic signs include gastric and duodenal ulceration, peritonitis, coagulation defects and glomerulonephritis. Because these tumours can be present with or without systemic signs the TNM system is not entirely suitable. The tumours can, however, be clinically staged into four categories.

CLINICAL STAGES OF CANINE MASTOCYTOMA

Case number Name of owner Date
Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

Circle appropriate category

Clinical Stage

- I One tumour confined to the dermis without regional lymph node involvement
 - Ia without systemic signs
 - Ib with systemic signs
- II One tumour confined to dermis, with regional lymph node involvement
 - IIa without systemic signs
 - IIb with systemic signs
- III Multiple dermal tumours or large infiltrating tumour with or without regional lymph node involvement
 - IIIa without systemic signs
 - IIIb with systemic signs
- IV Any tumour with distant metastasis or recurrence with metastasis*

Multiple tumours

Tumours occurring simultaneously should have the actual number recorded. The tumour with the highest T category is selected and the number of tumours indicated in parenthesis, e.g. T2(5). Successive tumours should be classified independently.

*Including blood and/or bone marrow involvement

3. MAMMARY GLANDS

The classification applies only to carcinoma.

The extent of disease is assessed on clinical examination and radiography of the thorax. The primary tumour is assessed on size, and involvement of skin and underlying structures. The size, to be recorded in cm., may be measured by calliper.

The position of the tumour in the mammary gland should be recorded but has no bearing on classification.

The pathological grade of tumour should be recorded when available but does not modify the classification.

Multiple tumours should be classified independently.

The regional lymph nodes are the axillary and inguinal nodes.

CLINICAL STAGES (TNM) OF CANINE MAMMARY TUMOURS

Case number Name of owner Date
 Age Sex Breed Body weight lbs
 (1 kg = 2.2 lbs) kgs

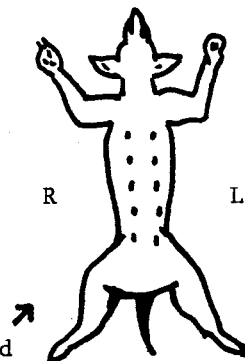
Number of primary tumours:

Mammary gland location of primary tumours:	Right Chain					Left Chain				
	1	2	3	4	5	1	2	3	4	5

Largest single diameter (cm): _____

SINGLE
 MULTIPLE (Mark ✓ where applicable)

Circle all glands involved



The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.)

- T categories : Clinical and surgical examination
- N categories : Clinical and surgical examination
- M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Tumour < 3 cm. maximum diameter
 - T1a not fixed
 - T1b fixed to skin
 - T1c fixed to muscle
- T2 Tumour 3-5 cm. maximum diameter
 - T2a not fixed
 - T2b fixed to skin
 - T2c fixed to muscle
- T3 Tumour > 5 cm. maximum diameter
 - T3a not fixed
 - T3b fixed to skin
 - T3c fixed to muscle

T4 Tumour any size, inflammatory carcinoma*

Multiple tumours should be classified independently.

* Locally invading skin without infection or trauma as the cause.

N: Regional Lymph Nodes (RLN):**

Mark where applicable

<u>Circle appropriate category</u>	<u>RLN evaluated</u>		<u>Method of RLN evaluation</u>	
	<u>Inguinal</u>	<u>Axillary</u>	<u>Clinical</u>	<u>Histological***</u>
N0 - no evidence of RLN involvement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N1 - ipsilateral RLN involved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N1a not fixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N1b fixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N2 - bilateral RLN involved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N2a not fixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N2b fixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

M: Distant Metastasis

Mark where applicable

<u>Circle appropriate category</u>	<u>Method of M Evaluation</u>		
	<u>Clinical</u>	<u>Radiographic</u>	<u>Histological</u>
M0 - no evidence of distant metastasis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M1 - distant metastasis including distant nodes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Specify site(s)

STAGE GROUPING:

	<u>T</u>	<u>N</u>	<u>M</u>
I	T1a,b or c	N0(-) or N1a(-) or N2a(-)	M0
II	T0	N1(+)	M0
	T1a,b or c	N1(+)	
	T2a,b or c	N0(+) or N1a(+)	
III	Any T3	Any N	M0
	Any T	Any Nb	
IV	Any T	Any N	M1

Final Clinical Stage:

T N M

TNM Evaluation

___ ___ ___

Stage

Comments:

.....

.....

** The RLN are the axillary and inguinal nodes

*** (-) = histologically negative, (+) = histologically positive

CLINICAL STAGES (TNM) OF FELINE MAMMARY TUMOURS

Case number Name of owner Date
 Age Sex Breed Body weight lbs
 (1 kg = 2.2 lbs) kgs

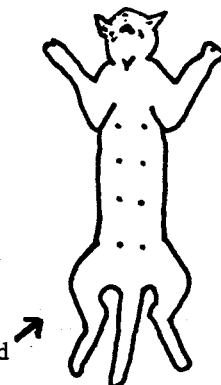
Number of primary tumours:

Mammary gland location of primary tumours:		Right Chain				Left Chain			
		1	2	3	4	1	2	3	4

Largest single diameter (cm): _____

SINGLE (Mark ✓ where applicable)
 MULTIPLE

Circle all glands involved →



The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.)

T categories : Clinical and surgical examination

N categories : Clinical and surgical examination

M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

T0 No evidence of tumour

T1 Tumour < 1 cm. maximum diameter

T1a not fixed

T1c fixed to muscle

T1b fixed to skin

T2 Tumour 1-3 cm. maximum diameter

T2a not fixed

T2c fixed to muscle

T2b fixed to skin

T3 Tumour > 3 cm. maximum diameter

T3a not fixed

T3c fixed to muscle

T3b fixed to skin

T4 Tumour any size, inflammatory carcinoma*

Multiple tumours should be classified independently.

