

Supplemental Online Content

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

eTable 1. Search Strategy, MEDLINE

1	exp Diabetes Mellitus, Type 2/
2	NIDDM.ti,ab,kf.
3	MODY.ti,ab,kf.
4	t2d*.ti,ab,kf.
5	((typ* two or typ?two or typ* 2 or typ* II or typ?2 or typ?II or typ* ii or typ?ii) adj4 diabet*).ti,ab,kf.
6	((non insulin or noninsulin or late or adult* or matur* or slow or stabl*) adj4 diabet*).ti,ab,kf.
7	((ketoresist* or keto* resist* or keto* prone) adj4 diabet*).ti,ab,kf.
8	or/1-7
9	exp Child/
10	child*.ti,ab,kf.
11	adolescen*.ti,ab,kf.
12	exp Adolescent/
13	youth*.ti,ab,kf.
14	teenage*.ti,ab,kf.
15	preadolescen*.ti,ab,kf.
16	Pediatrics/
17	p?ediatric*.ti,ab,kf.
18	pe?diatric*.ti,ab,kf.
19	or/9-18
20	8 and 19
21	exp Proteinuria/
22	proteinuria*.ti,ab,kf.
23	albuminuria*.ti,ab,kf.
24	hemoglobinuria*.ti,ab,kf.
25	microalbuminuria*.ti,ab,kf.
26	micro albuminuria*.ti,ab,kf.
27	macroalbuminuria*.ti,ab,kf.
28	macro albuminuria*.ti,ab,kf.
29	Creatinine/ and (ur.fs. or Urine/)
30	creatininuria*.ti,ab,kf.
31	(creatinine and urine*).ti,ab,kf.
32	exp Diabetic Nephropathies/
33	(diabet* adj3 (nephropath* or glomerulopath* or glomerulosclerosis or nephrosclerosis)).ti,ab,kf.
34	or/21-33
35	hypertension/ or diabetic hypertension/ or malignant hypertension/ or exp renovascular hypertension/
36	hypertens*.ti,ab,kw.
37	elevated blood pressure/

38	((elevat* or high* or rais*) adj3 (diastolic or systolic or arterial or blood) adj1 pressure*).ti,ab,kw.
39	or/35-38
40	34 or 39
41	Prevalence/
42	prevalence.ti,ab,kf.
43	prevalence studies/
44	Incidence/
45	incidence studies/
46	incidence.ti,ab,kf.
47	Epidemiology/
48	epidemiolog*.ti,ab,kf.
49	ep.fs.
50	epidemiologic methods/ or epidemiological monitoring/ or sentinel surveillance/
51	exp epidemiologic studies/
52	case-control.ti,ab,kf.
53	cohort.ti,ab,kf.
54	prospective.ti,ab,kf.
55	longitudinal.ti,ab,kf.
56	retrospective.ti,ab,kf.
57	cross sectional.ti,ab,kf.
58	correlational.ti,ab,kf.
59	or/41-58
60	20 and 40 and 59
61	60 not (animals/ not (humans/ and animals/))
62	remove duplicates from 61

eTable 2. Search Strategy, Embase

1	non insulin dependent diabetes mellitus/
2	NIDDM.ti,ab,kw.
3	MODY.ti,ab,kw.
4	t2d*.ti,ab,kw.
5	((typ* two or typ?two or typ* 2 or typ* II or typ?2 or typ?II or typ* ii or typ?ii) adj4 diabet*).ti,ab,kw.
6	((non insulin or noninsulin or late or adult* or matur* or slow or stabl*) adj4 diabet*).ti,ab,kw.
7	((ketoresist* or keto* resist*) adj6 diabet*).ti,ab,kw.
8	or/1-7
9	exp child/
10	child*.ti,ab,kw.
11	adolescent/
12	adolescen*.ti,ab,kw.
13	youth*.ti,ab,kw.
14	teenage*.ti,ab,kw.
15	preadolescen*.ti,ab,kw.
16	pediatrics/
17	p?ediatric*.ti,ab,kw.
18	pe?diatric*.ti,ab,kw.
19	or/9-18
20	8 and 19
21	exp proteinuria/
22	proteinuria*.ti,ab,kw.
23	albuminuria*.ti,ab,kw.
24	hemoglobinuria*.ti,ab,kw.
25	microalbuminuria*.ti,ab,kw.
26	micro albuminuria*.ti,ab,kw.
27	macroalbuminuria*.ti,ab,kw.
28	macro albuminuria*.ti,ab,kw.
29	creatinine urine level/
30	creatininuria*.ti,ab,kw.
31	(creatinine and urine*).ti,ab,kw.
32	diabetic nephropathy/
33	(diabet* adj3 (nephropath* or glomerulopath* or glomerulosclerosis or nephrosclerosis)).ti,ab,kw.
34	or/21-33
35	hypertension/ or diabetic hypertension/ or malignant hypertension/ or exp renovascular hypertension/
36	hypertens*.ti,ab,kw.
37	elevated blood pressure/

38	((elevat* or high* or rais*) adj3 (diastolic or systolic or arterial or blood) adj1 pressure*).ti,ab,kw.
39	or/35-38
40	34 or 39
41	20 and 40
42	prevalence/
43	prevalence.ti,ab,kw.
44	incidence/
45	incidence.ti,ab,kw.
46	epidemiology/
47	epidemiolog*.ti,ab,kw.
48	ep.fs.
49	epidemiological monitoring/
50	sentinel surveillance/
51	case-control.ti,ab,kw.
52	cohort.ti,ab,kw.
53	prospective.ti,ab,kw.
54	longitudinal.ti,ab,kw.
55	retrospective.ti,ab,kw.
56	cross sectional.ti,ab,kw.
57	correlational.ti,ab,kw.
58	or/42-57
59	41 and 58
60	59 not (exp animals/ not (humans/ and animals/))
61	remove duplicates from 60

eTable 3. Search Strategy, CINAHL

#	Query	Limiters/Expanders	Last Run Via
S1	(MH "Child+")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S2	"child*"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S3	(MH "Adolescence+")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S4	"youth*"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S5	"teenage*"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S6	(MH "Pediatrics")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S7	"p?ediatric*"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S8	"p#ediatric*"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S9	"pe#diatric*"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S10	"pediatric*"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S11	"preadolescen*"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S12	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S13	(MH "Diabetes Mellitus, Type 2")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL

S14	"NIDDM"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S15	"MODY"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S16	"T2D*"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S17	(typ* two or typ?two or typ* 2 or typ* II or typ?2 or typ? II) N4 diabet*	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S18	(non insulin or noninsulin or late or adult* or matur* or slow or stabl*) N4 diabet*	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S19	(ketoresist* or keto* resist* or keto* prone) adj4 diabet*	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S20	S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S21	S12 AND S20	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S22	(MH "Hypertension") OR (MH "Hypertension, Renal+") OR (MH "Hypertension, Malignant")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S23	"hypertens*"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S24	((elevat* or high* or rais*) N3 (diastolic or systolic or arterial or blood) N1 pressure*)	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S25	S22 OR S23 OR S24	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S26	(MH "Proteinuria+")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S27	"proteinuria*"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen -

			Advanced Search Database - CINAHL
S28	"albuminuria**"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S29	"hemoglobinuria**"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S30	"microalbuminuria**"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S31	"micro albuminuria**"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S32	"macroalbuminuria**"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S33	"macro albuminuria**"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S34	(MH "Creatinine/UR")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S35	MH creatinine AND MH urine	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S36	S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34 OR S35	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S37	S25 OR S36	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S38	"prevalence"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S39	(MH "Cross Sectional Studies")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S40	"cross section**"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL

S41	(MH "Incidence")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S42	"incidence"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S43	(MH "Epidemiology")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S44	"epidemiolog**"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S45	(MH "Epidemiological Research")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S46	(MH "Prospective Studies") OR (MH "Cross Sectional Studies") OR (MH "Case Control Studies") OR (MH "Correlational Studies")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S47	"case control" or "cohort" or "prospective" or "retrospective" or "longitudinal" or "correlational"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S48	S38 OR S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45 OR S46 OR S47	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S49	(S21 AND S37 AND S48) NOT (MH "Animals")	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL

eTable 4. Search Strategy, Cochrane Library: Cochrane Central Register of Controlled Trials and Cochrane Database of Systematic Reviews

child* OR youth* OR teenage* OR adolescen* OR pediatric* OR preadolescen* OR p?ediatric* OR pe?diatric* in Title Abstract Keyword	AND
NIDDM OR MODY OR t2d OR typ* two NEAR/4 diabet* OR typ?two NEAR/4 diabet* OR typ* 2 NEAR/4 diabet* OR typ* II NEAR/4 diabet* OR typ?2 NEAR/4 diabet* OR typ?II NEAR/4 diabet* OR typ* ii NEAR/4 diabet* OR typ?ii NEAR/4 diabet* OR non insulin NEAR/4 diabet* OR noninsulin NEAR/4 diabet* OR late or adult* NEAR/4 diabet* OR matur* NEAR/4 diabet* OR slow NEAR/4 diabet* OR stabl* NEAR/4 diabet* OR ketoresist* NEAR/4 diabet* OR keto* resist* NEAR/4 diabet* OR keto* prone NEAR/4 diabet* in Title Abstract Keyword	AND
(proteinuria* OR albuminuria* OR hemoglobinuria* OR microalbuminuria* OR "micro albuminuria*" OR macroalbuminuria* OR "macro albuminuria*" OR creatininuria* OR (creatinine and urine*) OR diabet* NEAR nephropath* OR diabet* NEAR glomerulopath* OR diabet* NEAR glomerulosclerosis OR diabet* NEAR nephrosclerosis) OR (hypertens* OR elevat* NEAR/3 diastolic NEAR/1 pressure* OR elevat* NEAR/3 systolic NEAR/1 pressure* OR elevat* NEAR/3 arterial NEAR/1 pressure* OR elevat* NEAR/3 blood NEAR/1 pressure* OR high* NEAR/3 diastolic NEAR/1 pressure* OR high* NEAR/3 systolic NEAR/1 pressure* OR high* NEAR/3 arterial NEAR/1 pressure* OR high* NEAR/3 blood NEAR/1 pressure* OR rais* NEAR/3 diastolic NEAR/1 pressure* OR rais* NEAR/3 systolic NEAR/1 pressure* OR rais* NEAR/3 arterial NEAR/1 pressure* OR rais* NEAR/3 blood NEAR/1 pressure*) in Title Abstract Keyword	
(Word variations have been searched)	

eTable 5. Search Strategy, Web of Science: Conference Proceedings Citation Index-Science

