An introduction to cancer in cats and dogs
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What is cancer?

Humans and animals are composed of many billions of cells which are arranged in a very complex fashion to form a living individual. In order for this complex arrangement to be maintained, these cells are subject to certain rules of behaviour that all cells must adhere to. The rules control the rate at which the cells grow, the rate at which they get old and die and the degree to which they stay in one place or migrate through the body.

Cancer is caused when cells stop obeying these strict rules of behaviour. They may grow at too fast a rate or fail to get old and die at the right time, they may also lose respect for the cells next to them and invade into neighbouring tissue, and they may also move throughout the body and start growing elsewhere. The cells may also produce chemical substances that make the patient feel ill and have effects on other parts of the body, such as the immune system that helps to fight off disease.

'Cancer' and 'tumour' are general terms for the disease caused by this abnormal behaviour of the cells and are often used interchangeably, although more commonly the term 'cancer' refers to a tumour with malignant behaviour.

It is important to realise that cancer is not a single disease and can vary widely between individuals.
What causes cancer?

Cancer is a genetic disease, in other words abnormalities in the DNA (the genetic 'fingerprint') in the cell will lead to the abnormalities in cell behaviour described previously. Normally, the additive effect of several abnormal genes is required before cancer will develop. Since many abnormalities are necessary before cancer will develop, cancer does not have a single cause.

Genetic abnormalities may be inherited from the parents and be present from birth, or they may be acquired during the life of the patient. While some causes of these acquired genetic abnormalities and therefore cancer are known, e.g. certain viruses, chemical substances, ultraviolet light, radiation, in most cases the cause of cancer is not known.

How common is cancer?

Approximately one quarter to one third of all our patients will suffer from cancer at some point in their lives, which is similar to the incidence of cancer in human medicine.

Is cancer one disease?

Tumours may arise from any one of many cells, tissues or organs within the body, and they may behave in a benign or malignant fashion. Hence, cancer is not one disease with a single treatment. Identification of the particular tumour type and its effect on the patient are important steps before deciding on the most appropriate treatment.

What are the signs that my pet may have cancer?

There are various clinical signs that an animal might show if it has developed cancer and of course, presence of any of these signs does not automatically mean that an animal has cancer, as they could be caused by other conditions. Nevertheless, identification of any of these abnormalities should prompt an investigation as to the cause.

Potential clinical signs include:

- Abnormal swelling or mass
- A wound that won't heal
- Loss of weight, particularly if the appetite is maintained
- Loss of appetite
- Difficulty eating or swallowing
- Lethargy and lack of interest in exercise or playing
- Difficulty breathing
- Difficulty passing urine or faeces
- Bleeding or discharge from any body orifice, e.g. mouth, rectum, vulva
- Offensive odour
- Unusual and persistent lameness or stiffness

What should I do if I think my pet has cancer?

As with all clinical signs of ill-health, in the first instance, veterinary advice should be sought from your local veterinary surgeon. Depending on the nature of the problem, your veterinary surgeon may discuss referral to a Specialist in oncology.

How is a diagnosis of cancer made?

This involves assessment of the abnormal cells in the primary tumour site, often a mass, following a biopsy sample. Biopsy samples may also be taken from nearby lymph nodes. X-rays or a CT scan and ultrasound may be used to detect evidence of tumour spread elsewhere within the body. Blood tests may be taken to assess the patient's general health and fitness for treatment, to look for other diseases that are also present, or, in some cases make a diagnosis of cancer (e.g. leukaemia)

For more information, please see our information sheet on Assessment of the Cancer Patient.

What is the best treatment for cancer?

The three main treatments for cancer are:

- **Surgery**
  - The surgical removal of the tumour cells
- **Radiotherapy**
  - The use of a strong X-ray beam to destroy cancer cells where they sit
- **Chemotherapy**
  - The use of anti-cancer drugs to kill cancer cells wherever they are in the body

The most appropriate treatment will depend on the nature, location and extent of the tumour, the overall health of the patient and the owner’s wishes and expectation. There may be more than one way to treat any particular tumour and it is important that the treatment is tailored to the patient.

What is the outlook for pets with cancer?

Many animals with cancer can be treated successfully and some can be cured of their disease. It is uncommon for us not be able to help and improve the quality of life of a pet with cancer in some way.

If you have any queries or concerns, please do not hesitate to contact us.