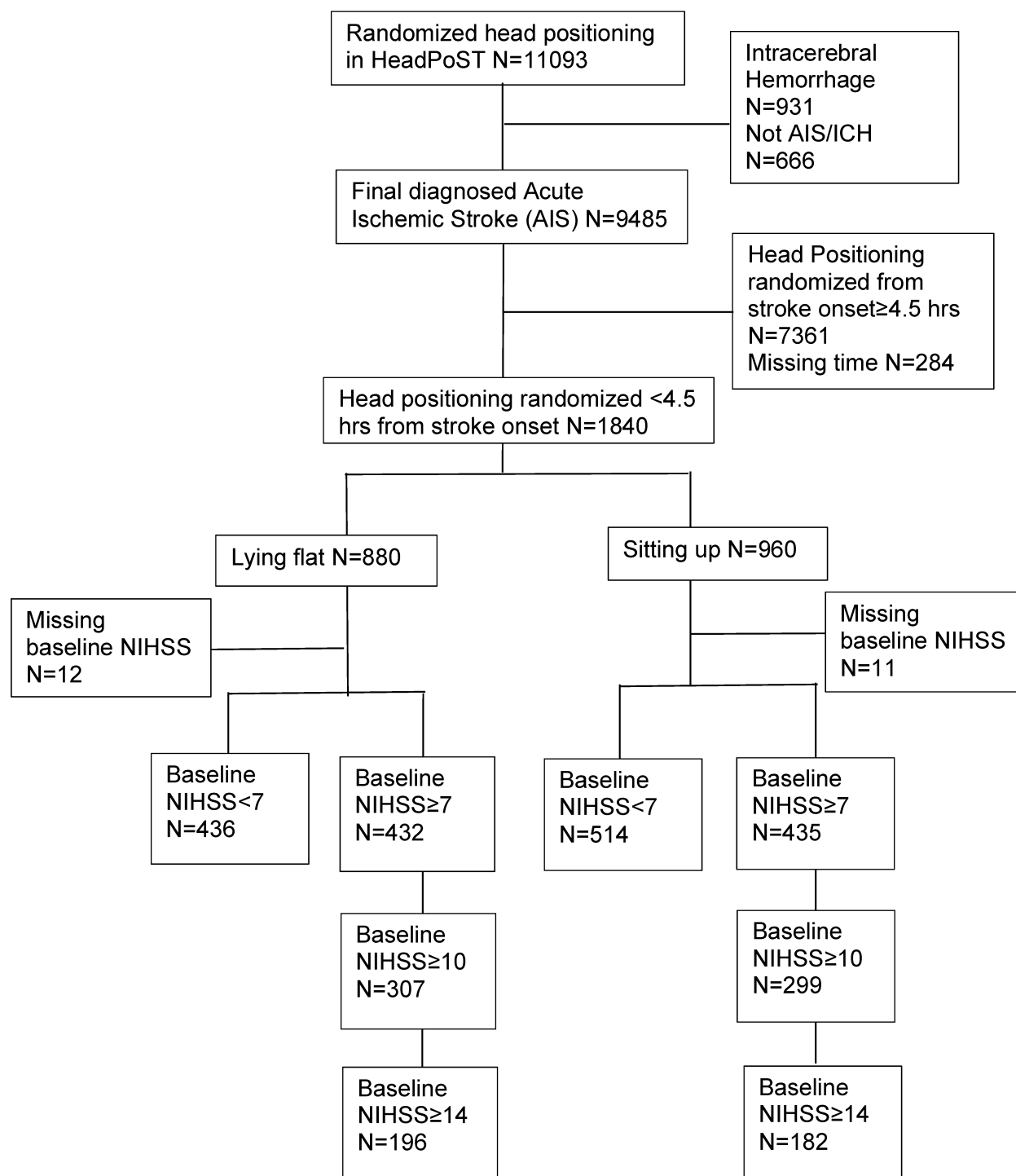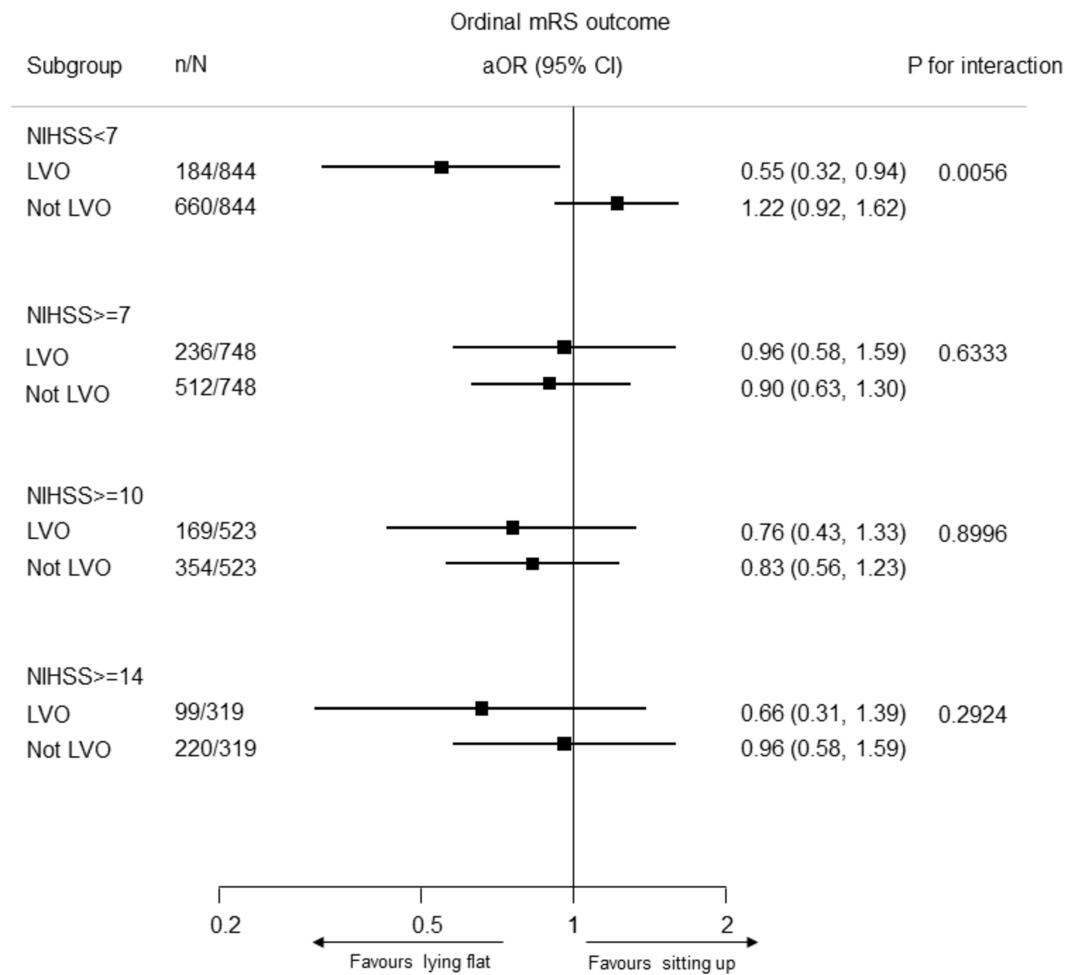**Supplemental Figure 1. Patients flow chart**