#1	TI=(child* OR youth* OR teenage* OR adolescen* OR pediatric* OR preadolescen* OR p?ediatric* OR pe?diatric*)
#2	TS=(child* OR youth* OR teenage* OR adolescen* OR pediatric* OR preadolescen* OR p?ediatric* OR pe?diatric*)
#3	#1 OR #2
#4	TI=(NIDDM OR MODY OR t2d OR typ* two NEAR/4 diabet* OR typ?two NEAR/4 diabet* OR typ* 2 NEAR/4 diabet* OR typ* II NEAR/4 diabet* OR typ?2 NEAR/4 diabet* OR typ?II NEAR/4 diabet* OR typ* ii NEAR/4 diabet* OR typ?ii NEAR/4 diabet* OR non insulin NEAR/4 diabet* OR noninsulin NEAR/4 diabet* OR late or adult* NEAR/4 diabet* OR matur* NEAR/4 diabet* OR slow NEAR/4 diabet* OR stabl* NEAR/4 diabet* OR ketoresist* NEAR/4 diabet* OR keto* resist* NEAR/4 diabet* OR keto* prone NEAR/4 diabet*)
#5	TS=(NIDDM OR MODY OR t2d OR typ* two NEAR/4 diabet* OR typ?two NEAR/4 diabet* OR typ* 2 NEAR/4 diabet* OR typ* II NEAR/4 diabet* OR typ?2 NEAR/4 diabet* OR typ?II NEAR/4 diabet* OR typ* ii NEAR/4 diabet* OR typ?ii NEAR/4 diabet* OR non insulin NEAR/4 diabet* OR noninsulin NEAR/4 diabet* OR late or adult* NEAR/4 diabet* OR matur* NEAR/4 diabet* OR slow NEAR/4 diabet* OR stabl* NEAR/4 diabet* OR ketoresist* NEAR/4 diabet* OR keto* resist* NEAR/4 diabet* OR keto* prone NEAR/4 diabet*)
#6	#4 OR #5
#7	#3 AND #6
#8	TI=(hypertens* OR elevat* NEAR/4 diastolic pressure* OR elevat* NEAR/4 systolic pressure* OR elevat* NEAR/4 arterial pressure* OR elevat* NEAR/4 blood pressure* OR high* NEAR/4 diastolic pressure* OR high* NEAR/4 systolic pressure* OR high* NEAR/4 arterial pressure* OR high* NEAR/4 blood pressure* OR rais* NEAR/4 diastolic pressure* OR rais* NEAR/4 systolic pressure* OR rais* NEAR/4 arterial pressure* OR rais* NEAR/4 blood pressure*)
#9	TS=(hypertens* OR elevat* NEAR/4 diastolic pressure* OR elevat* NEAR/4 systolic pressure* OR elevat* NEAR/4 arterial pressure* OR elevat* NEAR/4 blood pressure* OR high* NEAR/4 diastolic pressure* OR high* NEAR/4 systolic pressure* OR high* NEAR/4 arterial pressure* OR high* NEAR/4 blood pressure* OR rais* NEAR/4 diastolic pressure* OR rais* NEAR/4 systolic pressure* OR rais* NEAR/4 arterial pressure* OR rais* NEAR/4 blood pressure*)
#10	TI=(proteinuria* OR albuminuria* OR hemoglobinuria* OR microalbuminuria* OR micro albuminuria* OR macroalbuminuria* OR macro albuminuria* OR creatininuria* OR (creatinine and urine*) OR diabet* NEAR/4 nephropath* OR diabet* NEAR/4 glomerulopath* OR diabet* NEAR/4 glomerulosclerosis OR diabet* NEAR/4 nephrosclerosis)
#11	TS=(proteinuria* OR albuminuria* OR hemoglobinuria* OR microalbuminuria* OR micro albuminuria* OR macroalbuminuria* OR macro albuminuria* OR creatininuria* OR (creatinine and urine*) OR diabet* NEAR/4 nephropath* OR diabet* NEAR/4 glomerulopath* OR diabet* NEAR/4 glomerulosclerosis OR diabet* NEAR/4 nephrosclerosis)
#12	#8 OR #9 OR #10 OR #11
#13	#7 AND #12

eTable 6. Results of Sensitivity Analysis for Prevalence of Hypertension in Pediatric Type 2 Diabetes Meta-analysis

Studies removed	Pooled prevalence estimate (% 95% CI)	I^2 , χ^2 p-value
Conference abstracts ²⁻⁴	26% (95% CI 20-33)	95%, <0.001
Sample size <50 ⁴⁻¹⁷	27% (95% CI 20-35)	96%, <0.001
Patients over 18 years old ⁵⁻ 7,12,13,15,17-20	26% (95% CI 19-34)	96%, <0.001
Different definition ^{2-4,6,7,9,12,13,16-} 18,20-24	34% (95% CI 24-45)	97%, <0.001

eTable 7. Results of Sensitivity Analysis for Prevalence of Albuminuria in Pediatric Type 2 Diabetes Meta-analysis

Studies removed	Pooled prevalence estimate (% 95%CI)	I^2 , χ^2 p-value
Conference abstracts ⁴	23% (95%CI 18-28)	83%, <0.001
Sample size <50 ^{4,8,15,16,25,26}	20% (95%CI 15-25)	87%, <0.001
Patients over 18 years old ^{15,18,25–29}	17% (95%CI 9-27)	86%, <0.001
Different definition ^{4,15,16,23,26,27,30,31}	25% (95%CI 20-31)	57%, 0.04

eTable 8. Results of Sensitivity Analysis for Prevalence of Persistent Albuminuria in Pediatric Type 2 Diabetes Meta-analysis

Studies removed	Pooled prevalence estimate (% 95%CI)	I^2 , χ^2 p-value
Sample size <50 ^{12,14,17,32–34}	28% (95%CI 13-46)	99%, <0.001
Patients over 18 years old ^{12,17,19,20,33–35}	24% (95%CI 15-35)	92%, <0.001
Different definition ^{12,14,19,20,31,32,34,35}	17% (95%CI 7-29)	92%, <0.001

eTable 9. Results of Sensitivity Analysis for Prevalence of Microalbuminuria in Pediatric Type 2 Diabetes Meta-analysis

Studies removed	Pooled prevalence estimate (% 95%CI)	I^2 , χ^2 p-value
Conference abstracts ^{3,36–38}	21% (95%CI 14-29)	92%, <0.001
Sample size <50 ^{5,8,15,25,26,36,38,39}	14% (95%CI 9-20)	92%, <0.001
Patients over 18 years old ^{5,15,18,25–27,40}	24% (95%CI 14-36)	86%, <0.001
Different definition ^{3,5,15,26,27,36,38,40}	19% (95%CI 11-27)	83%, <0.001

eTable 10. Results of Sensitivity Analysis for Prevalence of Persistent Microalbuminuria in Pediatric Type 2 Diabetes Meta-analysis

Studies removed	Pooled prevalence estimate (% 95%CI)	I^2 , χ^2 p-value
Sample size <50 ^{12,14,19,33,34,39}	35% (95%CI 15-60)	98%, <0.001
Patients over 18 years old ^{12,19,20,33,34}	23% (95%CI 14-34)	88%, <0.001
Different definition ^{12,14,20,32,34,41}	24% (95%CI 11-39)	84%, <0.001

