## **Supplementary Online Content**

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This supplementary material has been provided by the authors to give readers additional information about their work.

**eMethods 1.** Clinical Trial Investigators and Sites, Bariatric Surgery Pathway Team, Patient Identification Centers, and Study Oversight Committees

#### **Trial Investigators**

Chief Investigator: Professor. Alex Sinclair Trial Manager: Mr Ryan Ottridge Trial Statistician: Dr Kristian Brock Health Economists: Dr Magda Aguiar and Professor Emma Frew

#### Trial sites and investigators

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#### Bariatric surgery pathway team

Mr. Rishi Singhal, Mr Paul Super, Mr Markos Daskalakis (Consultant Bariatric & Upper GI Surgeons) Sally Abbott – Specialist Bariatric Dietician

#### Patient identification centres

Gloucester Royal Hospital, Gloucestershire Hospitals NHS Foundation Trust: Dr Ben Wakerley. Leicester General Hospital, University Hospitals of Leicester NHS trust: Dr Mark Lawden. Royal Stoke University Hospital, University Hospitals of North Midlands NHS Foundation Trust: Dr Brendan Davies.

## Royal Hallamshire Hospital, Sheffield Teaching Hospitals NHS Foundation Trust: Dr Simon Hickman.

#### Study oversight committees

We thank all the members of the study oversight committees for their valued contributions. The IIH:WT Trial Steering Committee; the Data Monitoring and Ethics Committee and the Trial Management Group.

# **eMethods 2.** Community Weight Management Intervention, Bariatric Surgery Pathway, and Hierarchical Regression Analysis

#### **Community weight management intervention**

WeightWatchers<sup>TM</sup> program was chosen as the community weight management intervention (CWI) because it had superior weight loss<sup>1</sup>, was the best attended and most cost-effective<sup>2</sup>. Participants in the CWI arm were given exemption vouchers for 52 consecutive and specified weeks of their local WeightWatchers<sup>TM</sup> group with access to WeightWatchers<sup>TM</sup> online and mobile tools for 12 months. Vouchers provided 12 sessions at baseline, 3, 6 and 9 months.

#### **Bariatric surgery pathway**

The bariatric surgery pathway participants were screened to ensure their suitability, initially for medical and psychological assessment in the weight management clinic. This assessment continued for as long as thought appropriate, as per routine care. Once suitable, the case was discussed in the joint multi-disciplinary meeting, prior a group session for education regarding surgery. The participant then attended a consultant bariatric surgeon and was given a date for surgery. Twelve weeks was permitted for further consideration of the procedure if required. The standard patient pathway was envisioned to take approximately 4 months. The choice of surgical intervention was decided between the surgeon and participant, based on the participant's health and preference. These included laparoscopic adjustable gastric banding, laparoscopic Roux-en-Y gastric bypass or laparoscopic sleeve gastrectomy.

#### Hierarchical regression analysis

Initially, hierarchical regression models were generated, with data for both eyes for all patients analyzed in one model, using group structure to distinguish between the eyes. Models contained population-level terms (i.e. terms that apply to each experimental unit) to reflect: 1) the mean baseline value (i.e. the intercept); 2) the mean change from baseline associated with each assessment time (i.e. time as a factor variable); 3) the extra mean change from baseline associated with each assessment time in the experimental arm (i.e. the interaction of treatment allocation and time as a factor variable). Additionally, hierarchical regression models contained random effects (i.e. terms that are specific to each experimental unit) to reflect the random deviations from the population-level mean value at baseline (i.e. random intercepts).

