Oral Presentation

TITLE	**Should we be using the shock index to assess patients presenting with upper GI bleeding?**
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ABSTRACT DETAILS:	
Background:	Upper GI bleeding (UGIB) is a common cause of hospitalisation. The admission Rockall (ARS), Glasgow-Blatchford (GBS) and AIMS65 scores are validated pre-endoscopy risk assessment tools. The UK NCEPOD report into UGIB used Shock Index (SI = pulse/systolic blood pressure) to assess risk of poor outcome. However existing data on SI are mostly from trauma settings. The limited data in UGIB suggest SI>0.7, or SI>1 may predict need for endoscopic therapy or mortality. Our aim was to assess the accuracy of SI to predict clinical outcomes after UGIB.
Method:	We collected demographic, clinical and laboratory data on consecutive patients admitted to six large hospitals across the UK, USA, Denmark, Singapore, and New Zealand over 12 months. We compared the SI, ARS, GBS, AIMS65 and the new international bleeding risk score (IBRS) in their ability to predict need for endoscopic therapy, need for major transfusion (≥4 units PRBCs) and death. We also assessed score thresholds for identifying patients at low or high risk of death, and whether adding the SI as a parameter to the IBRS improved its predictive accuracy.
Results:	3012 patients (mean age 65yrs; 58% men) were studied. 574 (19%) required endoscopic therapy and 396 (13.3%) needed major transfusion. 30-day mortality was 7%.This table compares AUROCs of the scoring systems for predicting outcomes

Scoring System	Outcome (AUROC)		
	Endoscopic Therapy	Major(≥4 units) Transfusion	30-day Mortality
SI	0.606	0.655	0.611
GBS	0.747*	0.836*	0.692[†]
AIMS65	0.621	0.692	0.785*
ARS	0.613	0.658	0.759*
IBRS	0.675*	0.726*	0.863*

*p<0.001 and [†]p=0.001when compared to SI

For predicting need for endoscopic therapy or major transfusion, SI had lower accuracy than GBS and IBRS, but similar to AIMS65 and ARS. In contrast to SI≥1, GBS≥7 correctly identified the majority of patients needing endoscopic therapy (80% vs 21%; p<0.001).
For predicting 30-day mortality, SI had lower AUROC than all other scores. GBS≤1 was superior to SI<0.7 at predicting low-risk of death (mortality rate 0.35% vs 5.2%; p<0.001). Patients with S≥I1 had lower mortality than those with IBRS≥8 (15.3% vs 34.1%; p<0.001) and IBRS correctly identified a greater proportion of those who died as being high risk (49% vs 28%; p<0.001). Adding SI to the IBRS did not improve its predictive accuracy (AUROC 0.864 vs 0.863).

Conclusions:	Existing pre-endoscopy risk scores are superior to the SI in predicting need for endoscopic therapy, major transfusion or mortality after UGIB. Most patients who reach these important clinical endpoints are classified as low risk by SI.
References:	