Introduction Bowel purgatives are common practice prior to small bowel capsule endoscopy (SBCE). The use of polyethylene glycol (PEG) laxatives is suggested to improve SB visualisation quality and diagnostic yield [Kotwal, Eur J Gastro Hep 2014]. However, this finding is not completely consistent, with other studies suggesting no clear benefit of PEG preparation over clear fluids only [Hooker, GIE 2017]. Therefore, unlike colonoscopy where the routine use of split dose bowel preparation to improve right colon cleansing has become a standard of care [Fleming, GIE 2012], the benefit and timing of purgatives prior to SBCE is unknown. We report the interim results from a clinical trial comparing the use of split dose PEG and single dose PEG against clear fluids only.

Methods Adult patients referred for SBCE were invited to participate and subject to exclusion criteria, were randomised to control (clear fluids only), single dose PEG (2L PEG at 6am on the day of the exam) and split dose PEG (1L PEG at 7pm the day before and 6am on the day of the exam). Briefly, the mean red to green colour intensity from SBCE procedure colour bars were used to calculate a computed assessment of cleansing (CAC) scores described elsewhere [Van Weyenberg, Endoscopy 2011]. The CAC is a validated 10 point scoring system (0–10; least - most clean) used to assess small bowel visualisation quality. CAC scores are reported as mean ± SEM and student t-tests performed to compare the means.

Results A total of 78 patients (35% male, mean age 48±2.0) were included (split n=28, single n=24 and control n=26). Intention to treat analysis show that split dose PEG preparation results in significantly greater mean CAC score in the distal quartile (5.38±0.16) of the small bowel compared to control (4.78±0.30; p=0.02). No differences in the overall, first, second and third quartile CAC score of the small bowel were found between control and PEG groups. Complete ingestion of PEG preparation occurred in 88% and 77% of single vs split dose (p=0.33). Subgroup analysis showed that amongst patients that completed preparation successfully, those randomised to both split dose (5.52±0.20; p=0.01) and single dose (5.64±0.18; p=0.003) PEG had a significantly greater mean CAC score in the distal quartile of the small bowel compared to control (4.58±0.28).

Conclusions The use of split dose laxatives improves the visualisation quality of the distal small bowel. Initial results may suggest that the PEG dose in the morning of the procedure improves distal quartile visualisation.