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Message

What is Evidence-Based Medicine (EBM)?

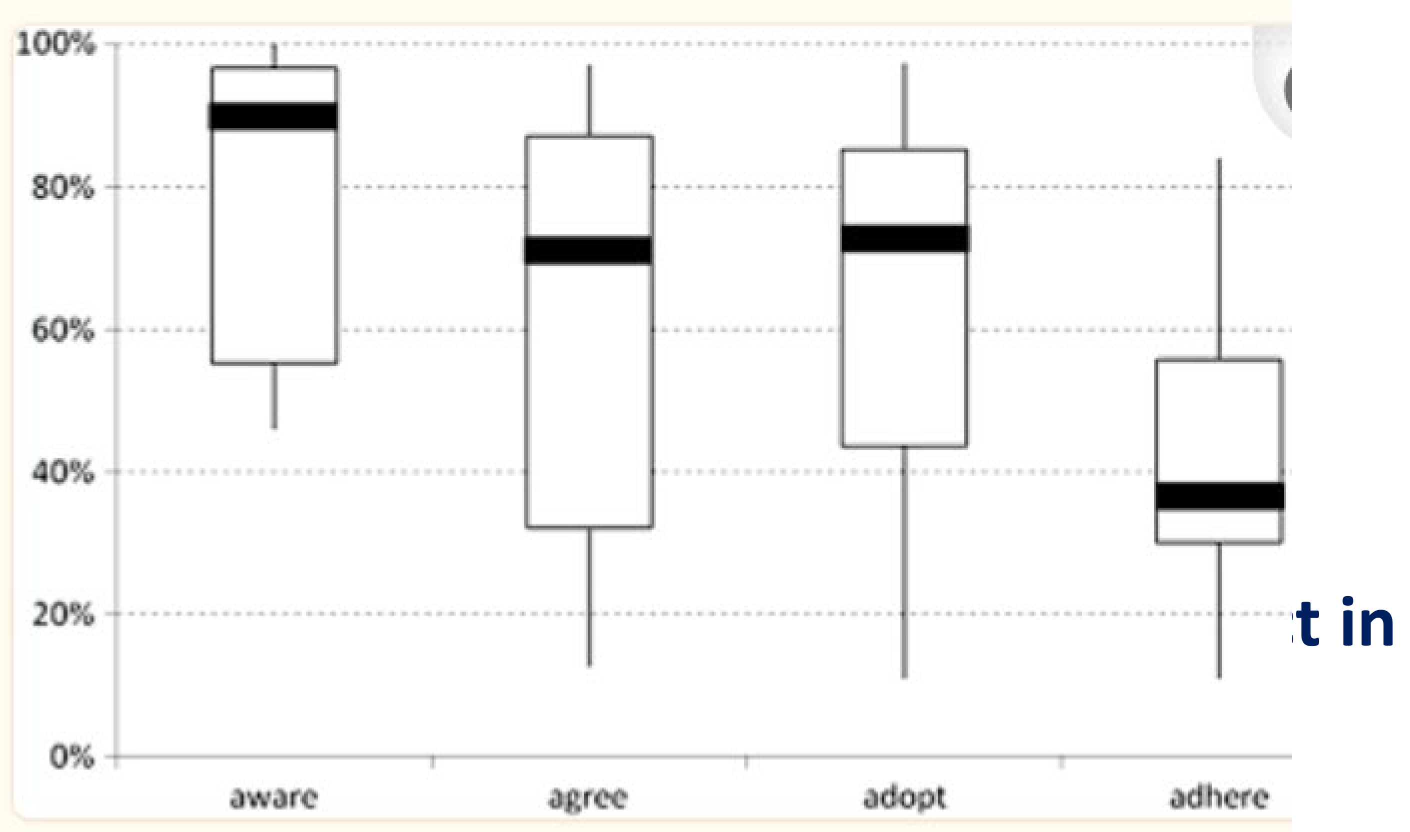
Sackett D et al (2000): Evidence-Based Medicine. Churchill Livingstone

"Evidence-based medicine is the integration of best research evidence with clinical expertise and patient values."

- Medical Information Resources provide us with Decision supporting systems

  not

  Decision making systems.



t in

behavior

[Figure 7](#)

Box and whisker plot for all absolute rates.

physicians may adopt recommendations with which they do not agree.

May be due to

peer pressure

- **This suggests that winning hearts and minds of clinicians through the dissemination of evidence is not the only strategy to increase the adoption of research evidence into practice**

This suggests that winning hearts and minds of clinicians through the dissemination of evidence is not the only strategy to increase the adoption of research evidence into practice.

"I figure there's a 40% chance of showers, and a 10% chance we know what we're talking about."

