

Table 1 - Basic Characteristics of Included Study.

Study trial number	Study design	Country	Intervention	Population mean age	Female (%)	Numbers of patients (n)	Treatment duration (weeks)
Yoshida et al. (37) 2018 No. JapicCTI-152936	Phase IIb, RCT, double-blind, multicenter	Japanese	VIB 50mg, qd	58.0 ± 11.8	334 (90.3)	370	aged ≥ 20 years, patients experiencing OAB symptoms for ≥ 6 months
			VIB 100mg, qd	58.7 ± 11.1	330 (89.7)	368	
			PBO	58.9 ± 11.8	333 (90.2)	369	
			IMI 0.1mg, bid	59.7 ± 12.4	105 (89.7)	117	
Yamaguchi et al. (30) 2014a NCT00966004	Phase III, RCT, double-blind, multicenter	Japanese	MIR 50mg, qd	58.3 ± 13.88	58 (15.7)	379	aged ≥ 20 years, patients experiencing OAB symptoms for ≥ 24 weeks
			PBO	58.2 ± 14.18	58 (15.8)	379	
			TER 4 mg, qd	58.3 ± 13.96	64 (17.4)	375	
Yamaguchi et al. (38) 2014b NCT00527033	Phase II, RCT, double-blind, multicenter	Japanese	MIR 50mg, qd	56.2 ± 13.59	31 (14.9)	208	aged ≥ 20 years, patients experiencing OAB symptoms for ≥ 24 weeks
			PBO	55.7 ± 12.89	42 (19.9)	212	
Staskin et al. (43) 2020 NCT03492281	Phase III, RCT, double-blind, multicenter	Multinational	VIB 75mg, qd	63.0 ± 18.0	449 (85.4)	545	aged ≥ 18 years, patients experiencing OAB symptoms for ≥ 3 months
			PBO	61.0 ± 16.0	445 (85.6)	540	
			TER 4 mg, qd	61.0 ± 17.0	352 (84.4)	430	
Shin et al. (55) 2019	Phase IV, RCT, double-blind, multicenter	Korea	MIR 50mg, qd	66.40 ± 9.51	310 (100)	310	aged ≥ 20 years, patients experiencing OAB symptoms for ≥ 12 weeks
			PBO	65.23 ± 10.00	154 (100)	154	
Nitti et al. (40) 2013 NCT00662909	Phase III, RCT, double-blind, multicenter	United States and Canada	MIR 50mg, qd	59.2 ± 13.5	120 (27.1)	442	aged ≥ 18 years, patients experiencing OAB symptoms for ≥ 3 months
			PBO	60.1 ± 13.8	108 (23.8)	453	
Herschorn et al. (41) 2013 NCT00912964	Phase III, RCT, double-blind, multicenter	Europe and North America	MIR 50mg, qd	60.3 ± 12.22	137 (31.1)	440	aged ≥ 18 years, patients experiencing OAB symptoms for ≥ 3 months
			PBO	58.2 ± 13.73	132 (30.5)	433	
Kuo et al. (70) 2015 NCT01043666	Phase III, RCT, double-blind, multicenter	Taiwan, Korea, China, and India	MIR 50mg, qd	54.3 ± 14.21	110 (32.5)	366	aged ≥ 18 years, patients experiencing OAB symptoms for ≥ 3 months
			PBO	55.3 ± 13.63	98 (30.3)	366	
			TER 4 mg, qd	53.9 ± 14.50	120 (36.0)	371	
Khullar et al. (44) 2013 NCT00689104	Phase III, RCT, double-blind, multicenter	European-Australian	MIR 50mg, qd	59.1 ± 12.36	136 (27.6)	493	aged ≥ 18 years, patients experiencing OAB symptoms for ≥ 3 months
			MIR 100mg, qd	59.0 ± 12.71	141 (28.4)	496	
			PBO	59.2 ± 12.30	138 (27.9)	494	
			TER 4 mg, qd	59.1 ± 12.89	134 (27.1)	495	
Herschorn et al. (42) 2017 NCT01972841	Phase III, RCT, double-blind, multicenter	Multinational (42 countries)	MIR 50mg, qd	56.7 ± 13.3	99 (23.5)	422	aged ≥ 18 years, patients experiencing symptoms of wet OAB for ≥ 3 months
			PBO	57.9 ± 13.0	102 (23.8)	429	