eTable 11. Risk of Bias and OCEBM Level of Evidence of Included Studies

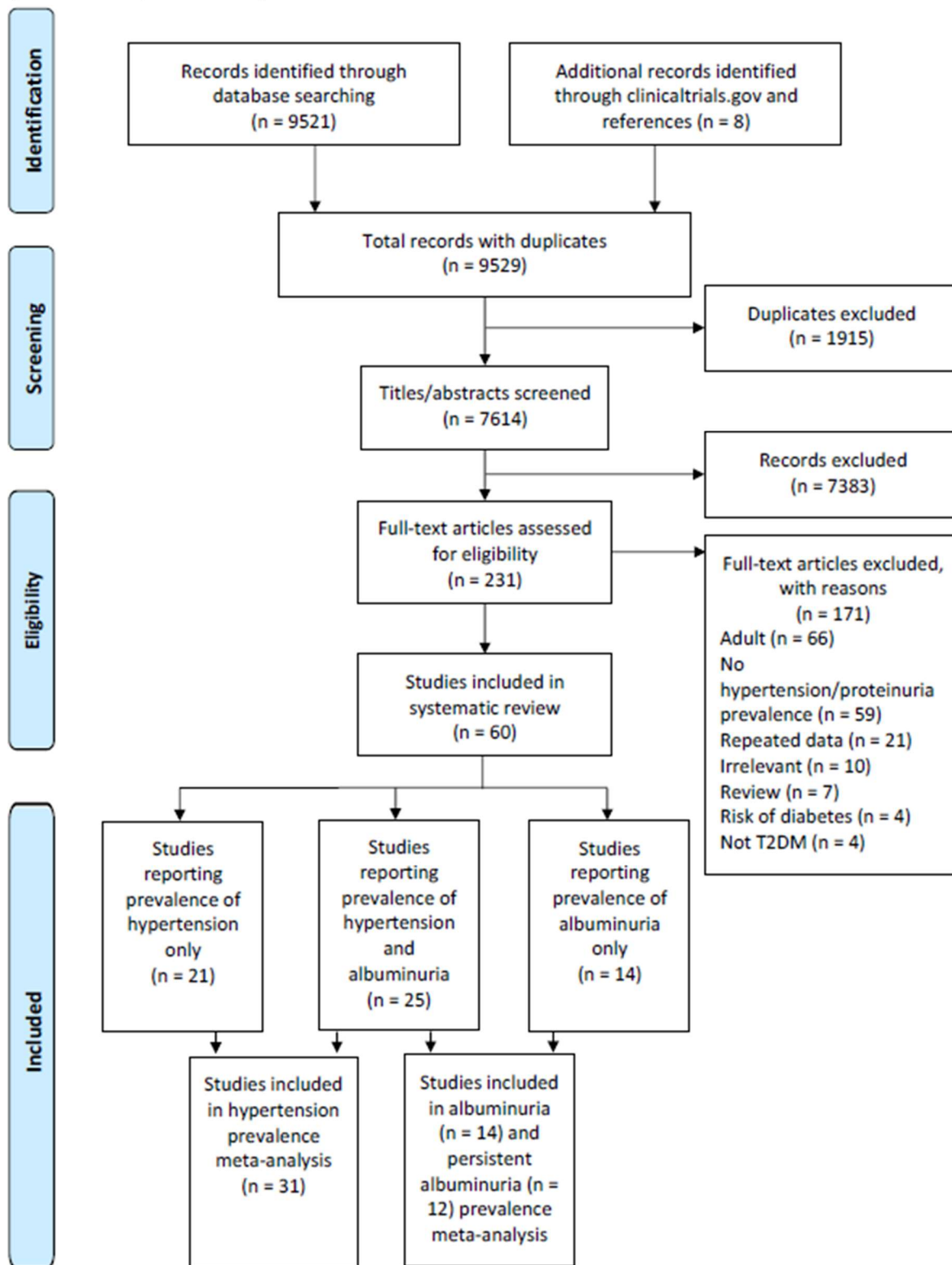
Author, year (country)	External Validity Items				Internal Validity Items						Overall Score	Overall Risk of Bias	OCEBM Level of Evidence Rating
	1	2	3	4	5	6	7	8	9	10			
Amed, 2012 (Canada) ²³	1	0	0	1	1	1	1	0	1	1	7	moderate	3
Amutha, 2012 (India) ¹⁸	0	1	1	1	1	1	1	1	1	1	9	low	1
Aulich, 2019 (Australia) ¹⁴	0	1	0	0	1	1	1	1	1	1	7	moderate	3
Balasanthiran, 2012 (UK) ⁶	0	0	1	1	1	1	1	1	1	1	8	moderate	2
Bell, 2009 (USA) ⁴²	0	1	1	1	1	1	1	1	1	1	9	low	1
Calagua Quipse, 2015 (Peru) ³⁶	0	0	0	1	1	0	1	1	1	1	6	moderate	3
Candler, 2018 (UK and Republic of Ireland) ³⁰	1	1	1	1	1	1	1	0	1	1	9	low	1
Copeland, 2011 (USA) ⁴³	1	1	0	1	1	1	1	1	1	1	9	low	3
Cruz, 2004 (Mexico) ⁴⁴	0	0	1	1	1	1	1	1	1	1	8	moderate	2
Curran, 2020 (Australia) ¹⁶	1	1	1	1	1	0	1	1	1	1	9	low	2
Dabelea, 2009 (USA) ⁴⁵	0	1	1	1	1	1	1	1	1	1	9	low	1
Dart, 2012 (Canada) ⁴¹	0	1	1	1	1	1	1	1	1	1	9	low	1
Dart, 2014 (Canada) ²²	0	1	1	1	1	1	1	1	1	1	9	low	1
Dart, 2019 (Canada) ³¹	0	0	1	1	1	1	1	1	1	1	8	moderate	1
Drutel, 2014 (USA) ²	0	0	0	1	1	1	1	1	1	1	7	moderate	3
Eppens, 2006 (Australia) ³²	0	1	1	0	1	1	1	1	1	1	8	moderate	2
Eppens, 2006 (Western Pacific) ⁴⁶	1	0	1	1	1	1	1	1	1	1	9	low	1
Ettinger, 2005 (USA) ⁸	0	0	0	1	1	1	1	1	1	1	7	moderate	3
Farah, 2006 (USA) ³³	0	0	0	1	1	1	1	1	1	0	6	moderate	3
Haynes, 2014 (Australia) ³	0	1	1	0	1	1	1	1	1	1	8	moderate	1
Holman, 2015 (UK) ⁴⁷	1	1	1	0	1	1	1	0	1	1	8	moderate	2
Hotu, 2004 (New Zealand) ²⁵	0	1	1	1	1	1	1	1	1	1	9	low	2
Jefferies, 2012 (New Zealand) ¹⁹	0	1	1	1	1	1	1	1	1	1	9	low	1
Kim, 2010 (USA) ⁴⁸	0	1	1	0	1	1	1	1	1	1	8	moderate	1

Khalil, 2019 (Egypt) ¹⁷	0	1	1	0	1	1	1	1	1	1	8	moderate	2
Klingensmith, 2016 (USA) ⁴⁹	1	1	1	1	1	1	1	0	1	1	9	low	1
Lawrence, 2009 (USA) ⁵⁰	0	1	1	1	1	1	1	1	1	1	9	low	1
Le, 2013 (USA) ⁵¹	0	0	1	0	1	1	1	1	1	1	7	moderate	1
Liu, 2009 (API) (USA) ⁵²	0	1	1	0	1	1	1	1	1	1	8	moderate	2
Maahs, 2007 (USA) ²⁸	1	1	1	1	1	1	1	1	1	1	10	low	1
Mayer-Davis, 2009 (USA) ⁵³	0	1	1	1	1	1	1	1	1	1	9	low	1
Nambam, 2017 (USA) ⁴⁰	1	1	1	1	1	1	1	0	1	1	9	low	1
Newton, 2015 (New Zealand) ³⁸	0	1	1	0	1	1	1	1	1	1	8	moderate	2
Osman, 2013 (Sudan) ⁵	0	1	1	1	1	1	1	1	1	1	9	low	2
Pelham, 2019 (USA) ⁵⁴	0	0	1	1	1	1	1	1	1	1	8	moderate	1
Pérez-Perdomo, 2005 (Puerto Rico) ⁷	1	0	1	0	1	1	1	0	1	1	7	moderate	2
Pinhas-Hamiel, 1996 (USA) ²⁴	0	1	1	1	1	1	1	1	1	1	9	low	1
Reinehr, 2005 (Germany) ¹¹	0	1	1	0	1	1	1	1	1	1	8	moderate	2
Rodriguez, 2010 (USA) ⁵⁵	1	1	1	1	1	1	1	1	1	1	10	low	1
Ruhayel, 2010 (Australia) ²⁶	0	1	1	0	1	1	1	1	1	1	8	moderate	2
Schmidt, 2012 (Germany and Austria) ²⁷	1	1	1	0	1	1	1	0	1	1	8	moderate	1
Scott, 1997 (USA) ⁹	0	0	0	1	1	1	1	1	1	1	7	moderate	3
Scott, 2004 (New Zealand) ¹²	0	1	1	1	1	1	1	0	1	1	8	moderate	2
Scott, 2006 (New Zealand) ²⁰	1	1	1	0	1	1	1	0	1	1	8	moderate	1
Sellers, 2007 (Canada) ⁵⁶	0	1	1	1	1	1	1	1	1	1	9	low	1
Sellers, 2009 (Canada) ²⁹	0	1	1	1	1	1	1	1	1	1	9	low	1
Sellers, 2016 (Canada) ³⁵	1	0	1	1	1	1	1	0	1	1	8	moderate	1
Shalitin, 2014 (Israel) ⁵⁷	0	0	0	1	1	1	1	1	1	0	6	moderate	3
Shield, 2009 (UK and Republic of Ireland) ⁵⁸	1	1	1	1	1	1	1	0	1	1	9	low	1
Son, 2015 (Korea) ³⁹	0	0	0	1	1	1	1	1	1	1	7	moderate	3
Unnikrishnan, 2008 (India) ¹³	1	1	1	1	1	1	1	0	1	1	9	low	2

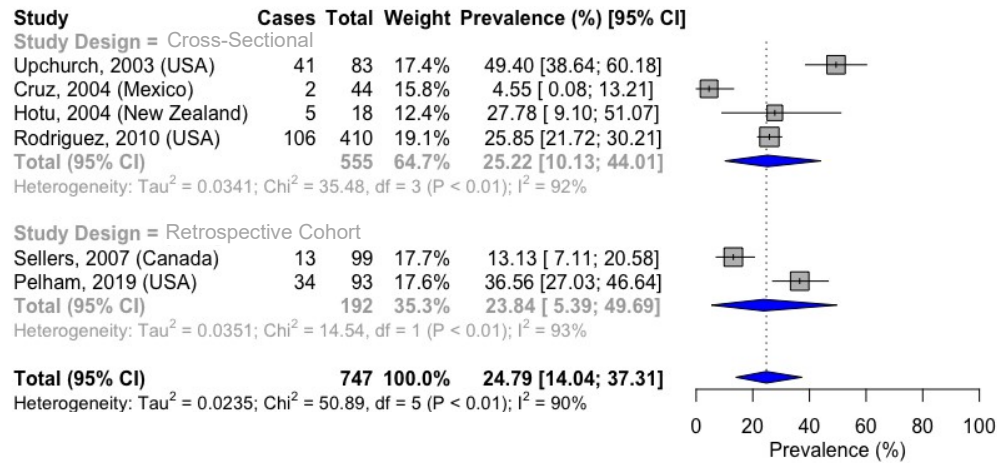
Upchurch, 2003 (USA) ⁵⁹	0	0	0	0	1	1	1	1	1	1	6	moderate	3
Urakami, 2009 (Japan)	0	0	0	1	1	1	1	1	1	1	7	moderate	3
Wei, 2003 (Taiwan) ⁶⁰	1	1	1	1	1	1	1	1	1	1	10	low	1
Yafi, 2019 (USA) ⁴	0	0	0	1	1	0	1	1	1	1	6	moderate	3
Yeow, 2019 (Malaysia) ¹⁵	0	1	1	0	1	1	1	1	1	1	8	moderate	2
Yoo, 2004 (Korea) ³⁴	0	0	0	1	1	1	1	1	1	1	7	moderate	3
Zabeen, 2016 (abstract) (Bangladesh) ³⁷	0	1	1	1	1	1	1	1	1	1	9	low	1
Zabeen, 2016 (Bangladesh) ⁶¹	0	1	1	1	1	1	1	1	1	1	9	low	1
Zdravkovic, 2004 (Canada) ¹⁰	0	1	1	1	1	1	1	1	1	1	9	low	2

Footnote: 0: no, 1: yes, overall risk of bias: low (score >8), moderate (score 6-8), or high (score ≤5). Items scored: 1) Was the study's target population a close representation of the national population in relation to relevant variables, e.g., age, sex?; 2) Was the sampling frame a true or close representation of the target population?; 3) Was some form of random selection used to select the sample, OR, was a census undertaken?; 4) Was the likelihood of non-response bias minimal?; 5) Were data collected directly from the subjects (as opposed to a proxy)?; 6) Was an acceptable case definition used in the study?; 7) Had the study instrument that measured the parameter of interest (e.g., prevalence of comorbidity) been tested for reliability and validity (if necessary)?; 8) Was the same mode of data collection used for all subjects?; 9) Was the length of the shortest prevalence period for the parameter of interest appropriate?; 10) Were the numerator(s) and denominator(s) for the parameter of interest appropriate?

