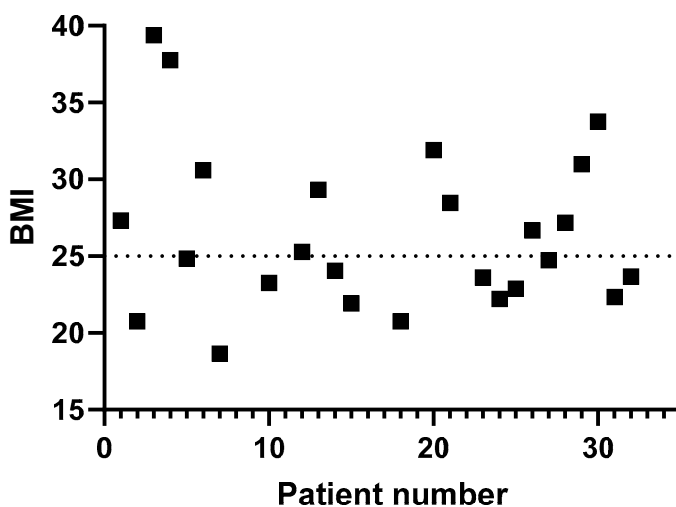


## Supplementary Data

**Supplementary Table 1:** Patient demographics from the Royal London Hospital, U.K.

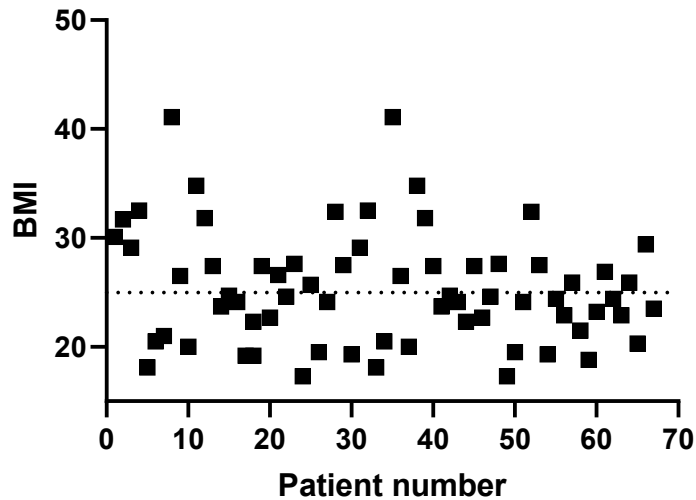
	Female		Male	
<b>N: (%)</b>	10	(33%)	20	(67%)
<b>Age: mean, +/- SD (years)</b>	62.4	±19.2	61.5	±18.1
<b>BMI: mean,+/- SD</b>	26.2	±4.1	25.7	±5.6



**Supplementary Graph 1:** Distribution of BMI for patient samples from the Royal London Hospital, UK. BMI data from individuals (N=32) from whom colonic tissue was collected is plotted alongside their assigned patient number.

**Supplementary Table 2:** Details of patient samples recruited at the University of Maastricht, Netherlands.

	Female		Male	
<b>N: (%)</b>	47	69.1%	21	30.9%
<b>Age: mean, +/- SD (years)</b>	44.8	±16.2	34.7	±8.9
<b>BMI: mean,+/- SD</b>	25.8	±5.2	24.3	±5.2
<b>IBS subtype: N, (%)</b>				
<b>Constipation</b>	18	38.3%	0	0%
<b>Diarrhoea</b>	11	23.4%	2	9.5%
<b>Mixed</b>	15	31.9%	9	42.9%
<b>None (healthy control)</b>	3	6.4%	10	47.6%



**Supplementary Graph 2: Distribution of BMI for patient samples from the University of Maastricht.** BMI data from individuals ( $N=67$ ) from whom colonic tissue was collected.

**Supplementary Table 3: Primary antibodies used for immunohistochemistry**

Protein	Species	clonal	Company	Product ID	Dilution
CaSR	Mouse	mono	Abcam	AB-19347	1:200
PYY	Rabbit	poly	US Biological	P3285-10	1:200
5-HT	Goat	poly	Immunostar	20079	1:200

**Supplementary Table 4: Secondary antibodies used for immunohistochemistry**

Species	Species reactivity	Wavelength	Company	Product ID	Dilution
Chicken	Mouse	488	Invitrogen	A21200	1:400
Donkey	Rabbit	568	Invitrogen	A10042	1:400
Donkey	Rabbit	488	Invitrogen	A21206	1:400
Donkey	Goat	568	Invitrogen	A11057	1:400
Donkey	Goat	488	Invitrogen	A11055	1:400

**Supplementary Table 5: Primers for gene expression studies**

Gene/ target	Manufacturer	Product code
Cholecystokinin	Qiagen	QT00073871
Cholecystokinin vb (CCK B)	Qiagen	QT02405228
Cholecystokinin va (CCK A)	Qiagen	QT02405221
Calcium-sensing receptor	Qiagen	QT00055944
GPRC6a	Qiagen	QT01033102
IFN- $\gamma$	Qiagen	QT00000525
18s ribosomal RNA	Qiagen	QT00199367

**Supplementary Table 6.** Distribution of patient samples by gene examined by Taqman qPCR.

<b>Proximal</b>		<b>Sigmoid</b>
A (n = 6, n = 6)	GPR43	F (n = 9, n = 11)
B (n = 6, n = 6)	GPR41	G (n = 9, n = 8)
C (n = 7, n = 6)	GPR109a	H (n = 9, n = 10)
D (n = 6, n = 6)	GPR40	I (n = 9, n = 8)
E (n = 7, n = 7)	GPR120	J (n = 12, n = 13)
	Calcium sensing receptor	K (n = 6, n = 7)