## eResults. Relevant Medication Changes Over the Course of the Clinical Trial

Headache preventative medication was taken by 27% (18/66) of all patients at enrolment. This reduced markedly amongst the bariatric surgery arm from 36% (12/33) at baseline to 7% (2/30) at 12 months, compared with little difference in the CWI arm from baseline 18% (6/33) to 21% (6/29) at 12 months. Acetazolamide was taken by 29% (19/66) of all patients at enrolment. The number of patients using acetazolamide reduced amongst those in the bariatric surgery arm from 24% (8/33) to 3% (1/30) with a mean daily dose change from 781mg (471.3) to 500mg (standard deviation [SD] 0) compared with the CWI arm whose numbers using acetazolamide reduced from 33% (11/33) to 28% (8/33) with a mean daily dose change from 909mg (SD 550.8) to 844mg (SD 498.9). Topiramate was used by 12% (4/33) in the bariatric surgery arm at baseline. All had discontinued by 12 months, whilst in the CWI arm 6% (2/33) topiramate use increased to 10% (3/29) by 12 months. Those taking other diuretics were 3% (1/33) in bariatric surgery arm and 6% (2/33) in the CWI arm at baseline. By 12 months, 3% (1/30) were using a diuretic in the bariatric surgery arm and 10% (3/29) in the CWI arm. There were no significant differences in the use of antihypertensive medications or hormonal contraception.

## eTable 1. Inclusion and Exclusion Criteria of the IIH:WT

	Criterion
Inclusion	Female patients with IIH aged between 18 and 55 years, diagnosed according to the Friedman Jacobson criteria, <sup>1</sup> who have active disease [papilloedema (Frisén <sup>2</sup> grade $\geq 1$ in at least one eye), significantly raised LP OP $\geq 25$ cmCSF] of over 2 months' duration and no evidence of venous sinus thrombosis (MRI or CT and venography as noted at diagnosis)
	Body mass index of $\geq$ 35 kg/m <sup>2</sup> .
	Have previously tried other appropriate non-surgical treatments to lose weight but have not been able to achieve or maintain adequate, clinically beneficial weight loss for at least 6 months.
	Able to give informed consent.
Exclusion	Age $<18$ or $>55$ years.
	Pregnancy, or planning pregnancy.
	Significant comorbidity, Cushing's syndrome, Addison's disease or the use of oral or injected
	glucocorticoid therapy.
	Previously undergone optic nerve sheath fenestration
	Definite indication for or contraindication against surgery or dieting
	Have a specific medical or psychiatric contraindication for surgery, including drug misuse,
	eating disorder or major depression (suicidal ideation, drug overdose or psychological
	admission in the last 12 months).
	Previous bariatric surgery
	Inability to give informed consent, for example, due to cognitive impairment.

## **References to eTable 1:**

1. Friedman DI, Liu GT, Digre KB. Revised diagnostic criteria for the pseudotumor cerebri syndrome in adults and children. *Neurology*. 2013; 81(13):1159-1165.
2. Frisen L. Swelling of the optic nerve head: a staging scheme. *J Neurol Neurosurg Psychiatry*. 1982;45(1):13-

18.

Schedule of Events

Outcome	Measure	Baseli	3 mont	6 mont	Postoperati	12	24 mont	60 mont
		ne	hs	hs	ve	months	hs	hs
						(primar		
						У		
						endpoin		
Intracrania	Lumber	v			v	l)	v	v
l pressure	Duncture	х			А	х	х	х
	opening							
	pressure							
Clinical	Body mass	х	x	x	x	x	x	x
measures	index.							
	blood pressu							
	re, waist/hip,							
	fat mass,							
	medication							
	use							
Idiopathic	Pulsatile	х				х	Х	Х
Intracrania	tinnitus,							
l Hypertensi	visual loss,							
on	diplopia,							
symptoms	visual							
Vérral	obscurations							
V ISUAI function	Visual	Х				Х	Х	Х
Tunction	acuity,							
	contrast							
	colour							
	assessment							
	Humphrey	x				x	x	x
	visual field							
	(24–2)							
Papilledem	Optical	Х				х	х	х
a grade	coherence							
	tomography							
	Retinal	х				х	Х	Х
	photographs							
Headache	HIT-6,	Х				Х	Х	Х
	headache							
	diary							
Quality of	EQ-5D-5L,	Х				Х	Х	Х
me	ICECAP-A,							
	SF-30 VI,							
Health	Resource	v				v	v	v
economics		А				А	A	A
20011011100	questionnair							
	e							

HIT-6 = Headache impact test-6. EQ-5D-5L= ICECAP-A= SF-36v1=, HADS=Hospital anxiety and depression score.

## eTable 3. Secondary Outcome: Headache

Differences in headache and visual function outcomes were not significant at 12- or 24-months (eTables 3 and 4). Exploratory analysis noted a greater improvement in monthly headache days, headache severity and HIT-6 scores in the bariatric surgery arm between baseline and 12-months (eTable 3).