Chapple et al. (71) 2013 NCT00337090	Phase II, RCT, double-blind, multicenter	Multinational	MIR 50mg, qd	56.9 ± 12.5	18 (10.8)	169	aged ≥ 18 years, patients experiencing symptoms of OAB for ≥ 3 months
			PBO	57.1 ± 12.9	15 (9.0)	169	
			TER 4 mg, qd	56.6 ± 12.8	16 (18.8)	85	
Herschorn et al. (42) 2017 NCT01314872	Phase IIb, RCT, double-blind, multicenter	Multinational (18 countries)	MIR 50mg, qd	60.3 ± 8.7	129 (86.0)	150	aged ≥ 18 years and ≤ 75 years, patients experiencing symptoms of OAB for ≥ 3 months
			PBO	57.8 ± 9.5	185 (90.2)	205	
			TER 4 mg, qd	58.5 ± 9.6	231 (89.9)	257	
Armstrong et al. (58) 2005	RCT, double-blind, multicenter	Multicenter	ER-OXY 10mg, qd	60 (18–92)	100%	391	aged ≥ 18 years, patients experiencing symptoms
			TER 4 mg, qd	60 (18–92)	100%	399	
Cardozo et al. (59) 2004	RCT, double-blind, multicenter	Multinational	SOL 5mg, qd	55.4 (13.8)	237 (82.9)	286	aged ≥ 18 years, patients experiencing symptoms of OAB for ≥ 3 months
			SOL 10mg, qd	55.9 (14.2)	238 (82.1)	290	
			PBO	56.1 (13.3)	227 (80.8)	281	

Chapple et al. (57) 2007a	RCT, double-blind, multicenter	Multinational	DAR 7.5/15 mg, qd	72 ± 5 (64–89)	206 (77.4)	266	aged ≥ 65 years with symptoms of OAB for at least 6 months
			PBO	73 ± 5 (64–87)	100 (75.2)	133	
Chapple et al. (60) 2014 NCT01302067	RCT, double-blind, multicenter	Multinational	FES 4 mg, qd	59.8 (21–94)	647 (82)	790	aged ≥ 18 years with OAB symptoms for ≥ 6 months
			FES 8 mg, qd	58.8 (18–89)	627 (80)	779	
			PBO	59.6 (19–85)	316 (82)	386	
Chapple et al. (15) 2007b	Phase III, RCT, double-blind, multicenter	Multinational	TER 4 mg, qd	57.7 ± 14.6	226 (78)	290	aged ≥ 18 years with OAB symptoms for ≥ 6 months
			FES 8 mg, qd	55.6 ± 14.1	223 (82)	272	
			FES 4 mg, qd	57.1 ± 13.2	232 (81)	287	
			PBO	56.0 ± 13.7	229 (81)	283	
Chapple et al. (61) 2005	RCT, double-blind, multicenter	European	SOL 5 mg/10mg, qd	56.5	493 (85.3%)	578	aged ≥ 18 years, patients experiencing OAB symptoms for ≥ 3 months
			TER 4 mg, qd	56.4	529 (88.3%)	599	
Chapple et al. (16) 2004	Phase IIIa, RCT, double-blind, multicenter	Multinational	SOL 5 mg, qd	58.1 (13.4)	194 (72.9)	266	aged ≥ 18 years, patients experiencing OAB symptoms for ≥ 3 months
			SOL 10 mg, qd	57.2 (13.4)	188 (71.2)	264	
			TER 2mg bid	56.9 (12.8)	200 (80.0)	250	
			PBO	57.8 (13.7)	193 (76.3)	253	
Choo et al. (17) 2008 NCT00189800	RCT, double-blind, multicenter	Korea	SOL 5 mg, qd	53.07 10.52	90 (84.11)	107	aged ≥ 18 years, patients experiencing OAB symptoms for ≥ 3 months
			SOL 10 mg, qd	52.65 (12.71)	83 (74.77)	111	
			TOL 2 mg, bid	53.05 (12.19)	88 (79.28)	111	
Chu et al. (20) 2009	Phase III, RCT, double-blind, multicenter	United States	SOL 10 mg, qd	59 (14)	272 (80.0)	340	aged ≥ 18 years with a diagnosis of OAB made by an investigator based on symptoms
			PBO	58 (13)	277 (83.4)	332	
Chua et al. (18) 2018 NCT01486706	RCT, double-blind, single center	Philippines	SOL 5 mg/10mg, qd	57.2 (9.36)	24 (77%)	31	18–79 years old, patients who are ambulatory, with defined history of OAB symptoms for ≥ 3 months