* Locally invading skin without infection or trauma as the cause.

N: Regional Lymph Nodes (RLN):**

Mark where applicable

<u>Circle appropriate category</u>	<u>RLN evaluated</u>		<u>Method of RLN evaluation</u>	
	<u>Inguinal</u>	<u>Axillary</u>	<u>Clinical</u>	<u>Histological***</u>
N0 - no evidence of RLN involvement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N1 - ipsilateral RLN involved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N1a not fixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N1b fixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N2 - bilateral RLN involved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N2a not fixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N2b fixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

M: Distant Metastasis

Mark where applicable

<u>Circle appropriate category</u>	<u>Method of M Evaluation</u>		
	<u>Clinical</u>	<u>Radiographic</u>	<u>Histological</u>
M0 - no evidence of distant metastasis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M1 - distant metastasis including distant nodes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Specify site(s)

STAGE GROUPING:

	<u>T</u>	<u>N</u>	<u>M</u>
I	T1a,b or c	N0(-) or N1a(-) or N2a(-)	M0
II	T0	N1(+)	M0
	T1a,b or c	N1(+)	
	T2a,b or c	N0(+) or N1a(+)	
III	Any T3	Any N	M0
	Any T	Any Nb	
IV	Any T	Any N	M1

Final Clinical Stage:

T N M

TNM Evaluation _____ _____ _____ Stage

Comments:

.....

.....

** The RLN are the axillary and inguinal nodes
*** (-) = histologically negative, (+) = histologically positive

4. HEAD AND NECK

(excluding larynx)

The extent of disease is assessed on clinical examination, radiography of the thorax and endoscopy. Radiographic examination is mandatory.

The regional lymph nodes are the cervical, the submandibular and the parotid nodes.

LIPS

1. Lower lip
2. Upper lip
3. Commissures

ORAL CAVITY (BUCCAL CAVITY)

The oral cavity includes the anterior two-thirds of the tongue, floor of mouth, buccal mucosa, the alveoli and the hard palate.

1. Buccal mucosa
2. Lower alveolus and gingiva
3. Upper alveolus and gingiva
4. Hard palate
5. Tongue: (a) dorsal surface and lateral borders (anterior two-thirds); (b) inferior surface
6. Floor of mouth

In the case of multiple tumours, the symbol (m) is added to the appropriate T category.

OROPHARYNX

The oropharynx extends from the junction of the hard and soft palates to the level of the floor of the glossoepiglottic folds.

1. Anterior wall (glossoepiglottic area): (a) tongue (posterior third); (b) glossoepiglottic folds; (c) anterior (lingual) surface of epiglottis
2. Lateral wall and tonsils
3. Posterior oropharyngeal wall
4. Superior wall - inferior surface of soft palate and uvula

The hypopharynx is included with the oropharynx. It extends from the pharyngoepiglottic fold to the upper end of the oesophagus and posterior pharyngeal wall.

In the case of multiple tumours, the symbol (m) is added to the appropriate T category.

CLINICAL STAGES (TNM) OF CANINE / FELINE TUMOURS OF THE LIPS

Case number Name of owner Date
Cat/Dog Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.)

- T categories : Clinical and surgical examination
- N categories : Clinical and surgical examination
- M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- Tis Preinvasive carcinoma (carcinoma in situ)
- T0 No evidence of tumour
- T1 Tumour < 2 cm. maximum diameter, superficial or exophytic
- T2 Tumour < 2 cm. maximum diameter, with minimal invasion in depth
- T3 Tumour > 2 cm. diameter or with deep invasion irrespective of size
- T4 Tumour invading bone

N: Regional Lymph Nodes (RLN)*

- N0 No evidence of RLN involvement
- N1 Movable ipsilateral nodes
 - N1a Nodes not considered to contain growth**
 - N1b Nodes considered to contain growth**
- N2 Movable contralateral or bilateral nodes
 - N2a Nodes not considered to contain growth**
 - N2b Nodes considered to contain growth**
- N3 Fixed nodes

M: Distant Metastasis

- M0 No evidence of distant metastasis
- M1 Distant metastasis (including distant nodes) detected - specify site(s)

STAGE GROUPING: No stage grouping is at present recommended

Comments:

* The RLN are the cervical, submandibular and parotid nodes
** (-) = histologically negative, (+) = histologically positive

CLINICAL STAGES (TNM) OF CANINE/FELINE TUMOURS OF THE ORAL CAVITY (BUCCAL CAVITY)

Case number Name of owner Date
Cat/Dog Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

This classification applies to the anterior two-thirds of the tongue, floor of mouth, buccal mucosa, the alveoli and the hard palate.

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.)

T categories : Clinical and surgical examination

N categories : Clinical and surgical examination

M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

Tis Preinvasive carcinoma (carcinoma in situ)

T0 No evidence of tumour

T1 Tumour < 2 cm. maximum diameter

T1a without bone invasion

T1b with bone invasion

T2 Tumour 2-4 cm. maximum diameter

T2a without bone invasion

T2b with bone invasion

T3 Tumour > 4 cm. maximum diameter

T3a without bone invasion

T3b, with bone invasion

The symbol (m) added to the appropriate T category indicates multiple tumours

N: Regional Lymph Nodes (RLN)*

N0 No evidence of RLN involvement

N1 Movable ipsilateral nodes

N1a Nodes not considered to contain growth** N1b Nodes considered to contain growth**

N2 Movable contralateral or bilateral nodes

N2a Nodes not considered to contain growth** N2b Nodes considered to contain growth**

N3 Fixed nodes

M: Distant Metastasis

M0 No evidence of distant metastasis

M1 Distant metastasis (including distant nodes) detected - specify site(s)
.....