	Bas	12	24	Differe	Difference	Difference	Difference	Difference
	elin	mon	mon	nce	baseline	baseline	between	between
	e	ths	ths		to 12	to 24	arms at	arms at
				baseline	months	months	12 months	24 months
				to 12		Hierarchica	regression	•
				months				
	Mean	(SD), n		Mean (SD); 95%CI, p		Mean (SE);	95%CI, p	
Headache disabili	ty (HIT	<b>[-6</b> ]						
Community	64.3	59.7	60.2	-6.2	-5.3 (1.9); (	-5.7 (2.0); (	-1.4 (2.6);	-1.4 (2.8);
weight	(8.6)	(12.4	(10.9	(9.8), 28	-9.1, -1.5),	-9.7, -1.8),	(-6.6, 3.8),	(-7.0, 4.1),
management	, 32	), 26	), 23		p=0.006	p=0.004	p=0.603	p=0.610
intervention					-	-	-	-
Bariatric	65.1	57.5	56.5	-7.4	-7.5 (1.9);	-8.0 (2.0);		
surgery	(6.0)	(9.1),	(13.0	(8.6), 29	(-11.1, -	(-11.9, -		
	, 33	29	), 23		3.9),	4.0),		
					p<0.001	p<0.001		
Monthly headach	e days							
Community	22.5	16.7	15.8	-6.3	-5.9 (2.2);	-7.4 (2.3);	-3.2 (2.8);	-2.9 (3.0);
weight	(7.8)	(11.8	(11.1	(9.9), 23	(-10.2, -	(-11.9, -	(-8.6, 2.2),	(-8.7, 2.9),
management	, 31	), 24	), 21		1.6),	2.9),	p=0.247	p=0.328
intervention					p=0.007	p=0.001	-	-
Bariatric	22.0	13.2	11.8	-8.1	-8.5 (2.0);	-9.7 (2.2);		
surgery	(8.3)	(11.4	(11.8	(10.5),	(-12.5, -	(-13.9, -		
	, 32	), 29	), 24	28	4.5),	5.5),		
					p<0.001	p<0.001		
Monthly analgesi	c freque	ency						
Community	14.1	10.2	9.0 (		-3.7 (2.1); (	-6.0 (2.2);	-3.0 (2.6);	1.2 (2.8);
weight	(9.4)	(10.5	9.5),		-7.9, 0.5),	(-10.4, -	(-8.1, 2.2),	(-4.3, 6.7),
management	, 31	), 24	21		p=0.085	1.6),	p=0.257	p=0.665
intervention						p=0.008		
Bariatric	10.6	7.3	9.3		-3.1 (2.0); (	-1.2 (2.1); (		
surgery	(8.5)	(9.1),	(11.0		-7.0, 0.9),	-5.3, 2.9),		
	, 32	29	), 24		p=0.125	p=0.570		
Headache severity	y (VRS	0-10)		1	I	1	1	I
Community	5.0	4.0	3.8	-1.1	-1.0 (0.6);	-1.5 (0.6);	-0.9 (0.7);	0.2 (0.8);
weight	(2.1)	(3.3),	(3.0),	(2.5), 22	(-2.2, 0.2),	(-2.7, -0.2),	(-2.3, 0.6),	(-1.3, 1.7),
management	, 31	24	21		p=0.110	p=0.023	p=0.231	p=0.796
intervention							4	
Bariatric	5.0	3.2	3.8	-1.6	-1.8 (0.6);	-1.2 (0.6);		
surgery	(1.9)	(2.6),	(3.1),	(2.7), 28	(-2.9, -0.7),	(-2.4, 0.0),		
	, 32	29	24		p=0.002	p=0.045		

CI=confidence interval. SD=standard deviation. SE=standard error.

