CD147 Expression in Advanced Cutaneous Squamous Cell Carcinoma

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Background:
CD147 is a membrane bound glycoprotein known to promote tumor growth, metastasis and drug resistance through stimulation of stromal MMP & upregulation of VEGF.

Investigations of other cancer types have found CD147 maturation and trafficking is dependent on monocarboxylate transporters (MCT1 & MCT4).

CD147 expression in advanced cutaneous squamous cell carcinoma (cSCC) is poorly understood and its relationship with MCT1 & MCT4 in cSCC is unknown.

Methods:
Retrospective cohort study.
Patients with advanced stage cSCC of the head and neck (n = 50).
IHC and immunofluorescent analysis of CD147, MCT1 and MCT4 expression levels of archived tumor samples.
Correlations were made with survival and clinicopathologic characteristics.

Results:
Overexpression of MCT1 (23%) & MCT4 (47%), and co-localizaton of MCT1 or MCT4 with CD147 was also observed.

There was no correlation between clinicopathologic characteristics and CD147, MCT1 or MCT4 expression.

There was a trend towards decreased survival & expression of CD147 (p=0.06), MCT1 (p=0.11) & MCT4 (p=0.15).

Two-year survival rate was 69% and the 5-year survival rate was 61%.

Conclusion:
CD147 and MCT1/4 may represent biomarkers or additional therapeutic targets in advanced cutaneous squamous cell carcinoma.