Arti

Endoscopic diagnosis and management of nonvariceal upper gastrointestinal hemorrhage (NVUGIH): European Society of Gastrointestinal Endoscopy (ESGE) Guideline – Update 2021

Authors

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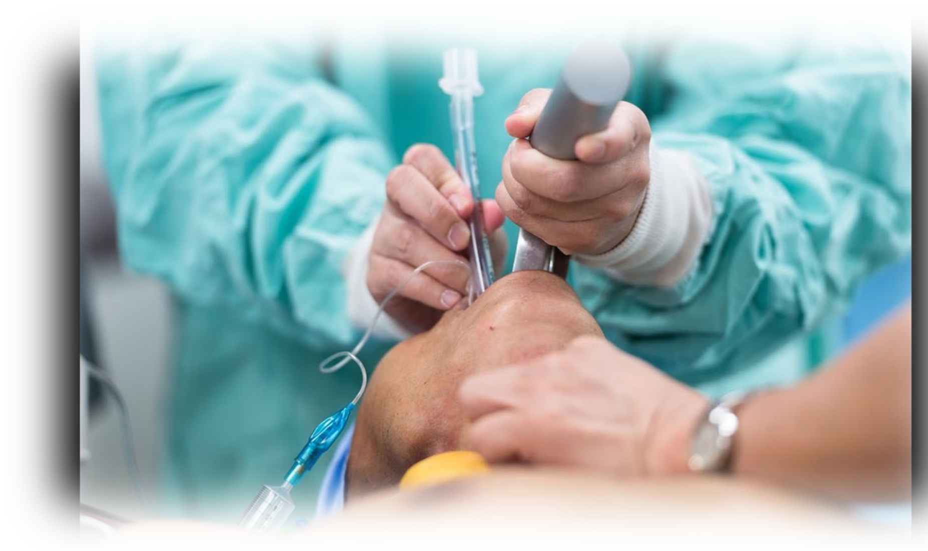
Start

Airway and breathing

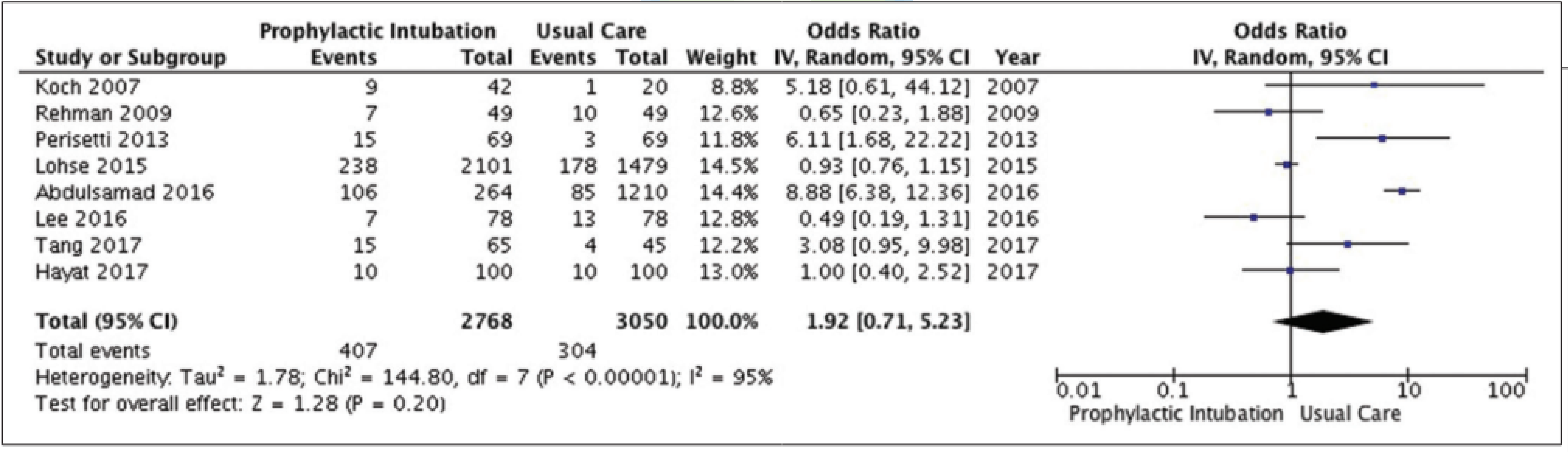
•Start



The practice of prophylactically intubating patients for the endoscopic management of severe UGIB varies significantly, and this may be related to endoscopist experience and patient factors.

A stable airway may allow for ease of intervention on bleeding lesions

JGH Open: An open access journal of gastroenterology and hepatology 4 (2020)



Study or Subgroup	Prophylactic Intubation Events	Prophylactic Intubation Total	Usual Care Events	Usual Care Total	Weight	Odds Ratio IV, Random, 95% CI	Year
Koch 2007	9	42	1	20	8.8%	5.18 [0.61, 44.12]	2007
Rehman 2009	7	49	10	49	12.6%	0.65 [0.23, 1.88]	2009
Perisetti 2013	15	69	3	69	11.8%	6.11 [1.68, 22.22]	2013
Lohse 2015	238	2101	178	1479	14.5%	0.93 [0.76, 1.15]	2015
Abdulsamad 2016	106	264	85	1210	14.4%	8.88 [6.38, 12.36]	2016
Lee 2016	7	78	13	78	12.8%	0.49 [0.19, 1.31]	2016
Tang 2017	15	65	4	45	12.2%	3.08 [0.95, 9.98]	2017
Hayat 2017	10	100	10	100	13.0%	1.00 [0.40, 2.52]	2017
Total (95% CI)		**2768**		**3050**	**100.0%**	**1.92 [0.71, 5.23]**	
Total events	407		304				

Heterogeneity: $Tau^2 = 1.78$; $Chi^2 = 144.80$, $df = 7$ ($P < 0.00001$); $I^2 = 95\%$
Test for overall effect: $Z = 1.28$ ($P = 0.20$)