	Base line	12 mont hs	24 mont hs	Differe nce baselin e to 12 months	Difference baseline to 12 months	Difference baseline to 24 months	Differenc e between arms at 12 months	Differenc e between arms at 24 months
	Mean	(SD), n		Mean (SD); 95%CI, p		Hierarchical r Mean (SE); 9	egression 95%CI, p	
logMar visual ac	uity							
Community weight management intervention	0.0 (0.2), 33	0.0 (0.2), 28	0.0 (0.2), 21	-0.02 (0.20)	0.0 (0.1); (- 0.1, 0.1), p=0.985	0.0 (0.1); (- 0.1, 0.1), p=0.661	0.0 (0.1); (-0.1, 0.1), p=0.598	0.0 (0.1); (-0.1, 0.1), p=0.988
Bariatric surgery	0.0 (0.2), 33	0.0 (0.2), 30	-0.1 (0.1), 24	-0.08 (0.24)	-0.1 (0.1); (- 0.2, 0.0), p=0.058	-0.1 (0.1); (- 0.1, 0.0), p=0.120		
Log contrast sens	sitivity							
Community weight management intervention	1.7 (0.1), 33	1.7 (0.1), 28	1.7 (0.1), 21		0.0 (0.1); (0.0, 0.1), p=0.630	0.0 (0.1); (0.0, 0.1), p=0.584	0.0 (0.1); (-0.1, 0.0), p=0.411	0.0 (0.1); (-0.1, 0.1), p=0.951
Bariatric surgery	1.7 (0.1), 33	1.7 (0.1), 29	1.7 (0.1), 24		0.0 (0.1); (0.0, 0.1), p=0.463	0.1 (0.1); (0.0, 0.1), p=0.066		
Perimetric mean (HVF 24-2 SITA	deviatio standa	on, dB rd)						
Community weight management intervention	-3.5 (3.8), 33	-2.0 (2.3), 29	-2.1 (2.8), 22	1.2 (2.6)	1.3 (0.5); ( 0.3, 2.3), p=0.010	1.5 (0.6); ( 0.4, 2.6), p=0.010	-0.5 (0.8); (-2.0, 1.0), p=0.526	0.1 (0.8); (-1.5, 1.8), p=0.863
Bariatric surgery	-3.6 (3.5), 32	-2.8 (2.6), 29	-2.2 (2.2), 24	1.1 (2.7)	1.0 (0.5); (- 0.1, 2.0), p=0.064	1.8 (0.6); ( 0.7, 2.8), p=0.002		
Optical Coheren retinal nerve fibr	ce Tomo e layer i	ograph <del>y</del> in more	affected	l (worst) ey	ye (µm)			
Community weight management intervention	161.7 (95.7 ), 32	111.8 (33.1 ), 28	107.4 (31.9 ), 22	-56 (88.3), 27	-50.5 (15.9); (-81.7, - 19.3), p=0.001	-53.0 (17.1); (-86.6, - 19.4), p=0.002	-8.1 (17.3); (- 41.9, 25.8),	-7.7 (19.6); (- 46.1, 30.7),
Bariatric surgery	148.8 (99.1), 32	10 <u>3.0</u> (27.4 ), 29	10 <u>3.0</u> (27.3 ), 22	-43 (107.3), 29	-45.3 (15.7); (-76.1, - 14.5),	-47.4 (17.1); (-80.9, - 13.9),	p=0.641	p=0.695

## eTable 4. Secondary Outcome: Visual Data (Worst Eye)

 All visual function measures are of worst eye. Negative values in the mean difference and adjusted mean difference favour surgical arm. SD=standard deviation. CI=confidence interval. HVF- Humphrey visual field.

## eTable 5. IIH Symptoms, Baseline to 12 Months

There was no evidence of improvement in the IIH symptoms of pulsatile tinnitus, visual symptoms, diplopia and visual obscurations in either group (eTable 5).

	Base	eline	12 ma	onths	Relative	р
	Community	Bariatric	Community	Bariatric	Risk*	_
	weight	surgery	weight	surgery		
	management		management		(95% CI)	
Pulsatile Tin	nitus				• · ·	
Not	8 (24)	9 (27)	11(38)	16(53)	0.76 (0.50	0.2
experienced					to 1.17)	
Experienced	25 (76)	24 (73)	18(62)	14(47)		
Visual Loss						
Not	10 (30)	8 (24)	15(52)	20(67)	0.69 (0.37	0.2
experienced					to 1.30)	
Experienced	23 (70)	25 (76)	14(48)	10(33)		
Diplopia						
Not	29 (88)	19 (58)	25(86)	26(87)	0.33 (0.07	0.2
experienced					to 1.67)	
Experienced	4 (12)	14 (42)	4(14)	4(13)		
Visual Obscu	irations					
Not	16 (48)	16 (48)	25(86)	23(77)	1.53 (0.54	0.4
experienced					to 4.35)	
Experienced	17 (52)	17 (52)	4(14)	7(23)		
Headache						
Not	1 (3)	2 (6)	6(21)	8(27)	0.98 (0.67	0.9
experienced					to 1.44)	
Experienced	32 (97)	31 (94)	23(79)	22(73)		

