Peritumoral apparent diffusion coefficients (ADC) in patients with breast carcinoma and effect of peritumoral edema on T2 weighted imaging (T2 WI)

Poster No.: C-0099

Congress: ECR 2019

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Keywords: Breast, MR, Imaging sequences

Aims and objectives:

Breast cancers may result in remodeling of adjacent normal appearing breast tissue which facilitate invasion locally or metastasis (1,2). The earliest stages is characterized by increased angiogenesis, immune cell infiltrates, increasing collagen deposition and tissue stiffness (2). For character[...]

Methods and materials:

Study population: In this prospective study, 78 patients with 89 breast cancers (invasive and in situ) were investigated between 2016 and 2018, by preoperative 1.5-T breast MRI. (General Electric Medical Systems, USA) All breast cancers had histopathologic diagnosis and that was based on evaluation[...]

Results:

In this study, 78 patients with 89 breast cancers (invasive and in situ) were investigated and included 36(40%) patients with peri-tumoral edema (group A) and 53(60%) patients without peri-tumoral edema (group B). The mean age of group A was 47.08±7.84 years and in the other group was 47.06±7.51 yea[...]

Conclusion:

In conclusion, our results suggest that the presence of peri-tumoral edema identified at T2WI can predict the tumoral characteristic on DWI and it has correlation with lower tumoral ADCs and higher peri-tumoral ADCs and is usually not seen in in situ cancers. The presence of peri-tumoral edema may[...]