STAGE GROUPING:

	T	N	M
I	T1	NO, N1a or N2a	M0
II	T2	NO, N1a or N2a	M0
III***	T3 Any T	NO, N1a or N2a N1b	M0
IV	Any T	Any N2b or N3 Any N	M0 M1

Comments:

.....

.....

* The RLN are the cervical, submandibular and parotid nodes
** (-) = histologically negative, (+) = histologically positive
*** Any bone involvement

CLINICAL STAGES (TNM) OF CANINE/FELINE/EQUINE TUMOURS OF THE OROPHARYNX*

Case number Name of owner Date

Species Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs).... kgs

The following classification applies from the junction of the hard and soft palates to the level of the floor of the glossoepiglottic folds.

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.)

T categories : Clinical, surgical and radiological examination, endoscopy

N categories : Clinical and surgical examination

M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

Tis Preinvasive carcinoma (carcinoma in situ)

T0 No evidence of primary tumour

T1 Tumour superficial or exophytic

T1a without systemic signs

T1b with systemic signs

T2 Tumour with invasion of tonsil only

T2a without systemic signs

T2b with systemic signs

T3 Tumour with invasion of surrounding tissue

T3a without systemic signs

T3b with systemic signs

The symbol (m) added to the appropriate T category indicates multiple tumours.

N: Regional Lymph Nodes (RLN)**

NO No evidence of RLN involvement

N1 Movable ipsilateral nodes

N1a nodes not considered to contain growth***

N1b nodes considered to contain growth***

N2 Movable contralateral or bilateral nodes

N2a nodes not considered to contain growth***

N2b nodes considered to contain growth***

N3 Fixed nodes

M: Distant Metastasis

MO No evidence of distant metastasis

M1 Distant metastasis (including distant nodes) detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended.

Comments:

*Mainly tonsillar carcinoma; **The RLN are the cervical, submandibular and parotid nodes
***(-) = histologically negative (+) = histologically positive

5. ALIMENTARY SYSTEM*

OESOPHAGUS

Tumours of the oesophagus are rare in animals except in geographic areas where the canine oesophageal parasite Spirocerca lupi exists and where herbivorous animals have a high intake of bracken fern (Pteridium aquilinum).

The extent of disease is assessed by clinical examination, radiography of the thorax and endoscopy.

STOMACH

In single-stomached animals there are two regions and the tumour is assigned to that region in which the bulk of it is situated.

- (a) anterior half
- (b) posterior half

In herbivores the anatomical site is recorded e.g. rumen, abomasum.

The extent of disease is assessed by clinical examination, radiography of the thorax and endoscopy or laparotomy.

The regional lymph nodes are the gastric and splenic nodes.

PANCREAS

The extent of disease is assessed by laparotomy or laparoscopy, and radiography of the thorax.

The regional lymph nodes are the splenic and hepatic nodes.

LIVER

The extent of disease is assessed by clinical examination, radiography of the thorax, and laparotomy or laparoscopy.

The regional lymph nodes are the hepatic and diaphragmatic nodes.

INTESTINES

The extent of disease is assessed by clinical examination, radiography of the thorax and subsequent laparotomy.

The regional lymph nodes are the mesenteric, caecal, colic and rectal nodes.

*With the exception of tumours of the pancreas, in the case of multiple tumours the symbol (m) is added to the appropriate T category.

CLINICAL STAGES (TNM) OF TUMOURS OF THE OESOPHAGUS (ALL SPECIES)

Case number Name of owner Date
Species Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.)

- T categories : Clinical and surgical examination, endoscopy
 - N categories : Clinical and surgical examination
 - M categories : Clinical and surgical examination, radiography of thorax
-

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Tumour confined to the oesophagus
- T2 Tumour invading neighbouring structures

The symbol (m) added to the appropriate T category indicates multiple tumours.

N: Regional Lymph Nodes (RLN)*

- N0 No evidence of RLN involvement
- N1 RLN involved

M: Distant Metastasis

- M0 No evidence of distant metastasis
- M1 Distant metastasis detected - specify site(s):.....

STAGE GROUPING: No stage grouping is at present recommended

Comments:
.....
.....

*The RLN are:

- for the cervical oesophagus, the cervical and prescapular nodes
- for the thoracic oesophagus, the mediastinal nodes

CLINICAL STAGES (TNM) OF TUMOURS OF THE STOMACH (ALL SPECIES)

Case number Name of owner Date
Species Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.)

T categories : Clinical and surgical examination (laparotomy or laparoscopy, endoscopy)

N categories : Surgical examination (laparotomy, laparoscopy)

M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Tumour not invading serosa
- T2 Tumour invading serosa
- T3 Tumour invading neighbouring structures

The symbol (m) added to the appropriate T category indicates multiple tumours

N: Regional Lymph Nodes (RLN)*

- NO No evidence of RLN involvement
- N1 RLN involved
- N2 Distant LN involved.

M: Distant Metastasis

- M0 No evidence of distant metastasis
- M1 Distant metastasis detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended

Comments:
.....
.....

*The RLN are the gastrosplenic nodes

CLINICAL STAGES (TNM) OF TUMOURS OF THE PANCREAS
(ALL SPECIES)

Case number Name of owner Date
Species Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.)

