

Supplemental Table S5. Characteristics of Included Studies

Study	Design	Study duration	Background OADs	Treatment	No. of patients	Age, yr	Duration of T2D, yr	Baseline HbA1c, %
Lee et al. (2023) [6]	Experimental, RCT	24 weeks	MET/SU/DPP4i	Add-on SGLT2i	76	61.2±9.5	15.4±7.3	8.5±1.0
				DPP4i → GLP-1RA	76	58.8±11.0	13.9±7.9	8.6±0.9
Ku et al. (2023) [7]	Observational, retrospective	3 years	MET/SU/DPP4i	Add-on SGLT2i	154	57.7±10.8	12.2±6.7	8.9±1.0
				Add-on insulin glargine	147	57.7±14.8	11.0±9.6	9.0±1.4
Kim et al. (2023) [8]	Observational, retrospective	24 weeks	Heterogeneous triple OADs ^a	Add-on 4th OAD	50	62 (52–66)	11 (7–18)	9.0±0.9
				MET/SU+GLP-1RA	46	58 (48–64)	9 (4–15)	9.0±1.2
Hong et al. (2024) [9]	Observational, retrospective	26 weeks	MET	Add-on SGLT2i	224	Not included in our analysis		
			MET/SU	Add-on SGLT2i	117			
			MET/DPP4i	Add-on SGLT2i	86			
			MET/SU/DPP4i	Add-on SGLT2i	126	60.3±10.5	NA	8.4±0.7
Saleem et al. (2022) [10]	Observational, retrospective	6 months	MET/SU/DPP4i	Add-on SGLT2i	100	53.8±9.6	9.6±5.6	8.2±1.1
Lee et al. (2022) [11]	Experimental, RCT	12 weeks (extension, 24weeks)	MET/SU/SGLT2i	Add-on DPP4i	51	60.6±11.0	13.4±7.1	7.9±0.6
				Add-on placebo	48	60.8±9.2	13.9±6.6	7.7±0.5
Bhosle et al. (2022) [12]	Experimental, non-RCT	24 weeks	Heterogeneous triple OADs	Add-on SGLT2i	120	NA (18–65 years)	7.2±2.3	11.9±2.2
Moon et al. (2021) [13]	Observational, retrospective	12 months	Heterogeneous	Add-on 4th OAD	357	58.9±10.9	13.1±6.9	9.0±1.3
Ku et al. (2021) [14]	Observational, prospective	3 years	MET/SU/DPP4i	Add-on SGLT2i (empagliflozin)	185	57.4±10.4	11.9±6.8	9.1±1.3
				Add-on SGLT2i (dapagliflozin)	177	58.0±8.6	12.3±6.7	9.0±1.3
Bae et al. (2021) [15]	Experimental, RCT	24 weeks	MET/SU/DPP4i	Add-on SGLT2i	60	61.8±10.2	13.9±7.3	7.9±0.7
				Add-on TZD	59	61.9±9.7	13.9±8.4	8.0±0.8
Ghosh et al. (2020) [16]	Observational, retrospective	12 weeks	-	Add-on DPP4i	390	Not included in our analysis		
			MET	Add-on DPP4i	4,299			
			MET/SU	Add-on DPP4i	3,608			
			MET/SU/AGI	Add-on DPP4i	953	NA ^b	NA ^b	8.7±1.1
			Insulin/other OADs	Add-on DPP4i	150	Not included in our analysis		
			Other OADs	Add-on DPP4i	1,223			
Cho et al. (2020) [17]	Observational, retrospective	3 months	MET/SU/DPP4i	Add-on TZD	187	61.5±9.9	NA	9.0±1.1
			MET/SU/DPP4i	Add-on SGLT2i	47	52.6±10.2	NA	8.9±1.0
			MET/SU/TZD	Add-on DPP4i	84	60.7±9.3	NA	9.1±1.3
Ku et al. (2019) [18]	Observational, prospective	24 weeks	MET/SU/DPP4i	Add-on SGLT2i	142	58.7±10.5	12.3±9.3	9.1±1.0
				Add-on Insulin glargine	126	60.2±13.0	11.7±9.3	9.3±1.1
Ku et al. (2019) [19]	Observational, prospective	52 weeks	MET/SU/DPP4i	Add-on SGLT2i (empagliflozin)	176	57.0±11.3	11.6±6.0	9.1±1.3
				Add-on SGLT2i (dapagliflozin)	174	57.2±9.9	11.1±6.8	9.0±1.3
Hong et al. (2019) [20]	Observational, retrospective	12 weeks	MET	Add-on SGLT2i	58	Not included in our analysis		
			MET/SU	Add-on SGLT2i	19			
			MET/SU/DPP4i	Add-on SGLT2i	52	NA ^c	NA ^c	8.9±0.2
			Insulin±OAD	Add-on SGLT2i	78	Not included in our analysis		
			Heterogeneous	DPP4i → SGLT2i	114			
			Heterogeneous	SU → SGLT2i	54			
			Heterogeneous	TZD → SGLT2i	35			

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Supplemental Table S5. Continued

Study	Design	Study duration	Background OADs	Treatment	No. of patients	Age, yr	Duration of T2D, yr	Baseline HbA1c, %	
Jeon et al. (2018) [21]	Observational, prospective	24 weeks	MET/SU/DPP4i	Add-on SGLT2i	162	59.2±12.7	12.1±7.5	8.5±0.9	
				Add-on Insulin glargine	148	56.1±15.2	12.8±9.6	8.8±1.4	
Sosale et al. (2016) [22]	Observational, prospective	3 months	MET/SU	Add-on SGLT2i	25	Not included in our analysis			
				MET/DPP4i	Add-on SGLT2i	25	Not included in our analysis		
				MET/SU/DPP4i	Add-on SGLT2i	25	NA ^b	14.4±6.7	9.5±1.2
				Insulin/MET/SU/DPP4i	Add-on SGLT2i	25	Not included in our analysis		

Values are expressed as mean ± standard deviation or median (interquartile ranges).

OAD, oral antidiabetic drug; T2D, type 2 diabetes; HbA1c, glycated hemoglobin; RCT, randomized clinical trial; MET, metformin; SU, sulfonylurea; DPP4i, dipeptidyl peptidase 4 inhibitor; SGLT2i, sodium-glucose co-transporter 2 inhibitor; GLP-1RA, glucagon-like peptide-1 receptor agonist; TZD, thiazolidinedione; NA, not available.

^aTriple combination regimens including metformin and sulfonylurea; ^bOnly data of the whole study population were available; ^cOnly data for the whole study population, the entire add-on group, and the switching group were available.