**CHEMOKINE (CC-MOTIF) LIGAND 2 AS A PROGNOSTIC SERUM MARKER IN CANINE IDIOPATHIC PULMONARY FIBROSIS**

Roels E.(1), Holopainen S.(2), Teske E.(1), CIPF European Consortium(\*), Rajamäki MM.(2), Clercx C.(1). (1)Department of Clinical Sciences, Faculty of Veterinary Medicine, University of Liege, Belgium; (2)Department of Equine and Small Animal Medicine, Faculty of Veterinary Medicine, University of Helsinki, Finland

(\*)*Allerton F., Bomassi E., Damoiseaux C., De Lorenzi D., Fisher A., Muller N., Hendrickx T., Vrancken A.*

Canine idiopathic pulmonary fibrosis (CIPF) is a progressive interstitial lung disease mainly affecting West Highland white terriers (WHWTs). The CIPF course varies greatly among dogs from rapid deterioration to slowly progressive forms and the survival time from onset of clinical signs ranges from a few months to several years. In human IPF, increased chemokine (CC-motif) ligand 2 (CCL2) concentrations in bronchoalveolar lavage fluid (BALF) are indicative of a poor outcome and serum concentrations are correlated with clinical parameters of lung function. In dogs, serum and BALF CCL2 concentrations were shown to be elevated in WHWTs with CIPF compared with healthy WHWTs. The aim of the present study was to investigate whether serum CCL2 concentrations measured in WHWTs with CIPF at diagnosis (1) can be used as an indicator of prognosis and (2) correlate with lung function parameters. CCL2 concentrations were determined by ELISA (Canine CCL2 Quantikine ELISA kit, R&D Systems) in the serum of 60 WHWTs suspected of CIPF (median age 11.7 years, range 5.7 - 14.5), for which a follow-up was available (median follow-up time 8.6 months, range 0 - 71.8). Serum sampling extended from May 2007 to January 2015. CIPF diagnosis was confirmed by thoracic high resolution computed tomography, lung histopathology, or both examinations in 17, 6 and 27 WHWTs respectively. Kaplan-Meier analysis was conducted to investigate differences in survival times according to serum CCL2 concentrations at diagnosis. Spearman analysis was used to assess correlations between serum CCL2 concentrations and lung function parameters, namely the distance walked in the 6–minute walking test (6MWD) and the arterial partial pressure of oxygen (pO2). Among the 60 CIPF WHWTs included, 31 died or were euthanized for CIPF-related reason, 12 died or were euthanized for non-CIPF-related reason and 17 were still alive at the end of the study. The median survival of WHWTs with CIPF-related death or euthanasia was 6.4 (range 0.4 – 71.9) months from diagnosis. Serum CCL2 concentrations above 700 pg/mL were significantly associated with a shorter survival time in WHWTs affected with CIPF (P=0.02). A weak negative correlation was found between serum CCL2 concentrations and the 6MWD (r=-0,382, P=0.03, n=31), while no correlation was observed with arterial pO2 values (n=49). In conclusion, serum CCL2 concentration provides prognostic information in WHWTs suffering from CIPF, while this marker is weakly correlated with the clinically lung function parameters available in the present study.