			PBO	53.9 (12.14)	23 (72%)	32	
Chuang et al. (19) 2020	RCT, double-blind, multicenter	Taiwan	IMI 0.1 mg, bid	59.84	23 (31.5%)	73	patients ≥ 20 years of age, with OAB symptoms for ≥ 3 months
			PBO	59.33	19 (48.7%)	39	
Diokno et al. (62) 2003	RCT, double-blind, multicenter	US	OXY 10 mg, qd	(23, 92)	100%	391	Women with OAB symptoms, aged 18 years and older
			TER 4mg, qd	(18, 85)	100%	399	
Dmochowski et al. (21) 2010	RCT, double-blind, multicenter	US	FES 4mg/8mg, qd	59.7 (13.7)	364 (83)	438	Aged ≥ 18 years patients experiencing OAB symptoms for ≥ 3 months
			PBO	60.1 (12.9)	368 (83)	445	
Dmochowski et al. (22) 2008	Phase III, RCT, double-blind, multicenter	US	TRO 60mg, qd	61.2 ± 0.7	230 (82.1)	280	Subjects aged 18 years or older with OAB of 6 months or longer duration
			PBO	58.4 ± 0.7	249 (87.7)	284	

Drutz et al. (14) 1999	RCT, double-blind, multicenter	United States and Canada	TOL 2 mg, bid	63.0 (31–88)	88 (81)	109	aged ≥ 18 years, patients experiencing OAB
			OXY 5 mg, tid	66.3 (23–91)	81 (72)	112	
			PBO	62.1 (26–87)	45 (80)	56	
DuBeau et al. (23) 2014 NCT00928070	RCT, double-blind, multicenter	US	FES 4mg/8mg, qd	74.8 (65–91)	100%	103	65 years old or older with OAB symptoms for 3 or more months
			PBO	75.3 (65–90)	100%	77	
Ercan et al. (63) 2015	RCT, single center	Turkey	SOL 5 mg, qd	58.9 ± 11.5	UK	60	patients diagnosed with OAB
			FES 4 mg, qd	58.1 ± 10.258.1	UK	59	
Ginsberg et al. (64) 2013	RCT, double-blind, multicenter	Multinational	FES 4mg/8mg, qd	59.8 (14.3) 57.5 (13.0)	1374 (84)	1639	≥ 18 years old, had self-reported OAB symptoms for ≥ 3 months
			TER 4mg, qd	60.8 (14.1) 57.8 (13.4)	1382 (83)	1657	
			PBO	61.8 (13.9) 58.5 (13.2)	679 (84)	812	
Gotoh et al. (24) 2011	Phase III, RCT, double-blind, multicenter	Japan	PRO 20 mg, qd	56.6 (13.6)	216 (76.1)	284	≥ 20 years old with OAB symptoms for at least 12 weeks
			PBO	58.7 (14.1)	207 (76.7)	270	
Govier et al. (30) 2010	Phase III, RCT, double-blind, multicenter	US	SOL 10 mg, qd	60 ± 13	261 (82)	318	Aged ≥ 18 years with OAB symptoms
			PBO	59 ± 13	259 (82)	316	
Herschorn et al. (41) 2013 NCT01767519	Phase IIIb, RCT, double-blind, multicenter	North America and Europe	SOL 5 mg/10mg, qd	61.4 ± 12.8	134 (88.7)	151	Adults with symptoms of patients diagnosed OAB for ≥ 6 months
			PBO	62.9 ± 11.8	51 (85.0)	60	
Homma et al. (53) 2003	RCT, double-blind, multicenter	Japan and Korea	TER 4 mg, qd	61.2 (11.8)	162 (68)	239	aged ≥ 20 years with symptoms of OAB for ≥ 6 months
			OXY 3 mg, qd	57.9 (12.5)	177 (73)	244	
			PBO	58.4 (14.0)	84 (69)	122	
Homma et al. (25) 2009	Phase III, RCT, double-blind, multicenter	Japan	IMI 0.1 mg, bid	57.7 (12.7)	278 (87.4%)	324	≥ 20 years, who had OAB symptoms
			PRO 20 mg, qd	59.8 (11.9)	257 (84.3%)	310	
			PBO	58.0 (13.5)	125 (87.4%)	147	
