Circulating tumor cells from patients with advanced prostate and breast cancer display both epithelial and mesenchymal markers. [1]

Enviado por Mariano Garcia-Blanco [2] el 9 octubre 2012 - 5:49pm

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Título	Circulating tumor cells from patients with advanced prostate and breast cancer display both epithelial and mesenchymal markers.
Publication Type	Journal Article
Year of Publication	2011
Autores	Armstrong, AJ [3], Marengo, MS [4], Oltean, S [5], Kemeny, G [6], Bitting, RL [7], Turnbull, JD [8], Herold, CI [9], Marcom, PK [10], George, DJ [11], García-Blanco, MA [12]
Journal	Mol Cancer Res
Volume	9
Issue	8
Pagination	997-1007
Date Published	2011 Aug
ISSN	1557-3125
Palabras clave	Breast Neoplasms [13], Epithelial-Mesenchymal Transition [14], Female [15], Humans [16], Male [17], Neoplasm Staging [18], Neoplastic Cells, Circulating [19], Prostatic Neoplasms [20], Tumor Markers, Biological [21]

Abstract	During cancer progression, malignant cells undergo epithelial-mesenchymal transitions (EMT) and mesenchymal-epithelial transitions (MET) as part of a broad invasion and metastasis program. We previously observed MET events among lung metastases in a preclinical model of prostate adenocarcinoma that suggested a relationship between epithelial plasticity and metastatic spread. We thus sought to translate these findings into clinical evidence by examining the existence of EMT in circulating tumor cells (CTC) from patients with progressive metastatic solid tumors, with a focus on men with castration-resistant prostate cancer (CRPC) and women with metastatic breast cancer. We showed that the majority (> 80%) of these CTCs in patients with metastatic CRPC coexpress epithelial proteins such as epithelial cell adhesion molecule (EpCAM), cytokeratins (CK), and E-cadherin, with mesenchymal proteins including vimentin, N-cadherin and O-cadherin, and the stem cell marker CD133. Equally, we found that more than 75% of CTCs from women with metastatic breast cancer coexpress CK, vimentin, and N-cadherin. The existence and high frequency of these CTCs coexpressing epithelial, mesenchymal, and stem cell markers in patients with progressive metastases has important implications for the application and interpretation of approved methods to detect CTCs.
DOI	10.1158/1541-7786.MCR-10-0490 [22]
Alternate Journal	Mol. Cancer Res.
PubMed ID	21665936 [23]

Links
[1] https://www.cienciapr.org/es/circulating-tumor-cells-patients-advanced-prostate-and-breast-cancer-display-both-epithelial-and [2] https://www.cienciapr.org/es/user/garci001 [3] https://www.cienciapr.org/es/biblio?f%5Bauthor%5D=583 [4] https://www.cienciapr.org/es/biblio?f%5Bauthor%5D=584 [5] https://www.cienciapr.org/es/biblio?f%5Bauthor%5D=585 [6] https://www.cienciapr.org/es/biblio?f%5Bauthor%5D=586 [7] https://www.cienciapr.org/es/biblio?f%5Bauthor%5D=587 [8] https://www.cienciapr.org/es/biblio?f%5Bauthor%5D=588 [9] https://www.cienciapr.org/es/biblio?f%5Bauthor%5D=589 [10] https://www.cienciapr.org/es/biblio?f%5Bauthor%5D=590 [11] https://www.cienciapr.org/es/biblio?f%5Bauthor%5D=591 [12] https://www.cienciapr.org/es/user/13/biblio [13] https://www.cienciapr.org/es/biblio?f%5Bkeyword%5D=781 [14] https://www.cienciapr.org/es/biblio?f%5Bkeyword%5D=782 [15]

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