Data are n(%) unless otherwise stated.\*Adjusted for baseline IIH symptoms and acetazolamide use at entry (stratification variable). Relative risk less than 1 favours bariatric surgery.

CI = confidence intervals.

eTable 6. Qualit	v of Life and Hos	pital Anxietv and De	pression Scores
orable or daam	y of End and 1100	pital / ana bo	

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Base line	12 mont	24 mont	Difference baseline to 12 months	Difference baseline to 24 months	Difference between arms at 12	Difference between arms at 24	
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$						21 months	months	months	
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Mean (	SD), n		Hierarchical 1	regression	Hierarchical	regression	
Quality of Life           Community         (12.2)         (14.8)         (13.8)         0.5, 9.6),         0, 9, 9.9),         (0.2, 14.4),         (10.4 (3.8);           management         (13.4)         (14.0)         (12.0)         (14.0)         (12.0)         (13.4)         (14.0)         (12.0)         (13.4)         (14.0)         (12.0)         (13.4)         (14.0)         (12.0)         (13.4)         (14.0)         (12.0)         (13.4)         (14.0)         (12.0)         (12.6)         (10.2)         (12.0)         (12.6)         (12.6)         (13.4)         (14.0)         (12.0)         (12.4)         (13.4)         (14.0)         (12.0)         (12.4)         (13.6)         (13.4) <th colspa="&lt;/td"><td></td><td></td><td></td><td></td><td>mean (SE); 95</td><td>%CI, p</td><td>mean (SE); 9.</td><td>5%CI, p</td></th>	<td></td> <td></td> <td></td> <td></td> <td>mean (SE); 95</td> <td>%CI, p</td> <td>mean (SE); 9.</td> <td>5%CI, p</td>					mean (SE); 95	%CI, p	mean (SE); 9.	5%CI, p
					Quality of Life		1		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Quality of life (SF- PCS summary	36)							
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Community	29.1	33.4	32.0	4.5 (2.6); (-	4.5 (2.8); (-	7.3 (3.6);	10.4 (3.8);	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	weight	(12.2)	(14.8)	(13.8)	0.5, 9.6),	0.9, 9.9),	(0.2, 14.4),	(3.0, 17.9),	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	intervention	, 50	, 25	, 22	p=0.079	p=0.099	p=0.043	p=0.006	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Bariatric Surgery	28.3	41.6	45.2	13.1 (2.5): (	16.2 (2.7):	-		
Quality of life (SF-36) MCS summary $35.8$ (10.2) $37.9$ (12.0) $39.6$ (12.0) $2.1$ (2.4); (- (2.6, 6.9), (9.8, 9.3), (9.007) $1.6$ (3.2); (-4.6, 7.8), (-4.6, 7.8), (-7.1, 6.1), (-7.1, 6.1), 	2 and 2 angery	(13.4)	(14.0)	(12.0)	8.1, 18.0),	(10.9, 21.5),			
Quality of life (SF-36) MCS summaryCommunity weight intervention $35.8$ 		, 30	, 28	, 23	p<0.001	p<0.001			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Quality of life (SF- MCS summary	36)							
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Community	35.8	37.9	39.6	2.1 (2.4); (-	4.3 (2.6); (-	1.6 (3.2);	-0.5 (3.4);	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	weight	(10.2)	(12.0)	(12.6)	2.6, 6.9),	0.8, 9.3),	(-4.6, 7.8),	(-7.1, 6.1),	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	intervention	, 50	, 25	, 22	p=0.384	p=0.097	p=0.017	p=0.876	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Bariatric Surgery	39.7	39.8	39.8	-0.1 (2.4): (-	0.0 (2.6); (-	_		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		(11.5)	(12.5)	(12.4)	4.7, 4.6),	5.0, 5.0),			
