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Oncology Q&A for The Primary Veterinarian – Cancer in General

Though patients with cancer may even have the same disease, every case is different. No one size fits all. These questions should help you to decide on the best path forward for your client and patient. You may encourage your clients to talk to an Oncologist about their pet's cancer, before any decisions for diagnostics or treatment are made, regardless of whether the diagnostics and/or treatment is to be done at the primary vet, with us, or not at all.

We believe that a medical oncologist, considered the general contractor of cancer medicine, is best able to guide them toward the diagnostics and treatment modalities, whether it be surgery and/or radiation therapy and/or medical therapy, that make the most sense for them and their pet, from an emotional, financial, and time perspective.

It's the difference between being patient/client-directed and being disease-directed. What is best for a tumour, is not always best for that patient and that owner. Being able to make an educated decision goes a long way to helping an owner feel empowered, at a difficult time.

These are very general statements and there are most definitely exceptions to the rule. These will be dealt with in subsequent tumour specific discussions.

What is the signalment of this pet, including weight?

Age, Breed and weight will often impact the treatment options considered.

What is the suspected tumour type, where is it on the pet and how long has it been there?

Generally, intermediate to low grade cancers would typically have a low metastatic potential, where the focus is on local therapy (surgery &/or radiotherapy). Intermediate to high grade cancers will likely have a higher metastatic potential, where no matter what we do locally, systemic drug therapy is usually indicated.

Do we have a tissue or cellular diagnosis?

With the intermediate to low grade tumours a specific and complete histopathologic diagnosis is not always necessary and a cytological diagnosis will suffice. With the higher grade tumours, a specific diagnosis becomes more important as there may be a difference in the systemic therapy chosen. Options may include; conventional cytotoxic chemotherapy, molecular-targeted therapy, metronomic chemotherapy and/or immunotherapy.

What is the condition of the pet overall? Any co-morbidities?

What bothers this pet's quality of life the most? Where on the list of priorities does the tumour sit, with respect to its effect on the pet, as compared to other chronic incurable diseases that are present. Are we looking at definitive/curative or palliative intent? Is there significant DJD which may affect the ability to consider something like amputation.

What do we believe are this client's expectations and goals?

Once clients are over the initial shock of a cancer diagnosis, they are likely to have a pretty good idea of what they would like to do with their pet, if we take the time to ask the right questions. We often say that the medical part is easy; we have our recipe books and know what to do with a tumour. The difficult part is the emotional, financial and time constraints, and concerns about their pet, that should be an integral part of the decision-making process.

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Based on the information so far, are there any other tests that are required? Can the primary vet do them?

A diagnostic test is important if it could change what we do, or what the owner decides to do. Otherwise, it is just for informational purposes, which may be important for a client, if it gives them an idea of where things stand at that moment, whether they plan to treat or not. Paragon, as part of the patient's treatment team, can do any of the diagnostics that the PV cannot, or does not want to do. We do not routinely repeat tests, unless we feel we can learn something new.

What are the diagnostic options & costs?

Once we know what tumour type we have, we need to know how much tumour we have, both locally and systemically, if present. We also want to make sure there are no other disease processes, related or not, that may influence decisions on treatment. This is Staging!

Generally, Staging costs, with bloodwork, run about £800-1200 for x-rays and ultrasound versus CT-scan for £1500-2200, depending on what additional testing needs to be done.

What are the treatment options & costs?

Simple mass excisions with surgery usually run about £2500-3500; more complicated may go up to £4500. The surgical estimate would be provided by a surgeon, once a consultation has been completed with them.

Radiation therapy would run about £4000-6000 for palliative and £8000-10000 for definitive, depending on the planning required and the protocol used; different at different facilities.

Medical therapy can vary from £300-500 a treatment for injectable chemo for a limited number of treatments over a 3-month period, to £200-400 a month for oral medications in a metronomic chemotherapy protocol, which would be more continuous, for longer.

Are there clinical trials available? Where are they located, and how do I find out more about them?

Different speciality hospitals and Universities typically will have a list of their research studies listed on their websites. They most often have very specific inclusion and exclusion criteria. Ask your oncologist and if there is something available, it can be determined if a certain pet is eligible and if it is logistically feasible.

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What treatment plan will be recommended and why?

As described above, all factors about the tumour, the pet and the owner should be considered. All options from the most definitive/curative approach, to doing nothing at all, are discussed and considered. Single or multimodality approaches would be discussed and explained as indicated. Things that can be done by the primary vet are also considered. Even if a client decides to do nothing at all, we hope that after speaking to us, they will feel better about their decision and more informed about their pet's disease and what to expect.

What is the goal of treatment? Will it eliminate the cancer, or just help the pet feel better, or both?

Each treatment option will be discussed, considering the expected outcome, cure vs control, effects on pet, short term and long term. No matter what the treatment, a good quality of life is the primary concern and not cure at all costs. We never want the treatment to be worse than the disease.

What are the possible side effects of treatment, both in the short term and the long term?

Surgery – pre-op, operative and post-op potential effects and complications, along with post-op recovery and management, will be discussed with the surgeon.

