# CUTANEOUS SQUAMOUS CELL CARCINOMA OF DIFFERENT GRADES: VARIATION OF THE EXPRESSION OF CD10

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## Summary

Although it has been claimed that invasive cutaneous squamous cell carcinoma (SCC) does not express CD10, very few examples have been investigated regarding this matter. The claim of our study is to investigate the expression in 20 cases of SCC of different grades of differentiation. For that, we randomly selected from our archives 5 SCC-keratoacanthomatous (KA)-type; 5 SCC non-KA, well-differentiated; 5 SCC, moderately differentiated; and 5 SCC, poorly differentiated. In all these cases, we performed an immunohistochemical study for CD10. We found expression of CD10 (either stromal or cytoplasmic) in all the cases. While stromal expression (either focal or diffuse) seemed to have no relation to the degree of differentiation of the tumor, cytoplasmic expression of the marker was not found in any of the cases of the poorly-differentiated group. We conclude that 1) stromal expression of CD10 is not lost in deeply invasive SCC, as previous literature has suggested; 2) lack of cytoplasmic expression of CD10 by cutaneous SCC can be considered as an additional prognosis factor to investigate in the future; 3) our results seem contradictory to the current view that has defended atypical fibroxanthoma as an anaplastic type of SCC, since the former expresses CD10 in virtually 100 % of the cases.

**Keywords:** squamous cell carcinoma – CD10 – keratoacanthoma

## Souhrn

### Dlaždicobuněčný karcinom kůže různého stupně – rozdíly v expresi CD10

Přestože se udává, že dlaždicobuněčný karcinom kůže (DBK) neexprimuje CD10, bylo takto dosud vyšetřeno jen nemnoho případů. Účelem naší studie bylo vyšetřit tuto expresi u 20 případů DBK různého stupně diferenciace. Náhodně jsme proto z našeho archivu vybrali po 5 případech DBK – keratoakantomového (KA) typu a neKA typu dobře diferencovaného, středně diferencovaného a málo diferencovaného. Ve všech těchto případech jsme provedli imunohistochemickou reakci na CD10. Zjistili jsme expresi CD10 ve všech případech (buď stromální, či cytoplazmatickou). Zatímco stromální exprese (fokální či difuzní) zjevně neměla žádný vztah ke stupni diferenciace nádoru, cytoplazmatická exprese markeru nebyla zjištěna ani v jednom případě z málo diferencované skupiny. Uzavíráme, že 1. u hluboce invazivního DBK není ztracena exprese CD10; 2. ztráta cytoplazmatické exprese CD10 v DBK může být považována za další prognostický faktor; 3. naše výsledky se neshodují s literárními názory, které považují atypický fibroxantom za anaplastický typ DBK, protože atypický fibroxantom exprimuje CD10 v prakticky 100 % případů.

**Klíčová slova:** dlaždicobuněčný karcinom – CD10 – keratoakantom

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CD10 has been suggested as a tool in the differential diagnosis between superficial basal cell carcinoma (BCC) and (superficial) squamous cell carcinoma (SCC) (4). This is based on the finding of cytoplasmic expression by superficial BCC, in contrast to the superficial SCC that does not express the marker (4). Although it was claimed that this lack of expression seems to be preserved in invasive SCC (4), very few examples have been investigated regarding this matter (7), and some of them have shown stromal positivity for CD10 (4). On the other hand, others have found a relation between the expression of CD10 by oral SCC and its prognosis (3). The matter of the CD10 status in cutaneous SCC is even more important if one takes into account that SCC is one of the main differential diagnoses, when facing the possibility of an atypical fibroxanthoma (AF). The latter is, nevertheless, CD10 positive in nearly 100 % of the cases (1, 2, 5).

The aim of this study is to investigate the expression of CD10 by SCC of different grades of differentiation.

## MATERIAL AND METHODS

We selected 20 cases of SCC in four groups of 5 cases each: 1) SCC-keratoacanthomatous (KA)-type; 2) SCC non-KA, well-differentiated; 3) SCC, moderately differentiated; and 4) SCC, poorly differentiated. The criteria to include the cases in each group were evaluated as described in the last edition of skin tumors of the WHO book (6). The cases were randomly selected from our archives until each group was completed. In all the cases, the diagnosis and the grade of differentiation were confirmed before being included in the particular group.

We also performed an immunohistochemical study on sections from the paraffin-embedded block corresponding to each case, for CD10 (IgG1; Biocare Medical; clone 56C6; Ref. PM129AA; ready to use).