Supplementary Tables

Table S1: Reported normal ranges of integrated relaxation pressure (IRP) for control subjects in a supine position among studies and among manometric devices. The 95th percentile is used as the upper limit of normal (UNL).

Manufacturer	Citation	Manometric Assembly Design	Number of controls	IRP (mmHg) Median (ULN)
Sierra	Ghosh 2007 [6]	36 circumferential solid-state sensors (Sierra*)	75	3 (11) upright 8 (15) supine
Sierra	Sweis 2011 [8]	36 circumferential solid-state sensors (Sierra*)	23‡	6 (15) upright 3 (9) supine
Given	Niebisch 2013 [7]	36 circumferential solid-state sensors (Sierra*)	68	9 (17)
Given	Weijenborg 2014 [9]	36 circumferential solid-state sensors (Sierra*)	50	7 (16)
MMS	Bogte 2013 [4]	36 solid state unidirectional sensors (Unisensor AG)	52	12 (28)
MMS	Kessing 2014 [41]	36-channel water perfused catheter ¶ (Dentsleeve, Mississauga, ON, Canada)	50	7 (19)
Sandhill	Shi 2013 [5]	32 solid state sensors and 5 dual impedance sensors (Unisensor AG)	42	14 (21)

*Device design was by Sierra Scientific Instruments, which was subsequently acquired by Given Imaging in 2010, then Covidien in 2013, and most recently Medtronic in 2014

‡ upright, supine values as reported

¶ Electronically generated e-sleeve

Table S2: Reported normal ranges of distal contractile integral (DCI) and distal latency (DL) for control subjects in a supine position among studies and among manometric devices.

Manufacturer	Citation	Design	Number of controls	Median DCI (5-95th percentile) (mmHg·s·cm)	Median DL (5th percentile) (s)
Sierra	Xiao 2012 [38]	36 circumferential solid-state sensors (Sierra*)	75	1612 (448-4721)	5.8 (4.3)
Given	Niebisch 2013 [7]	36 circumferential solid-state sensors (Sierra*)	68	2103 (628-7234)¶	6.8 (5.4)
Given	Weijenborg 2014 [9]	36 circumferential solid-state sensors (Sierra*)	50	834 (178-2828)	6.8 (5.4)
MMS	Bogte 2013 [4]	36 solid state unidirectional sensors (Unisensor AG)	52	1008 (186-3407)	6.1 (5.0)
MMS	Kessing 2014 [41]	36-channel water perfused catheter (Dentsleeve, Mississauga, ON, Canada)	50	970 (142-3675)	7.4 (6.2)
Sandhill	Shi 2013 [5]	32 solid state sensors and 5 dual impedance sensors	42	1527 (25th percentile = 1188; only IQR reported)	5.2 (25th percentile = 4.9; only IQR reported)

*Device design was by Sierra Scientific Instruments, which was subsequently acquired by Given Imaging in 2010, then Covidien in 2013, and most recently Medtronic in 2014

¶ the highest value per subject was reported

Table S3: Reported normal ranges of basal EGJ pressures for control subjects in a supine position among studies and among manometric devices.

Manufacturer	Citation	Design	Number of control subjects	Expiratory EGJ pressure Median (5^{th}-95^{th} percentile) (mmHg)	End inspiratory EGJ pressure Median (IQR) (mmHg)
Sierra	Pandolfino 2006 [42] Nicodème 2014 [20]	36 circumferential solid-state sensors (Sierra*)	75	14 (5-32)	34
Sierra	Sweis 2011 [8]	36 circumferential solid-state sensors (Sierra*)	23	19 (5-38) (23 (8-34) for upright position)	Not reported
Given	Niebisch 2013 [7]	36 circumferential solid-state sensors (Sierra*)	68	15 (3-31)	Not reported
Given	Weijenborg 2014 [9]	36 circumferential solid-state sensors (Sierra*)	50	15 (3-31)	Not reported
MMS	Bogte 2013 [4]	36 solid state unidirectional sensors (Unisensor AG)	52	31 (9-51)	Not reported
MMS	Kessing 2014 [41]	36 channel water perfused catheter ¶ (Dentsleeve, Mississauga, ON, Canada)	50	10 (3-30)	Not reported
Sandhill				No data available	No data available

*Device design was by Sierra Scientific Instruments, which was subsequently acquired by Given Imaging in 2010, then Covidien in 2013, and most recently Medtronic in 2014

¶ Electronically generated e-sleeve