- T categories : Clinical and surgical examination (laparotomy or laparoscopy)
- N categories : Surgical examination (laparotomy, laparoscopy)
- M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- TO No evidence of tumour
- T1 Tumour present - state anatomical site:

N: Regional Lymph Nodes (RLN)*

- NO No evidence of RLN involvement
- N1 RLN involved
- N2 Distant LN involved

M: Distant Metastasis

- MO No evidence of distant metastasis
- M1 Distant metastasis detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended.

Comments:
.....
.....

*The RLN are the splenic and hepatic nodes

CLINICAL STAGES (TNM) OF TUMOURS OF THE LIVER
(ALL SPECIES)

Case number Name of owner Date

Species Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.)

T categories : Clinical and surgical examination (laparotomy or laparoscopy)

N categories : Surgical examination (laparotomy, laparoscopy)

M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Tumour involving one lobe
- T2 Tumour involving more than one lobe
- T3 Tumour invading neighbouring structures

The symbol (m) added to the appropriate T category indicates multiple tumours

N: Regional Lymph Nodes (RLN)*

- N0 No evidence of RLN involvement
- N1 RLN involved
- N2 Distant LN involved

M: Distant Metastasis

- M0 No evidence of distant metastasis
- M1 Distant metastasis detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended

Comments:

.....

.....

*The RLN are the hepatic and diaphragmatic nodes

CLINICAL STAGES (TNM) OF TUMOURS OF THE INTESTINES
(ALL SPECIES)

Case number Name of owner Date
Species Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.)

T categories : Clinical and surgical examination (laparotomy or laparoscopy)

N categories : Surgical examination (laparotomy, laparoscopy)

M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Tumour not invading serosa
- T2 Tumour invading serosa
- T3 Tumour invading neighbouring structures

The symbol (m) added to the appropriate T category indicates multiple tumours.

N: Regional Lymph Nodes (RLN)*

- NO No evidence of RLN involvement
- N1 RLN involved
- N2 Distant LN involved

M: Distant Metastasis

- MO No evidence of distant metastasis
- M1 Distant metastasis detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended

Comments:
.....
.....

*The RLN are the mesenteric, caecal, colic and rectal nodes

6. UROLOGICAL SYSTEM

KIDNEY AND BLADDER

As well as clinical examination, radiography of the thorax and laparotomy, techniques such as lymphangiography or arteriography may be helpful in the assessment of these tumours. For bladder tumours cystoscopy, urography and cystography are of considerable value. It is recognized that facilities for these techniques are not uniformly available and veterinary clinicians who do not have them cannot classify these tumours according to the system proposed.

In the case of multiple tumours of the bladder, the symbol (m) is added to the appropriate T category.

The regional lymph nodes for the kidney are the lumbar nodes and for the bladder, the external and internal iliac lymph nodes.

CLINICAL STAGES (TNM) OF CANINE TUMOURS OF THE KIDNEY

Case number Name of owner Date
Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met, the symbols TX, NX and MX should be used.)

T categories : Clinical and surgical examination (laparotomy or laparoscopy)

N categories : Surgical examination (laparotomy, laparoscopy)

M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- | | | | |
|----|---|----|---|
| T0 | No evidence of tumour | T3 | Tumour invading perinephric structures (peritoneum) and/or pelvis, ureter and/or renal blood vessels (renal vein) |
| T1 | Small tumour without deformation of the kidney | T4 | Tumour invading neighbouring structures |
| T2 | Solitary tumour with deformation and/or enlargement of the kidney | | |

N: Regional Lymph Nodes (RLN)*

- | | | | |
|----|--------------------------------|----|---|
| NO | No evidence of RLN involvement | N2 | Bilateral RLN involved |
| N1 | Ipsilateral RLN involved | N3 | Other LN involved (abdominal and pelvic LN) |

M: Distant Metastasis

- | | | | |
|----|---|-----|---------------------------------------|
| M0 | No evidence of distant metastasis | | |
| M1 | Distant metastasis detected - specify site(s) | M1a | Single metastasis in one organ |
| | | M1b | Multiple metastases in one organ |
| | | M1c | Multiple metastases in various organs |

STAGE GROUPING: No stage grouping is at present recommended.

Comments:

*The RLN are the lumbar nodes

CLINICAL STAGES (TNM) OF CANINE TUMOURS OF THE URINARY BLADDER

Case number Name of owner Date
Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met, the symbols TX, NX and MX should be used.)

T categories : Clinical examination, cystoscopy, urography or cystography, laparotomy.

N categories : Surgical examination (laparotomy or laparoscopy)

M categories : Clinical examination, radiography of thorax, laparotomy

Circle appropriate category

T: Primary Tumour

- | | | | |
|-----|-------------------------------|----|--|
| Tis | Carcinoma <u>in situ</u> | T2 | Tumour invading the bladder wall, with induration |
| T0 | No evidence of primary tumour | T3 | Tumour invading neighbouring organs (prostate, uterus, vagina, anal canal) |
| T1 | Superficial papillary tumour | | |

The symbol (m) added to the appropriate T category indicates multiple tumours

N: Regional Lymph Nodes (RLN)*

- | | | | |
|----|--------------------------------|----|----------------------------|
| NO | No evidence of RLN involvement | N2 | RLN and juxta RLN involved |
| N1 | RLN involved | | |

M: Distant Metastasis

- | | | | |
|----|--|--|-------|
| M0 | No evidence of distant metastasis | | |
| M1 | Distant metastasis detected - specify site(s): | | |

STAGE GROUPING: No stage grouping is at present recommended.

Comments:
.....
.....

*The RLN are the internal and external iliac nodes. The juxta RLN are the lumbar nodes

7(a). FEMALE GENITAL SYSTEM

OVARY

The extent of disease is assessed on clinical examination and the findings at operation, but before definitive treatment is commenced. Radiography of the thorax is mandatory. It is recognized that some cases will remain unclassified.

