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## Association of CD44 isoform immunohistochemical expression with myometrial and vascular invasion in endometrioid endometrial carcinoma.

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Abstract: OBJECTIVE: Appropriate clinical management of cases of FIGO Grade I and II endometrial carcinoma relies heavily on the determination of myometrial invasion (MI). There are no reports addressing expression of the cell adhesion molecule CD44 in the subset of Grade I and II endometrioid carcinoma (EC) as it relates to prognosis, including MI. METHODS: Immunohistochemical staining for CD44s and CD44v6 was evaluated in 40 hysterectomy specimens with Grade I and II EC, including 11 noninvasive ECs, 14 with MI (50%). Staining characteristics according to the presence of MI and vascular space invasion (VSI) were evaluated. Strong membranous staining of >10% of tumor cells was interpreted as positive. RESULTS: CD44v6 staining was positive in 20% (8/40) of cases, including 45% (5/11) of EC without MI but only 10% (3/29) with MI (P = 0.025). CD44v6 staining was not present in deeply invasive tumors (0/15), while it was present in 8/25 superficially or noninvasive tumors (P = 0.016). Sensitivity and specificity were 25 and 100%, respectively, using CD44v6 in evaluating deep myometrial invasion. CD44s showed a trend toward positive staining when comparing noninvasive versus invasive tumors and noninvasive/superficially invasive versus deeply invasive tumors (P = 0.08 and 0.12, respectively). CD44s or CD44v6 staining was highly specific for absence of VSI, although statistical comparison did not reach significance. CONCLUSION: Deeply invasive EC was associated with a consistent lack of CD44v6 expression. This may have potential clinical utility if this finding is demonstrated in further study of pre-hysterectomy sampling specimens containing EC.

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