Introduction:
The increase in morbidity and mortality associated with anemia has been well documented. Thus, blood transfusion can be a lifesaver maneuver for the surgical patient. However, transfusion carries a potential risk of acute or delayed immunologic reactions that may result in poor postoperative outcomes. Patients undergoing cytoreductive surgery with hyperthermic intraperitoneal chemotherapy (CRS/HIPEC) may have a higher risk of bleeding due to tumor-related fibrinolysis, tumor vascularity and location, and extent of the disease. We aimed to evaluate the trends in transfusion rates for CRS/HIPEC.

Methods:
After IRB approval was obtained, a retrospective observational study was conducted. All patients older than 18 years undergoing elective CRS/HIPEC were enrolled. We excluded patients with known coagulopathies and active infection. Main outcome was to describe transfusion rates in patients undergoing CRS/HIPEC. Other variables measured included ICU length of stay, mechanical ventilation, readmission to ICU, and hospital length of stay. For analysis patients were divided by the amount of blood units received: 0 units, ≤4 units, and >4 units. Chi-squared test, Student’s T-test and Mann-Whitney U test were used when appropriate. P<0.05 was considered statistically significant.

Results:
A total of 130 patients were included, of which 114 patients (87.7%) had blood transfusion. Of these, 57 patients (50%) received ≤4 red blood cells units and 49 patients (37.7%) received >4 red blood cells units. The average number of red blood cells units transfused per person was 4.23 ± 3.29. There were statistically significant differences on duration of mechanical ventilation (p=0.036) and ICU length of stay (p<0.01). No significant differences were found on hospital length of stay, start of oral feeding, ambulation, and readmission to ICU between groups (p>0.05).

Conclusion:
Perioperative blood transfusion of >4 units may associate with increased length of stay in ICU and duration of mechanical ventilation.