

SUPPLEMENTARY APPENDIX

Supplementary Table 1: Liver-related primary ICD-10 diagnosis codes

Hospitalisations with the primary ICD-10 diagnosis codes listed below were classified as liver-related.

Primary ICD-10 code	Description
K70	Alcoholic liver disease
K70.0	Alcoholic fatty liver
K70.1	Alcoholic hepatitis
K70.2	Alcoholic fibrosis and sclerosis of liver
K70.3	Alcoholic cirrhosis of liver
K70.4	Alcoholic hepatic failure
K70.9	Alcoholic liver disease, unspecified
K71.8	Toxic liver disease with other disorders of liver
K72	Hepatic failure, not elsewhere classified
K72.0	Acute and subacute hepatic failure
K72.1	Chronic hepatic failure
K72.9	Hepatic failure, unspecified
K74.6	Other and unspecified cirrhosis of liver
K75.8	Other specified inflammatory liver diseases
K76.0	Fatty (change of) liver, not elsewhere classified
K76.5	Hepatic veno-occlusive disease
K76.6	Portal hypertension
K76.7	Hepato-renal syndrome
K76.9	Liver disease, unspecified
C22.0	Malignant neoplasm: Liver cell carcinoma
I85	Oesophageal varices
I85.0	Oesophageal varices with bleeding
I85.9	Oesophageal varices without bleeding
I86.4	Gastric varices

Supplementary Table 2: Additional (potentially liver-related) primary ICD-10 diagnosis codes

For hospitalisations with the primary ICD-10 diagnosis codes listed below, anonymised records were reviewed on a case-by-case basis by a medical representative of the study sponsor to determine whether the admission was liver-related.

Primary ICD-10 code	Description
R18	Ascites
R41.0	Disorientation, unspecified
R41	Other symptoms and signs involving cognitive functions and awareness
F10.0	Mental and behavioural disorders due to use of alcohol: Acute intoxication
G93.4	Encephalopathy, unspecified
F10.3	Mental and behavioural disorders due to use of alcohol: Withdrawal state
F05.9	Delirium, unspecified
I98.2	Oesophageal varices without bleeding in diseases classified elsewhere
I98.3	Oesophageal varices with bleeding in diseases classified elsewhere

Supplementary Table 3: All-cause resource use in surviving patients prescribed rifaximin- α 1100mg/day (UK licensed dose)

Resource use parameter*	6 months (N=114)				12 months (N=102)			
	n [#]	Pre-RFX initiation [†]	Post-RFX initiation [†]	P [‡]	n [#]	Pre-RFX initiation [†]	Post-RFX initiation [†]	P [‡]
ALL-CAUSE RESOURCE USE								
Hospitalisations per patient	31	1.9 (0.4)	0.6 (0.1)	<0.001	30	2.7 (0.6)	1.5 (0.3)	0.071
Hospital bed days per patient	31	21.5 (4.0)	5.0 (1.6)	<0.001	30	28.9 (5.2)	14.1 (3.9)	0.013

Definitions: 'Hospitalisation' includes overnight stay admissions only (i.e. excluding day case); it includes both non-elective (unplanned) admissions (via ED or GP direct referral route) and elective (planned) admissions.

Abbreviations: ED, emergency department; GP, general practitioner; RFX, rifaximin- α .

* Data are presented for all surviving patients at the end of 6 months (N=114) or 12 months (N=102)

[#] Number of patients with ≥ 1 admission/attendance in the observed periods (pre-RFX, post-RFX or both)

[†] Shown as the mean (standard error of the mean [SEM]) per patient

[‡] Paired t-test

Supplementary Table 4: Resource use in surviving patients with at least one admission / attendance in the observed periods (pre-rifaximin- α , post-rifaximin- α or both)

