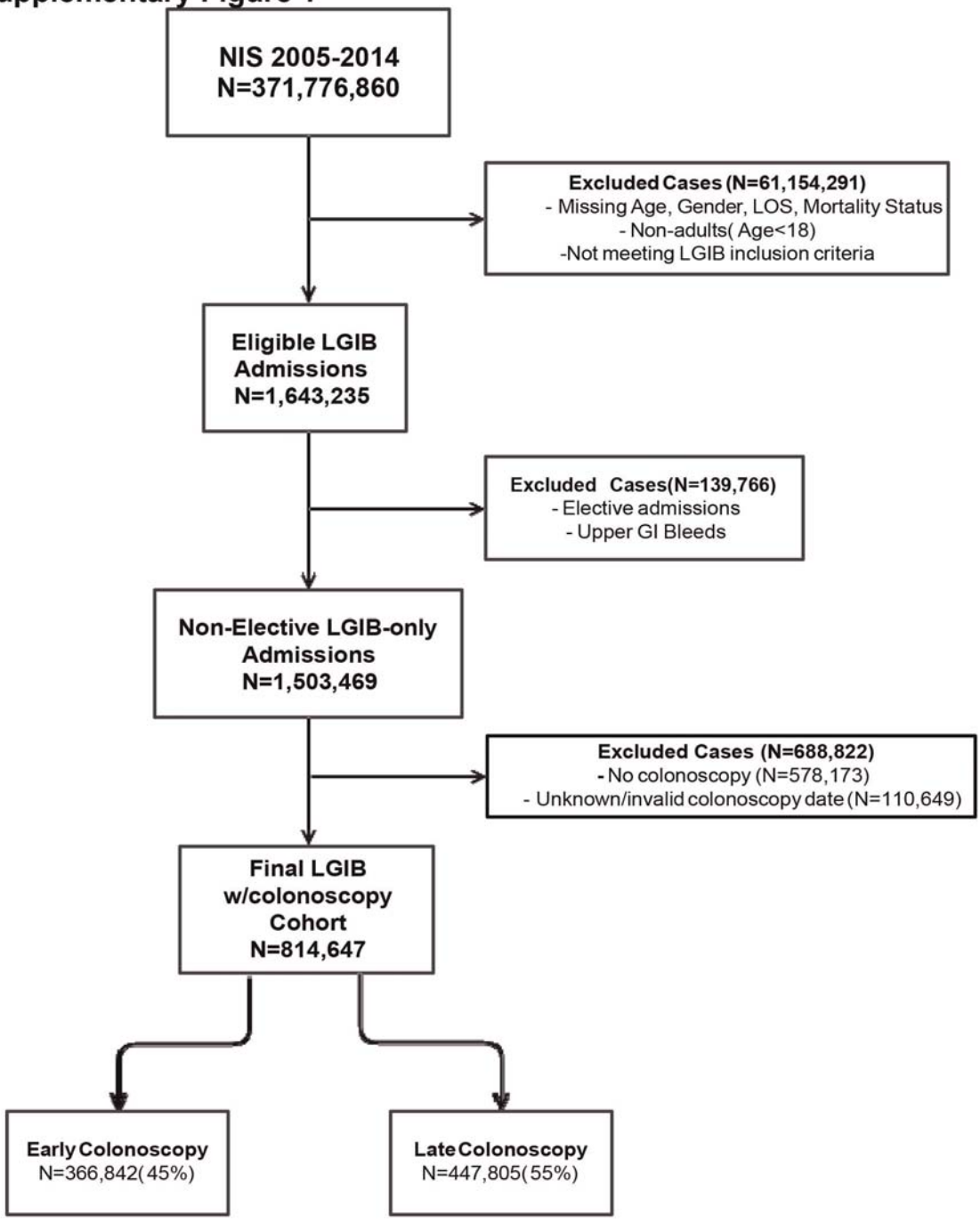
Supplementary material

Supplementary Figure 1



Supplementary Table 1 ICD-9-CM and ICD-9-PR codes to identify LGIB patients and colonoscopy.