Radiation therapy – early and late effects influenced by definitive or palliative protocols and site of treatment, will be discussed with the radiation oncologist.

Medical therapy - <20% any negative effects; <5 % any significant side effects; if we see this, we make a change, reducing the dose or stopping treatment with that drug. Again, the specifics for a case will be discussed with the medical oncologist.

Who will be part of the health care team, and what does each member do? To what extent can the PV be involved?

Owner – daily monitoring at home, with reporting of any changes or concerns.

GP – routine exams, imaging and blood work can be done by GP – at owners and vet's discretion.

Oncologist – Medical, Radiation, Surgical as and when indicated or needed.

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Who will be leading the overall treatment?

The Medical Oncologist determines the overall plan and coordinates the individual specialists who oversee their particular modality. Multimodality therapy can have very varied sequencing, based on the initial presentation and overall goal of the treatment as determined by the owner.

How will this treatment affect the pet's daily life? Will the pet be able to perform its normal activities?

There may be periods of a limited time of recovery from each treatment modality but overall, the pet's quality of life should be stabilised or hopefully improved, throughout. The pet should be able to do all the things it likes to do. Again, the treatment should not end up being worse than the disease.

Do I get a treatment summary and plan to keep in my records? When?

We typically provide a treatment plan at the beginning of treatment and a treatment summary after each treatment, both to the primary vet and the client.

Who will be leading the follow-up care? What can I, as the RVS, do?

We deem ourselves to be an extension of the primary care facility and part of the treatment team comprising the client, the primary vet and the oncologist. We provide anything that the primary vet is unable to provide or asks us to provide. So, the primary vet can do anything they are comfortable with, along with our support, if we have met with the client.

What follow-up tests will the pet need, and how often will they need to be done? Can I, as the RVS, do them?

We typically recommend restaging of the chest +/- the abdomen every 3 months for the first year. If patients are on medication, then an exam and bloodwork will need to be done every 4-6 weeks. All of the above can be done by the primary vet. We just require that if we are providing prescriptions that we see the owner and pet at least once every 3 months.

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What is the chance that the cancer will come back? What specific signs or symptoms should I watch for?

If tumours are not cured with a wide margin surgery alone, typically they will grow back in the same area within 2-6 months on average, depending on the grade and therefore their growth rate.

With some tumours radiation this can be extended sometimes by years with definitive treatment and months with palliative treatment.

Medical therapy can extend life in some responsive tumour types from months to years.Typically, it is just regrowth in the same approximate area, without pain. If metastasis occurs, more likely in high grade tumours, it will go to the lungs most often, so non-productive coughing is a possibility.

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What support services are available to my client?

Both Dr Ayl and his Oncology Nurse Dani White have completed the Linnaeus Pet Bereavement Course and are able to help most clients through the difficult times. Should they feel that the client may need more professional help, they will provide them with information in that regard.

If I have questions or problems, who should I call? Nights and weekends?

Our hospital is staffed 24/7 for our referring vets, patients and clients! Any questions or concerns that come up will be addressed by the clinician on duty, and if they cannot address them, they will get in touch with the relevant clinician and/or oncologist.

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Specific questions asked about surgery

Should I do a biopsy before referral?

Any diagnostic test is important if it can change what we or the owners plan to do. A cytologic diagnosis of a well differentiated tumour, that fits the clinical picture is enough to consider a conservative approach of a debulking surgery to be followed by radiation and/or metronomic chemotherapy.

If a definitive approach is planned, like amputation, it would be optimal to type and grade the tumour, which will require at least an incisional biopsy. If it is high grade, systemic metastases in up to 25% of cases is possible, so adjuvant cytotoxic chemo would be indicated.

What surgery is recommended and why? Costs?

Depends on the tumour factors, the site, the patient factors and the owner's goals.

Surgery for the cure with wide margins is often the quickest, easiest, cheapest way to get the best possible long-term benefit for many patients, if it is appropriate for that patient and client.

If wide excision if not possible then a marginal excision with adequate skin closure without tension, flowed by radiation (definitive or palliative) will provide long term control. Metronomic chemotherapy is also able to delay recurrence or progression in some tumours.

If no surgery possible or chosen, then palliative radiation and/or metronomic chemo can provide some local control.

Neo-adjuvant radiation is sometimes used before surgery to simplify the surgery and possibly shrink the tumour.

Generally simple mass excisions are £2500-3500; more complex ones may go up to £4500.

Does the stage of cancer affect the decision for surgery? How?

Stage is a measure of how much disease and how far it has spread. It determines whether we can focus on potentially curative-intent local therapy (surgery/radiation) vs needing to use systemic medical therapy to try to prolong survival.

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How long will the pet be in the hospital?

Depends of the surgical procedure, how well the patient handled the anaesthetic and the surgery, any specific post-operative treatments required, and post-op recovery. Generally, we would want to get the patient home to their family as soon as is medically appropriate and feasible.

What are the possible complications of the surgery, both in the short term and long term?

