

## LETTER TO EDITOR

## COMMENT ON “DIFFUSE TTF-1 EXPRESSION IN A CASE OF MERKEL CELL CARCINOMA”

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Der Editor,

we read with great interest the recent paper in “Polish Journal of Pathology” entitled “Diffuse TTF-1 expression in a case of Merkel cell carcinoma”. We have recently published our observations concerning TTF-1 expression in combined Merkel cell carcinoma (MCC) [1] and we would like to share our opinion/hypothesis about this phenomenon.

TTF-1 expression has long been believed to exclude the diagnosis of MCC. However, since the first description of TTF-1 positive MCC in 2008 [2, 3], a few such cases have been reported. If combined MCC is included, expression of TTF-1 seems not to be infrequent, as in the largest published series 4/15 (27%) presented expression of TTF-1 [4]. In our report, TTF-1 expression was present to a variable extent in 4/5 (80%) cases, and peculiarly in two cases also in the squamous cell carcinoma component [1]. Combined MCC differs in many aspects from the conventional MCC: being Merkel cell polyomavirus (MCPV) negative, showing high expression of p53 and a low level of Rb1 and a much higher number of mutations [4, 5, 6]. MCPV-negative MCCs overlap to some extent in biology and genetics with the combined MCC, as they present *TP53* mutations and a high mutation phenotype, with the majority of them showing a UV-signature pattern with C > T transitions [5, 7, 8]. As all TTF-1-positive conventional MCCs developed in very old people in sun-exposed areas (85, M, right frontal scalp [9], 84, lower lip [3], 74, F, right lower leg [10], 88, F, upper lip [11]), we speculate that TTF-1 expression may correlate with chronic UV light exposure but not with MCPV etiology.

Therefore, it would be interesting to know the MCPV, p53 and Rb1 status of the case reported by Iliadis *et al.* Additionally, identification of the morphological signs of chronic sun exposure (actinic keratosis) in the neighboring skin would be supportive of our hypothesis.

## References

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