Figure 4: Mortality outcome

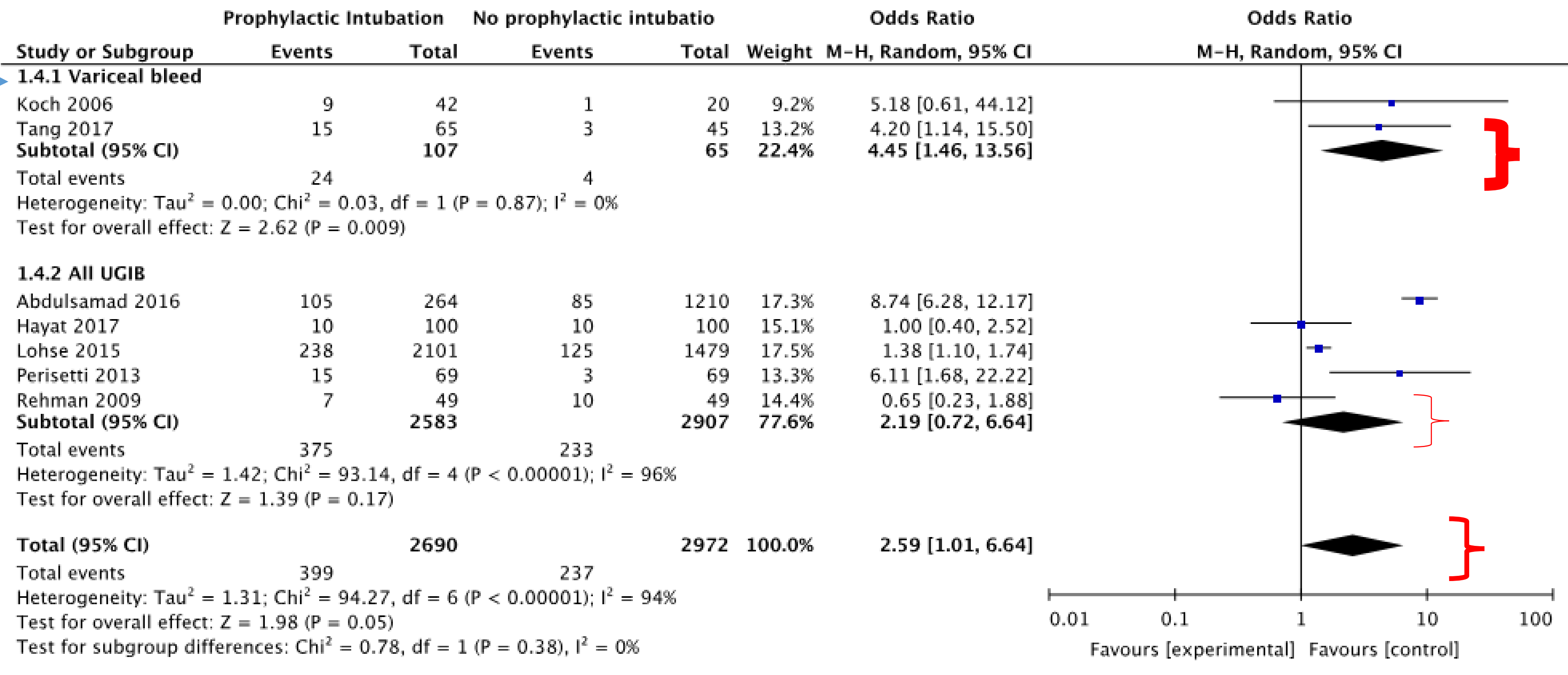
Study or Subgroup	Prophylactic Intubation Mean	Prophylactic Intubation SD	Prophylactic Intubation Total	Usual Care Mean	Usual Care SD	Usual Care Total	Weight	Mean Difference IV, Random, 95% CI	Year
Koch 2007	8.2	6	42	6.9	7	20	4.2%	1.30 [−2.26, 4.86]	2007
Rehman 2009	6.9	5.8	49	5.9	6.1	49	9.7%	1.00 [−1.36, 3.36]	2009
Perisetti 2013	10	43.7	69	5	14.1	69	0.5%	5.00 [−5.83, 15.83]	2013
Lohse 2015	8.16	12.4	2101	7.63	13.8	1479	69.2%	0.53 [−0.35, 1.41]	2015
Tang 2017	10.6	7.9	65	8.8	7.5	45	6.3%	1.80 [−1.11, 4.71]	2017
Hayat 2017	9	9.6	100	7	6.7	100	10.2%	2.00 [−0.29, 4.29]	2017
Total (95% CI)			**2426**			**1762**	**100.0%**	**0.86 [0.13, 1.59]**	

Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 2.52$, $df = 5$ ($P = 0.77$); $I^2 = 0\%$
Test for overall effect: $Z = 2.30$ ($P = 0.02$)

