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# Diffusion Tensor Imaging (DTI) in Head and Neck Oncology; a new method of Virtual Biopsy

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The objective of our study is to explore the feasibility and utility of Diffusion Tensor Imaging (DTI) in the non invasive evaluation of any lesion [1] in Head and Neck structure. We would reach a verified and certified step of Virtual biopsy. Ten patients with different histological lesions were recruited for this study. Morphological and diffusion weighted images were acquired with a 3T scanner during last 3 months. Probabilistic tensor-based tractography reconstruction of any lesions was performed and mean fractional anisotropy (FA) values for everyone were extracted [2]. The results showed that the Diffusion Tensor Imaging (DTI) was able to identify the lesion geometrical morphology and diffusion microstructural changes. The patient with a benign lesion reported a significant improvement in ADC mean values. We have evidence that pushes us to continue with this method. We are at the beginning of this work. We had to recruits more patients to get meaningfully significant data.

## References

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Keywords

Diffusion tensor imaging, Tractography, Fractional Anisotropy