

**Supplementary Table 1:** Comorbidity definition by Medical Evidence Report (CMS Form 2728) and ICD-9 diagnosis code.

<b>Comorbidity</b>	<b>Medical Evidence Report comorbid condition</b>	<b>ICD-9 diagnosis code</b>
Arrhythmia	NA	426.0X, 426.13, 426.7X, 426.9X, 426.10, 426.12, 427.0X-427.4X, 427.6X, 427.8X, 427.9X, 785.0X, 996.01, 996.04, V45.0, V53.3
Cancer	Malignant neoplasm, cancer	14X.XX-208.XX, excluding 173.XX
Coronary artery disease	Atherosclerotic heart disease	410.XX-413.XX
Deep vein thrombosis	NA	451.1X, 451.2X, 451.8X, 451.9X, 453.0X, 453.1X, 453.2X, 453.4X, 453.8X, 453.9X
Diabetes mellitus	Diabetes, currently on insulin Diabetes, on oral medications Diabetes, without medications Diabetic retinopathy	250.XX, 357.2X, 326.0X, 362.07
Gastrointestinal bleeding	NA	456.0, 456.2, 530.21, 530.7, 530.82, 531.0X, 531.2X, 531.4X, 531.6X, 532.0X, 532.2X, 532.4X, 532.6X, 533.0X, 533.2X, 533.4X, 533.6X, 534.0X, 534.2X, 534.4X, 534.6X, 535.X1, 537.83, 537.84, 562.02, 562.03, 562.12, 562.13, 569.3, 569.85, 573.83, 578.X, 772.4
Heart failure	Congestive heart failure	398.91, 402.X1, 404.X1, 404.X3, 428.XX
Hemorrhagic stroke	NA	430.XX, 431.XX, 432.XX
Ischemic stroke	Cerebrovascular disease, cerebrovascular accident, transient ischemic attack	433.X1, 434.X1, 436.XX, 437.1X
Liver disease	NA	070.22, 070.23, 070.32, 070.33, 070.44, 070.54, 070.6, 070.9X, 456.0X-456.2X, 570.XX, 571.XX, 572.2X-572.4X, 572.8X, 573.3X, 573.4X, 573.8X, 573.9X, V42.7
Peripheral vascular disease	Peripheral vascular disease Amputation	093.0X, 437.3X, 440.XX, 441.XX, 443.1X, 443.2X, 443.8X, 443.9X, 447.1X,

Pulmonary disease	Chronic obstructive pulmonary disease	557.1X, 557.9X, V43.4, 84.3X 490.XX, 491.XX, 492.XX, 494.XX, 496.XX
Pulmonary embolism		415.1X

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**Supplementary Table 2.** Baseline characteristics of patients who resumed outpatient hemodialysis (HD) after a gastrointestinal bleeding event (GIB), categorized by whether they had a recurrent GIB.

Variable	Did not have a recurrent GIB (N = 1252)	Had a recurrent GIB (N= 90)	P-value
<b>Demographics</b>			
Age (yr, mean $\pm$ SD)	77 $\pm$ 6	75 $\pm$ 6	0.01
Male sex, N (%)	622 (50)	42 (47)	0.58
Race, N (%)			0.96
Black	391 (31)	27 (30)	
White	773 (62)	57 (63)	
Other <sup>1</sup>	88 (7)	- (7)	
Hispanic ethnicity <sup>1</sup>	161 (13)	- (10)	0.43
Years on dialysis (median & IQR)	1.8 (0.7-3.5)	2.0 (0.7-3.5)	0.53
<b>Reported comorbidities, N (%)</b>			
Arrhythmia	262 (21)	16 (18)	0.48
Cancer	159 (13)	10 (11)	0.66
Coronary artery disease	547 (44)	41 (46)	0.73
Deep vein thrombosis	121 (10)	10 (11)	0.66
Diabetes mellitus	720 (58)	53 (59)	0.80
Previous gastrointestinal bleeding	148 (12)	14 (16)	0.29
Heart failure	609 (49)	52 (58)	0.09
Hemorrhagic stroke <sup>1</sup>	- (1)	- (1)	0.68
Ischemic stroke	258 (21)	19 (21)	0.91
Liver disease <sup>1</sup>	64 (5)	- (4)	0.78
Peripheral vascular disease	393 (31)	31 (34)	0.55
Pulmonary disease	268 (21)	27 (30)	0.06
Pulmonary embolism <sup>1</sup>	19 (2)	- (<1)	0.24
<b>GIB characteristics</b>			
Year GIB occurred			0.69
2004	190 (15)	13 (14)	
2005	342 (27)	30 (33)	
2006	242 (19)	18 (20)	
2007	258 (21)	14 (16)	
2008	220 (18)	15 (17)	
Transfusions received during GIB hospitalization <sup>1</sup>			0.83
0	770 (62)	56 (62)	
1	470 (38)	34 (38)	
2	- (<1)	- (<1)	
3	- (<1)	- (<1)	