Supplemental Figure 2. Subgroup analysis of ordinal mRS outcome by LVO in NIHSS cohorts

Note: aOR donates adjusted odds ratio, mRS modified rankin scale, NIHSS national institute of health stroke scale, LVO large vessel occlusion Hierarchical mixed model adjusted study design, age, sex, NIHSS at baseline as continuous, pre-morbid function according to mRS and medical history of heart disease, stroke or diabetes mellitus.

Supplemental Table 1: Baseline characteristics by head positioning within 4.5 hours from stroke onset and NIHSS <7 points

Baseline characteristics	Lying flat N=436	Sitting up N=514	P value
Age (years)	67.7 (13.3)	68.1 (12.5)	0.56
Male	274 (62.8%)	336 (65.4%)	0.42
Region, n(%)			0.18
Australia and UK	217 (49.8%)	279 (54.3%)	
China and Taiwan	167 (38.3%)	190 (37.0%)	
India and Sri Lanka	9 (2.1%)	4 (0.8%)	
South America	43 (9.9%)	41 (8.0%)	
Hypertension, n(%)	257 (58.9%)	326 (63.5%)	0.15
Previous stroke, n(%)	99 (22.8%)	114 (22.2%)	0.83
Atrial fibrillation, n(%)	45 (10.4%)	58 (11.3%)	0.64
Heart failure, n(%)	7 (1.6%)	16 (3.1%)	0.13
Diabetes Mellitus, n(%)	89 (20.4%)	114 (22.2%)	0.50
Current smoker, n(%)	79 (18.5%)	108 (21.4%)	0.27
Aspirin use, n(%)	174 (39.9%)	235 (45.8%)	0.07
Anticoagulant use, n(%)	33 (7.6%)	52 (10.1%)	0.17
AIS category, n(%)			0.53
Large Vessel	90 (20.6%)	125 (24.3%)	
Cardioembolic	61 (14.0%)	68 (13.2%)	
Lacunar	153 (35.1%)	164 (31.9%)	
Other	132 (30.3%)	157 (30.5%)	
NIHSS at admission	3.0 (2.0, 5.0)	3.0 (2.0, 5.0)	0.71
mRS, n(%)			0.97
0 (no symptoms)	285 (65.4%)	336 (65.4%)	
1 (no significant disability)	83 (19.0%)	100 (19.5%)	
2 (slight disability)	44 (10.1%)	46 (8.9%)	
3 (moderate disability)	19 (4.4%)	25 (4.9%)	
4 (moderate/severe disability)	5 (1.1%)	7 (1.4%)	
5 (severe disability)	0 (0.0%)	0 (0.0%)	

