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Editorial Comment on: Identification of Stanniocalcin 2 as Prognostic Marker in Renal Cell Carcinoma

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The authors present Stanniocalcin 2 (STC2) as a prognostic marker for renal cell cancer (RCC) patients based on immunohistochemistry, reverse transcription-polymerase chain reaction (RT-PCR), and western blotting. In a small series of patients, expression of STC2 was correlated to patients' survival on the DNA level and also on the protein level. The authors conclude that STC2 can aid in the assessment of patients' prognosis after nephrectomy and postoperative risk stratification. They also speculate that STC2 may be useful as a serum marker for surveillance over the course of the disease [1].

The problem with postoperative risk stratification in RCC is that there are no guidelines on follow-up and that no routine postoperative diagnostic pathways exist. It remains unclear whether computed tomography of the abdomen and thorax, or alternatively x-ray and ultra-sound at 3 mo, 6 mo, or 12 mo intervals, can improve survival.

Treatment options for high-risk patients with early metastasis are rare and so far no objective data exist showing that adjuvant therapy based on angiogenic, or immune therapy can lessen progression or improve overall survival. Although trials are ongoing, it is much too early to foresee efficacy of the new drugs in the adjuvant or neoadjuvant setting.

Prognostic systems are mainly based on clinical data, such as performance and nephrectomy status or the tumor-node-metastasis stage. Many histologic parameters were introduced as prognostic parameters, such as Matrix Metalloproteinase-10 [2], Carbonic Anhydrase 9 [3,4], Cathepsin-D [5], Survivin [6], and others. But none of them has found its way into routine diagnosis of RCC, and no prognostic models are based upon them so far. Various serum/plasma, urine, and tissue biomarkers are still under investigation in RCC and require validation, especially for monitoring systemic therapy and for selecting optimal treatment regimes for patients. There is an unmet need for biomarkers identifying patients most likely to benefit from targeted therapy or developing resistance to this treatment. Thus, biomarkers should be included in former adjuvant and neoadjuvant trials, as well as in prognostic models. Eventually upcoming data on serum levels of STC2 could aid in this effort.

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