Homma et al. (26) 2008	Phase II, RCT, double-blind, multicenter	Japan	IMI 0.1 mg, bid	64.5 (13.5)	63 (67.7)	93	≥ 20 years, who had OAB symptoms
			PBO	61.9 (11.8)	69 (72.6)	95	
Kaplan et al. (45) 2014 NCT01302054	RCT, double-blind, multicenter	Europe, North America, Asia, and Africa	FES 4mg/8mg, qd	57.3 (13.4)	253 (82)	308	aged ≥ 18 years, self-reported OAB symptoms for ≥ 6 months
			PBO	58.2 (13.2)	244 (81)	301	
Karram et al. (32) 2009 NCT00454896	Phase IIIb, RCT, double-blind, multicenter	USA	SOL 5 mg/10mg	57	84.20%	372	age 18 or older, OAB for at least 3 months
			PBO	57	84.20%	367	

Lee et al. (28) 2013 NCT01578304	Phase IV, RCT, double-blind, multicenter	Korean	IMI 0.1 m, bid	57.94 ± 10.81	57.94 ± 10.81	104	aged ≥ 20 years, with OAB symptom for ≥ 3 months
			FES 4 mg, qd	57.63 ± 12.63	57.63 ± 12.63	102	
Nitti et al. (46) 2007	Phase III, RCT, double-blind, multicenter	US	FES 4 mg, qd	59 (21–85)	213 (76)	282	18 years or older with OAB syndrome for 6 months or greater
			FES 8 mg, qd	59 (23–91)	218 (78)	279	
			PBO	59 (24–88)	200 (74)	271	
Park et al. (47) 2014	Phase III, RCT, double-blind, multicenter	Korea	IMI 0.1 m, bid	58.31 ± 11.45	57 (85.07)	82	OAB patients aged ≥ 19 years for ≥ 3 months.
			PRO 20mg, qd	56.13 ± 11.29	55 (85.94)	80	
Rudy et al. (66) 2006	Phase III, RCT, double-blind, multicenter	US	TRO 40 mg, qd	61.1 ± 0.69	267 (81.2)	329	18 years or older with OAB symptoms for at least 6 months.
			PBO	61.0 ± 0.70	269 (81.8)	329	
Sand et al. (67) 2004	RCT, double- blind, multicenter	US	ER-OXY 10 mg, qd	58.4	100%	152	Participants with overactive bladder
			TOL 2mg, bid	58.8	100%	163	
Vardy et al. (33) 2009 NCT00573508	Phase IV, RCT, double-blind, multicenter	US	SOL 5 mg/10mg, qd	59 ± 13	306 (81)	377	(aged ≥ 18 years) were required to have OAB symptoms for ≥ 3 months
			PBO	60 ± 12	314 (84)	374	
Wagg et al. (34) 2013 NCT00798434	RCT, double- blind, multicenter	Multinational	FES 4mg/8mg, qd	72.6 ± 5.8	213 (54)	392	aged 65 and older with OAB symptoms for 3 months or longer
			PBO	72.8 ± 5.7	205 (52)	393	
Weiss et al. (50) 2013 NCT00911937	RCT, double- blind, multicenter	US	FES 4mg/8mg, qd	58.0 ± 14.7	313 (67.6)	463	age 18 years or older with self-reported OAB symptoms for 3 or more months
			PBO	57.5 ± 14.0	312 (65.8)	474	
Yamaguchi et al. (29) 2007	Phase III, RCT, double-blind, multicenter	Japan	SOL 5 mg, qd	60.4 (13.3)	318 (83.0)	398	aged ≥ 20 years and with symptoms of OAB reported for ≥ 6 months
			SOL 10 mg, qd	59.9 (13.0)	318 (85.7)	381	
			PRO 20 mg, qd	59.6 (13.6)	321 (83.6)	400	
			PBO	60.8 (12.5)	333 (84.3)	405	
Yamaguchi et al. (27) 2011 NCT00561951	Phase II, RCT, double-blind, multicenter	Japan, Taiwan, Korea, and Hong Kong	FES 4 mg, qd	57.2 (14.2)	251 (78.4)	320	≥ 20 years of age; a medical history of OAB symptoms for ≥ 6 months
			FES 8 mg, qd	58.8 (13.4)	255 (81.5)	313	
			PBO	56.7 (13.5)	251 (78.9)	318	
Yamaguchi et al. (38) 2014b JapicCTI-101309	RCT, double- blind, multicenter	Japan	PRO 20 mg, qd	55.6 (12.5)	478 (85.5)	576	Age ≥ 20 years, OAB symptoms for ≥ 24 weeks
