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Should you condone ozone therapy as an acceptable alternative treatment for a dog with cancer?

THE DILEMMA

You are a first-opinion small animal practitioner. Ziggy, an 11-year-old Labrador retriever, is diagnosed with stage II splenic hemangiosarcoma. You inform the client of the poor prognosis, perform splenectomy and schedule chemotherapy within a few days; however, the client fails to show up. You call them and they say that after weighing up the treatment's pros and cons, they have opted not to perform chemotherapy. Instead, the client explains that they consulted a 'holistic veterinarian' and started doing ozone therapy, namely major autohaemotherapy and rectal insufflation. How should you handle the situation?

Issues to consider

We will resort to the Ethical Matrix to help structure reasoning and promote decision making (Mepham and others 2006). The Ethical Matrix considers how three chief ethical principles – namely wellbeing, autonomy and justice – apply to the relevant stakeholders (Table 1).

The first issue to consider is whether to subject Ziggy to palliative treatment, be it chemotherapy or ozone therapy. Splenic hemangiosarcoma is a highly aggressive cancer that metastasises rapidly. There is strong evidence that chemotherapy can slow down the progression of the disease in dogs, extend their lifespan and improve their quality of life (De Nardi and others 2023). In turn, ozone therapy is said to have antimicrobial, antioxidant, anti-inflammatory

and immunomodulating properties, and has been applied to almost everything, from bovine mastitis to canine cancer (Sciorsci and others 2020, Orlandin and others 2021). However, most available clinical evidence comes from case reports and no reliable controlled clinical trials have been published. Moreover, ozone has been administered by a variety of different routes, including intravenous (major autohaemotherapy) and intrarectal, without standard operating procedures (Orlandin and others 2021) and evidence supporting it. These findings justify the use of chemotherapy, but do not support ozone therapy.

Chemotherapy also poses an ethical dilemma to animal owners and veterinary practitioners, balancing its cytotoxic and its palliative effects

(Stephens 2019). With an average survival time usually not exceeding six months after diagnosis when treated with a maximum tolerated dose chemotherapy protocol (De Nardi and others 2023), chemotherapy is only expected to extend Ziggy's life for a few months. Ziggy is unable to perceive the benefits of chemotherapy, and preventing overtreatment and unnecessary suffering is paramount.

The owner has an emotional attachment to Ziggy that leads them to pursue the seemingly 'less harmful' treatment. This is not, however, an informed decision, since ozone therapy is likely useless, gives the client a false sense of fairness (eg, 'doing what is right'), and prevents them from seeking effective – albeit not curative – chemotherapeutical treatment.

In this context, should prescribing and applying ozone therapy be considered malpractice? Society trusts veterinarians to prescribe and apply evidence-based treatments and expects to be informed otherwise. Most complementary and alternative therapies fail to provide an acceptable standard of care, but veterinary regulators have not prohibited these therapies. This requires adequate clinical governance. Until better evidence is available, ozone therapy should not be considered an act of veterinary medicine and the client must be made aware of its experimental nature (Magalhães-Sant'Ana and Azevedo 2024). Moreover, the precautionary principle should preclude any responsible health professional from administering an irritative, toxic gas (with risks to both animals and medical staff) directly into the bloodstream or rectal mucosa without robust evidence of benefit, especially if used as a first-line (alternative) treatment, rather than complementary.

Possible ways forward

As a seasoned veterinarian, you feel that you failed to provide the best possible care to Ziggy and wonder whether there is anything else you could (or should) do. One option would be to do nothing, since the responsibility for Ziggy no longer lies on your shoulders; however, inaction falls short of a veterinarian's deontological duties to animals, the profession and society at large. You are expected to exert moral agency.

Taking this into consideration you consider raising concerns about the holistic vet to the RCVS.

Table 1: The Ethical Matrix* applied to the use of conventional or alternative therapies in treating a cancer patient, for five stakeholders

Stakeholder	Wellbeing	Autonomy	Justice
Ziggy	Quality and quantity of life	Enduring palliative treatment	Being able to benefit from treatment
Client	Human-animal bond	Informed consent	Fairness, affordability of treatment
Holistic vet	Reputation	Clinical governance	Liability – standard of care
First-opinion vet	Peace of mind	Agency	Deontological duty vs professional courtesy
Society	Trust	Informed choice	Equity in access to evidence-based treatment

*Adapted from Mepham and others 2006

However, it is advised to first reach out to both client and colleague, to discuss the evidence (or lack thereof) of ozone therapy. A shared decision-making approach should be used, focusing on the implications of not following the best available evidence, for all stakeholders, and particularly for Ziggy.

Should you find that the holistic vet did not inform the client of the lack of evidence regarding ozone therapy, and recommended against evidence-based chemotherapeutical treatment, you will have grounds to contact the RCVS.

ANY THOUGHTS?

We welcome views on this article. Please email your comments by 20 June 2024 so we can consider them for inclusion in the next issue of *In Practice*.
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This series gives readers the opportunity to consider and contribute to discussion of some of the ethical dilemmas that can arise in veterinary practice. Each month, a case scenario is presented, followed by discussion of some of the issues involved. In addition, a possible way forward is suggested; however, there is rarely a cut-and-dried answer in such cases, and readers may wish to suggest an alternative approach. The series is coordinated by Steven McCulloch, senior lecturer in human animal studies at the Centre for Animal Welfare, University of Winchester and vet. It aims to provide a framework that will help practising veterinarians find solutions when facing similar dilemmas.