Variable	Did not have a recurrent GIB (N = 1252)	Had a recurrent GIB (N= 90)	P-value
Days from hospital admission for GIB to resumption of outpatient HD (median & IQR)	7 (5-12)	7 (4-10)	0.04
<b>Vital signs and laboratory measurements</b>			
Weight (kg) by quartile			0.20
<58	300 (24)	15 (17)	
58-67.9	301 (24)	19 (21)	
68-78.9	307 (25)	22 (24)	
≥79	288 (23)	28 (31)	
Pre-dialysis systolic blood pressure (mmHg)			0.09
<120	292 (23)	30 (33)	
120-139	315 (25)	16 (18)	
140-159	311 (25)	23 (26)	
≥160	307 (25)	17 (19)	
Hemoglobin (g/dL) <sup>1</sup>			0.08
<9	179 (14)	20 (22)	
9-9.9	123 (10)	12 (13)	
10-10.9	181 (14)	- (10)	
11-11.9	244 (19)	21 (23)	
12-12.9	260 (21)	12 (13)	
13-13.9	139 (11)	12 (13)	
≥14	82 (7)	- (2)	
Platelets (x10 <sup>3</sup> /μL) <sup>1</sup>			0<0.001
<150	145 (12)	- (10)	
150-229	403 (32)	44 (49)	
230-310	356 (28)	13 (14)	
311-400	147 (12)	- (6)	
>400	59 (5)	- (10)	
Albumin (g/dL) <sup>1</sup>			0.60
<2.5	35 (3)	- (1)	
2.5-2.9	116 (9)	- (10)	
3-3.4	278 (22)	22 (24)	
3.5-3.9	484 (39)	31 (34)	
≥4	212 (17)	20 (22)	
Kt/V <sup>1</sup>			0.27
0.5-1.1	89 (7)	- (4)	
1.2-1.5	462 (37)	42 (47)	
1.6-1.9	421 (34)	25 (28)	
2.0-3.0	108 (9)	- (8)	
<b>Dialysis characteristics</b>			

Variable	Did not have a recurrent GIB (N = 1252)	Had a recurrent GIB (N= 90)	P-value
Vascular access			0.74
Central venous catheter	549 (44)	41 (46)	
Fistula or graft	677 (54)	47 (52)	
Length of session (minutes) <sup>1</sup>			0.44
<180	59 (5)	- (1)	
180-194	310 (25)	17 (19)	
195-209	100 (8)	- (9)	
210-224	390 (31)	33 (37)	
225-239	97 (8)	- (9)	
≥240	296 (24)	23 (26)	
Reuse of dialysis filter (any)	713 (57)	55 (61)	0.44
<b>Facility characteristics</b>			
Number of outpatient hemodialysis patients (by quartile) <sup>2</sup>			0.26
<53	301 (24)	25 (28)	
53-78	320 (26)	21 (23)	
79-113	304 (24)	28 (31)	
≥114	315 (25)	16 (18)	
Rural <sup>3</sup> , N (%)	205 (16)	22 (24)	0.05
Census division <sup>4</sup> , N (%)			0.57
East North Central	193 (15)	19 (21)	
East South Central	63 (5)	- (3)	
Middle Atlantic	116 (9)	- (7)	
Mountain	54 (4)	- (6)	
New England	50 (4)	- (6)	
Pacific	208 (17)	12 (13)	
South Atlantic	347 (28)	29 (32)	
West North Central	75 (6)	- (6)	
West South Central	146 (12)	- (7)	

SD=Standard deviation. IQR=interquartile range.

<sup>1</sup> Per federal research regulations, any cell counts less than 10 must not be reported.

<sup>2</sup> Reflects the number of outpatient hemodialysis patients treated at a facility at the end of year the GIB occurred, per the ESRD Facility Survey (form CMS-2744).

<sup>3</sup> Facilities were considered urban if they were classified as a metropolitan area in the Rural-Urban Commuting Area (RUCA) Codes version 2.0, which are based on 2000 Census commuting data and 2004 zip codes; all other areas were considered to be rural.<sup>11</sup>

<sup>4</sup> Facilities were categorized into one of nine U.S. Census Bureau Divisions based on their state.<sup>12</sup>

Note: Variables and the N (%) patients who did not have a recurrent bleed vs. N (%) patients who received did have a recurrent bleed with missing data:

Weight<sup>1</sup>: 56 (4) vs. - (7)

Pre-dialysis systolic blood pressure<sup>1</sup>: 27 (2) vs. - (4)

Hemoglobin<sup>1</sup>: 44 (4) vs. 1 (2)

Platelet count: 142 (11) vs. 10 (11)

Albumin: 127 (10) vs. - (8)

Kt/V: 172 (14) vs. 12 (13)

Vascular access<sup>1</sup>: 26 (2) vs.- (2)

Facility number of outpatient hemodialysis patients<sup>1</sup>: 12 (1) vs.- (<1)

Facility rural status<sup>1</sup>: - (<1) vs.- (<1)