

PROGRESS REPORT



Evaluating Imaging Technique for Head and Neck Tumors

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Morris Animal Foundation-funded researchers from Colorado State University are evaluating a novel imaging method called lymphotropic nanoparticle enhanced magnetic resonance imaging. The team wants to know if LNMRI can improve the diagnosis of the spread of cancer to lymph nodes in malignant head and neck tumors in dogs. Knowing if a cancer has spread aids in prognosis and therapy decisions, and imaging can help provide this valuable data noninvasively. However, current imaging techniques are not reliable for diagnosing cancer spread to lymph nodes in dogs with head and neck tumors.

So far, the team has collected data on 12 of the 24 dogs needed for robust data analysis. Recruitment has been slow due to the COVID-19 outbreak. Clinical trials resumed in August 2020.

In these dogs, the team compared the diagnosis of metastasis lymph nodes using imaging to what was seen on the surgically excised lymph nodes. Preliminary results show LNMRI is very accurate, with sensitivity and specificity of 96% and 100%, respectively. However, these results need to be validated in more patients.

In the next year, the team will complete recruitment and data collection on the remaining 12 dogs. They also are working on making LNMRI more clinically relevant by decreasing the costs associated with the procedure so it can be more widely used by veterinary oncologists and surgeons.

Thanks to the generous sponsors of this study!