			PBO	56.2 (13.2)	344 (92.2)	381	
Zinner et al. (68) 2004	Phase III, RCT, double-blind, multicenter	US	TRO 20 mg, qd	63 ± 0.8	203 (77.5)	256	aged ≥ 18 years with a history of OAB for ≥ 6 months
			PBO	61.5 ± 0.8	186 (71.3)	256	

Zinner et al. (69) 2006	RCT, double-blind, single center	US	DAR 15 mg, qd	59.1 (20–93)	185 (86.4)	214	aged ≥ 18 years with a history of OAB for ≥ 6 months
			PBO	59.1 (18–89)	198 (88.0)	225	
Dmochowski et al. (54) 2003	RCT, double-blind, multicenter	UK	ER-TOL 4mg, qd	62.9[13.5]	117 (95.1)	123	at least 18 years of age taking current pharmacologic treatment for OAB
			PBO	64.5 [12.3]	109 (93.2)	117	
Haab et al. (72) 2004	RCT, double-blind, multicenter	Multinational	DAR 7.5 mg, qd	57.7 (22–88)	194 (84.7)	229	(aged 19–88 years, 85% female) who had suffered from symptoms of OAB for at least 6 months
			DAR 15 mg, qd	56.6 (24–81)	100 (87.0)	115	
			PBO	56.5 (19–81)	138 (84.1)	164	
Herschorn et al. (49) 2008 NCT00143377	RCT, double-blind, multicenter	Multinational	ER-TOL 4 mg, qd	58 (13)	290 (72)	408	aged ≥ 18 years with a history of OAB for ≥ 3 months
			PBO	57 (14)	143 (71)	204	
Hill et al. (73) 2006	RCT, double-blind, multicenter	Multinational	DAR 7.5 mg, qd	56.1 (23–88)	94 (87.04)	108	aged ≥ 18 years with a history of OAB for ≥ 6 months
			DAR 15 mg, qd	55.1 (24–82)	92 (85.98)	107	
			PBO	53.7 (21–85)	90 (82.57)	109	
Kaplan et al. (48) 2011 NCT00611026	RCT, double-blind, multicenter	Multinational	ER-TOL 4 mg, qd	58.1 (13.8)	818 (84)	960	(≥ 18 years) self-reported OAB symptoms for ≥ 3 months
			FES 4mg/8mg, qd	57.9 (13.5)	816 (85)	973	
			PBO	59.5 (13.2)	410 (86)	478	
Van Kerrebroeck et al. (35) 2001	RCT, double-blind, multicenter	Australasia, Europe and North America	ER-TOL 4 mg, qd	60 (20–89)	417(82.25)	507	aged ≥ 18 years with a history of OAB for ≥ 6 months
			TOL2 mg, bid	60 (22–92)	408(79.38)	514	
			PBO	61 (22–93)	410(80.71)	508	
Rogers et al. (51) 2008 NCT00143481	RCT, double-blind, multicenter	US	ER-TOL 4 mg, qd	49 (12)	100%	202	aged ≥ 18 years with OAB symptoms for ≥ 3 months
			PBO	47 (12)	100%	211	
Zinner et al. (36) 2002	RCT, double-blind, multicenter	Europe, United States, Canada, Australia, and New Zealand	ER-TOL 4 mg, qd	51 ± 10.5	417 (82.25)	507	aged ≥ 18 years with OAB symptoms for ≥ 6 months
			PBO	74 ± 6	410 (80.71)	508	
Batista et al. (56) 2015	Phase III, RCT, double-blind, multicenter	Multinational	MIR 50 mg, qd	56.7 (14.3)	712 (76.1)	936	aged ≥ 18 years old, with symptoms of OAB for ≥ 3 months
			SOL 5 mg, qd	57.4 (13.6)	709 (75.9)	934	

Abbreviations: OXY = Oxybutynin; ER-OXY = Oxybutynin chloride extended-release; TOL = tolterodine; ER-TOL = extended-release tolterodine; SOL = solifenacin; CR-DAR = darifenacin extended-release; FES = fesoterodine; IMI = imidafenacin; PRO = propiverine; TRO = trospium chloride; VIB = vibegron; MIR = mirabegron; PBO = placebo