Resource use parameter*	6 months				12 months			
	N [#]	Pre-RFX initiation [†]	Post-RFX initiation [†]	P [‡]	N [#]	Pre-RFX initiation [†]	Post-RFX initiation [†]	P [‡]
LIVER-RELATED RESOURCE USE								
Hospitalisations per patient	89	1.6 (0.1)	0.6 (0.1)	<0.001	85	2.0 (0.2)	1.0 (0.2)	<0.001
Hospital bed days per patient	89	22.9 (3.1)	8.6 (1.9)	<0.001	85	25.1 (3.2)	10.7 (2.2)	<0.001
Hospital bed days per admission	89	14.0 (1.7)	6.1 (1.4)	0.001	85	13.1 (1.6)	6.3 (1.4)	0.002
Critical care admissions per patient	16	1.1 (0.1)	0.4 (0.2)	0.022	15	1.1 (0.1)	0.3 (0.2)	0.005
Critical care bed days per patient	16	7.6 (2.6)	2.4 (1.4)	0.111	15	9.7 (2.9)	2.3 (1.5)	0.056
Non-elective admissions per patient	74	1.6 (0.2)	0.6 (0.1)	<0.001	71	1.9 (0.2)	0.9 (0.2)	0.006
30-day emergency readmissions per patient	37	1.4 (0.2)	0.7 (0.2)	0.037	34	1.7 (0.4)	0.9 (0.2)	0.084
All-CAUSE RESOURCE USE								
Hospitalisations per patient	101	2.2 (0.2)	1.0 (0.1)	<0.001	99	2.7 (0.3)	1.7 (0.2)	0.002
Hospital bed days per patient	101	28.6 (3.1)	11.9 (2.3)	<0.001	99	31.7 (3.6)	16.4 (2.9)	<0.001
Hospital bed days per admission	101	14.2 (1.5)	7.2 (1.3)	0.001	99	13.0 (1.5)	6.0 (0.9)	<0.001
Critical care admissions per patient	19	1.1 (0.1)	0.3 (0.1)	0.005	18	1.2 (0.1)	0.3 (0.2)	0.001
Critical care bed days per patient	19	7.9 (2.3)	2.0 (1.2)	0.046	18	11.3 (2.8)	2.4 (1.4)	0.017
Non-elective admissions per patient	88	2.1 (0.2)	1.0 (0.1)	<0.001	87	2.5 (0.3)	1.6 (0.2)	<0.001
30-day emergency readmissions per patient	50	1.7 (0.3)	0.9 (0.2)	0.023	52	1.8 (0.4)	1.2 (0.2)	0.162
ED attendances per patient [‡]	61	1.9 (0.3)	1.0 (0.2)	<0.001	62	2.4 (0.4)	1.8 (0.3)	0.149

Definitions: 'Hospitalisation' includes overnight stay admissions only (i.e. excluding day case); it includes both non-elective (unplanned) admissions (via ED or GP direct referral route) and elective (planned) admissions. 'ED attendance' includes only attendances which did NOT result in hospital admission.

Abbreviations: ED, emergency department; GP, general practitioner; RFX, rifaximin- α .

* Data are presented for surviving patients with ≥ 1 admission/attendance in the pre-RFX, post-RFX or both periods

[#] Number of surviving patients with ≥ 1 admission/attendance in the observed periods (pre-RFX, post-RFX or both)

[†] Shown as the mean (standard error of the mean [SEM]) per patient

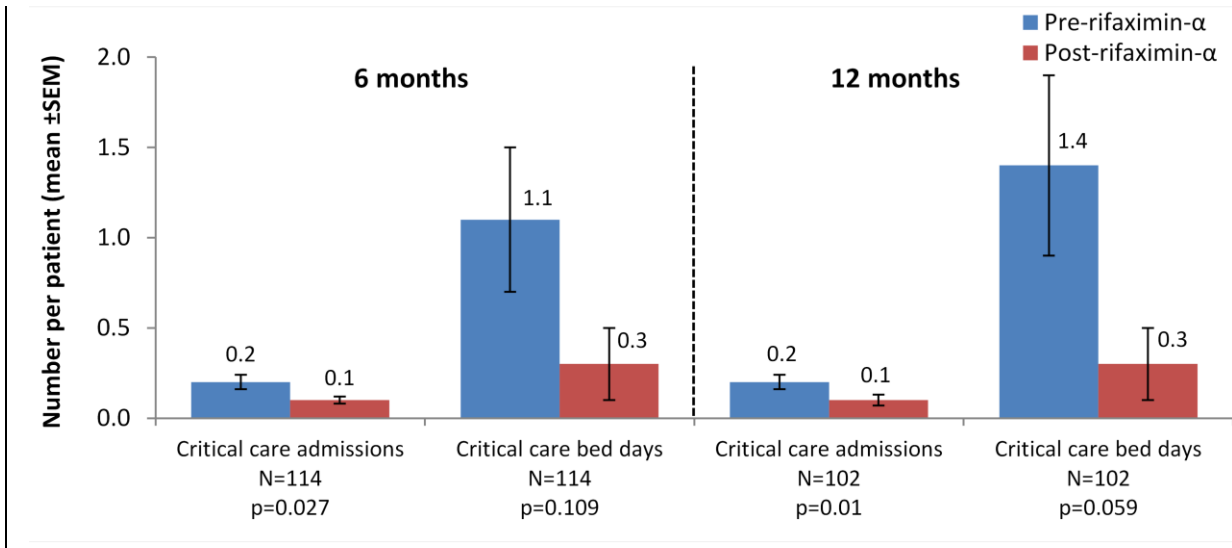
[‡] Paired t-test

[‡] Data only available for all-cause (not liver-related)

SUPPLEMENTARY FIGURE LEGENDS

Supplementary Figure 1: Critical care admissions and bed days in surviving patients

Panel A: Liver-related



Panel B: All-cause

