Introduction & Objectives
It is known that renal tumour patients have often elevated serum levels of C-reactive protein (CRP). There is a positive correlation between CRP-value and tumour stage. As a possible cause is discussed the release of the proinflammatory cytokine interleukin 6 (IL6) by the tumor itself and the resulting induced acute-phase reaction and subsequent CRP synthesis. SAA - also an acute phase protein - responds more rapidly and with more pronounced increases as CRP to an inflammatory stimulus. For this reason, SAA could be a sensitive marker for advanced kidney cancer and better than CRP.

Results
The preoperative IL6, CRP and SAA levels in patients with advanced tumour stage (group 2) are significantly higher than those of pT1 tumours (group 1) and control (group 0). There is no difference between control and group 1 (figures 1-3). While about 80% of advanced kidney cancer were associated with an increase in SAA, only 20% of the measured SAA levels in the group 1 were pathological. The corresponding results for CRP are: 70% (group 2) and 23% (group 1), for IL6: 43% (group 2) and 12% (group 1). In the control group, 17% of SAA, 15% of CRP and 11% of IL6 values were elevated (tables 1-2).

In 10 patients with very preoperative SAA values, the SAA concentration dropped below the baseline within 5 days after the surgery (figure 4). This can be an indicator that the tumor caused the markers increase.

Material & Methods
In 116 patients were a tumour nephrectomy performed and preoperative serum CRP, SAA and IL6 concentrations determined. 51 tumours were small and localized (pT1, group 1), 65 patients had a higher tumour stage (≥ pT2) and / or positive lymph nodes and / or metastases (group 2). In 12 patients a nephrectomy was performed due to a non malignant kidney disease (control, group 0). For statistical calculations the software program Statgraphics Plus 5.0 for Windows was used. A significance level of p < 0.05 was considered statistically significant.

Conclusions
Our results indicate that advanced kidney tumours are accompanied by an increase of the acute-phase proteins CRP and SAA significantly more likely than small localized tumours. SAA is more sensitive than CRP.
First indications that the SAA as a biomarker of renal tumour might be suitable, must be examined in further studies.