

FAQS ABOUT RADIOTHERAPY FOR YOUR PET

Everything you need to know about Radiotherapy for your pet.



WHAT IS RADIOTHERAPY?

Radiotherapy is the treatment of cancer with high energy x-rays. This is usually given in the form of powerful x-rays produced by a machine called a Linear Accelerator (like a very sophisticated, giant x-ray machine).

How does radiotherapy work?

Cancer cells generally multiply and grow very rapidly, compared with normal cells. Radiotherapy works primarily by disrupting the process of cell division; as the cells try to multiply, they die. Radiotherapy is a focused treatment and the goal is to provide local or regional control of cancer. It is most often used to prevent a tumour growing back at the same site after surgery, where this is thought to be a high risk. It may also be used to try and control a tumour when surgery is declined or not thought possible. Radiotherapy is rarely used for cancer that has spread throughout the body (metastasis), although in some cases, this may be possible. It may still be considered for some patients with metastasis, if they have a type of cancer that is slow growing, or as a palliative treatment to improve symptoms.

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WHAT ARE THE BENEFITS OF RADIOTHERAPY?

Radiation treatments are given by specially trained veterinary surgeons called Radiation Oncologists using dedicated equipment that is only available at a few locations throughout Europe.

Radiation treatments are individualised for each patient and are sometimes incorporated into a treatment plan involving other types of cancer therapy, i.e. surgery or chemotherapy.

- + **Radiotherapy** can be used to try and 'clean up' residual cancer cells that have been left behind after surgery. These cancers are often located on the legs or head of the patient, making it difficult for the surgeon to totally remove all the cancer. Examples when radiotherapy is used in this manner are mast cell tumours or soft tissue sarcomas.
- + **Radiotherapy** can be used as the only treatment. In some cases, the cancer will be well-controlled with radiotherapy alone. In other cases, the cancer cannot be reached (or accessed) in any other way and radiotherapy can be used to shrink the cancer to improve the quality of life for the patient. Examples of such cancers are some brain tumours or tumours inside the nose.
- + **Radiotherapy** can be used to shrink large tumours that are too big to be removed surgically. In some cases, just shrinking a tumour can provide pain relief and improve quality of life. We use radiation to shrink large sarcomas, which *may* enable us to carry out surgery afterwards.
- + **Radiotherapy** can be used as a palliative procedure to relieve cancer pain. An example of such a cancer is the malignant bone tumour, osteosarcoma. However, it is important to point out that not all patients are candidates for this treatment.
- + **Radiotherapy** is sometimes combined with chemotherapy in an attempt to kill as many cancer cells as possible. Certain patients with mast cell tumours are given this combination of treatment.



How is treatment given?

Radiotherapy is given as either an out-patient or in-patient treatment. It is vital that the patient is perfectly still whilst the radiotherapy is being administered, which means that a short general anaesthetic is required for each treatment.

Once the patient is positioned, the treatment only takes a few minutes. To aid positioning, localisation marks are often put on the skin, which does mean that some patients will need to be shaved, whilst others have lines painted on their skin with special pens.



Is radiotherapy expensive?

Treatment of cancer with radiotherapy can be expensive. It involves the use of very sophisticated equipment that is only available in a few centres throughout Europe (we are one of only six veterinary centres in the UK to have this equipment).

In addition, your pet will benefit from the expertise of highly trained specialists in veterinary oncology, together with an experienced support team who are available 24 hours a day, if necessary. The exact cost of the treatment depends upon the type of cancer, the goal of the treatment, the number of treatments required, and if any other treatment is indicated (e.g. surgery or chemotherapy). The projected cost will be discussed with you

at your consultation and modified as necessary once a treatment plan has been finalised for your pet.

Will treatment be covered by my insurance?

Radiation is the recognised, treatment for many cancers and if you have insurance, treatment should be covered. However, we strongly recommend that you check your policy carefully before starting any therapy and if you have any doubts, you should check with your individual insurance provider. You are legally responsible for payment for all treatments should your insurance company fail to pay out.

What are the side effects?

Dogs and cats generally tolerate radiotherapy very well. However, there is the possibility of temporary side effects because some normal tissue adjacent to the tumour is exposed to radiation. Acute side effects tend to occur towards the end of the treatment course, sometimes worsen for a week or two, then heal over 1-4 weeks. The type and severity of side effects will vary markedly, depending on the patient, location of the tumour and the intensity of the treatment protocol. However, they are predictable and temporary. The side effects of radiotherapy should be limited to the tumour area and surrounding tissues, and can include:

Skin side effects

A most common side effect seen towards the end or shortly after treatment is sore skin (radiation dermatitis). This can manifest as "sunburn" or sometimes can result in moist, crusty areas of skin with some discomfort. These effects are temporary and will rapidly resolve, providing the instructions given by the attending clinician are followed. The most important thing to prevent problems is to stop any licking and this may be achieved using a buster collar. Sometimes it is necessary to apply topical creams or prescribe antibiotics, depending on the patient and the site being treated. Patients requiring radiotherapy on the lower part of the leg are most likely to experience some burns.

Hair loss

The hair will most likely fall out or become thinned in the treatment area. In some cases, the colour of the skin will change, resulting in a black patch of skin. Usually (but not always), the hair will grow back a few months after completing treatment. When the hair grows back, it is typically white.

Sore mouth

Some dogs with tumours in the head/neck region (brain tumours, nasal tumours, thyroid tumours) can develop some soreness of the oral mucosa (mucositis). This can affect the gums, lips, hard/soft palate or throat. This can be uncomfortable for a couple of weeks, and require some supportive medications, but again is temporary and completely heals.

Other side effects

Other side effects may be seen, depending on the type and location of the cancer being irradiated. Pets that live a very long time after RT may be at risk of late-onset side effects of treatment, which can be serious. These are extremely rare and would be discussed with you before embarking on any treatment. Your radiation oncologist will discuss the risk and likely severity of any potential individual side effects with you at your consultation.

It is important to note that with new, sophisticated technology we can markedly reduce these side effects to a very low level for many cancers.

What happens if my dog/cat is sick out of hours?

Southfields Veterinary Specialists is a 24-hour facility – if you have a problem, please call **01268 564664** and speak to the out of hours team who will be happy to help you. It may be necessary for you to bring your pet in, and in some cases, we may need to admit them for further tests and/or treatment.

What happens when treatment is completed?

Once a course of treatment is completed, your Oncology Specialist will discuss monitoring and follow-up appointments, whether this is here at Southfields or at the referring practice.

Will my pet have a normal life whilst undergoing radiotherapy?

The goal of radiotherapy is to improve and extend the quality of life for the patient for as long as possible. Usually, our patients have few problems whilst undergoing treatment. If at any time you are concerned with your pet's quality of life, you should discuss this with your Oncology Specialist at the earliest opportunity.



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