

POSTER PRESENTATION

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# Phenotypic analysis of breast cell lines – triple negative cells vs expressing hormonal receptors

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Breast cancer patients are stratified in 3 groups: expressing hormonal receptors (HR), which respond to therapies targeting estrogen receptors; HER2+, candidates to trastuzumab; and triple negative (TN), for which, despite its more aggressive clinical behavior, chemotherapy is therapy available.

*In vitro* studies proved that cells subjected to specific growth factors form spherical colonies of stem-cells in suspension designated mammospheres (MS). The aim of this work is to assess the capacity to form MS in TN (HCC1806) comparing with HR+ (MCF7) breast cancer cell lines.

Cell lines were propagated according to ATCC. MS forming protocol consisted on cell culturing in DMEM-F12 supplemented with bFGF and EGF. Media was renewed every 2 days. Flow cytometry analysis, with antibodies anti-CD44, anti-CD24 and anti CD133 was made.

Microscopic observation showed a differential phenotype. HR+ cells formed spherical colonies in suspension while TN maintained adherent appearing only a few groups of MS. This may be related with late recurrence.

Controls of both cell lines analyzed showed a low CD44 markup. For both cell lines CD133 did not show significant changes. HR+ cells had higher expression of CD44 and CD133 when compared with TN.

In TN cells was identified 2 populations of cells in suspension. The major one was CD44+ and in 1% this expression was even more relevant and may be representative of a progenitor cell population. The HR+ showed stronger staining for CD24 than TN. The HR+ also differentiated 2 populations, a major one CD44+

and 9% with minor expression of CD44. The results suggest a significant fraction of HR+ harboring CD44+, representing a phenotype of progenitor cells.

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