



HAL
open science

Choosing the right score and threshold to identify low-risk patients with an upper gastrointestinal bleeding is critical

Pierre-Clément Thiebaud, Youri Yordanov

► **To cite this version:**

Pierre-Clément Thiebaud, Youri Yordanov. Choosing the right score and threshold to identify low-risk patients with an upper gastrointestinal bleeding is critical. *European Journal of Emergency Medicine*, 2023, 10.1097/MEJ.0000000000001008 . hal-04033024

HAL Id: hal-04033024

<https://hal.sorbonne-universite.fr/hal-04033024>

Submitted on 16 Mar 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Choosing the right score and threshold to identify low-risk patients with an upper gastrointestinal bleeding is critical.

Pierre-Clément THIEBAUD¹, Youri YORDANOV²

¹ AP-HP.Sorbonne Université, Hôpital Saint Antoine, Service d'Accueil des Urgences, Paris, France

² Sorbonne Université, AP-HP, Hôpital Saint Antoine, Service d'Accueil des Urgences, INSERM, Institut Pierre Louis d'Epidémiologie et de Santé Publique, UMR-S 1136, Paris, France

Corresponding author:

Dr Pierre-Clément THIEBAUD

Service d'Accueil des Urgences, Hôpital Saint Antoine

Assistance Publique-Hôpitaux de Paris, Sorbonne Université

184 rue du Faubourg St-Antoine, 75012 Paris, France.

Email: pierre-clement.thiebaud@aphp.fr

Phone: + (33) 1 49 28 27 43 + (33) 6 84 77 35 28

Orcid: 0000-0001-9519-1783

Short Title: Identify low-risk patients with an upper gastrointestinal bleeding

Keywords: Upper gastrointestinal bleeding; Score; Glasgow-Blatchford; Emergency medicine

Word count: Manuscript: 539 words, References: 5

Conflicts of interest and Source of Funding: None declared.

Choosing the right score and threshold to identify low-risk patients with an upper gastrointestinal bleeding is critical.

We read with great interest the article by Rivieri *et al.* which compared the performance of several scores (pre-endoscopic Rockall score [PERS], Glasgow-Blatchford score (GBS), modified-GBS [mGBS], and AIMS65) to predict death or the need for an intervention among patients with an upper gastrointestinal bleeding (UGIB) in an emergency department (ED) [1]. UGIB is a common medical emergency, with a hospitalization rate of over 80% and a mortality of around 5 to 10%. Some patients can be categorized as at low-risk of death or at need of any intervention. Identifying precisely these patients could allow their management in an outpatient setting and therefore avoid unnecessary hospitalizations.

First, we would like to commend the authors for addressing this important topic for emergency physicians (EPs), as these data are usually reported by gastroenterology and hepatology teams [2]. The authors rightly mention hospitalizations related to over-triage and the critical importance of identifying low-risk patients who could be safely discharged from the ED. Studies have already shown that GBS was superior to PERS, AIMS65 or other existing scores for this purpose [3] and European guidelines recommend the use of GBS, with a threshold ≤ 1 to identify low-risk patients [4]. In their article, Rivieiri *et al.* reassess PERS (as this score is purely clinical) and mGBS (as data remains scarce on its use) from an ED perspective, but we were surprised by the choice of AIMS65. This score does not seem to have any advantage compared to GBS and requires biological tests that are not often collected in an ED setting, particularly albumin or the international normalized ratio (INR). This is reflected by the volume of missing data for INR, as the total amount of missing data for albumin is not reported. Other scores recently developed to identify low-risk patients would have been worth investigating, such as the CANUKA [5].

Then, based on their reported results, the authors state that mGBS and GBS appeared to be the most accurate scores when it comes to predicting death or the need for an intervention, without specifically reporting on the scores ability to identify low-risk patients, and therefore avoid hospitalizations. To allow proper appraisal of the score ability to identify these patients, in addition to the sensitivity, specificity, positive and negative predictive value of the scores for various thresholds, the rate of patients identified as at low-risk might have been reported, as well as their hospitalization rate. Both these information would have been interesting, and could have helped to identify the most suitable score in an ED setting. Furthermore, if a large proportion of the patients identified as low-risk were among the 30% of discharged patients, using a score to identify them may no longer be useful.

Last, and in that same perspective, Rivieri *et al.* do not report the number of hospitalized patients who received an endoscopy, particularly in the low-risk patients' group. Endoscopy is recommended for all patients with suspected UGIB, including low-risk patients discharged from the ED [4], but the waiting time for this procedure can be long in most healthcare systems, and this could also be an excessive use of resources. A low number of endoscopies in that low-risk population could question the need for an endoscopy in that group of patients.

References

1. Rivieri S, Carron PN, Schoepfer, Ageron FX. External validation and comparison of the Glasgow-Blatchford score, modified Glasgow-Blatchford score, Rockall score and AIMS65 score in patients with upper gastrointestinal bleeding: a cross-sectional observational study in Western Switzerland. *Eur J Emerg Med* 2022; In press.
2. Thiebaud PC, Yordanov Y. European guidelines on the management of upper gastrointestinal bleeding: where are emergency physicians? *Eur J Emerg Med* 2022; **29**:7-8. doi: 10.1097/MEJ.0000000000000896.
3. Stanley AJ, Ashley D, Dalton HR, Mowat C, Gaya DR, Thompson E, et al. Outpatient management of patients with low-risk upper-gastrointestinal haemorrhage: multicentre validation and prospective evaluation. *Lancet* 2009; **373**:42-47. doi: 10.1016/S0140-6736(08)61769-9
4. Gralnek IM, Stanley AJ, Morris AJ, Camus M, Lau J, Lanas A, et al. Endoscopic diagnosis and management of nonvariceal upper gastrointestinal hemorrhage: European Society of Gastrointestinal Endoscopy (ESGE) Guideline – Update 2021. *Endoscopy* 2021; **53**:300-332. doi: 10.1055/a-1369-5274
5. Oakland K, Kahan BC, Guizzetti L, Martel M, Bryant RV, Brahmania M, et al. Development, Validation, and Comparative Assessment of an International Scoring System to Determine Risk of Upper Gastrointestinal Bleeding. *Clin Gastroenterol Hepatol* 2019; **17**:1121-1129.e2. doi: 10.1016/j.cgh.2018.09.039.