



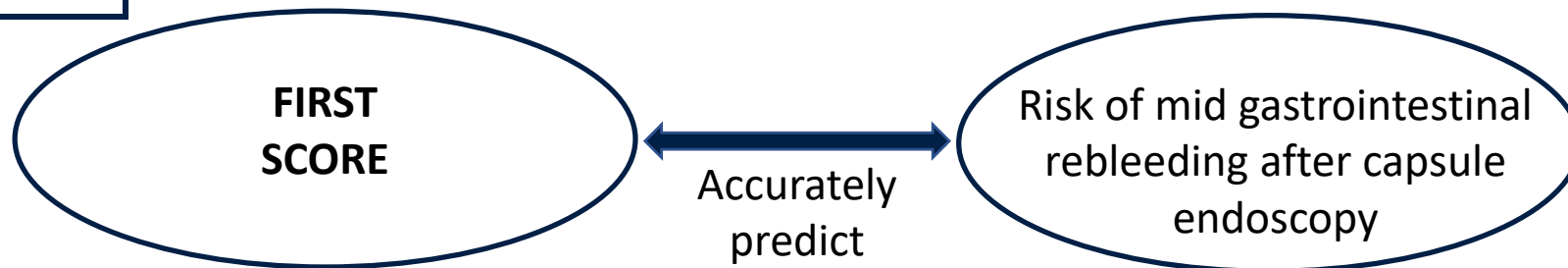
RHEMITT SCORE: PREDICTING THE RISK OF REBLEEDING FOR PATIENTS WITH MID-GASTROINTESTINAL BLEEDING SUBMITTED TO SMALL BOWEL CAPSULE ENDOSCOPY A PROSPECTIVE VALIDATION

Rui de Sousa Magalhães^(1,2,3), Bernardo Sousa-Pinto^(4,5), Tiago Cúrdia Gonçalves^(1,2,3), Pedro Boal Carvalho^(1,2,3), Bruno Rosa^(1,2,3), Maria João Moreira^(1,2,3), José Cotter^(1,2,3)

1. Serviço de Gastrenterologia, Hospital da Senhora da Oliveira – Guimarães
2. Life and Health Sciences Research Institute (ICVS), Escola de Medicina, Universidade do Minho, Braga, Portugal
3. ICVS/3B's, PT Government Associate Laboratory, Guimarães/Braga, Portugal
4. MEDCIDS – Department of Community Medicine, Information and Health Decision Sciences, Faculty of Medicine, University of Porto, Portugal
- 5 – CINTESIS – Center for Health Technology and Services Research, University of Porto, Porto, Portugal

RICE 2021

INTRODUCTION



R Renal Disease

H Heart Failure

E Endoscopic capsule lesions

M Major Bleeding

I Incomplete capsule

T Tobacco

T Endoscopic Treatment

Digestive Diseases

Dig Dis
DOI: 10.1159/000504385

Received: July 30, 2019
Accepted: October 28, 2019
Published online: November 18, 2019

RHEMITT Score: Predicting the Risk of Rebleeding for Patients with Mid-Gastrointestinal Bleeding Submitted to Small Bowel Capsule Endoscopy

Rui de Sousa Magalhães^{a-c} Tiago Cúrdia Gonçalves^{a-c} Bruno Rosa^{a-c}
Maria João Moreira^{a-c} Bernardo Sousa-Pinto^{d,e} José Cotter^{a-c}

	Score Points
Heart Failure	1
Incomplete capsule	2
Endoscopic treatment	2
Tobacco	2
P1 Lesion	2
P2 Lesions	3
Chronic kidney disease	3
Major Bleeding	5
	20

RISK	Score Points	Rebleeding risk
<u>Low</u>	0-3	0%
<u>Intermediate</u>	4-10	25.4%
<u>High</u>	11-18	63.8%



Prospective internal validation of the RHEMITT score.

RICE

2021

R Renal Disease

H Heart Failure

E Endoscopic capsule lesions

M Major Bleeding

I Incomplete capsule

T Tobacco

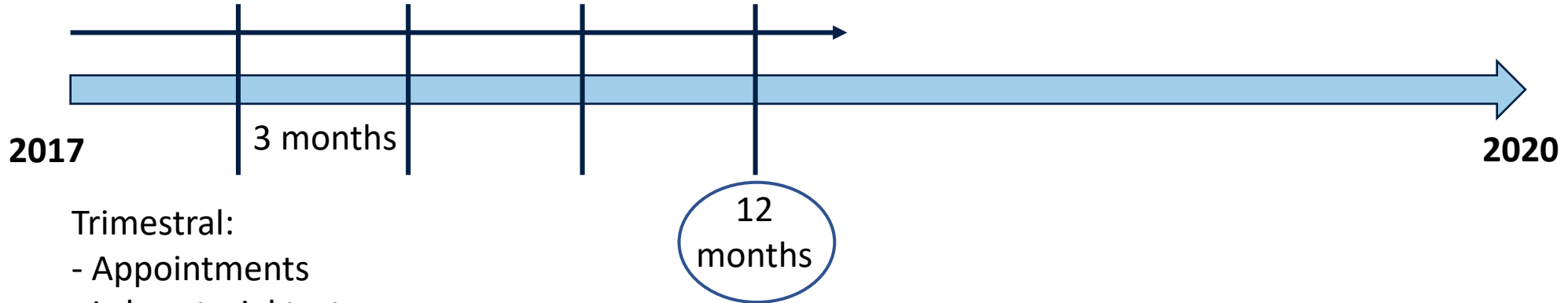
T Endoscopic Treatment

METHODS

POPULATION: Cohort of consecutive patients submitted to capsule endoscopy for suspected mid gastrointestinal beeding, from 2017-2020