Prophylactic Intubation Usual Care

Figure 5: Hospital length of stay outcome

Figure 3: Pneumonia outcome



Study or Subgroup	Prophylactic Intubation Events	Prophylactic Intubation Total	No prophylactic intubatio Events	No prophylactic intubatio Total	Weight	Odds Ratio M-H, Random, 95% CI
1.4.1 Variceal bleed						
Koch 2006	9	42	1	20	9.2%	5.18 [0.61, 44.12]
Tang 2017	15	65	3	45	13.2%	4.20 [1.14, 15.50]
Subtotal (95% CI)		**107**		**65**	**22.4%**	**4.45 [1.46, 13.56]**
Total events	24		4			
Heterogeneity: Tau² = 0.00; Chi² = 0.03, df = 1 (P = 0.87); I² = 0%						
Test for overall effect: Z = 2.62 (P = 0.009)						
1.4.2 All UGIB						
Abdulsamad 2016	105	264	85	1210	17.3%	8.74 [6.28, 12.17]
Hayat 2017	10	100	10	100	15.1%	1.00 [0.40, 2.52]
Lohse 2015	238	2101	125	1479	17.5%	1.38 [1.10, 1.74]
Perisetti 2013	15	69	3	69	13.3%	6.11 [1.68, 22.22]
Rehman 2009	7	49	10	49	14.4%	0.65 [0.23, 1.88]
Subtotal (95% CI)		**2583**		**2907**	**77.6%**	**2.19 [0.72, 6.64]**
Total events	375		233			
Heterogeneity: Tau² = 1.42; Chi² = 93.14, df = 4 (P < 0.00001); I² = 96%						
Test for overall effect: Z = 1.39 (P = 0.17)						
Total (95% CI)		**2690**		**2972**	**100.0%**	**2.59 [1.01, 6.64]**
Total events	399		237			
Heterogeneity: Tau² = 1.31; Chi² = 94.27, df = 6 (P < 0.00001); I² = 94%						
Test for overall effect: Z = 1.98 (P = 0.05)						
Test for subgroup differences: Chi² = 0.78, df = 1 (P = 0.38), I² = 0%						

Figure 2 Meta-analysis of mortality and prophylactic intubation in upper gastrointestinal bleeding (UGIB) stratified by variceal bleed only and all UGIB. CI, confidence interval(s); M-H, mantel–Haenszel odds ratio.

MA/RCT mortality

Study or Subgroup	Prophylactic Intubation Mean	SD	Total	No intubation Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI
Abdulsamad 2016	0	0	0	0	0	0		Not estimable
Hayat 2017	9	9.6	100	7	8.1	100	8.1%	2.00 [−0.46, 4.46]
Koch 2006	8.2	6	42	6.9	7	20	3.9%	1.30 [−2.26, 4.86]
Lohse 2015	8.2	11.34	2101	7.63	13.83	1479	67.5%	0.57 [−0.29, 1.43]
Perisetti 2013	10	11.8	69	7	3.8	69	5.8%	3.00 [0.07, 5.93]
Rehman 2009	6.9	5.8	49	5.9	6.1	49	8.9%	1.00 [−1.36, 3.36]
Tang 2017	10.6	7.9	65	8.8	7.5	45	5.8%	1.80 [−1.11, 4.71]
Total (95% CI)			**2426**			**1762**	**100.0%**	**0.96 [0.26, 1.67]**

Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 3.71$, df = 5 (P = 0.59); $I^2 = 0\%$

Test for overall effect: Z = 2.69 (P = 0.007)

Figure 3 Meta-analysis of hospital length of stay and prophylactic intubation in upper gastrointestinal bleeding. CI, confidence interval(s); IV, inverse variance.

Study or Subgroup	Prophylactic Intubation Events	Prophylactic Intubation Total	No prophylactic intubatio Events	No prophylactic intubatio Total	Weight	Odds Ratio M-H, Random, 95% CI
Abdulsamad 2016	97	264	94	1210	80.3%	6.90 [4.97, 9.56]
Hayat 2017	14	100	2	100	3.8%	7.98 [1.76, 36.10]
Koch 2006	9	42	0	20	1.0%	11.63 [0.64, 210.56]
Lohse 2015	0	2101	0	1479		Not estimable
Perisetti 2013	26	69	4	69	6.8%	9.83 [3.20, 30.14]
Rehman 2009	9	49	5	49	6.2%	1.98 [0.61, 6.41]
Tang 2017	7	65	1	45	1.9%	5.31 [0.63, 44.76]
Total (95% CI)		**589**		**1493**	**100.0%**	**6.58 [4.91, 8.81]**
Total events	162		106			

Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 4.84$, df = 5 ($P = 0.44$); $I^2 = 0\%$
Test for overall effect: $Z = 12.60$ ($P < 0.00001$)

Figure 4 Meta-analysis of rates of pneumonia and prophylactic intubation in upper gastrointestinal bleeding. CI, confidence interval(s); M-H, mantel–Haenszel odds ratio.

Study or Subgroup	Prophylactic Intubation Events	Total	Control Events	Total	Weight	Odds Ratio M-H, Random, 95% CI
Hayat 2017	5	100	1	100	10.3%	5.21 [0.60, 45.43]
Perisetti 2013	6	69	2	69	17.7%	3.19 [0.62, 16.40]
Rehman 2009	8	49	8	49	39.0%	1.00 [0.34, 2.92]
Tang 2017	15	65	4	45	32.9%	3.08 [0.95, 9.98]
Total (95% CI)		**283**		**263**	**100.0%**	**2.11 [1.04, 4.27]**
Total events	34		15			

Heterogeneity: $Tau^2 = 0.03$; $Chi^2 = 3.19$, df = 3 (P = 0.36); $I^2 = 6\%$
Test for overall effect: Z = 2.07 (P = 0.04)

Figure 5 Meta-analysis of cardiac complications and prophylactic intubation in upper gastrointestinal bleeding. CI, confidence interval(s); M-H, mantel–Haenszel odds ratio.

