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## **Investigating Tumor Angiogenesis by Means of Dynamic Contrast Enhanced MRI and Contrast Enhanced Intermittent Ultrasound**

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This work has shown that radiological Methods, such as dynamic MRI and CEUS, are reliable and complementing techniques to examine tumor vascularization. Additionally, T<sub>1</sub> weighted dynamic MRI based on the two-compartment model is proven to be a useful and sensitive tool for monitoring early therapeutic response to antiangiogenic therapy. Changes in tumor vascularisation and the therapeutic success could be observed before any Changes in tumor size were visible. Dynamic MRI may gain importance to predict tumor response to angiogenic treatment clinically.

Intermittent CEUS is a highly sensitive and promising method allowed measuring vascularization of tumors, also in small animals and thus may gain high relevance in research on tumor angiogenesis in the future. However, additional studies have to clarify whether US vascularization parameters allow for an early assessment of tumor response and may provide prognostic parameters for therapeutic efficacy.