Primary diagnosis (DX1) (any of the 4):	
Diverticular bleeding	562.12, 562.13
Anorectal hemorrhage	569.3, 455.2, 455.5, 455.8
Intestinal arteriovenous malformations	569.85
Dieulafoy lesion	569.86
As DX1 (either of the two):	
Acute hemorrhagic anemia	285.1
Unspecified lower GI bleeding	578.9
WITH at least one of the following secondaries (DX2-DX15):	211.3, 211.4
Non-infectious	558.*
colitis Colonic	569.82
ulcer Ischemic	557.*
colitis	555.*, 556.*
Inflammatory bowel	569.41
disease Solitary rectal	152.*, 153.*, 154.*, 230.*

Thieme

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Anal fissure	565.0
Infectious colitis	009.*
Colonoscopy (procedure codes)	45.22, 45.23, 45.24, 45.25, 45.42, 45.43

ICD-9-CM, International Classification of Diseases 9th revision Clinical Modification; PR, procedure code; DX, diagnosis

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Supplementary Table 2 ICD-9-CM and ICD-9-PR codes to identify UGIB and EGD.

Primary diagnosis (DX1)(any of the 7):	
Gastric, duodenal, peptic ulcer with hemorrhage	531.00, 531.01, 531.20, 531.21, 531.40, 431.41, 531.60, 531.61, 533.00, 533.01, 533.20, 533.21, 533.40, 533.41, 533.60, 533.61, 534.00, 534.01, 534.20, 534.21, 534.40, 534.41, 534.60, 534.61, 532.00, 532.01, 532.20, 532.21, 532.40, 532.41, 532.60, 532.61
Gastritis and duodenitis with hemorrhage	535.01, 535.11, 535.21, 535.31, 535.41, 535.51, 535.61
Variceal bleeding	456.0, 456.20
Esophageal ulcer with hemorrhage	530.21
Mallory-Weiss syndrome	530.7
Angiodysplasia of stomach and duodenum with hemorrhage	537.83
Dieulafoy lesion (hemorrhagic) of stomach and duodenum	537.84
As DX1 (either one of these):	
Melena, hematemesis, hemorrhage of GI tract, acute blood loss, anemia	578.9, 578.1, 285.1, 578.0
WITH at least one of the following secondaries (DX2-DX15):	
Esophagitis, esophageal ulcer	530.20, 530.1, 530.10, 530.12
Malignant neoplasm of esophagus, stomach or duodenum	150.0, 150.1, 150.2, 150.3, 150.4, 150.5, 150.9, 150.8, 537.89, 151.0, 151.1, 151.2, 151.3, 151.4, 151.5, 151.6, 151.8, 151.9, 152.0
EGD (procedure codes)	42.23, 42.24, 42.33, 44.13, 44.14, 44.43, 45.13, 45.14, 45.16

ICD-9-CM, International Classification of Diseases 9th revision Clinical Modification; PR, procedure code; DX, diagnosis.

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Supplementary Table 3 Miscellaneous ICD-9-CM and ICD-9-PR codes.

Other diagnoses:	
Acute renal failure	584.5, 584.6, 584.7, 584.8, 584.9
Blood transfusion (procedure codes)	99.03, 99.04
Colostomy, colectomy (procedure	45.41, 45.90, 45.91, 45.92, 45.93, 45.94, 45.71, 45.72, 45.73, 45.74, 45.75, 45.76, 45.81, 45.82, 45.83, 46.10, 46.11, 46.12, 46.20, 46.21, 46.22, 46.23
ICU Admission (procedure codes)	96.72, 96.70, 38.91, 89.61, 89.62

ICD-9-CM, International Classification of Diseases 9th revision Clinical Modification; PR, procedure code; ICU, intensive care unit.

Supplementary Table 4 Charlson Comorbidity Index scoring system.

Myocardial infarction	0	1
Congestive heart failure	2	1
Peripheral vascular disease	0	1
Cerebrovascular disease	0	1
Dementia	2	1
Chronic pulmonary disease	1	1
Rheumatologic disease	1	1
Peptic ulcer disease	0	1
Mild liver disease	2	1
Diabetes without chronic complications	0	1
Diabetes with chronic complications	1	2
Hemiplegia or paraplegia	2	2
Renal disease	1	2
Any malignancy, including leukemia and lymphoma	2	2
Moderate or severe liver disease	4	3
Metastatic solid tumor	6	6
AIDS/HIV	4	6
Maximum comorbidity score	24	29