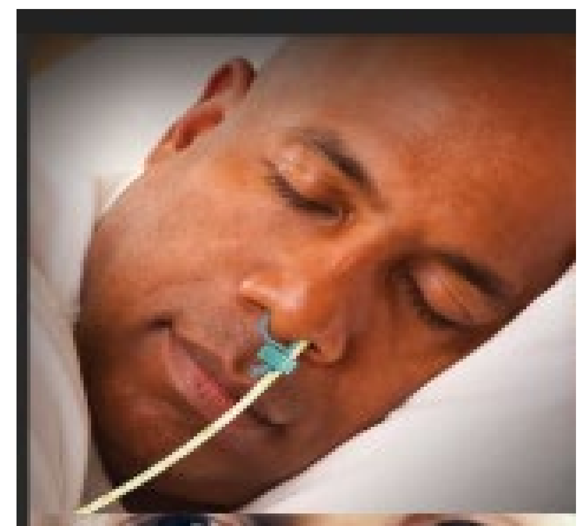
Endotracheal intubation	
16	ESGE does not recommend routine prophylactic endotracheal intubation for airway protection prior to upper endoscopy in patients with acute UGIH. Strong recommendation, high quality evidence.
17	ESGE recommends prophylactic endotracheal intubation for airway protection prior to upper endoscopy only in selected patients with acute UGIH (i. e., those with ongoing active hematemesis, agitation, or encephalopathy with inability to adequately control the airway). Strong recommendation, low quality evidence.

ESGE recommends that, if prophylactic endotracheal intubation is performed, extubation should occur as soon as clinically safe following upper GI endoscopy

Strong recommendation, very low quality evidence

The European non-variceal UGIB guidelines recommend that prophylactic intubation should be performed only in the context of severe haematemesis, agitation, or inability to protect the airway.

The European non-variceal UGIB guidelines recommend that prophylactic intubation should be performed only in the context of severe haematemesis, agitation, or inability to protect the airway.



ESGE does not recommend the routine use of nasogastric or orogastric aspiration/lavage in patients presenting with acute UGIH.

Strong recommendation, moderate quality evidence.

15	ESGE does not recommend the routine use of nasogastric or orogastric aspiration/lavage in patients presenting with acute UGIH. Strong recommendation, moderate quality evidence.

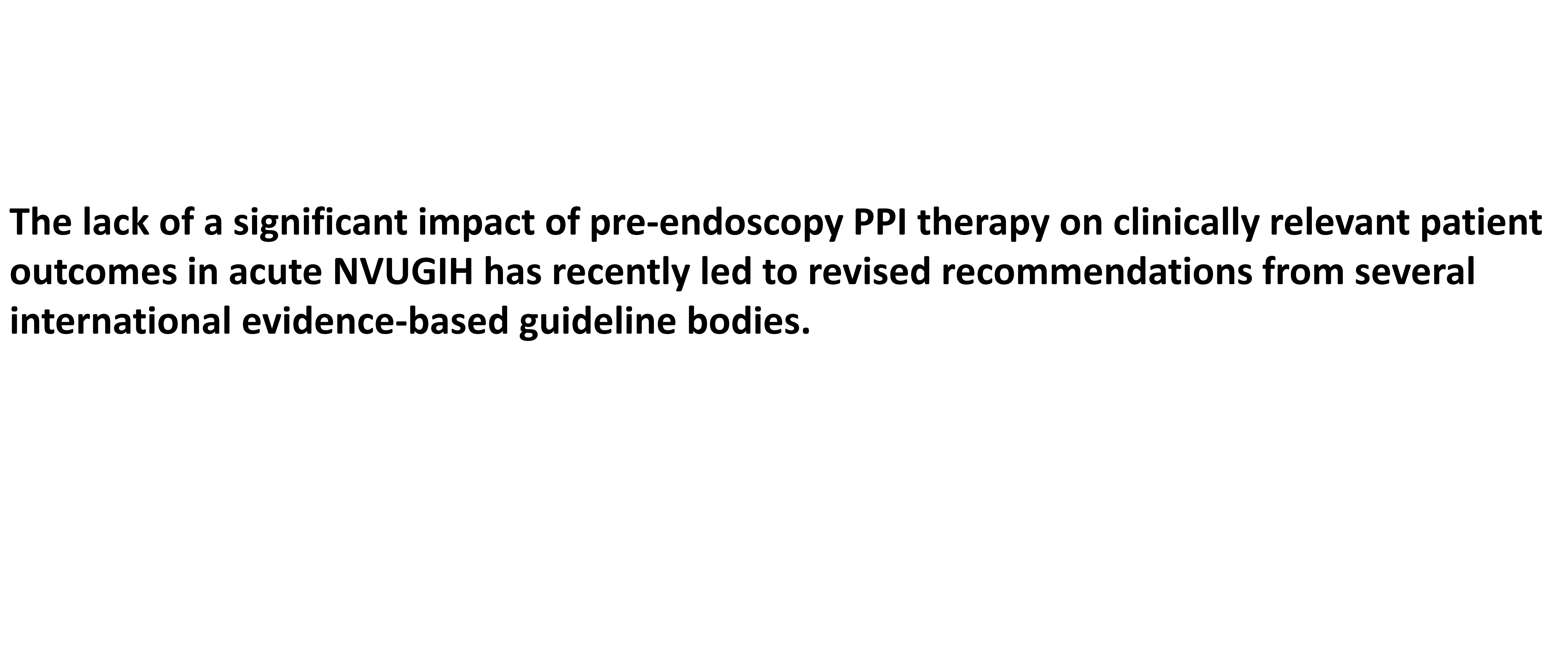
2015

ESGE recommends initiating high dose intravenous proton pump inhibitors (PPI)

intravenous bolus followed by continuous infusion (80 mg then 8 mg/hour), in patients presenting with acute UGIH awaiting upper endoscopy. However, PPI infusion should not delay the performance of early endoscopy

strong recommendation ,High quality evidence.

