

POSTER PRESENTATION

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In vivo pulmonary metastatic profile of breast cancer cell lines expressing hormonal receptors versus triple negative

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Breast cancer metastized to lungs is a challenge considering clinical management and molecular processes. The interaction between tumor cells and lung environment as well as the influence of hormonal receptor (HR) are a question of debate.

The aim of this study is the characterization of pulmonary metastatic spread *in vivo* of breast cancer cell lines that express HR comparing with triple negative (TN) after injection in the tail vein.

It was performed injection in the tail vein of female mice Balb/c nude with 1.5×10^6 cells of each breast cancer cell line (MCF7 and HCC1806) previously labeled with ^{99m}Tc-HMPAO. Imagiological studies with ^{99m}Tc-HMDP and ^{99m}Tc-MIBI were performed between 7th and 8th weeks and then sacrificed. The lungs were submitted to histological image analysis focusing on regions of interest (ROI), in order to obtain lesion areas.

Tumor cells injected labeled with ^{99m}Tc-HMPAO showed a preference embolization to the lungs. The ROI analysis of imagiological studies with ^{99m}Tc-HMDP and ^{99m}Tc-MIBI did not reveal significant differences according to each cell type. Histology showed metastatic lung *foci* in all animals injected. On one hand, the number of lung *foci* was not significantly different considering MCF7 and HCC1806 injection. On the other hand, the mean area of lung metastasis in MCF7 cases were significantly higher than in HCC1806 ($p = 0.023$).

The mice injected with HR positive breast cancer cells in the tail vein were associated with higher lung metastatic areas than TN cells. This emphasizes the influence

of HR in the expression of growth factors and pulmonary neovascularization that is not still delineated.

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