etoposide phosphate (ETOPOPHOS®) IV injections every 2 weeks, with a 3-hour injection once daily on 3 consecutive days. Adverse effects were graded according to the Veterinary Cooperative Oncology Group criteria. A complete end-staging was realized 60 days after inclusion (D60).

At dose levels 35, 42, 50, 60, and 75 mg/m^2 a minimal therapeutic effect was observed (n = 19, 6PR at D60). In 6 dogs treated with dose level 100 mg/m^2, 4 dogs achieved a PR and 1 dog a CR at D60 (ORR = 83%). In dogs treated with dose levels under 120 mg/m^2, the main adverse event observed in 8 dogs was a reversible gastrointestinal toxicity (grade 1 to 3), and myelotoxicity was rare (grade 1 to 3 in 4 dogs). A grade 4 neutropenia was reported in only one dog at dose level 42 mg/m^2. In 2 dogs treated at dose level 120 mg/m^2, severe gastrointestinal toxicities (grade 4) and severe myelotoxicities (grade 4 neutropenia) were reported. No dogs had acute hypersensitivity reactions during the study.

The recommended dose of etoposide phosphate (ETOPOPHOS®) in dogs is 100 mg/m^2 with an ORR of 83% (5/6). Only a moderate reversible gastrointestinal toxicity, no severe myelotoxicity and no hypersensitivity reaction was reported at this dose level.

Disclosures: This study was conducted by Oncovet Clinical Research (OCR) as part of a collaborative research project between OCR and Pierre Fabre Medicament.

ESVONC-O-5

CASE-CONTROL STUDY OF CHEMOTHERAPY FOR THE TREATMENT OF CANINE MESOTHELIOMAS: 16 CASES. G.M.M. Chamel[1], D. Sayag[1], F. Floch[2], I. Bublot[1], I. Goy-Thollot[1], C. Fournel-Fleury[1], F. Ponce[1]. [1]VetAgro Sup, Marcy l'étoile, France, [2]Oncovet, Villeneuve-d'ascq, France

Mesotheliomas are rare tumors in dogs known to induce effusions in cœlomic cavities. Neoplastic tissue biopsy is often difficult to obtain and, even if cytological diagnosis can be straightforward in some cases, it can be challenging in others. Therefore, diagnosis of mesothelioma is complicated. Only a few cases are described in the literature and no study assesses in a case-control manner the efficiency of surgery, radiation therapy or chemotherapy.

The aim of this retrospective case-control study was to evaluate the efficiency of chemotherapy.

Dogs with a cytological and/or histological diagnosis of mesothelioma were collected in the medical database. Dogs that were treated with intravenous (IV) and/or intracavitary (IC) chemotherapy were included in Group 1 and dogs that did not received cytotoxic treatment in Group 2. Signalment, type and duration of clinical signs, anatomic location of the mesothelioma, results of staging procedures, cytological and/or histological examinations and type of treatment (surgery, chemotherapy) were collected for all dogs. Follow-up data were obtained from the medical records or from telephone interview of the owners or referring veterinarians. Progression-free survival (PFS) defined as time between diagnosis and evidence of disease progression or death was calculated for all dogs. PFS functions were estimated using the Kaplan Meier method and were compared between groups using the log rank test.

Sixteen dogs were included in the study between March 2004 and December 2014. There was 8 pleural, 5 pericardial, 2 peritoneal and 1 concomitant pleural and pericardial mesotheliomas. There was no significant difference of age, weight and sex ratio between the two groups. Ten dogs were treated with various chemotherapy protocols, 9 of which received both IV (carboplatin (7), doxorubicin (7) mitoxantrone (1) and mitomycin C (1)) and IC chemotherapy (carboplatin (5), cisplatin (4)). Chemotherapy administration was associated with a significantly higher PFS (Median PFS 353 (range 100–656) vs 48 days (range 0–151); $P = 0.001$). Six dogs also underwent a pericardiectomy.