Opinions


The lack of a significant impact of pre-endoscopy PPI therapy on clinically relevant patient outcomes in acute NVUGIH has recently led to revised recommendations from several international evidence-based guideline bodies.

In 2018, the Asia-Pacific working group consensus **revised** their earlier support for routine pre-endoscopy intravenous PPI administration in acute UGIH .

Since there is **no proven impact on patient outcomes**
and **costs are increased**

the working group members voted to reject the indiscriminate use of pre-endoscopy intravenous PPIs in patients presenting in a stable condition with symptoms suggestive of acute UGIH.

2015

ESGE recommends initiating high dose intravenous proton pump inhibitors (PPI)

intravenous bolus followed by continuous infusion (80 mg then 8 mg/hour), **in patients presenting with acute UGIH awaiting upper endoscopy. However, PPI infusion should not delay the performance of early endoscopy**

strong recommendation ,High quality evidence.

2015

ESGE recommends IV (PPI)

strong recommendation ,High quality evidence.

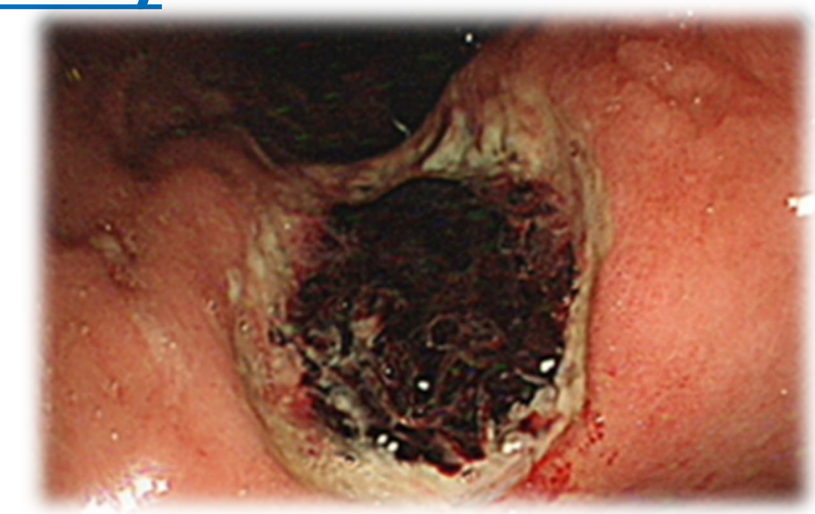
2021

ESGE **suggests** (PPI) therapy **be considered**

Weak recommendation, high quality evidence

Post-endoscopy management

ESGE **recommends** high dose proton pump inhibitor (PPI) therapy for patients who receive endoscopic hemostasis and for patients with FIIb ulcer stigmata (adherent clot) **not treated endoscopically**.



