[Session III] #14

Cellular Localization of The P-Glycoprotein, Alpha Fetoprotein, And Von Willerbrand Factor In Canine Hepatocellular Carcinoma And Liver Cirrhosis Tissues

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The objective of the study was to evaluate the disease risk, characteristic, and the correlation of tumor microvessel density with pathologic features in canine hepatic tumoral diseases. P-glycoprotein (multi-drug resistance gene, MDR-1), Alpha Fetoprotein (AFP), and von Willerbrand factor (vWF) expression were assessed in tumoral specimens from canine patients with hepatocellular carcinoma (HCC) and in cirrhotic livers without HCC, using immunohistochemistry. The higher level of expression of MDR-1 was observed in the HCC and in the cirrhotic livers. Major sites of localization were found in liver on biliary canaliculi and small ductules. AFP was found exclusively in the cytoplasm of the HCC and few of cirrhotic liver tissues. In both cases, the AFP-positive cells were morphologically similar to hepatocytes and they showed an even distribution of AFP in their cytoplasm. Expressions of vessel density were significantly higher in cirrhotic liver than HCC. Taken together, we have performed the first comprehensive study of MDR-1, presence of a co-regulated receptor system in vivo. These findings can be used to further the understanding hepatic tumoral diseases and diagnosis in dogs

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[Session III] #15

A Novel Image Probing System for Precise Quantification of Angiogenesis

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The rapid development of clinical diagnostic imaging technology, in tandem with medical and angiogenesis research, has led to some major advances in healthcare. The chorioallantoic membrane assay is commonly used for studying normal angiogenesis as well as putative angiogenic and antiangiogenic substances. Despite the progress, it is generally recognized that a major problem is the lack of a suitable quantitative bioassay for angiogenesis. Image probing is a novel solution to this problem, which, together with its associated discipline of evaluating angiogenesis, is showing great potential not only for accurate measurement of even very small blood vessels but also for detailed three

dimensional quantification of blood vessels and surface characterization. This technique could be a helpful tool for quantification in angiogenesis research.

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