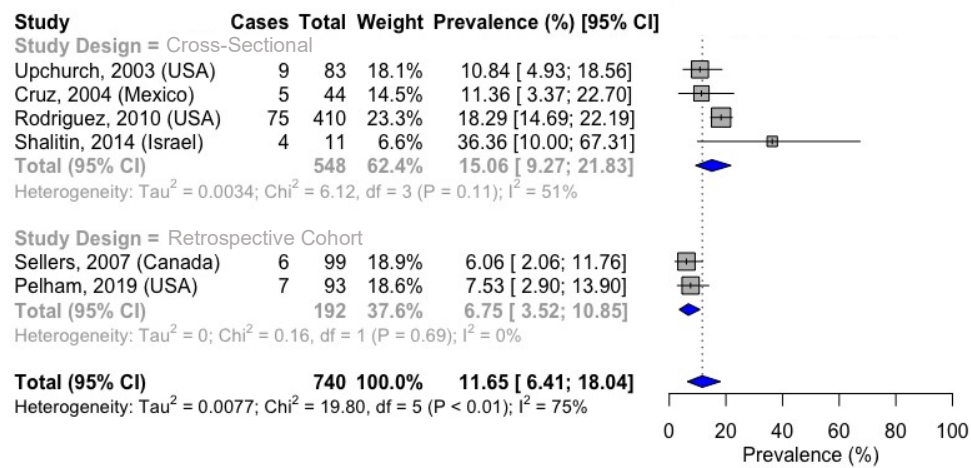
eFigure 1. Study Flow Diagram



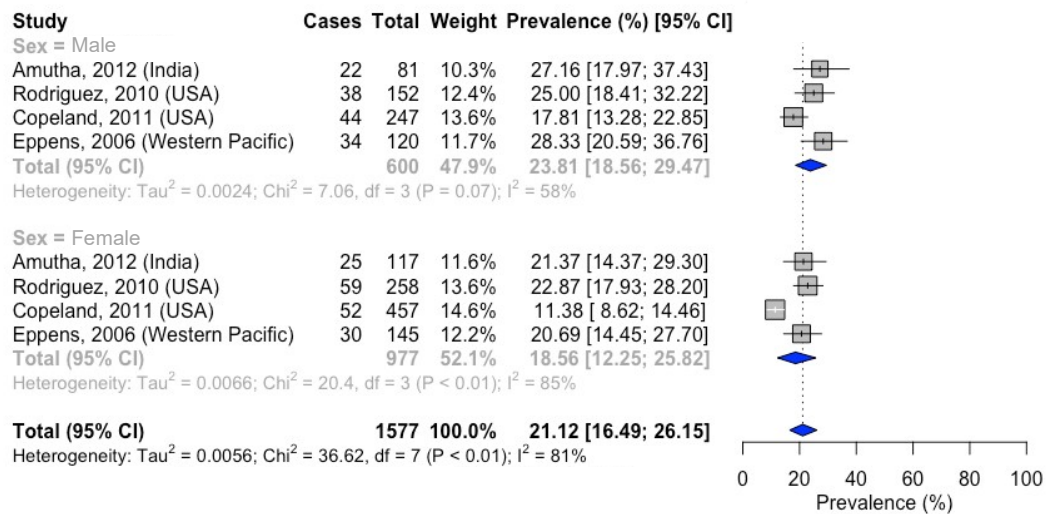
eFigure 2. Forest Plot Showing Pooled Prevalence of Systolic Hypertension in Pediatric Type 2 Diabetes



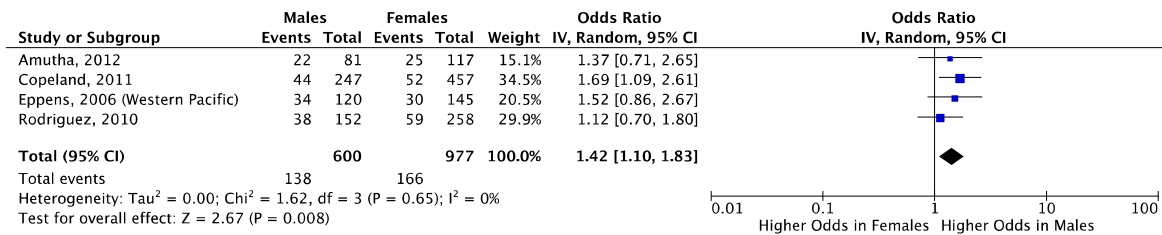
eFigure 3. Forest Plot Showing Pooled Prevalence of Diastolic Hypertension in Pediatric Type 2 Diabetes



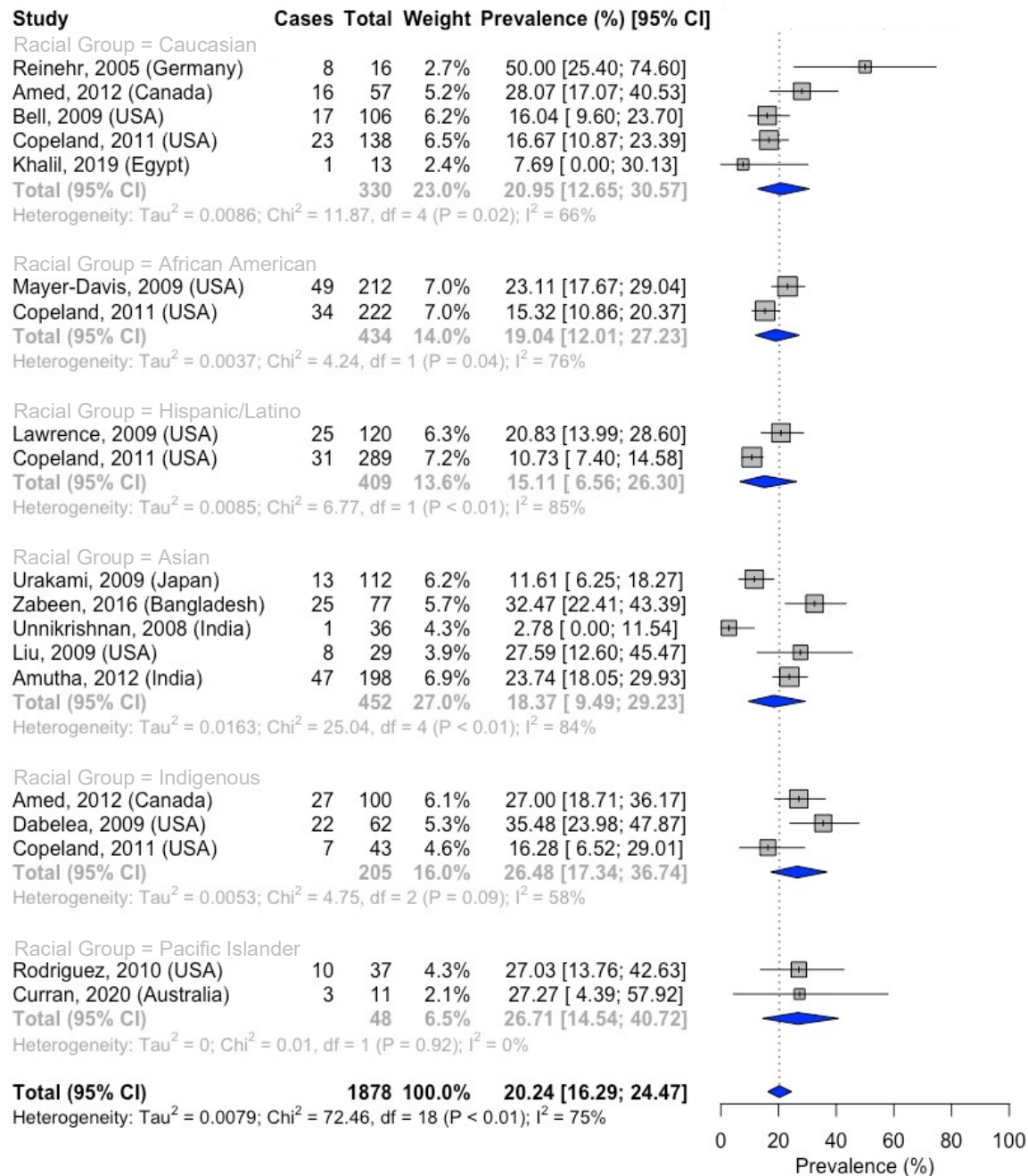
eFigure 4. Forest Plot Showing Pooled Prevalence of Hypertension in Pediatric Type 2 Diabetes
by Sex



