BACKGROUND
A high NLR has been shown to be associated with a poor prognosis in several solid tumors including STS and might be helpful for patient stratification and individual risk assessment. The aims of this study were to confirm that higher NLR at baseline is associated with worse prognosis and to evaluate if an early decline of NLR during treatment with pazopanib is associated with a more favorable prognosis.

PATIENT AND METHODS
The single-arm phase II EORTC 62043 and placebo-controlled phase III EORTC 62072 were both investigating the effect of pazopanib in patients with advanced STS. We evaluated NLR at baseline and 50 days after treatment and the predictive value of changes in NLR from baseline to the 50 days landmark. Sensitivity analyses were conducted on the placebo-treated patients.

RESULTS
Among the 333 eligible patients treated with pazopanib, a NLR at baseline ≥ 3 - representing 134 patients out of 326 known NLR - was associated with shorter PFS and OS in comparison to NLR < 3 (HR 1.44; 95% CI = 1.14-1.82; p-value 0.002 and HR 1.86; 95% CI = 1.43-2.41; p-value <0.001, respectively). Changes in NLR ratio were defined as a difference of at least 40% with baseline. Compared with no changes, an increase or decrease in NLR did not affect PFS or OS. Thresholds other than 40% difference to define NLR change did not impact the result and no association between changes in NLR and outcome was seen in placebo-treated patients. The median NLR change in patients treated with pazopanib was a decrease of 30.4% compared to an increase of 14.5% in placebo.

CONCLUSION
In this study, limited by its retrospective design, the prognostic value of NLR at baseline was confirmed in advanced STS patients, irrespective of treatment. Changes in NLR during the first 50 days of treatment with pazopanib were not associated with patient outcome and can therefore not be used as a marker for response.