This study is showing for the first time that dogs with mesothelioma could benefit from cytotoxic chemotherapy. However a larger prospective study using a standardized chemotherapy protocol, applied to specific anatomic forms of the disease is warranted to confirm this finding.

Disclosures: No disclosures to report.

ESVONC-O-6

COMBINATION TARGETING OF PI3 KINASE AND MTOR FOR TREATMENT OF CANINE MELANOMA. J. Smich, J. Morrison, A.J. Mutsaers. Ontario Veterinary College, University of Guelph, Guelph, Canada

Canine malignant melanoma is an aggressive neoplasm that is highly metastatic and resistant to conventional chemotherapy treatment. Previous work has demonstrated that canine melanoma cell lines may contain activated AKT and mTOR pathways, as well as sensitivity to mTOR inhibitors, such as rapamycin. The aim of this study was to assess combination treatment using dual inhibition of PI3k and mTOR and compare results to that achieved with inhibition of each pathway individually. Five established primary canine melanoma cell lines were grown in monolayer culture in vitro under standard conditions. Cell lines were derived from a canine primary oral melanoma, primary cutaneous melanoma, metastatic lymph node, or subcutaneous metastasis. Cells were treated with PI3k inhibitor LY294002, mTOR inhibitor rapamycin, or dual inhibitor GSK2126458 for 24 -72 hours. Cell viability was assessed using resazurin dye, with absorbance read on a spectrophotometer. Western blot was used to evaluate drug treatment impact on pathway components, including phosphorylated and total AKT, mTOR, and p70S6K. A dose-dependent decrease in cell viability was observed in all cell lines. Dual inhibition of PI3k and mTOR with GSK2126458 was more potent in pathway target inhibition and resulted in lower cell viability IC50 values than either of the other drugs tested. Dual inhibition of PI3k and mTOR may be more efficacious than single pathway targeting in canine melanoma cells. Future studies will assess the potential for this targeted strategy to sensitize the chemotherapy response in this notoriously treatment resistant tumour type.

Disclosures: No disclosures to report.

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ESVCN-O-1

HOW DOES THE NUTRITIONAL ASSESSMENT OF DOGS VARY IN A VETERINARY STAFF?. P. Scarpa, C. Palestrini, S.P. Marelli, M. Giraldi, M. Ghiringhelli, M. Raja, E. Fusi. University of Milan, Milano, Italy

The nutritional status of the patient is usually evaluated recording the body weight (BW) and assessing body condition score (BCS) and muscle condition score (MCS). Because differences in scoring could exist among trained and untrained veterinary personnel, the aim of the study was to assess the reproducibility of these scoring techniques between different operators in dogs.

Seventy-five adult dogs (30 Boxers; 16 English Cocker Spaniel; 22 Golden Retriever; 7 Labrador Retriever) were weighted and blinded assessed for BCS and MCS by five different evaluators (i.e. internist, nutritionist, behaviorist, vet student and dog show judge), according to the official nutritional guidelines. In particular, BCS scoring was evaluated using a 9-points scale, while the MCS scoring considered the visual examination and the palpation of the muscle over the temporal bones, scapulae, ribs, lumbar vertebrae and pelvic bones. Chi-square test was performed and statistical significance of the analysis was set at $P < 0.05$. The agreement between the different operators scoring was evaluated by Cohen's kappa.

Chi-square test performed between the five evaluators' assessments was significant ($P < 0.001$). The Cohen's kappa obtained estimating the BCS scoring showed a fair to moderate agreement between the evaluators (kappa = 0.2–0.48). In particular, the higher concordance was detected between the student and the internist (kappa = 0.45) compared with the others. Considering MCS, the kappa agreement of the evaluations was in the range of 0.19–0.55. The best agreement was between the nutritionist and the judge. English cocker spaniel was the most difficult breed to be evaluated, showing the worst level of concordance between the evaluators.

These data confirm the difficulties in obtaining a unique nutritional evaluation. This lack in concordance could be due to the different practice area in which the evaluators were mainly involved. So caution should be taken into consideration of BCS and MCS scoring, when more practitioners are involved in the