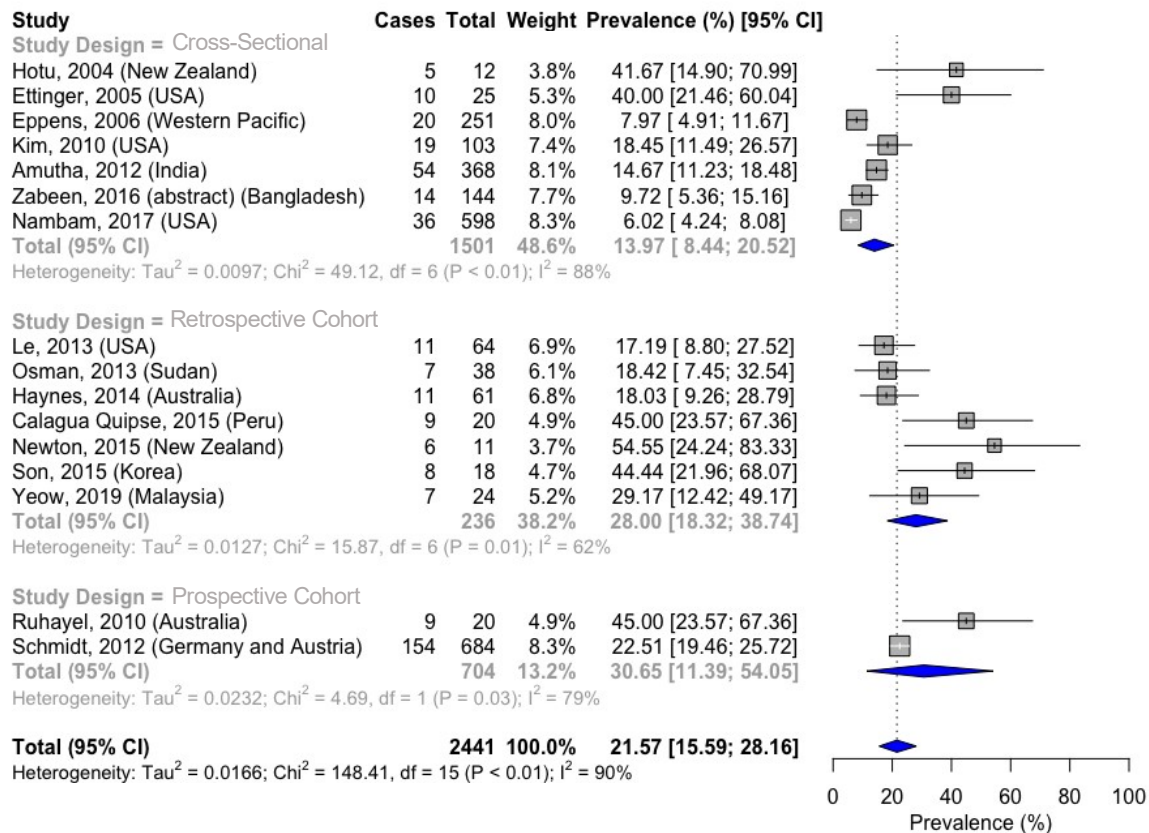
eFigure 5. Forest Plot Showing Pooled Odds Ratio of Hypertension in Male vs Female
Participants With Pediatric Type 2 Diabetes



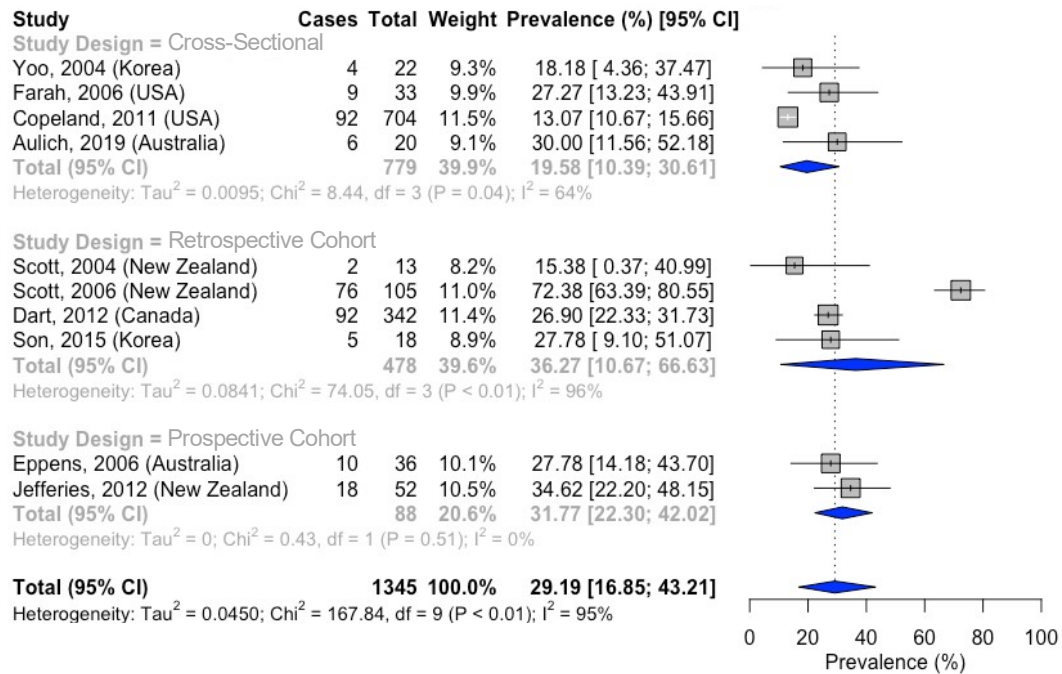
eFigure 6. Forest Plot Showing Pooled Prevalence of Hypertension Across Different Racial Groups With Pediatric Type 2 Diabetes



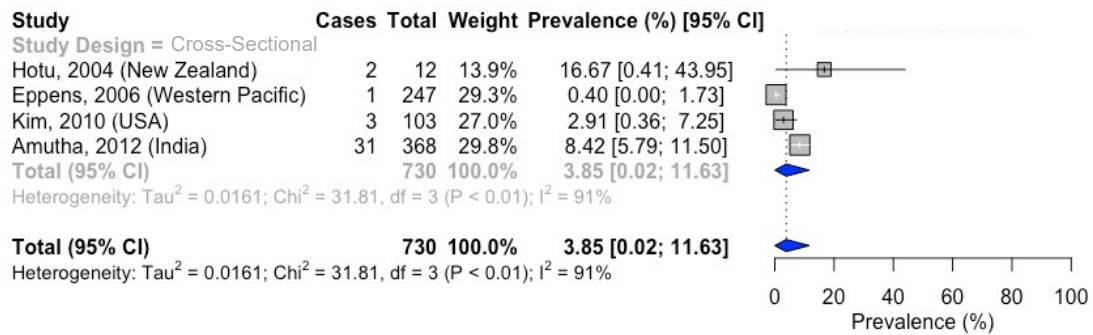
eFigure 7. Forest Plot Showing Pooled Prevalence of Microalbuminuria in Pediatric Type 2 Diabetes



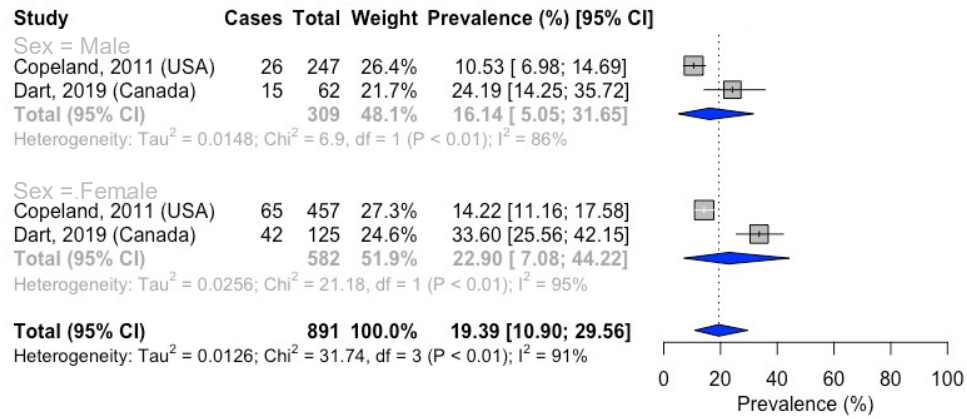
eFigure 8. Forest Plot Showing Pooled Prevalence of Persistent Microalbuminuria in Pediatric Type 2 Diabetes



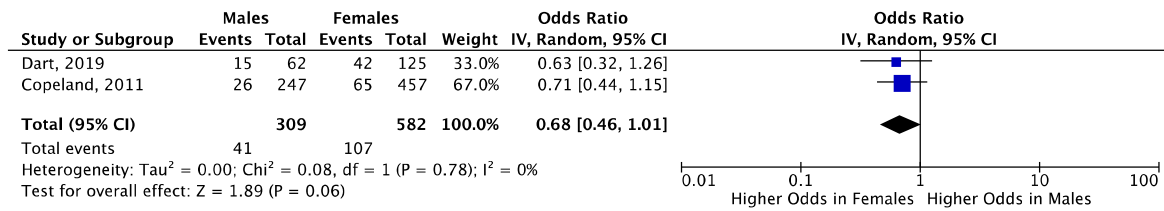
eFigure 9. Forest Plot Showing Pooled Prevalence of Macroalbuminuria in Pediatric Type 2 Diabetes



