Predicative Vagueness in Lung Metastases in Soft Tissue Sarcoma Screening

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Abstract. *Soft Tissue Sarcomas* (*STSs*) pose a potential risk for the development of lung metastases, which in turn results in a negative prognosis for patients. Presumptions about the occurrence of these abnormalities during *STSs* treatment would have countless implications for both patients and healthcare professionals as they could increase the efficacy of the treatment and improve overall survival. Prediction is based on a creative *Logic Programming, Case Based Reasoning* approach to problem solving, that is complemented with an unusual approach to *Knowledge Representation and Reasoning*, as it takes into consideration not only the data items entropic states but introduces the concept of *Vague's Predicate Extension*.

Keywords: Soft Tissue Sarcoma · Magnetic Resonance Imaging
Logic Programming · Knowledge Representation and Reasoning
Case Based Reasoning · Entropy · Predicative Vagueness