OUTCOME: Rebleeding - overt bleeding event (melaena or haematochezia) or a haemoglobin decrease of at least 2 g/dL, measured in regular appointments or urgency episodes.

FOLLOW UP: At least 12 months.



Trimestral:
- Appointments
- Laboratorial tests

Calculation of RHEMITT score (at inclusion)

Inclusion Criteria:

All adult patients (≥ 18 years old) with either anemia (hemoglobin levels < 13 g/dL for males, and < 12 g/dL for females) or overt bleeding (melena and/or hematochezia) with previous nondiagnostic upper endoscopy and colonoscopy.

Exclusion Criteria:

Pregnancy
Known or suspected gastrointestinal obstruction
Concurrent nonendoscopic (pharmacologic and/or surgical) treatment of small bowel potentially bleeding lesions
Follow-up period shorter than 12 months.


Statistical analysis


- 1) Univariate analysis: Homogeneity of the population including the same variables assessed in the initial score's manuscript.
- 2) Area under curve (AUC) of the ROC curve: Performance of the score towards the outcome rebleeding.

RICE
2021

RESULTS

 162 patients

 102 (62.9%)

 Mean age 64 years old

Sensitivity and Specificity according to RHEMITT risk groups

	Sensitivity/"Risk of rebleeding" (95%CI)	Specificity (95%CI)
Low risk (0-3 points)	0% (0-10.0%)	28.8% (21.1-36.5%)
Intermediate risk (4-10 points)	23.3% (8.2-38.4%)	72.0% (64.3-79.7%)
High risk (11-18 points)	76.7% (61.6-91.8%)	99.2% (97.7-100%)

R Renal Disease

H Heart Failure

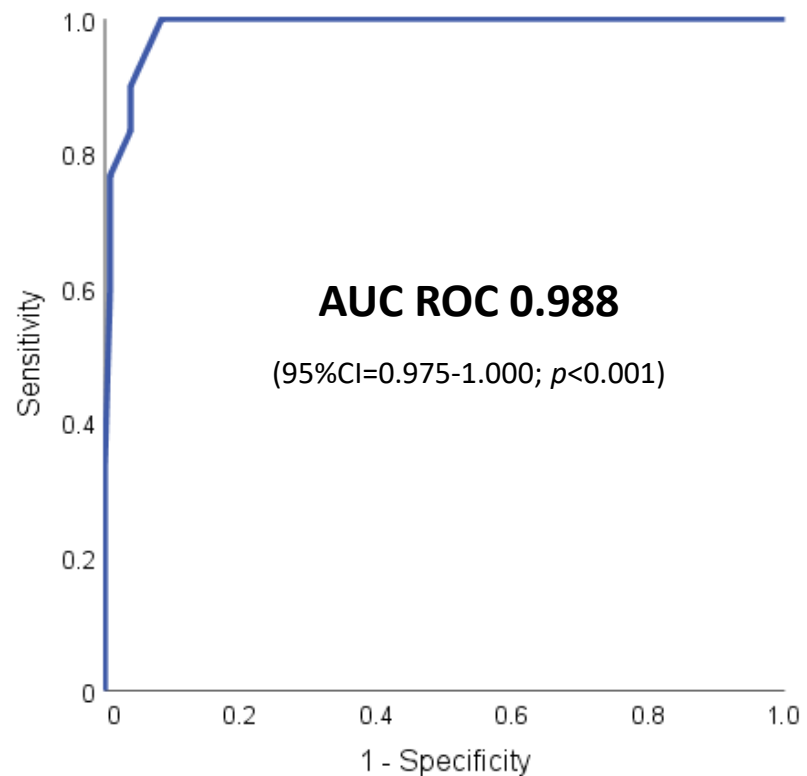
E Endoscopic capsule lesions

M Major Bleeding

I Incomplete capsule

T Tobacco

T Endoscopic Treatment



RICE

2021

R Renal Disease

H Heart Failure

E Endoscopic capsule lesions

M Major Bleeding

I Incomplete capsule

T Tobacco

T Endoscopic Treatment

Conclusion

RHEMITT score

Identified different rebleeding risk groups, with *excellent discriminative power*:

- 1) Patients at a higher risk, that would benefit from stricter surveillance
- 2) Patients at lower risk, that ultimately can be discharged from intra-hospitalar surveillance

This *prospective validation* reinforced a promising and easy to apply tool, now *ready for daily clinical practice*, optimizing allocation of resources and overall mid gastrointestinal bleeding surveillance, for the benefit of patients and healthcare resources.