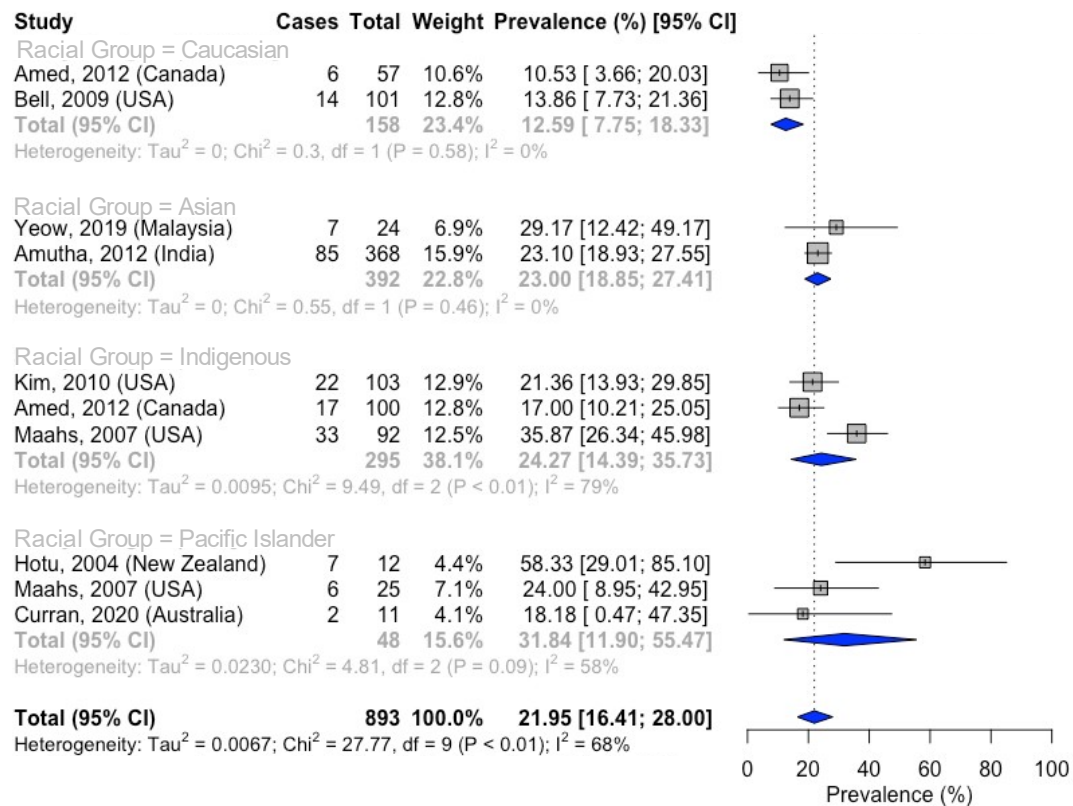
eFigure 10. Forest Plot Showing Pooled Prevalence of Persistent Albuminuria in Pediatric Type 2 Diabetes by Sex



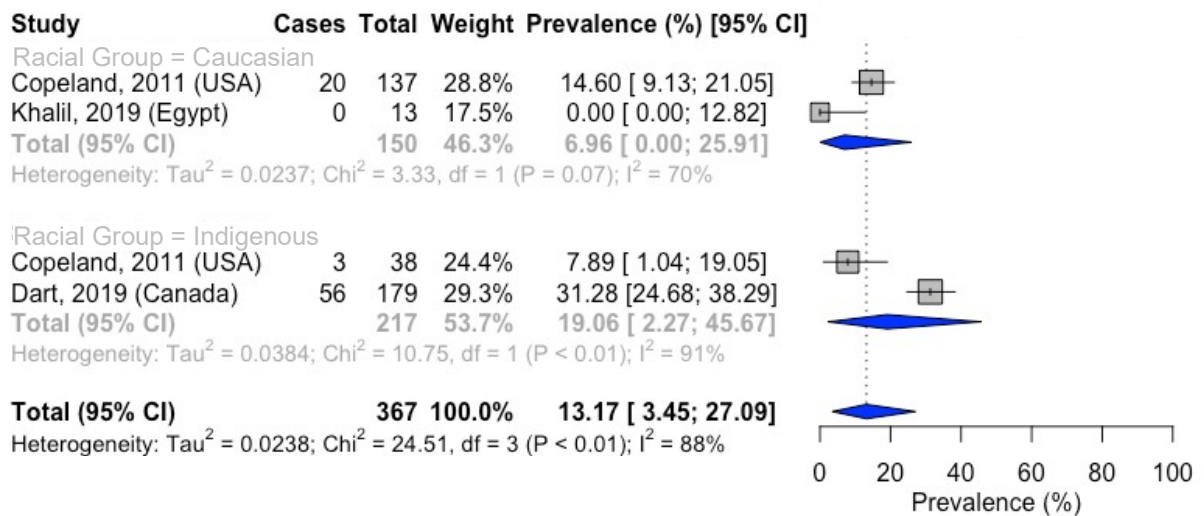
eFigure 11. Forest Plot Showing Pooled Odds Ratio of Persistent Albuminuria in Male vs Female Participants With Pediatric Type 2 Diabetes



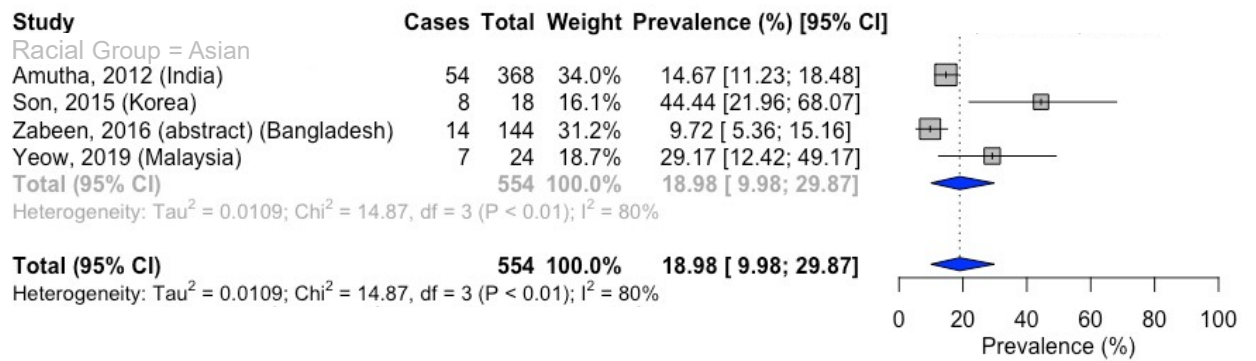
eFigure 12. Forest Plot Showing Pooled Prevalence of Albuminuria Across Different Racial Groups With Pediatric Type 2 Diabetes



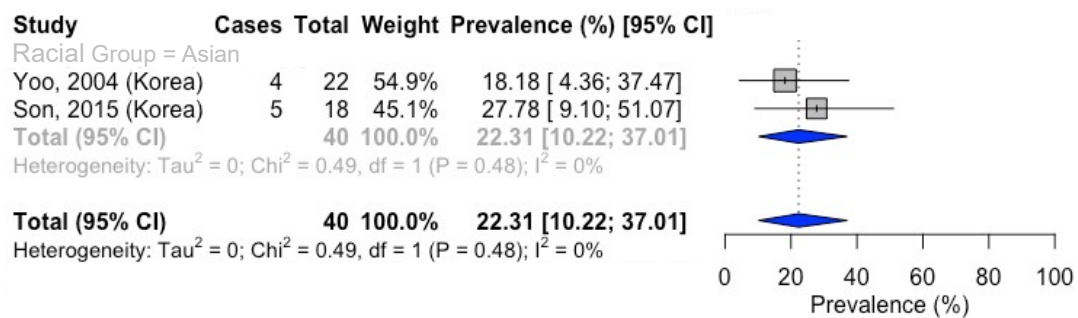
eFigure 13. Forest Plot Showing Pooled Prevalence of Persistent Albuminuria Across Different Racial Groups With Pediatric Type 2 Diabetes



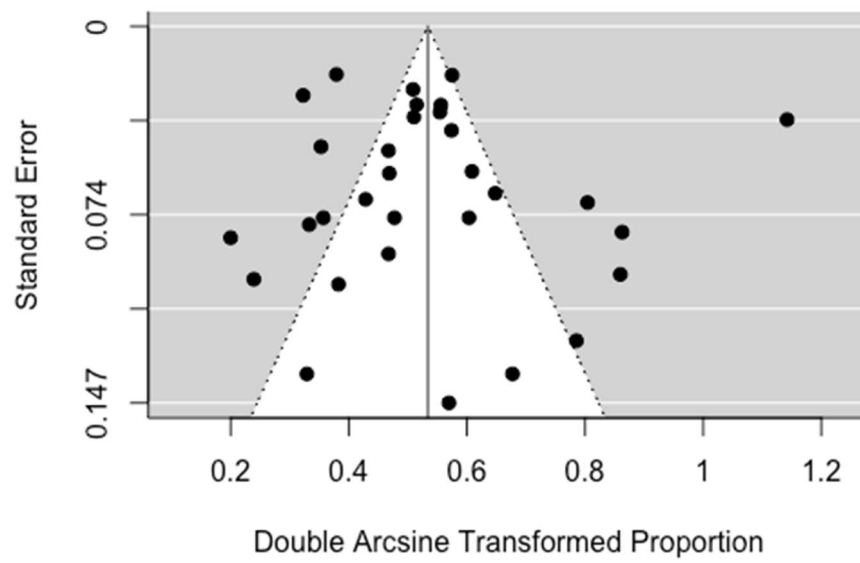
eFigure 14. Forest Plot Showing Pooled Prevalence of Microalbuminuria in Asian Patients with Pediatric Type 2 Diabetes



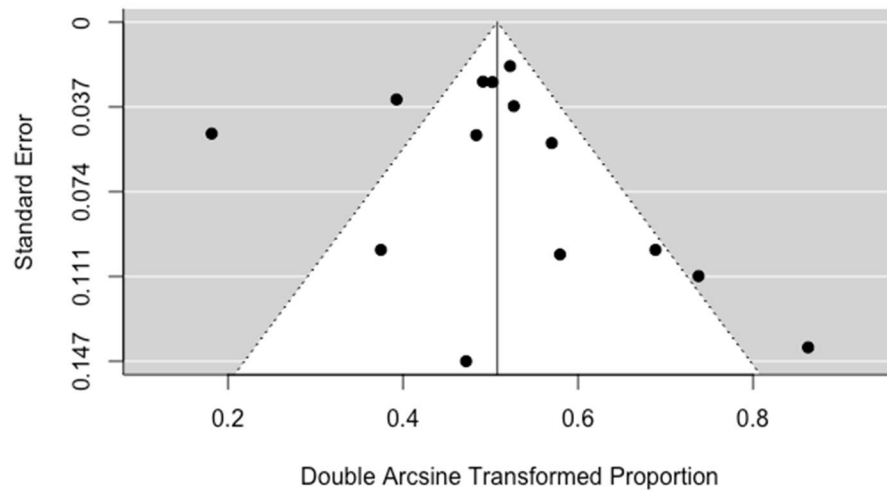
eFigure 15. Forest Plot Showing Pooled Prevalence of Persistent Microalbuminuria in Asian Patients with Pediatric Type 2 Diabetes