The regional lymph nodes are the lumbar nodes.

UTERUS

Cervical tumours are very rare in animals and no staging classification is provided. Uterine tumours are infrequent.

There are two areas of the uterus, the body and horns.

The extent of disease is assessed by clinical examination, radiography of the thorax and laparoscopy or laparotomy.

In the case of multiple tumours, the symbol (m) is added to the appropriate T category.

The regional lymph nodes are the internal and external iliac and sub-lumbar and sacral nodes

VAGINA AND VULVA

Tumours of the vulva are classified as those of skin. Tumours present in the vagina as secondary growths from either genital or extra-genital sites should be excluded.

The extent of disease is assessed on clinical examination and/or following surgical exposure, and radiography of the thorax is required.

In the case of multiple tumours, the symbol (m) is added to the appropriate T category.

The regional lymph nodes are the superficial inguinal, sacral and internal iliac nodes.

CLINICAL STAGES (TNM) OF CANINE TUMOURS OF THE OVARY*

Case number Name of owner Date
Age Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met, the symbols TX, NX and MX should be used.)

T categories : Clinical and surgical examination (laparotomy, laparoscopy)

N categories : Surgical examination (laparotomy, laparoscopy)

M categories : Clinical and surgical examination (laparotomy) and radiography of thorax

Circle appropriate category

T: Primary Tumour

- | | | | |
|----|---------------------------------|----|---|
| T0 | No evidence of tumour | T3 | Tumour invading the ovarian bursa |
| T1 | Tumour limited to one ovary | T4 | Tumour invading neighbouring structures |
| T2 | Tumours limited to both ovaries | | |

N: Regional Lymph Nodes (RLN)**

- NO No evidence of RLN involvement
N1 RLN involved

M: Distant Metastasis

- M0 No evidence of distant metastasis
M1 Evidence of implantation(s) or other metastases:
M1a in the peritoneal cavity
M1b beyond the peritoneal cavity - specify site(s):
M1c both peritoneal cavity and beyond

STAGE GROUPING: No stage grouping is at present recommended

Comments:
.....
.....

*General principles apply to all species
**The RLN are the lumbar nodes

CLINICAL STAGES (TNM) OF TUMOURS OF THE UTERUS (ALL SPECIES)

Case number Name of owner Date
Species Age Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met, the symbols TX, NX and MX should be used.)

- T categories : Clinical and surgical examination (laparotomy or laparoscopy)
- N categories : Surgical examination (laparotomy or laparoscopy)
- M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Small non-invasive tumour
- T2 Large or invasive tumour
- T3 Tumour invading neighbouring structures

The symbol (m) added to the appropriate T category indicates multiple tumours

N: Regional Lymph Nodes (RLN)*

- N0 No evidence of RLN involvement
- N1 Pelvic RLN involved
- N2 Para-aortic RLN involved

M: Distant Metastasis

- M0 No evidence of distant metastasis
- M1 Evidence of metastasis:
 - M1a in the peritoneal cavity
 - M1b beyond the peritoneal cavity - specify site(s):
 - M1c in and beyond the peritoneal cavity

STAGE GROUPING: No stage grouping is at present recommended

Comments:
.....
.....

*The RLN are the pelvic nodes distal to the bifurcation of the common iliac arteries and intra-abdominal para-aortic nodes proximal to the bifurcation of the common iliac arteries.

CLINICAL STAGES (TNM) OF CANINE TUMOURS OF THE VAGINA AND VULVA*

Case number Name of owner Date
Age Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met, the symbols TX, NX and MX should be used.)

T categories : Clinical and surgical examination

N categories : Surgical examination

M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

T0 No evidence of tumour

T1 Tumour <1 cm maximum diameter, superficial

T2 Tumour 1-3 cm maximum diameter, with minimal invasion

T3 Tumour > 3 cm or every tumour with deep invasion

T4 Tumour invading neighbouring structures (skin, perineum, urethra, paravaginal wall,
anal canal)

The symbol (m) added to the appropriate T category indicates multiple tumours

N: Regional Lymph Nodes (RLN)**

N0 No evidence of RLN involvement

N1 Movable, ipsilateral nodes

N2 Movable, bilateral nodes

N3 Fixed nodes

M: Distant Metastasis

M0 No evidence of distant metastasis

M1 Distant metastasis detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended

Comments:
.....

*Tumours present in the vagina as secondary growths from either genital or extragenital sites should be excluded.

**The RLN are the superficial inguinal, sacral and internal iliac nodes, except that for the cranial part of the vagina they are only the internal iliac nodes.

7(b). MALE GENITAL SYSTEM

TESTIS

Tumours of the testis may be in the descended testicle (scrotum) or undescended testicle (abdomen or inguinal).

The extent of disease is assessed on clinical examination, radiography of the thorax and (for abdominal testicle) laparotomy.

In the case of multiple tumours, the symbol (m) is added to the appropriate T category.

The regional lymph nodes are the sub-lumbar, inguinal nodes.

PENIS

There are three anatomical regions:

- (a) preputium or prepuce
- (b) glans
- (c) shaft of penis

The extent of disease is assessed on clinical examination and radiography of the thorax.

In the case of multiple tumours, the symbol (m) is added to the appropriate T category.

The regional lymph nodes are the superficial inguinal nodes.

PROSTATE

While hyperplasia of the prostate is common in the dog malignant prostatic tumours in this and other domestic animal species are uncommon.

