Supplementary Table 1. Clinical characteristics

Authors-year	Country	Center	Patient no./ male	Age years Mean ± SD	Location No. of patients (percentage)	Stenosis at baseline (Mean ± SD)	Device type	Follow up (months) Mean ± SD	Initial NIHSS score ± SD	mTICI 2b/3	sICH	Re-stenosis No. of patients (percentage)	Mortality (percentage)	Drugs
M. Machado, et al. 2022 [1]	Portugal	Single center	13/ 9 (69.2%)	69.4 ± 12.3	BA 13 (100%)	N/A	Wingspan	3	N/A	N/A	N/A	1 (10%)	2 (15.40%)	Aspirin, Clopidogrel/ Ticagrelor
Li et al. 2021 [2]	China	Single center	174/ 138 (79.3%)	59.4 ± 8.7	BA 42 (24.1%) VA 58 (75.9%)	N/A	Gateway Wingspan and the Apollo stent	12	N/A	N/A	N/A	N/A	N/A	Aspirin, Clopidogrel
Jia, Z., et al. 2021 [3]	China	Single center	16/ 10 (62.5%)	66.6 ± 8.1	N/A	N/A	Apollo and Wingspan	36 ± 11	1.3 ± 1	N/A	0 (0%)	2 (12.50%)	2 (12.50%)	Aspirin, Clopidogrel
Zhongxiu Wang et al 2021 [4]	China	Single center	97/ 67 (69.1%)	64.4 ± 8.6	BA 30 (30.93%) VA 55 (56.7%) VBA 12	85.08% ± 8.12%	Selfexpanding stent and Balloon-mounted stent	3	N/A	N/A	N/A	N/A	2 (2.10%)	N/A
Feng Gao et al. 2020 [5]	China	Single center	50/ 47 (94%)	57.24 ± 11.38	VA 50 (100%)	N/A	selfexpandable stent (Wingspan stent, Stryker Neurovascular or Enterprise, Codman & Shurtleff)	24.18 ± 18.41	1.25 ± 0.9	N/A	N/A	4 (8%)	1 (2%)	Aspirin, Clopidogrel

Liu, P., et al. 2020 [6]	China	Multicenter	94/69 (73.4%)	59.48 ± 8.96	BA 94 (100%)	84.30% ± 7.40%	Apollo stent, Wingspan stent	12	N/A	N/A	N/A	6 (6.38%)	N/A	Aspirin, Clopidogrel
Yuanzhi Li, et al. [7] 2020	China	Multicenter	67/57 (85.07%)	57 ± 8	BA 67 (100%)	82% ± 9%	Gateway Balloon-mounted stent (Boston, MA)	56 ± 21	1.067 ± 0.122	N/A	0 (0%)	4 (6%)	0 (0%)	N/A
Tanja Djurdjevic et al. [8] 2019	UK	Single center	30/ 24 (80%)	68 ± 13	BA 6 (20%) VA 24 (80%)	N/A	Selfexpanding stent (Wingspan)	84 ± 30	N/A	N/A	N/A	5 (16.70%)	7 (23.30%)	Aspirin, Clopidogrel
Zhou et al. [9] 2019	China	Single center	213/146 (68.5%)	57.4 ± 11.8	BA 118 (55.4%) VA 95 (44.6%)	86.30% ± 6.80%	Wingspan or Apollo stent	9	N/A	206 (96.71%)	N/A	N/A	1 (0.46%)	Aspirin, Clopidogrel
Yong Zhang et al [10] 2019	China	Multicenter	167/131 (78.4%)	59.7 ± 8.81	BA 95 (56.8%) VA 72 (43.2%)	82.80% ± 11.80%	Apollo (Microport) balloon mounted stent	12	N/A	N/A	1 (0.59%)	10 (5.98%)	3 (1.79%)	Aspirin, Clopidogrel

H. Nordmeyer et al. [11] 2018	Germany	Single center	67/58 (86.6%)	70 ± 8	N/A	N/A	balloon mounted coronary stents (mainly Coroflex R blue, B.Braun) or selfexpanding intracranial stents (mainly Neuroform R , Stryker, and Acclino R , Acandis)	19 ± 23.5	N/A	N/A	1 (1.30%)	9 (13.40%)	6 (11.80%)	Aspirin, Clopidogrel
I. L. Maier, et al. [12] 2018	Germany	multi center	79/60 (76%)	69 ± 4	BA 79 (100%)	N/A	balloon expandable and self-expanding stents (wingspan)	21.3 ± 2.43	N/A	N/A	3 (3.80%)	8 (10.10%)	5 (6.30%)	aspirin, clopidogrel
Jia, et al. [13] 2017	China	single center	255/ 208 (81.6%)	60.3 ± 8.6	BA 255 (100%)	88.40% ± 7.30%	Apollo and wingspan stents	3	N/A	N/A	2(0.78 %)	0 (0%)	N/A	aspirin, clopidogrel
WeiXing Bai et al. [14] 2016	China	single center	91/66 (72.50 %)	61.3 ± 9.2	BA 91 (100%)	82.20% ± 5.80%	Wingspan stenting	31.3 ± 15.1	N/A	N/A	1 (1,10%)	6 (13%)	N/A	aspirin 100 mg/day & clopidogrel 75 mg/day and Nimodipine for blood pressure control

