Syndecan-1 overexpression is associated with nonluminal subtypes and poor prognosis in advanced breast cancer.

OBJECTIVES: Syndecan-1 expression is decreased in diverse tumor types but remains controversial in breast carcinomas. The goal of the study was to examine syndecan-1 expression in breast carcinoma and its prognostic significance.

METHODS: The epithelial expression of syndecan-1 was examined in tissue microarrays constructed from 62 consecutive breast carcinoma cases diagnosed between 1997 and 2004 with distant organ metastasis and 10 consecutive control cases (breast carcinoma with no distant metastasis after at least 8 years of follow-up). The prognostic significance of syndecan-1 was estimated by utilizing a Cox proportional hazards regression model.

RESULTS: Among tumors with distant metastasis, syndecan-1 expression was significantly associated with a higher histologic grade and inversely related to hormonal receptor status. The HER2 subtype and triple-negative carcinomas exhibited markedly higher syndecan-1 levels than those of luminal subtypes, while the latter remained significantly higher than nonmetastatic control cases. Furthermore, high syndecan-1 expression had a negative impact on both overall and disease-free survival rates.

CONCLUSIONS: These findings suggest that...
syndecan-1 may regulate breast cancer cell behavior and thus deserves further investigation to ascertain its potential as a therapeutic target, especially in metastatic, triple-negative carcinomas.

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