Note: AIS donates Acute Ischaemic Stroke, IQR interquartile range, mRS modified Rankin Scale, NIHSS National Institution of Health Stroke Scale, SD standard deviation

Supplemental Table 2: Baseline characteristics by head positioning within 4.5 hours from stroke onset and NIHSS ≥ 10 points

Baseline characteristics	Lying flat N=307	Sitting up N=299	P value
Age (years)	74.4 (13.0)	73.8 (13.8)	0.55
Male	148 (48.2%)	141 (47.2%)	0.80
Region, n(%)			0.10
Australia and UK	219 (71.3%)	191 (63.9%)	
China and Taiwan	56 (18.2%)	71 (23.7%)	
India and Sri Lanka	8 (2.6%)	4 (1.3%)	
South America	24 (7.8%)	33 (11.0%)	
Hypertension, n(%)	210 (69.1%)	184 (61.5%)	0.05
Previous stroke, n(%)	70 (22.9%)	72 (24.1%)	0.73
Atrial fibrillation, n(%)	77 (25.4%)	71 (23.9%)	0.67
Heart failure, n(%)	27 (8.9%)	24 (8.1%)	0.72
Diabetes Mellitus, n(%)	65 (21.2%)	45 (15.1%)	0.05
Current smoker, n(%)	35 (11.7%)	39 (13.1%)	0.60
Aspirin use, n(%)	94 (30.7%)	101 (33.8%)	0.42
Anticoagulant use, n(%)	46 (15.0%)	33 (11.1%)	0.15
AIS category, n(%)			0.80
Large Vessel	101 (32.9%)	92 (30.8%)	
Cardioembolic	86 (28.0%)	80 (26.8%)	
Lacunar	25 (8.1%)	30 (10.0%)	
Other/uncertain	95 (30.9%)	97 (32.4%)	
NIHSS at admission	16.0 (12.0, 20.0)	15.0 (12.0, 21.0)	0.55
mRS, n(%)			0.90
0 (no symptoms)	162 (53.3%)	155 (52.2%)	
1 (no significant disability)	60 (19.7%)	56 (18.9%)	
2 (slight disability)	31 (10.2%)	31 (10.4%)	
3 (moderate disability)	31 (10.2%)	33 (11.1%)	
4 (moderate/severe disability)	18 (5.9%)	17 (5.7%)	
5 (severe disability)	2 (0.7%)	5 (1.7%)	

Note: AIS donates Acute Ischaemic Stroke, IQR interquartile range, mRS modified Rankin Scale, NIHSS National Institution of Health Stroke Scale, SD standard deviation

Supplemental Table 3: Baseline characteristics by head positioning within 4.5 hours from stroke onset and NIHSS ≥ 14 points

Baseline characteristics	Lying flat N=196	Sitting up N=182	P value
Age (years)	75.5 (12.7)	75.1 (14.1)	0.79
Male	87 (44.4%)	84 (46.2%)	0.74
Region, n(%)			0.16
Australia and UK	148 (75.5%)	120 (65.9%)	
China and Taiwan	29 (14.8%)	35 (19.2%)	
India and Sri Lanka	5 (2.6%)	4 (2.2%)	
South America	14 (7.1%)	23 (12.6%)	
Hypertension, n(%)	134 (69.1%)	116 (63.7%)	0.28
Previous stroke, n(%)	42 (21.5%)	47 (25.8%)	0.33
Atrial fibrillation, n(%)	46 (23.8%)	47 (26.1%)	0.61
Heart failure, n(%)	19 (9.8%)	16 (8.9%)	0.76
Diabetes Mellitus, n(%)	45 (23.1%)	28 (15.4%)	0.06
Current smoker, n(%)	17 (8.9%)	25 (13.9%)	0.13
Aspirin use, n(%)	62 (31.8%)	60 (33.0%)	0.81
Anticoagulant use, n(%)	28 (14.4%)	20 (11.0%)	0.33
AIS category, n(%)			0.78
Large Vessel	63 (32.1%)	54 (29.7%)	
Cardioembolic	61 (31.1%)	53 (29.1%)	
Lacunar	12 (6.1%)	15 (8.2%)	
Other	60 (30.6%)	60 (33.0%)	
NIHSS at admission	19.0 (16.0, 22.0)	19.0 (16.0, 23.0)	0.70
mRS, n(%)			0.48
0 (no symptoms)	94 (48.5%)	90 (49.7%)	
1 (no significant disability)	43 (22.2%)	31 (17.1%)	
2 (slight disability)	17 (8.8%)	22 (12.2%)	
3 (moderate disability)	25 (12.9%)	23 (12.7%)	
4 (moderate/severe disability)	14 (7.2%)	11 (6.1%)	
5 (severe disability)	1 (0.5%)	4 (2.2%)	

Note: AIS donates Acute Ischaemic Stroke, IQR interquartile range, mRS modified Rankin Scale, NIHSS National Institution of Health Stroke Scale, SD standard deviation