Hospital anxiety and depression scores         HADS -A         Community       10.5       10.5       9.7       -0.1 (0.9); (-       -1.2 (0.9); (-       -1.1 (1.3);       -0.2 (1.4);         weight       (4.6),       (5.2),       (5.6),       1.8, 1.6),       3.1, 0.6),       (-3.7, 1.5),       (-3.0, 2.6),         management       32       26       21       p=0.925       p=0.179       p=0.405       p=0.887         Bariatric Surgery       10.5       9.5       9.0       -1.1 (0.9); (-       -1.3 (0.9); (-       -1.4 (0.4),       p=0.887         Bariatric Surgery       10.5       9.5       9.0       -2.8, 0.6),       3.1, 0.4),       p=0.405       p=0.887         MADS-D       28       24       p=0.202       p=0.142       -1.6 (1.2);       -1.5 (1.3);         Weight       (4.8),       (4.2),       (5.0),       1.9, 1.3),       3.3, 0.2),       (-4.0, 0.8),       (-4.0, 1.1),         weight       (4.8),       (4.2),       (5.0),       1.9, 1.3),       3.3, 0.2),       p=0.200       p=0.268		, 30	, 28	, 23	p=0.981	p=0.998			
HADS -ACommunity weight10.5 (4.6), 3210.5 			Hos	spital any	xiety and depre	ssion scores			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	HADS -A								
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Community	10.5	10.5	9.7	-0.1 (0.9); (-	-1.2 (0.9); (-	-1.1 (1.3);	-0.2 (1.4);	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	weight	(4.6),	(5.2),	(5.6),	1.8, 1.6),	3.1, 0.6),	(-3.7, 1.5),	(-3.0, 2.6),	
InterventionImageImageImageImageImageBariatric Surgery10.59.59.0 $-1.1 (0.9); ( -1.3 (0.9); (-$ (5.1),(4.8),(5.8),2.8, 0.6), $3.1, 0.4),$ $p=0.142$ <b>HADS-D</b> Community7.97.37.0 $-0.3 (0.8); ( -1.5 (0.9); ( (4.8),$ (4.2),(5.0), $1.9, 1.3),$ $3.3, 0.2),$ $(-4.0, 0.8),$ $(-4.0, 0.8),$ $(-4.0, 1.1),$ $p=0.202$ $p=0.082$ $p=0.200$	management	32	26	21	p=0.925	p=0.179	p=0.405	p=0.887	
Dariatic Surgery10.3 (5.1), 309.0 (4.8), 28-1.1 (0.9), (- 2.8, 0.6), p=0.202-1.3 (0.9), (- 3.1, 0.4), p=0.142HADS-DCommunity weight management intervention7.9 (4.8), 327.0 (5.0), (5.0), 27-0.3 (0.8); (- 1.9, 1.3), p=0.082-1.6 (1.2); (-4.0, 0.8), (-4.0, 0.8), (-4.0, 1.1), p=0.200-1.5 (0.9); (- (-4.0, 0.8), (-4.0, 1.1), p=0.200	Intervention Bariatric Surgery	10.5	0.5	0.0	11(00).(	13(00):(	_		
Image (11)(110) <td>Danatic Surgery</td> <td>(5.1).</td> <td>(4.8).</td> <td>(5.8).</td> <td>2.8, 0.6</td> <td>-1.3(0.9), (-3.1, 0.4).</td> <td></td> <td></td>	Danatic Surgery	(5.1).	(4.8).	(5.8).	2.8, 0.6	-1.3(0.9), (-3.1, 0.4).			
HADS-D       Community       7.9       7.3       7.0       -0.3 (0.8); (-       -1.5 (0.9); (-       -1.6 (1.2);       -1.5 (1.3);         weight       (4.8),       (4.2),       (5.0),       1.9, 1.3),       3.3, 0.2),       (-4.0, 0.8),       (-4.0, 1.1),         management       32       27       22       p=0.727       p=0.082       p=0.200       p=0.268		30	28	24	p=0.202	p=0.142			
Community weight management7.9 $(4.8),$ 7.3 	HADS-D								
weight management $(4.8)$ , $32$ $(4.2)$ , $27$ $(5.0)$ , $22$ $1.9$ , $p=0.727$ $3.3$ , $p=0.082$ $(-4.0, 0.8)$ , $p=0.200$ $(-4.0, 1.1)$ , $p=0.268$	Community	7.9	7.3	7.0	-0.3 (0.8); (-	-1.5 (0.9); (-	-1.6 (1.2);	-1.5 (1.3);	
management 32 27 22 $p=0.727$ $p=0.082$ $p=0.200$ $p=0.268$	weight	(4.8),	(4.2),	(5.0),	1.9, 1.3),	3.3, 0.2),	(-4.0, 0.8),	(-4.0, 1.1),	
INTERVENTION	management	32	27	22	p=0.727	p=0.082	p=0.200	p=0.268	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Intervention	76	62	1.0	16(0.9).(	27(0.0)	4		
Darrance Surgery $7.0$ $0.2$ $4.0$ $-1.0$ $(0.0); (2.7, (0.9); (2.7, (0$	Danaule Surgery	(4 1)	(5.1)	4.0 (4.9)	-1.0(0.8);(-3.1,0.0)	-2.7(0.9); (-4.4)			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		31	30	24	p=0.053	p=0.002			

