Conclusions: We demonstrate that the risk of relapse in UC can be predicted by consecutively measuring fecal EDN every third month. In CD, EDN was higher among patients who stayed in remission than in those who relapsed, indicating different functions of the protein in CD and UC.

P167
Long-term outcomes of cyclosporine A and infliximab treatment for the management of steroid-refractory acute severe ulcerative colitis
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Background: In patients with steroid-refractory acute severe ulcerative colitis (SR-ASUC), cyclosporine A (CsA) or infliximab (IFX) are recommended as salvage therapy. However, long-term data comparing outcomes of these two therapies are still scarce. We aimed to evaluate treatment outcomes of CsA treatment and to compare long-term outcomes of CsA and IFX by analysing colectomy rates.

Methods: Between October 1995 and October 2015, ASUC patients according to Truelove and Witts criteria who were refractory to steroid treatment and who received CsA or IFX as salvage therapy were identified and reviewed.

Results: Among 120 patients with SR-ASUC, 23 received CsA as first-line salvage therapy and the remaining 97 received IFX. Baseline characteristics including age at the diagnosis, sex, disease duration, disease extent at admission and Mayo score at the time of CsA or IFX initiation were comparable between two groups. In CsA group, 16 (69.6%) of 23 patients achieved initial efficacy which was defined as steroid-free clinical remission with successful switch to immunosuppressant and without need for early colectomy or the second salvage therapy. Seven (30.4%) of 16 patients who achieved initial efficacy maintained the immunosuppressant without step-up treatment. The median follow-up duration of 120 patients was 45 months (range, 29–62 months). The colectomy rates were not different significantly at 3, 12, 36 and 60 months between two groups: 26.1% vs. 12.4% (p = 0.111), 26.1% vs. 13.4% (p = 0.199), 26.1% vs. 16.5% (p = 0.367) and 26.1% vs. 17.5% (p = 0.381) for CsA group vs. IFX group, respectively. Moreover, the overall colectomy-free survival rate was not significantly different between two groups (p = 0.286).

In multivariate cox proportional hazard model, Mayo score at the time of CsA or IFX initiation was a significantly associated factor for colectomy (p = 0.026, hazard ration [HR] = 1.490, confidence interval [CI] = 1.050–2.114). However, the salvage therapy with CsA was not associated with a higher probability of colectomy than IFX therapy (p = 0.591, HR = 1.306, CI = 0.494–3.454).

Conclusions: The treatment outcome of CsA and IFX in SR-ASUC patients seems to be comparable, as demonstrated by the similar short- and long-term colectomy rates.

P168
Predicting outcome in acute severe ulcerative colitis: Comparison of the Oxford, Edinburgh, Lindgren and endoscopic Mayo scores
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Background: Up to one-third of patients with acute severe ulcerative colitis (ASUC) will fail intravenous corticosteroids (IVCT) treatment, requiring rescue therapy with Cyclosporin (Cy), Infliximab (IFX) or colectomy. Although several scores for predicting response to IVCT exist, formal comparison is lacking.

Methods: This was a retrospective cohort single-center study. The endoscopic Mayo score and the Oxford, Edinburgh and Lindgren scores were determined at admission and on the third day of IVCT treatment, respectively. Outcomes included prediction of steroid refractoriness, need for rescue medical therapy and surgery.

Results: From 489 patients with ulcerative colitis, 112 presented with ASUC; 58% were male with a median age of 33.5 years (range 18–80). The median of Truelove and Witts score was 4 (range 2–5).
Thirty-five percent of patients showed an incomplete or absent response to IVCT, 28.6% received rescue medical therapy (65.6% with IFX, 31.3% with Cy and 31.4% received sequential therapy with Cy and IFX) and 13.4% were colectomized up to 1 year from admission. The Lindgren score was superior to the Edinburgh score (AUC 0.836 [0.784–0.929] vs. 0.775 [0.682–0.869], p = 0.01) and the Mayo score (AUC 0.699 [0.597–0.801], p = 0.02), but not to the Oxford score (AUC 0.746 [0.651–0.841], p = 0.14) in predicting steroid refractoriness. The Lindgren score was superior to the Mayo (AUC 0.826 [0.749–0.902] vs. 0.637 [0.525–0.749], p = 0.002) and Oxford scores (AUC 0.719 [0.617–0.821], p = 0.03), but similar to the Edinburgh score (AUC 0.771 [0.678–0.865], p = 0.18) in predicting the need for medical rescue therapy. Finally, the Lindgren score was also a better predictor of the need of colectomy than the Edinburgh (AUC 0.836 [0.712–0.960] vs. 0.753 [0.608–0.897], p = 0.03) and Oxford scores (AUC 0.712 [0.587–0.837], p = 0.003), but not to Mayo score (AUC 0.782 [0.685–0.879], p = 0.47). In multivariate regression analysis, the Lindgren score was an independent predictor for steroid refractoriness (OR 1.647 1.111–2.441, p = 0.02), but not to Mayo score (OR 1.647 1.111–2.441, p = 0.03) and need for medical rescue therapy (OR 1.410 1.033–1.926, p = 0.03). A Lindgren score >9 had a positive and negative predictive value for IVCT failure of 91.7% and 72.9%, respectively.

