

Cytokeratin 8/18 monoclonal antibody was dissimilar to anti-cytokeratin CAM 5.2

Comment on: “A randomized phase III study of adjuvant platinum/docetaxel chemotherapy with or without radiation therapy in patients with gastric cancer. Cancer Chemother Pharmacol. 2010; 65(6): 1009–1021”

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Editor:

We read with great interest the contribution by Dr. Bamias et al. [1] regarding the study, entitled “A randomized phase III study of adjuvant platinum/docetaxel chemotherapy with or without radiation therapy in patients with gastric cancer”. The authors implemented an outstanding clinical trial and presented a good report. However, this article contains an incorrect message in the Immunohistochemistry

section of the Patients and Materials paragraph that I believe, may misguide the readers. The authors seem to have inadvertently annotated the cytokeratin 8/18 within the parentheses (CAM5.2, clone 5D3, Novocastra) and (CAM5.2), which suggests that CK8/18 is identical to CAM5.2.

We would like to clarify the updated information that cytokeratin 8/18 monoclonal antibody was initially made up by Novocastra Laboratories Ltd (Newcastle Upton Tyne, United Kingdom) using the brand “Novocastra”. The company grew and in 2003 was integrated into Vision Bio-Systems (Wetzlar, Germany). Today, Novocastra has become an important part of the overall histology range of Leica Microsystems’ Biosystems Division through this definitive merger. Thus, monoclonal antibody to cytokeratin 8/18 is marketed by Leica Microsystems’ Biosystems Division, which is derived from the 5D3 clone. This clone reacts with human cytokeratin-intermediate filament proteins at 52.5 and 45 kD, which are identified as cytokeratins 8 and 18, respectively [2, 3].

On the other hand, anti-cytokeratin CAM 5.2 is marketed by Becton–Dickinson Biosciences (Franklin Lakes, NJ) and is derived from the clone CAM 5.2. This clone recognizes human cytokeratin intermediate filament proteins at 48 and 52 kDa, which are identified as cytokeratins 7 and 8, respectively. Moreover, Becton–Dickinson Biosciences has revised the data sheet for CAM5.2 (B.D.) since 1997. It is now well known that CAM5.2 is specific for cytokeratin 8 and to a lesser extent for cytokeratin 7, but not for cytokeratin 18 [4, 5]. However, anti-cytokeratin CAM5.2 has frequently been mistakenly supposed to recognize cytokeratins 8 and 18, since previous results by Makin et al. [6] are attributed to breakdown products of cytokeratin 8, giving smaller molecular weight fractions on immunoblots.

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As a result, we put emphasis on the fact that cytokeratin 8/18 monoclonal antibody was dissimilar to anti-cytokeratin CAM 5.2 [7]. Nevertheless, this finding does not affect the conclusions of Dr. Bamias's study. The presence of cytokeratin 8 and/or 18 as detected with the antibody (clone 5D3, Novocastra) used in this study indicates the presence of epithelial tumor cells in tissues of gastric adenocarcinoma.

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Conflict of interest None.

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