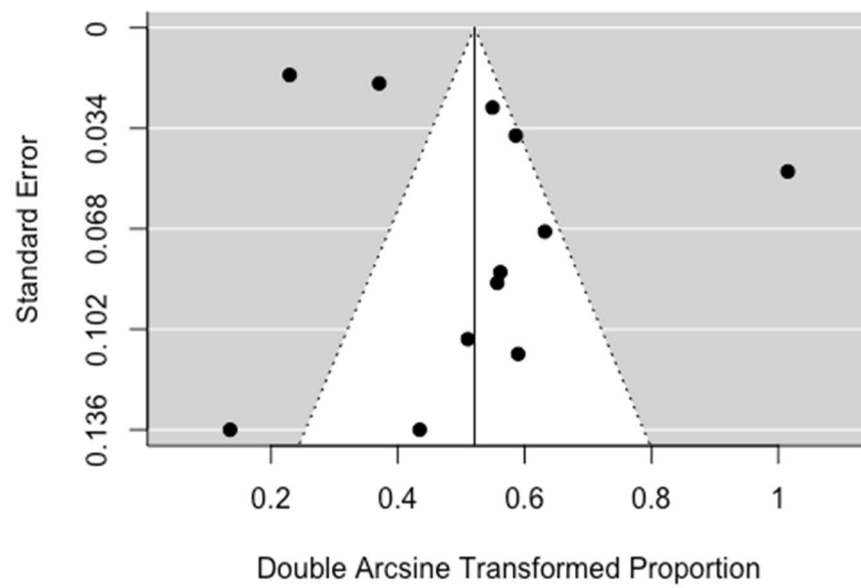
eFigure 16. Funnel Plot Examining Publication Bias for Pooled Prevalence of Hypertension Outcome



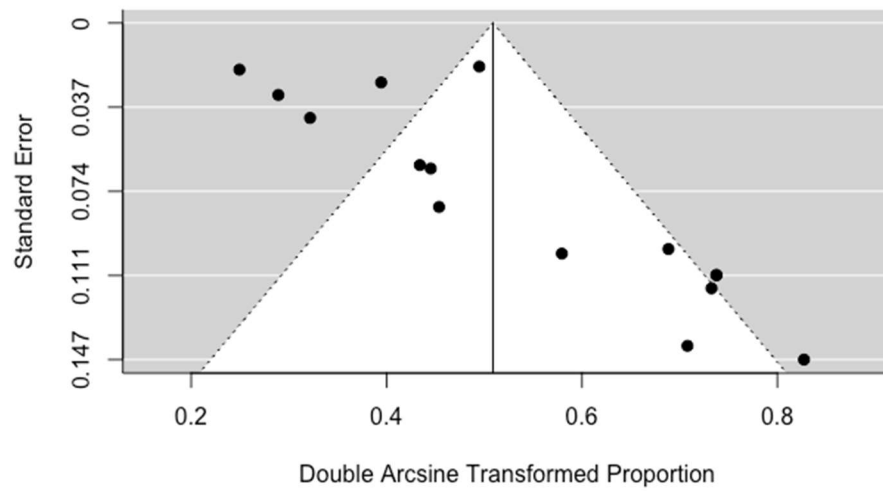
eFigure 17. Funnel Plot Examining Publication Bias for Pooled Prevalence of Albuminuria Outcome



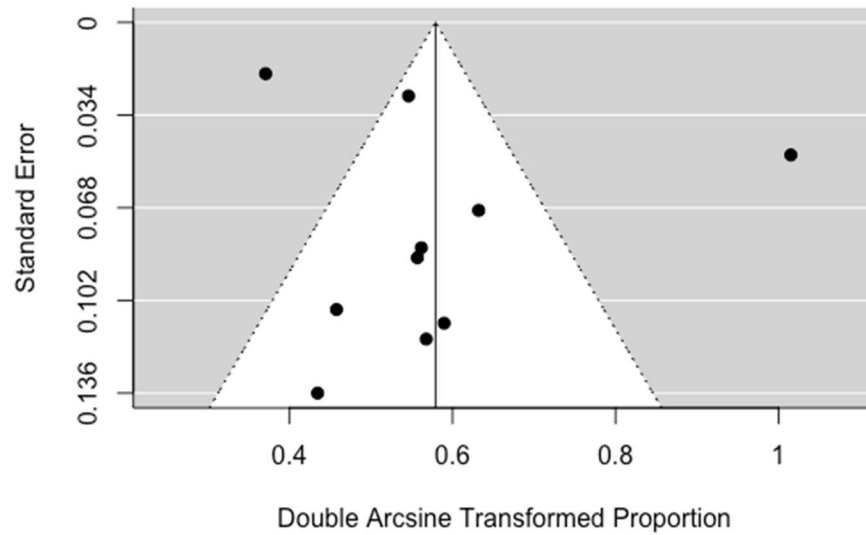
eFigure 18. Funnel Plot Examining Publication Bias for Pooled Prevalence of Persistent Albuminuria Outcome



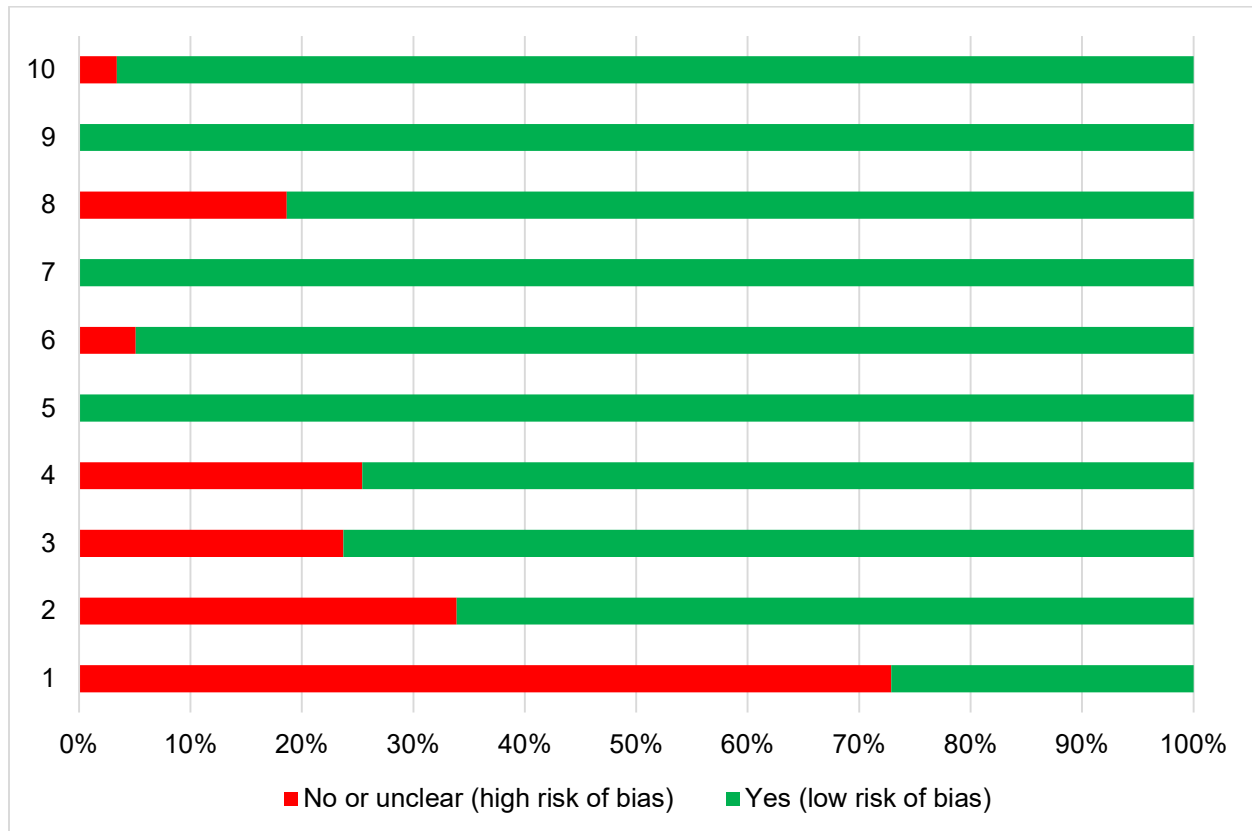
eFigure 19. Funnel Plot Examining Publication Bias for Pooled Prevalence of Microalbuminuria Outcome



eFigure 20. Funnel Plot Examining Publication Bias for Pooled Prevalence of Persistent Microalbuminuria Outcome



eFigure 21. Distribution of Risk of Bias Sources in the Included Studies



Footnote: Overall risk of bias: low (score >8), moderate (score 6-8), or high (score ≤5). Items scored: 1) Was the study's target population a close representation of the national population in relation to relevant variables, e.g., age, sex?; 2) Was the sampling frame a true or close representation of the target population?; 3) Was some form of random selection used to select the sample, OR, was a census undertaken?; 4) Was the likelihood of non-response bias minimal?; 5) Were data collected directly from the subjects (as opposed to a proxy)?; 6) Was an acceptable case definition used in the study?; 7) Had the study instrument that measured the parameter of interest (e.g., prevalence of comorbidity) been tested for reliability and validity (if necessary)?; 8) Was the same mode of data collection used for all subjects?; 9) Was the length of the shortest prevalence period for the parameter of interest appropriate?; 10) Were the numerator(s) and denominator(s) for the parameter of interest appropriate?

eAppendix. List of Studies Excluded at the Full-Text Screening Stage

Exclusion Reason: Adult (n = 66)