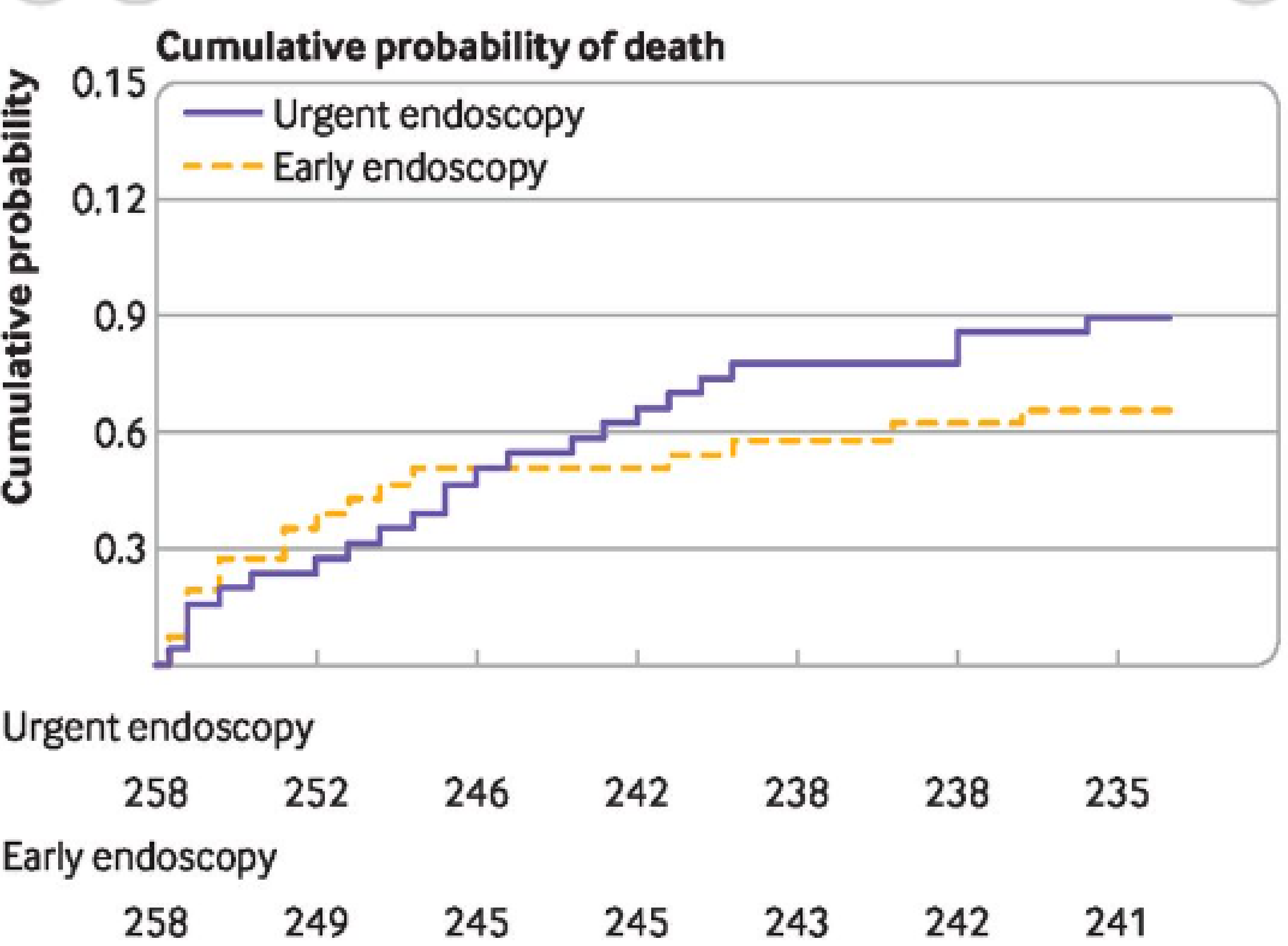
Strong recommendation, high quality evidence

