Letter to the Editor

Radiologic Differences between Human Papillomavirus-Related and Human Papillomavirus-Unrelated Oropharyngeal Carcinoma on Diffusion-Weighted Imaging

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With great interest we have read the paper of Chan et al. [1] published online on March 1, 2017, with the title: “Radiologic Differences between Human Papillomavirus-Related and Human Papillomavirus-Unrelated Oropharyngeal Carcinoma on Diffusion-Weighted Imaging.” It is the first published article that also compares the apparent diffusion coefficient (ADC) value of lymph node metastasis in human papillomavirus (HPV)+ and HPV– oropharyngeal tumors. The combination of the ADC values of the primary tumor and the lymph node metastasis results in a model with a very high area under the curve of 0.92.

With the new TNM classification (8th edition), the stratification of HPV+ and HPV– tumors is not only the main prognostic factor in oropharyngeal carcinoma, it is also essential for tumor staging [2, 3]. At the moment, there is a lot of ongoing research on new treatments for HPV+ tumors [4]. So, the distinction between HPV+ and HPV– tumors will become even more important and relevant in future clinical practice.

As the authors correctly state in the discussion, there is no consensus yet regarding the optimal HPV test: HPV DNA in situ hybridization, polymerase chain reaction analysis, or p16 immunohistochemistry [5]. We support the authors in their choice of using p16 immunohistochemistry as a surrogate measure of HPV status. It is an easily implementable test in routine clinical practice and has been used in previous large studies [5–7].

However, we have some questions regarding the methodology used in this paper concerning the differentiation between HPV+ and HPV– tumors. The authors state: “A HPV-positive status was defined as >70% nuclear and cytoplasmic p16 positivity. Staining above 0 but <70% was considered equivocal, and those cases were not included in the study.” We completely agree with the cutoff of >70% nuclear and cytoplasmic p16 positivity. This cutoff has been used in numerous previous studies [5, 6].

Though excluding all patients with staining above 0 but <70% seems strange. In daily clinical practice, these patients would be considered HPV– patients. The HPV– patient group in this paper includes only patients who have 0% p16 staining. Those 11 patients are a subgroup of a bigger group of patients who would generally be considered as HPV– (all patients with <70% p16 staining). There is also no information in the article about the number of patients excluded based on p16 staining above 0 but <70%. The ADC results and the area under the curve of the model could be different if these patients were also included.

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Disclosure Statement

There is no conflict of interest to declare.

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