

CANINE OSTEOSARCOMA TREATMENT

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Objectives



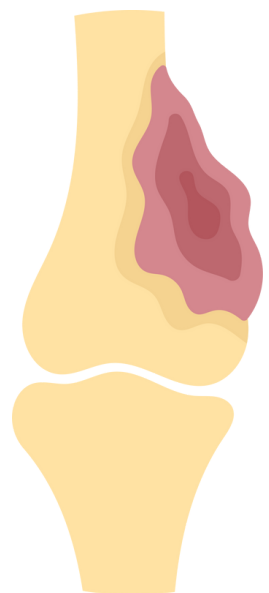
The objective of this study is to review the current treatments of canine osteosarcoma and to present new therapeutic options and improvements in conventional treatments in order to improve the survival and quality life. The review focuses on relevant and current scientific studies. The ultimate goal is to provide useful and updated information for veterinarians and pet owners facing the diagnosis and treatment of canine osteosarcoma.

Introduction



Canine osteosarcoma is an aggressive neoplasm that mainly affects large breed dogs of middle age. Treatment options available for this disease include surgery, chemotherapy, radiation therapy, and gene therapy. In addition to these treatments, palliative care can also be provided to improve the quality of life of dogs with osteosarcoma. This may include pain management, physical therapy, and nutritional support. The choice of treatment will depend on the stage of the disease, the location of the tumor, and the overall health of the dog.

Results



Surgery is the primary treatment and may include techniques to preserve the limb in selected cases. Chemotherapy is used as palliative care, to reduce tumor size before surgery, or to prevent disease recurrence post-surgery. Radiation therapy is used especially in dogs not undergoing amputation or limb-sparing surgery. Trials of immunotherapy, virotherapy, stereotactic radiation therapy, targeted therapy, and personalized medicine are being conducted as innovative approaches for the treatment of OS. Gene therapy, virotherapy, and the use of nanoparticle carriers are highlighted for their potential in drug delivery. Finally, evaluation of the tumor microenvironment and disease monitoring through liquid biopsies and assessment of circulating immune cell quantity can be useful tools for assessing OS progression.

Conclusions



The canine osteosarcoma is a challenging and aggressive disease. The current treatment options, aim to improve survival and quality life. Despite this interventions, the prognosis for dogs with osteosarcoma remains poor, with a high rate of metastatic disease leading to limited survival post-diagnosis. These ideas highlight the complexity of canine osteosarcoma treatment, spanning from conventional approaches to innovative therapies, and underscore the importance of monitoring and the development of new therapeutic strategies.

References



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