The extent of disease is assessed on clinical examination, supplemented by (T) urography, endoscopy or laparotomy and biopsy, (N) lymphography and/or urography, laparotomy, (M) pelvic, thoracic and skeletal x-rays.

The regional lymph nodes are the external and internal iliac lymph nodes.

CLINICAL STAGES (TNM) OF CANINE TUMOURS OF THE TESTIS

Case number Name of owner Date

Age Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

Site: Mark where applicable

Right testis	<input type="checkbox"/>	Scrotal	<input type="checkbox"/>	
Left testis	<input type="checkbox"/>	Inguinal	<input type="checkbox"/>	
Both testes	<input type="checkbox"/>	Abdominal	<input type="checkbox"/>	Feminization present <input type="checkbox"/>

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met, the symbols TX, NX and MX should be used.)

- T categories : Clinical and surgical examination (laparotomy for abdominal testicle only)
- N categories : Clinical and surgical examination
- M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Tumour restricted to the testis
- T2 Tumour invading the tunica albuginea
- T3 Tumour invading the rete testis and/or the epididymis
- T4 Tumour invading the spermatic cord and/or the scrotum

The symbol (m) added to the appropriate T category indicates multiple tumours

N: Regional Lymph Nodes (RLN)*

- N0 No evidence of RLN involvement
- N1 Ipsilateral RLN involved
- N2 Contralateral or bilateral RLN involved

M: Distant Metastasis

- M0 No evidence of distant metastasis
- M1 Distant metastasis detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended

Comments:
.....
.....

*The RLN are the sub-lumbar, inguinal nodes

CLINICAL STAGES (TNM) OF CANINE TUMOURS OF THE PENIS
(PREPUCE AND GLANS)

Case number Name of owner Date
Age Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met, the symbols TX, NX and MX should be used.)

T categories : Clinical and surgical examination, radiography of thorax

N categories : Clinical and surgical examination

M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Tumour < 1 cm maximum diameter, strictly superficial
- T2 Tumour 1-3 cm maximum diameter with minimal invasion
- T3 Tumour > 3 cm or every tumour with deep invasion
- T4 Tumour invading neighbouring structures

The symbol (m) added to the appropriate T category indicates multiple tumours.

N: Regional Lymph Nodes (RLN)*

- NO No evidence of RLN involvement
- N1 Movable ipsilateral nodes
- N2 Movable bilateral nodes
- N3 Fixed nodes

M: Distant Metastasis

- MO No evidence of distant metastasis
- M1 Distant metastasis detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended

Comments:
.....
.....

*The RLN are the superficial inguinal nodes

CLINICAL STAGES (TNM) OF CANINE TUMOURS OF THE PROSTATE

Case number Name of owner Date

Age Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met, the symbols TX, NX and MX should be used.

- T categories : Clinical and surgical examination, urography, endoscopy and biopsy
- N categories : Clinical and surgical examination, lymphography and/or urography
- M categories : Clinical and surgical examination, radiography of pelvis, thorax and skeleton

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Intracapsular tumour, surrounded by normal gland
- T2 Diffuse intracapsular tumour
- T3 Tumour extending beyond the capsule
- T4 Tumour fixed, or invading neighbouring structures

N: Regional Lymph Nodes (RLN)*

- N0 No evidence of RLN involvement
- N1 RLN involved
- N2 RLN and juxta RLN involved

M: Distant Metastasis

- M0 No evidence of distant metastasis
- M1 Distant metastasis detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended

Comments:
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*The RLN are the external and internal iliac nodes. The juxta RLN are the lumbar nodes

8. BONES AND JOINTS

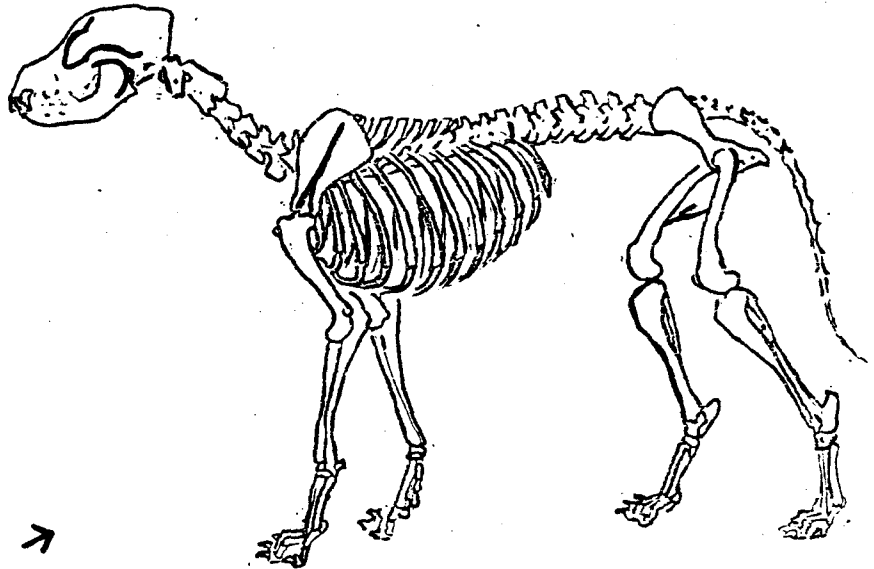
The extent of disease is assessed on clinical and radiographic examination. Radiographic examination of the affected bone or joint together with the thorax (for metastases) is mandatory.

Multiple tumours should be classified independently.

CLINICAL STAGES (TM) OF CANINE / FELINE TUMOURS OF THE BONE

Case number Name of owner Date

Cat/Dog Age Sex Breed Body weight lbs
 (1 kg = 2.2 lbs) kgs



Circle site(s) involved →

The following are the minimum requirements for assessing the T and M categories. (If these cannot be met, the symbols TX and MX should be used.)

