BLADDER CANCER

uPAR expression indicates worse prognosis of urothelial carcinoma

New research reveals that urokinase-type plasminogen activator receptor (uPAR) expression is associated with worse prognosis, staging and overall survival in patients with urothelial carcinoma of the bladder (UCB). “UCB is an extremely heterogeneous group of malignancies”, therefore, “there is a strong need for biomarkers that will help in the selection of the right treatment and follow-up for the individual patient,” explains lead author Line Hammer Dohn.

uPAR is an established prognostic marker in patients with other solid tumours; however, uPAR has not been widely investigated as a marker of UCB. In an immunohistochemical study of tumour tissue from 149 patients who underwent radical cystectomy, uPAR expression was detected in 89% of tumours. uPAR expression was most prevalent in myofibroblasts and macrophages of the tumour-associated

stroma, although a substantial proportion of tumour cells of stages T2–T4 were also found to be uPAR positive. Significant positive associations were detected between increased uPAR expression, tumour T-stage and grade. Unsurprisingly, uPAR expression was also associated with significantly worse overall survival.

“The prognostic value of uPAR is in accordance with findings in other solid tumours,” concludes Dohn, who adds that the collection of preoperative blood samples from patients undergoing radical cystectomy, with the aim of investigating the prognostic value of different forms of uPAR for UCB, is currently ongoing.

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