Data are mean (SD) or mean (SE).

SD=standard deviation. SE=standard error. CI=confidence interval. HIT-6 = Headache impact test-6. HADS=Hospital anxiety and depression score. SD = standard deviation. SE = standard error. SF-36 = 36-item short form survey.

eTable 7.	Quality of Life	Subscales as	Measured by	y the SF-36
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	Basel	12	24	Difference	Difference	Difference	Difference
	ine	mont	mont	baseline to	baseline to	between arms	between
		hs	hs	12 months	24 months	at 12 months	arms at 24
							months
					Hierarchic	al regression	
					mean (SE)	); 95%CI, p	
Physical funct	tioning						
	e						
Community	56.8	62.6	59.6	4.1 (4.3); (-	6.6 (4.5); (-	20.2 (6.8); (	27.7 (7.2);
weight	(26.1)	(30.6)	(30.1)	4.2, 12.5),	2.3, 15.5),	6.9, 33.5),	(13.7, 41.8),
management	, 31	, 27	, 23	p=0.331	p=0.144	p=0.003	p<0.001
Bariatric	56.6	81.9	92.6	24.7 (4.1);	34.6 (4.5);		
Surgery	(27.5)	(22.9)	(13.3)	(16.6, 32.8),	(25.8, 43.5),		
	, 32	, 29	, 23	p<0.001	p<0.001		
Role limitation	n due to	physical	health				
Community	28.1	43.3	46.7	17.4 (8.8);	24.4 (9.2);		
weight	(40.5)	(47.2)	(43.5)	(0.2, 34.6),	(6.4, 42.3),		
management	, 32	, 26	, 23	p=0.047	p=0.008		
Bariatric	36.4	56.0	57.3	9.7 (8.4);	21.1 (9.0);	10.5 (11.8); (-	5.0 (12.5); (-
Surgery	(44.2)	(43.6)	(46.9)	(3.2, 36.2),	(3.5, 38.8),	12.5, 33.6),	19.4, 29.5),
	, 33	, 29	, 24	p=0.019	p=0.019	p=0.371	p=0.687
Role limitation	n due to	emotiona	l proble	ms			
Community	37.6	51.3	53.6	13.2 (10.0); (-	19.2 (10.4); (-		
weight	(43.7)	(46.4)	(46.9)	6.4, 32.8),	1.3, 39.6),		
management	, 31	, 26	, 23	p=0.186	p=0.066		
Bariatric	45.8	57.5	65.2	11.6 (9.6); (-	19.5 (10.4); (-	5.9 (12.2); (-	7.9 (13.1); (-
Surgery	(45.4)	(47.9)	(44.4)	7.2, 30.4),	0.9, 39.9),	18.0, 29.8),	17.9, 33.6),
	, 32	, 29	, 23	p=0.226	p=0.060	p=0.627	p=0.550
Energy/Fatigu	ıe						
Community	28.0	33.7	36.1	5.7 (4.8); (-	10.8 (5.1); (		
weight	(18.2)	(27.4)	(23.9)	3.8, 15.1),	0.7, 20.8),		
management	, 32	, 27	, 23	p=0.242	p=0.035		
Bariatric	26.1	49.0	46.5	22.4 (4.7);	20.1 (5.0);	14.9 (6.4); (	7.5 (6.8); (-
Surgery	(20.8)	(26.7)	(28.8)	(13.2, 31.7),	(10.3, 30.0),	2.4, 27.4),	5.9, 20.9),
	, 33	, 29	, 24	p<0.001	p<0.001	p=0.020	p=0.275
Emotional we	ll-being						
Community	50.5	56.0	52.7	5.3 (4.4); (-	5.2 (4.7); (-		
weight	(23.6)	(27.3)	(27.8)	3.4, 14.0),	4.0, 14.5),		
management	, 32	, 27	, 23	p=0.232	p=0.268		
Bariatric	55.0	59.2	59.8	3.1 (4.3); (-	5.0 (4.6); (-	2.3 (6.9); (-	4.3 (7.2); ( -
Surgery	(26.3)	(26.0)	(29.4)	5.4, 11.6),	4.0, 14.1),	11.2, 15.8),	9.9, 18.5),
8. 9	, 33	, 29	, 24	p=0.476	p=0.277	p=0.738	p=0.550
Social function	ning			1		•	•
				1			
Community	46.9 (	48.6 (	50.5	1.8 (2.4); ( -	3.6 (2.5); ( -		
weight	8.4),	6.3),	(10.3)	2.9, 6.5),	1.3, 8.5),		
management	32	27	, 23	p=0.450	p=0.145		
Bariatric	55.3	50.4	49.5 (	-4.9 (2.3); ( -	-5.9 (2.4); (-	1.8 (2.5); (-	-1.1 (2.7); (-
Surgery	(11.3)	(10.3)	8.6),	9.4, -0.3),	10.7, -1.1),	3.2, 6.7),	6.5, 4.2),
	, 33	, 29	24	p=0.036	p=0.016	p=0.482	p=0.680
Pain							