T categories : Clinical, surgico-pathological and radiographic examination

M categories : Surgico-pathological examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- T0 No evidence of primary tumour
- T1 Tumour confined within the medulla and cortex
- T2 Tumour extends beyond the periosteum

Multiple tumours should be classified independently.

M: Distant Metastasis

- M0 No evidence of distant metastasis
- M1 Distant metastasis detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended

Comments:

CLINICAL STAGES (TNM) OF CANINE AND FELINE TUMOURS OF JOINTS AND ASSOCIATED STRUCTURES
(TENDONS, TENDON SHEATHS ETC.)

Case number Name of owner Date
Species Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.

T categories : Clinical, surgico-pathological and radiographic examination

N categories : Clinical and surgico-pathological examination

M categories : Surgico-pathological examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Tumour well-defined, no invasion of surrounding tissues
- T2 Tumour invading soft tissues
- T3 Tumour invading joints and/or bones

Multiple tumours should be classified independently

N: Regional Lymph Nodes (RLN)*

- N0 No evidence of RLN involvement
- N1 RLN involved**

M: Distant Metastasis

- M0 No evidence of distant metastasis
- M1 Distant metastasis detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended

Comments:
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.....

*The RLN are as described in the introduction to skin (page 12)
**(-) = histologically negative, (+) = histologically positive.

9. LYPHOID AND HAEMATOPOIETIC TISSUES

(including lymphosarcoma of skin)

Lymphosarcoma in most domestic mammals falls into distinct anatomic types: generalized lymphadenopathy, organs and nodes of the alimentary tract, thymus, skin, true lymphatic leukemia and occasionally other sites such as renal tissue or eye only.

The TNM system cannot be used. A histological classification is essential and attempts should be made to type these tumours immunologically as well.

The extent of disease is assessed on clinical, radiographic and haematological examination and is described as with or without systemic signs e.g. dyspnoea, dysentery. The recommended method for biopsy in multicentric lymphosarcoma is to excise an entire node e.g. popliteal, prescapular (superficial cervical).

CLINICAL STAGES OF LYMPHOSARCOMA AND LYMPHOID LEUKAEMIA IN DOMESTIC MAMMALS*
(INCLUDING LYMPHOSARCOMA OF SKIN)

Case number Name of owner Date

Species Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The extent of disease is assessed by clinical, radiographic and haematological examination.

1. ANATOMIC TYPE Circle appropriate category
- A. Generalized
 - B. Alimentary
 - C. Thymic
 - D. Skin
 - E. Leukaemia (True)**
 - F. Others (including solitary renal)
2. STAGE GROUPING (to include anatomic type)
- I Involvement limited to a single node or lymphoid tissue in a single organ***
 - II Involvement of many lymph nodes in a regional area (+ tonsils)
 - III Generalized lymph node involvement
 - IV Liver and/or spleen involvement (+ Stage III)
 - V Manifestation in the blood and involvement of bone marrow and/or other organ systems (+ Stages I-IV)
- Each stage is subclassified into:
- (a) without systemic signs, or (b) with systemic signs

Comments:

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*Excluding myeloma
**Only blood and bone marrow involved
***Excluding bone marrow

10. RESPIRATORY SYSTEM

NASAL CHAMBER AND SINUSES

The nasal chamber extends from the external nose anteriorly including the alae to the oropharynx posteriorly. Paranasal sinuses include frontal and maxillary in all species, plus sphenopalatine and ethmoidal sinuses in the horse.

The extent of disease is assessed on clinical and radiographic examination.

In the case of multiple tumours, the symbol (m) is added to the appropriate T category.

The regional lymph nodes are the submandibular, anterior cervical and pharyngeal nodes.

LARYNX, TRACHEA AND LUNGS

Primary tumours of the larynx, trachea and lungs are rare in animals. In some geographical regions there is a high incidence in sheep of jaagsiekte, a horizontally transmissible disease.

The extent of disease is assessed by clinical examination, endoscopy and radiography of the thorax.

Multiple tumours of the lungs should be classified independently.

The regional lymph nodes are the anterior cervical and pharyngeal (larynx and anterior trachea) and intrathoracic nodes (trachea, lungs).

CLINICAL STAGES (TNM) OF CANINE AND FELINE TUMOURS OF THE NASAL CHAMBER AND SINUSES

Case number Name of owner Date

Species Age Sex ... Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.)

- T categories : Clinical, surgical and radiographic examination
- N categories : Clinical examination
- M categories : Clinical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Tumour ipsilateral, minimal or no bone destruction
- T2 Tumour bilateral and/or moderate bone destruction
- T3 Tumour invading neighbouring tissues

The symbol (m) added to the appropriate T category indicates multiple tumours

N: Regional Lymph Nodes (RLN)*

- N0 No evidence of RLN involvement
- N1 Movable ipsilateral nodes
 - N1a Nodes not considered to contain growth**
 - N1b Nodes considered to contain growth**
- N2 Movable contralateral or bilateral nodes
 - N2a Nodes not considered to contain growth**
 - N2b Nodes considered to contain growth**
- N3 Fixed nodes