Conclusions: In our series, the Lindgren score was superior to the Edinburgh, Oxford and endoscopic Mayo scores in predicting steroid refractoriness, need for rescue medical therapy and colectomy.

**P169**

Infliximab trough levels after induction therapy are predictive for infliximab efficacy in paediatric patients with inflammatory bowel disease

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**Background:** Loss of response (LOR) to biological therapies is a big concern in inflammatory bowel disease (IBD) management and especially among paediatric patients where treatment options are limited. Therapeutic drug monitoring has been proposed as one of the ways to improve outcome, but its role remains unclear. The aim of this study was to determine whether infliximab (IFX) trough levels (TL) correlated with clinical and biological remission. We hypothesised that IFX TL after induction are predictive for IFX efficacy.

**Methods:** All paediatric IBD patients with IFX TL available at their first maintenance infusion and a follow-up of at least 54 weeks were included. IFX induction regimens could be intensified at the discretion of the treating physician based on disease severity. All children received pro-active drug monitoring in the maintenance phase with the therapeutic window defined between 3 and 7 µg/ml (conform adult studies). Demographics, disease activity indices and inflammatory biomarkers were recorded retrospectively. Clinical remission was defined as PUCAI/PCDAI <10 and biological remission as CRP ≤ 5 mg/l and ESR ≤ 10 mm/h at week 54. Patients were considered in deep remission if both criteria (clinical and biological remission) were met. IFX TL were measured by Ridascreen IFX Monitoring ELISA. Results were analysed using Mann–Whitney U-test. All data are presented as median [IQR] and alpha was set at 0.05.

**Results:** We included 25 children (15 with Crohn’s disease and 10 with ulcerative colitis; 40% male). IFX was stopped in only 1 patient before week 54 due to LOR. Median age at start of IFX was 12.7 years [9.7–15.0] with a median disease duration prior to starting IFX of 7 months [4–12] and a median follow-up under IFX of 23 months [16–43]. At start of maintenance therapy, 76% was on concomitant immunosuppressants, which dropped to 36% at week 54. Median IFX TL at the time of the first maintenance infusion were significantly higher in children who were in clinical remission (3.4 µg/ml [2.4–6.0] vs. 1.5 µg/ml [0.7–3.2], p = 0.014), biological remission (3.8 µg/ml [2.7–9.0] vs. 1.4 µg/ml [0.3–3.0], p = 0.003) and deep remission (4.8 µg/ml [2.4–12.0] vs. 2.3 µg/ml [0.9–3.2], p = 0.008; see Figure) at 54 week.

**Conclusions:** Paediatric IBD patients with enough exposure during induction therapy (deduced by the IFX TL at start of maintenance) have better chance for clinical and/or biological remission at week 54. This illustrates that sufficient exposure during induction is essential for a long and better response.

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**P170**

Azathioprine metabolite (6-TGN) levels within a defined therapeutic range are associated with lower faecal calprotectin in Crohn’s disease

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**Background:** Azathioprine/6-mercaptopurine (AZA/6-MP) are first-line immunosuppressants for the treatment of Crohn’s disease. While recent studies have reported a positive association of their active metabolite 6-thioguanine (6-TGN) with clinical outcomes, 6-TGN levels within a defined therapeutic range are associated with optimal clinical outcome in Crohn’s disease. We therefore asked whether 6-TGN levels within a defined therapeutic range are associated with lower faecal calprotectin (FC). We retrospectively analysed 156 patients (median age 36 years, 64% female) without further immunosuppressive therapy visiting our IBD outpatient clinic between 2009 and 2016 were retrospectively analysed. In a small sub-cohort with serial 6-TGN measurements, longitudinal FC measurements were evaluated (Registered as DRKS00013246, submission to WHO in progress).