1. Al-Saeed AH, Constantino MI, Molyneaux L, et al. An Inverse Relationship Between Age of Type 2 Diabetes Onset and Complication Risk and Mortality: The Impact of Youth-Onset Type 2 Diabetes. *Diabetes Care*. 2016;39(5):823-829. doi:10.2337/dc15-0991
2. Baena Díez J, Martínez Martínez J, Alvarez Pérez B, et al. [Cardiovascular risk and the new diagnostic categories for diabetes mellitus proposed by the American Diabetes Association]. *Aten Primaria*. 2001;28(1):31-38. doi:10.1016/s0212-6567(01)78892-0
3. Brandt M, Harder K, Walluscheck KP, Fraund S, Böning A, Cremer J. Coronary artery bypass surgery in diabetic patients. *J Card Surg*. 2004;19(1):36-40. doi:10.1111/j.0886-0440.2004.04007.x
4. Calhoun D, Beals J, Carter EA, et al. Relationship between glycemic control and depression among American Indians in the Strong Heart Study. *J Diabetes Complications*. 2010;24(4):217-222. doi:10.1016/j.jdiacomp.2009.03.005
5. Chen H-S, Wu T-EJ, Jap T-S, et al. Subclinical hypothyroidism is a risk factor for nephropathy and cardiovascular diseases in Type 2 diabetic patients. *Diabet Med*. 2007;24(12):1336-1344. doi:10.1111/j.1464-5491.2007.02270.x
6. Cheng Y-Y, Leu H-B, Chen T-J, et al. Metformin-inclusive therapy reduces the risk of stroke in patients with diabetes: a 4-year follow-up study. *J Stroke Cerebrovasc Dis*. 2014;23(2):e99-e105. doi:10.1016/j.jstrokecerebrovasdis.2013.09.001
7. Chuang LM, Tsai ST, Huang BY, Tai TY, DIABCARE (Taiwan) Study Group. The current state of diabetes management in Taiwan. *Diabetes Res Clin Pract*. 2001;54 Suppl 1:S55-S65. doi:10.1016/s0168-8227(01)00310-2
8. Cisse A, Lopez Sall P, Diop PA, et al. [Frequency of microalbuminuria during diabetes in Dakar, Senegal]. *Dakar Med*. 2003;48(3):237-239. <https://www.ncbi.nlm.nih.gov/pubmed/15776639>
9. Constantino MI, Molyneaux L, Limacher-Gisler F, et al. Long-term complications and mortality in young-onset diabetes: type 2 diabetes is more hazardous and lethal than type 1 diabetes. *Diabetes Care*. 2013;36(12):3863-3869. doi:10.2337/dc12-2455
10. Coppel K, Williams S, Anderson K, Lamb C, Mann J. Characteristics and cardiovascular risk of new cases of type 2 diabetes in Otago, New Zealand, 1998-2004. *Diabetes Res Clin Pract*. 2008;82(3):396-401. doi:10.1016/j.diabres.2008.09.038
11. Craig KJ, Donovan K, Munnery M, Owens DR, Williams JD, Phillips AO. Identification and management of diabetic nephropathy in the diabetes clinic. *Diabetes Care*. 2003;26(6):1806-1811. doi:10.2337/diacare.26.6.1806
12. Cuellar NG, Ratcliffe SJ. Restless legs syndrome in type 2 diabetes: implications to diabetes educators. *Diabetes Educ*. 2008;34(2):218-234. doi:10.1177/0145721708314180
13. D'Silva LJ, Staecker H, Lin J, et al. Retrospective data suggests that the higher prevalence of benign paroxysmal positional vertigo in individuals with type 2 diabetes is mediated by hypertension. *J Vestib Res*. 2016;25(5-6):233-239. doi:10.3233/VES-150563
14. da Mata AR, Álvares J, Diniz LM, et al. Quality of life of patients with Diabetes Mellitus Types 1 and 2 from a referral health centre in Minas Gerais, Brazil. *Expert Rev Clin Pharmacol*. 2016;9(5):739-746. doi:10.1586/17512433.2016.1152180

15. Dabelea D, Stafford JM, Mayer-Davis EJ, et al. Association of Type 1 Diabetes vs Type 2 Diabetes Diagnosed During Childhood and Adolescence With Complications During Teenage Years and Young Adulthood. *JAMA*. 2017;317(8):825-835. doi:10.1001/jama.2017.0686
16. Donaghue KC, Fairchild JM, Craig ME, et al. Do all prepubertal years of diabetes duration contribute equally to diabetes complications? *Diabetes Care*. 2003;26(4):1224-1229. doi:10.2337/diacare.26.4.1224
17. Drion I, Kleefstra N, Landman GWD, et al. Plasma COOH-terminal proendothelin-1: a marker of fatal cardiovascular events, all-cause mortality, and new-onset albuminuria in type 2 diabetes? (ZODIAC-29). *Diabetes Care*. 2012;35(11):2354-2358. doi:10.2337/dc11-2526
18. Durruty P, Carpentier C, Krause P, García de los Ríos M. [Evaluation of retinal involvement in type 2 diabetics with microalbuminuria]. *Rev Med Chil*. 2000;128(10):1085-1092. <https://www.ncbi.nlm.nih.gov/pubmed/11349506>
19. Estacio RO, Dale RA, Schrier R, Krantz MJ. Relation of reduction in urinary albumin excretion to ten-year cardiovascular mortality in patients with type 2 diabetes and systemic hypertension. *Am J Cardiol*. 2012;109(12):1743-1748. doi:10.1016/j.amjcard.2012.02.020
20. Girach A, Vignati L. Diabetic microvascular complications--can the presence of one predict the development of another? *J Diabetes Complications*. 2006;20(4):228-237. doi:10.1016/j.jdiacomp.2006.03.001
21. Hannon TS, Gungor N, Arslanian SA. Type 2 diabetes in children and adolescents: a review for the primary care provider. *Pediatr Ann*. 2006;35(12):880-887. doi:10.3928/0090-4481-20061201-02
22. Heisler M, Smith DM, Hayward RA, Krein SL, Kerr EA. Racial disparities in diabetes care processes, outcomes, and treatment intensity. *Med Care*. 2003;41(11):1221-1232. doi:10.1097/01.MLR.0000093421.64618.9C
23. Hernández-Ávila M, Gutiérrez JP, Reynoso-Noverón N. [Diabetes mellitus in Mexico. Status of the epidemic]. *Salud Publica Mex*. 2013;55 Suppl 2:S129-S136. <https://www.ncbi.nlm.nih.gov/pubmed/24626688>
24. Ionescu-Tîrgoviște C, Paterache E, Cheța D, Farcașiu E, Serafinceanu C, Mincu I. Epidemiology of diabetes in Bucharest. *Diabet Med*. 1994;11(4):413-417. doi:10.1111/j.1464-5491.1994.tb00296.x
25. Jin K-K, Chen L, Pan J-Y, Li J-M, Wang Y, Wang F-Y. Acupressure therapy inhibits the development of diabetic complications in Chinese patients with type 2 diabetes. *J Altern Complement Med*. 2009;15(9):1027-1032. doi:10.1089/acm.2008.0608
26. Lascar N, Brown J, Pattison H, Barnett AH, Bailey CJ, Bellary S. Type 2 diabetes in adolescents and young adults. *Lancet Diabetes Endocrinol*. 2018;6(1):69-80. doi:10.1016/S2213-8587(17)30186-9
27. Maracy MR, Feizi A, Bagherinejad M. The prevalence and correlated determinants of hypertension and type 2 diabetes: A large community-based study in Isfahan, Iran. *Pak J Med Sci*. 2012;28(2):247-252.
28. McGrath NM, Parker GN, Dawson P. Early presentation of type 2 diabetes mellitus in young New Zealand Maori. *Diabetes Res Clin Pract*. 1999;43(3):205-209. doi:10.1016/s0168-8227(99)00003-0
29. Moreira TMM, Gomes EB, dos Santos JC. [Cardiovascular risk factors in young adults with arterial hypertension and/or diabetes mellitus]. *Rev Gaucha Enferm*. 2010;31(4):662-669. doi:10.1590/s1983-14472010000400008
30. Moss SE, Klein R, Klein BE. Ten-year incidence of visual loss in a diabetic population. *Ophthalmology*. 1994;101(6):1061-1070. doi:10.1016/s0161-6420(94)31217-6
31. Nelson RG, Knowler WC, Pettitt DJ, Hanson RL, Bennett PH. Incidence and determinants of elevated urinary albumin excretion in Pima Indians with NIDDM. *Diabetes Care*. 1995;18(2):182-187. doi:10.2337/diacare.18.2.182

32. Nelson RG, Pettitt DJ, Baird HR, et al. Pre-diabetic blood pressure predicts urinary albumin excretion after the onset of type 2 (non-insulin-dependent) diabetes mellitus in Pima Indians. *Diabetologia*. 1993;36(10):998-1001. doi:10.1007/BF02374490
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34. Penno G, Solini A, Bonora E, et al. HbA1c variability as an independent correlate of nephropathy, but not retinopathy, in patients with type 2 diabetes: the Renal Insufficiency And Cardiovascular Events (RIACE) Italian multicenter study. *Diabetes Care*. 2013;36(8):2301-2310. doi:10.2337/dc12-2264
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36. Ramaiya KL, Swai AB, McLarty DG, Alberti KG. Impaired glucose tolerance and diabetes mellitus in Hindu Indian immigrants in Dar es Salaam. *Diabet Med*. 1991;8(8):738-744. doi:10.1111/j.1464-5491.1991.tb01693.x
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41. So W-Y, Raboca J, Sobrepena L, et al. Comprehensive risk assessments of diabetic patients from seven Asian countries: The Joint Asia Diabetes Evaluation (JADE) program. *J Diabetes*. 2011;3(2):109-118. doi:10.1111/j.1753-0407.2011.00115.x
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44. Tseng C-H, Chong C-K, Tseng C-P, Shau W-Y, Tai T-Y. Hypertension is the most important component of metabolic syndrome in the association with ischemic heart disease in Taiwanese type 2 diabetic patients. *Circ J*. 2008;72(9):1419-1424. doi:10.1253/circj.cj-08-0009
45. Yardley JE, MacMillan F, Hay J, et al. The blood pressure response to exercise in youth with impaired glucose tolerance and type 2 diabetes. *Pediatr Exerc Sci*. 2015;27(1):120-127. doi:10.1123/pes.2014-0062
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Exclusion Reason: No Hypertension/Albuminuria Prevalence (n = 59)

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Exclusion Reason: Repeated Data (n = 21)

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Exclusion Reason: Irrelevant (n = 10)

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