M: Distant Metastasis

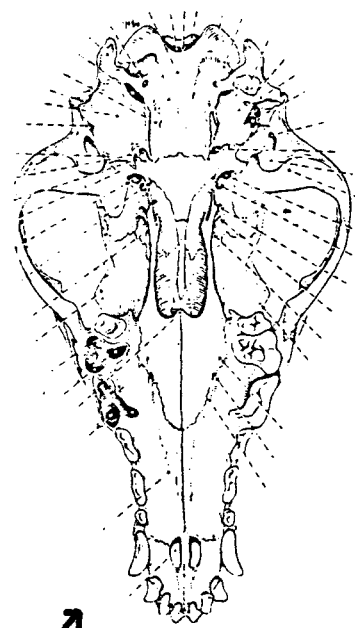
- M0 No evidence of distant metastasis
- M1 Distant metastasis detected (including distant nodes) - specify site(s)

STAGE GROUPING: No stage grouping is at present recommended

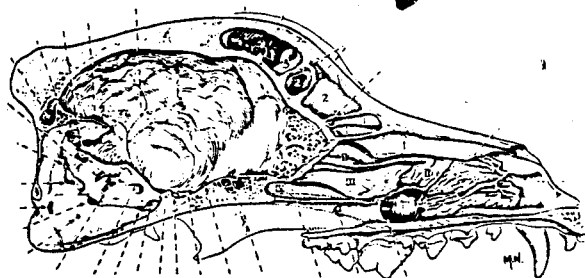
Comments:

.....

*The regional lymph nodes are the submandibular, anterior cervical and pharyngeal nodes
 **(-) = histologically negative, (+) = histologically positive



Circle site(s) involved



CLINICAL STAGES (TNM) OF TUMOURS OF THE LARYNX, TRACHEA AND LUNGS (ALL SPECIES)

Case number Name of owner Date
Species Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met the symbols TX, NX and MX should be used.)

T categories : Clinical and surgical examination, endoscopy, bronchoscopy, radiography

N categories : Clinical and surgical examination

M categories : Clinical and surgical examination, radiography of thorax

Circle appropriate category

T: Primary Tumour

T0 No evidence of tumour

TX Tumour proven by presence of malignant cells in bronchopulmonary secretions but not seen by radiography or bronchoscopy

T1 Solitary tumour surrounded by lung or visceral pleura

T2 Multiple tumours of any size

T3 Tumour invading neighbouring tissues

Multiple tumours should be classified independently (applicable to lungs only)

N: Regional Lymph Nodes (RLN)*

N0 No evidence of RLN involvement

N1 Bronchial LN involved

N2 Distant LN involved

M: Distant Metastasis

M0 No evidence of distant metastasis

M1 Distant metastasis detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended

Comments:
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.....

*The regional lymph nodes for the larynx and anterior trachea are the anterior cervical and and pharyngeal nodes; for the trachea and lungs they are the intrathoracic nodes

11. ENDOCRINE GLANDS

THYROID GLAND

The extent of disease is assessed on clinical examination, radiography of the thorax, endoscopy and radio-isotope scanning. There must be histological verification.

The regional lymph nodes are the cervical nodes.

ADRENAL GLANDS

The extent of disease is assessed on clinical examination, radiography of the thorax, endoscopy and hormonal assays.

The regional lymph nodes are the lumbar nodes.

CLINICAL STAGES (TNM) OF CANINE TUMOURS OF THE THYROID GLAND

Case number Name of owner Date
Age Sex Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

LOCATION:*	LEFT		RIGHT		BOTH	
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The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met, the symbols TX, NX and MX should be used.)

T categories : Clinical, surgical and radiographic examination, endoscopy, radio-isotope scanning

N categories : Clinical and surgical examination

M categories : Clinical and surgical examination, radiography of thorax, radio-isotope scanning

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Tumour < 2 cm maximum diameter : T1a not fixed, T1b fixed
- T2 Tumour 2-5 cm maximum diameter : T2a not fixed, T2b fixed
- T3 Tumour > 5 cm maximum diameter : T3a not fixed T3b fixed

N: Regional Lymph Nodes (RLN)**

- N0 No evidence of RLN involvement
 - N1 Ipsilateral RLN involved : N1a not fixed*** N1b fixed***
 - N2 Bilateral RLN involved : N2a not fixed*** N2b fixed***
- Assessment: Clinical Radiographic Histological

M: Distant Metastasis

- M0 No evidence of distant metastasis
- M1 Distant metastasis detected - specify site(s):

STAGE GROUPING:	T	N	M
I	T1a,b	NO(-) or N1a(-) or N2a(-)	M0
II	T0 T1a,b T2a,b	N1(+) N1(+) NO(+) or N1a(+)	M0
III	Any T3 Any T	Any N Any Nb	M0
IV	Any T	Any N	M1

Comments:
.....

*When both glands are involved, separate staging forms should be used for each
**The RLN are the cervical nodes
***(-) = histologically negative, (+) = histologically positive

CLINICAL STAGES (TNM) OF CANINE TUMOURS OF THE ADRENAL GLANDS

Case number Name of owner Date
Age Sex ... Breed Body weight lbs
(1 kg = 2.2 lbs) kgs

The following are the minimum requirements for assessing the T, N and M categories. (If these cannot be met, the symbols TX, NX and MX should be used.)

T categories : Clinical and surgical examination, radiography of primary site, hormonal assays

N categories : Clinical and surgical examination

M categories : Clinical and surgical examination, radiography of thorax, hormonal assays

Circle appropriate category

T: Primary Tumour

- T0 No evidence of tumour
- T1 Well-defined tumour
- T2 Tumour invading neighbouring structures
- T3 Tumour invading blood vessels

N: Regional Lymph Nodes (RLN)*

- N0 No evidence of RLN involvement
- N1 RLN involved

M: Distant Metastasis

- M0 No evidence of distant metastasis
- M1 Distant metastasis detected - specify site(s):

STAGE GROUPING: No stage grouping is at present recommended

Comments:
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.....

*The RLN are the lumbar nodes