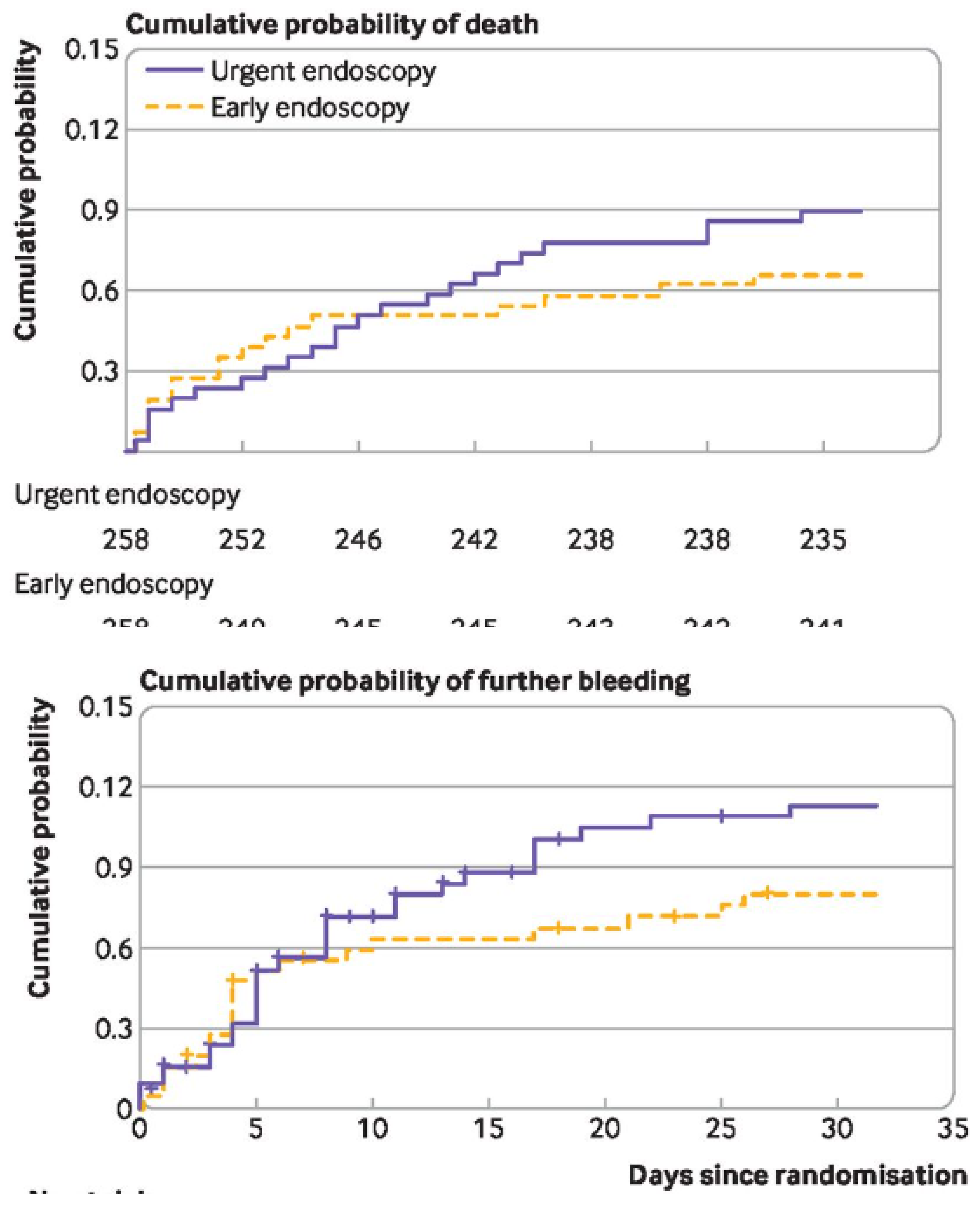
Post-endoscopy management

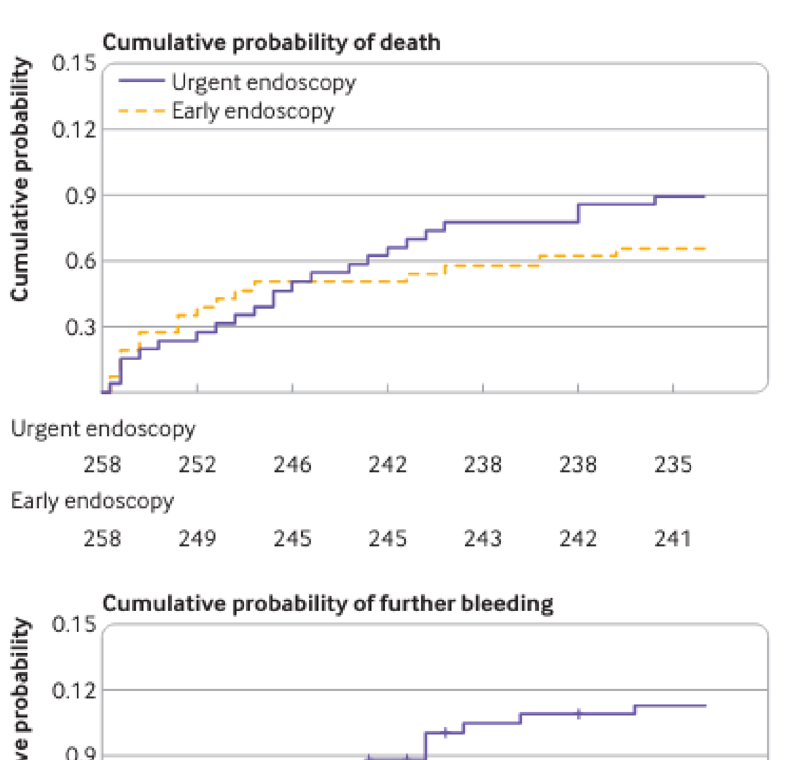
esomeprazol

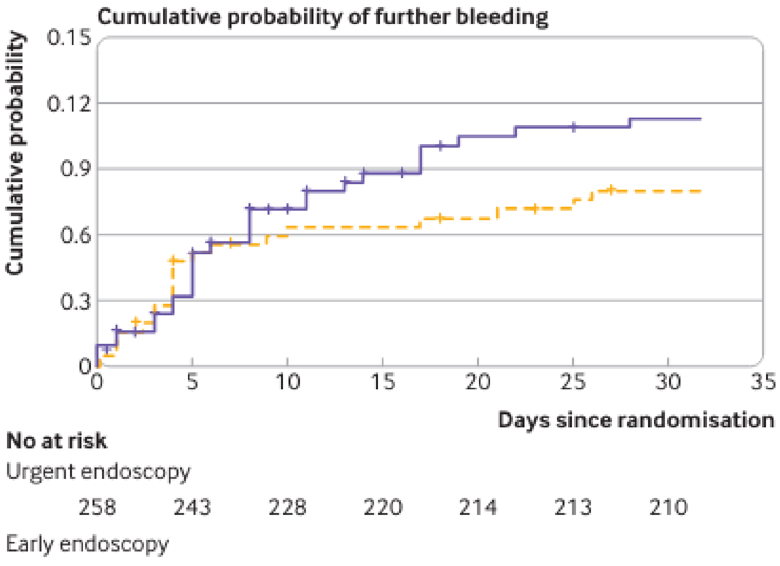
What is the optimal timing of urgent endoscopy in patients UGIB?

Exact timing of endoscopy can be challenging and should be decided on the basis of thorough clinical assessment, including haemodynamics and underlying comorbidities.
Appropriate resuscitation and optimisation of comorbidities is essential before endoscopy.


Cumulative probability of death
Cumulative probability
0.15
0.12
0.9
0.6
0.3
Urgent endoscopy
Early endoscopy
Urgent endoscopy
258 252 246 242 238 238 235
Early endoscopy
258 249 245 245 243 242 241


Cumulative probability of death
Cumulative probability
0.15
0.12
0.9
0.6
0.3
Urgent endoscopy
Early endoscopy
Urgent endoscopy
258
252
246
242
238
238
235
Early endoscopy
Cumulative probability of further bleeding
Cumulative probability
0.15
0.12
0.9
0.6
0.3
0
0
5
10
15
20
25
30
35
Days since randomisation





Update on the management of upper gastrointestinal bleeding

Josh Orpen-Palmer, Adrian J Stanley

2022

4 ESGE does not recommend urgent (≤12 hours) upper GI endoscopy since as compared to early endoscopy, patient outcomes are not improved.
Strong recommendation, high quality evidence.

- **To continue**