Community	45.6	51.6	43.5	6.9 (5.9); (-	2.5 (6.2); (-		
weight	(26.2)	(30.4)	(30.0)	4.6, 18.4),	9.7, 14.7),		
management	, 32	, 26	, 22	p=0.237	p=0.688		
Bariatric	42.9	62.4	61.5	18.4 (5.7); (	17.4 (6.1); (	8.4 (7.6); (-	11.9 (8.1); (-
Surgery	(25.6)	(27.4)	(31.0)	7.2, 29.6),	5.5, 29.3),	6.5, 23.3),	4.0, 27.7),
	, 32	, 28	, 24	p=0.001	p=0.004	p=0.267	p=0.143
General healt	h						
Community	34.1	39.4	32.8	4.7 (4.1); (-	0.3 (4.3); (-		
weight	(18.7)	(19.7)	(21.7)	3.3, 12.7),	8.2, 8.7),		
management	, 32	, 27	, 23	p=0.247	p=0.949		
Bariatric	30.8	49.0	58.3	17.9 (4.0);	26.4 (4.2);	9.9 (5.6); (-	22.8 (6.0);
Surgery	(17.6)	(24.0)	(27.8)	(10.2, 25.7),	(18.1, 34.7),	1.2, 20.9),	(11.1, 34.6),
-	, 33	, 29	, 24	p<0.001	p<0.001	p=0.079	p<0.001

Data are mean (SD) or mean (SE).

CI = confidence intervals. SD = standard deviation. SE = standard error. SF-36 = 36-item short form survey.

Time following randomisation	Community wei	ight management	Bariatric surgery	Total	
	Related	Unrelated	Related	Unrelated	
0-12months	0	3 (3)	4	8 (6)	15
12-24months	1*	7 (4)	1	0 (0)	9
Total	1	10 (7)	5	8 (6)	24

## eTable 8. Serious Adverse Events at 12 and 24 Months

Data are n. Those in brackets are the number of events that are a hospitalised episode of exacerbation of idiopathic intracranial hypertension.

\* This participant had a headache following lumbar puncture as part of the trial, which was therefore assigned as a related serious adverse event headache. Adverse events are presented by Medical Dictionary for Regulatory Activities preferred term.