Depends on the surgical procedure and the site involved. Dehiscence of the site depends on the completeness of excision and tension on the suture line. These are discussed by the consulting surgeon.

Does the pet need chemotherapy and/or radiation therapy before the surgery? After the surgery?

Depends on the tumour site and resectability; sometimes neo-adjuvant or pre-op chemotherapy and/or radiation can be used first to improve the outcome from surgery.

Will the pet need rehabilitation after the surgery?

Depends on the surgery site. Though most patients adapt very well and very quickly after an amputation, rehab for amputated dogs does help them to compensate sooner and better by strengthening the remaining limbs.

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Questions asked about radiation therapy

What type of radiation therapy is recommended and where would it be done? Costs?

The type of radiation is determined by the site of the tumour, the goal of the treatment and the treatment planning required to maximise the benefit to the patient and minimise the side effects.

It is available at Southfields Veterinary Specialists, Liverpool, Cambridge, Edinburgh and Glasgow Universities (due to COVID19 restrictions some may not be open). Costs range from around £3000-10,000, depending on the facility and treatment protocol planned, definitive or palliative.

How many treatments, and how long will each one take?

Treatment number varies from 3-20 depending on the protocol. Treatments can take from 15-45 minutes again dependent on the protocol and complexity of the planning.

There may be 1-5 treatments a week. Due to COVID19, some facilities may require the pet to stay at the hospital if more than 1 treatment per week is done.

What side effects can be expected, from this treatment?

Determined largely by treatment goal and protocol, but typically minimal in palliative protocols and within acceptable limits with definitive protocols. Typically the more accurate the planning can be, the less the side effects on the normal tissues in the treatment field.

RT side effects are divided into acute/early and chronic/late effects and can occur anywhere and only within the treatment field. The idea of the treatment planning is to minimise these. The various permutations & combinations (**TDF**) of **T**ime (per treatment, per week, & total time), **D**ose (per treatment, per week and total dose) and **F**ractionation (treatments per day, per week, for whole course), determine the early and late effects to varying degrees.

Early effects can occur during and soon after the full treatment time and are typically reversable within weeks. Late effects can occur months to years later and will be the dose limiting effects that are kept to an absolute minimum at <5%.

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Who should I contact about any side effects? And how soon?

The treatment facility should be contacted initially, however, though we do not have radiation therapy at Paragon, our Oncologist, Rodney Ayl, is an American double-boarded specialist in medical and radiation oncology and so can answer any questions related to radiation therapy treatment options and side effects. Specifics about the protocol and logistics of treating at a particular facility, will require a consultation with them.

What can be done to prevent or to treat the side effects?

As described, the treatment planning is designed to minimise side effects, but any particular patient may react unpredictably to the radiation. Certain metabolic conditions like Diabetes, may predispose them to acute reactions.

There are no well-defined preventatives, however your pet is monitored carefully during the treatment and any appearance of side effects will be addressed. It is important to note that early effects are set up from day 1 of treatment, though may only show up weeks later or even after treatment is completed. Stopping treatment when they show up will not stop the reaction from passing through its normal sequence, so unless reaction is severe and bothering the patient, treatments may not stop; it is even possible that healing will take place while still in treatment.

The radiation oncologist or nurse may recommend some treatment options that may ease the irritation caused by the radiation reaction but will not alter it's course.

Questions asked about medical therapy

What type of treatment is recommended? Costs?

These options are very varied from IV options Q. 1-3 weeks x4-6 cycles for high grade disease, to an oral metronomic protocol for low grade incomplete resections that do not have radiation therapy.

There are multiple drugs that can be used in the metronomic protocols, and typically a combination of well tolerated drugs is formulated for the patient. This type of treatment may be indefinite, with re-evaluations and bloodwork on a monthly to 6-week basis. This is often done with the primary vet.

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What is the goal of this treatment? Definitive or Palliative?

IV Infusions – definitive

Oral metronomic – palliative

Are other chemotherapy, immunotherapy or targeted treatments available?

There are a number of cytotoxic drugs that may be used alone or in combinations to intensify protocols. There are limited options with immunotherapy in pets in the UK; a vaccine for melanoma and IL2 for sarcomas in cats. Molecular targeted therapy with tyrosine kinase inhibitors may have some value when used with a metronomic protocol for some tumour types.

How many treatments will be needed? How long will each take?

Very varied as described above.

IV infusions Q. 3 weeks x 4-6 – 1-2 hour appointment

Oral metronomic protocol – could be indefinite, with outpatient re-evaluations and bloodwork on a monthly to 6-week basis.

What are the possible long-term effects of having this treatment?

Typically, there are few if any long-term effects from chemo and we make a determined effort to again reduce the possibility to less than 5%. Bone marrow, cardiac, lung, liver, bladder, kidney and neurologic issues are possible, depending on the drug/s used and how much of the drug/s was used in total.

What can be done to relieve side effects?

Typically, these effects are recognised early and appropriate changes to the treatment are made, including stopping altogether. Treatment breaks, dose reductions, alternative drug/s, along with any other supportive medical care, are used as indicated.