Jian Li, [15] 2016	China	single center	30/25 (83.3%)	59 ± 8.07	BA 14 (46.6%) VA 13 (43.3%) VBA 4	82.28% ± 8.02%	wingspan	17.81 ± 11.49	N/A	N/A	N/A	1 (3.30%)	N/A	N/A
ZiLiang Wang et al [16] 2015	China	Single center	88/66 (75%)	62.6 ± 10.1	VA 88 (100%)	82.20% ± 5.80%	Wingspan stent , 6F guiding catheter , Gateway angioplasty balloon	12	N/A	N/A	N/A	12 (26.10%)	5 (5.68%)	Aspirin, Clopidogrel and nimopidine in case of hypertension
He, Y., et al. [17] 2014	China	Single center	27/24 (88.88 %)	57 ± 10	BA 12 (44.4%) VA 15 (55.55%)	N/A	Wingspan stent (Stryker Corp.), Neuroform stent (Stryker Corp.), and Solitaire AB stent (ev3, Irvine, CA). Sometimes, balloonmounted stents, such as the much cheaper Apollo stent (MicroPort Medical, Shanghai, China)	6.4 ± 4.8	7 ± 3.5	N/A	N/A	2 (7.40%)	2 (7.40%)	Aspirin, Clopidogrel/ Tirofiban
Hatano, T. and T. Tsukahara [18] 2014	Japan	Single center	44/39 (88.6%)	68.3 ± 9.25	BA 7 (15.9%) VA 37 (84.1%)	83%	undersized balloon of 10–20 % (Gateway balloon, Boston Scientific), balloon-expandable coronary stents (Driver, S660, S670; Medtronic)	49 ± 19	N/A	N/A	N/A	9 (20.50%)	N/A	N/A

Jiang et al. [19] 2010	China	Single center	139/128 (92.1%)	58.5 ± 9.18	BA 69 (49.6%) VA 70 (50.4%)	81% ± 7.43%	Balloon-expandable and wingspan stents	22 ± 23.87	N/A	N/A	7 (5%)	16 (11.50%)	4 (2.87%)	N/A
Ralea, et al. [20] 2008	France	Single center	12/8 (66.6%)	62.5	BA 6 (50%) VA 4 (33.3%) VBA 2	81.60%	Tsunami, INX and Cérébrence and wingspan	15 ± 3	N/A	N/A	N/A	N/A	0 (0%)	aspirin, clopidogrel, abciximab
Steinfort et al. [21] 2007	Australia	Single center	13/13 (100%)	60	BA 5 (38.4%) VA 8 (61.5%)	67.70%	paclitaxelcoated stent (Taxus, Boston Scientific)	3	N/A	N/A	0 (0%)	0 (0%)	0 (0%)	aspirin, coumadin
Chow et al. [22] 2005	USA	Single center	39/ N/A	N/A	BA 15 (38.46%) VA 18 (46.15%) VBA 2	75% ± 14%	N/A	13	N/A	38 (97.20%)	N/A	N/A	2 (5.10%)	aspirin, clopidogrel/ or ticlopiding
Werner Weber et al [23] 2005	Germany	Multi center	21/15 (71.4%)	67 ± 10	BA 9 (42.85%) VA 13 (57.15%)	92.27%	stenting	9 ± 3.5	N/A	N/A	N/A	2 (9.50%)	N/A	N/A
W. Yu, et al. [24] 2005	USA	Single center	18/15 (83.3%)	69 ± 7	BA 18 (100%)	79.60% ± 11.70%	balloon expandable	26.7 ± 12.1	N/A	N/A	N/A	1 (0.55%)	2 (1.11%)	aspirin, clopidogrel
Kim et al. [25] 2005	Korea	Single center	17/10 (58.8%)	64 ± 5.75	BA 6 (31.3%) VA 13 (76.4%)	76.10% ± 14.60%	s660, s670, Cypher, Jo flex	17.1 ± 12.5	N/A	N/A	1 (5.88%)	0 (0%)	0 (0%)	aspirin, clopidogrel, LMWnadropine calcium (fraxiparine), periprocedure Abciximab in one case

Guimaraens et al. [26] 2005	Spain	Single center	8/7 (87.5%)	65.37 ± 5.5	BA 8 (100%)	N/A	Velocity or INX	6	N/A	N/A	0 (0%)	0 (0%)	0 (0%)	N/A
Tsuura M, et al. [27] 2004	Japan	Single center	18/14 (77.7%)	62.5 ± 6.8	BA 6 (33.3%) VA 12 (66.6%)	80.80% ± 12.86%	N/A	12	N/A	N/A	1(5.50 %)	4 (22.20%)	1 (5.50%)	N/A
Levy, et al. [28] 2003	USA	Single center	10/7 (70%)	73.5 ± 9.2	BA 10 (100%)	71.60% ± 9.75%	Velocity (3), AVE INR, GFX, Maverick, S7, Neurolink, S540, S670,	16.5 ± 13.7	N/A	N/A	0 (0%)	N/A	1 (10%)	N/A
Elad I. Levy [29] 2002	USA	Single center	8/8 (100%)	68	BA 8 (100%)	77%	AVE 4 (50%), ACS 2 (25%), NIR 2 (25%)	26.3 ± 9.8	N/A	N/A	N/A	N/A	1 (12.5%)	aspirin, warfarin, clopidpgrel, ticlopidine
Levy et al. [30] 2001	USA	Single center	11/11 (100%)	62.9 ± 8.34	BA 8 (72.7%) VA 3 (27.27%)	N/A	AVE, ACS, NIR	4.37 ± 2.1	N/A	N/A	N/A	N/A	4 (36.36%)	aspirin, clopidogrel, abciximab in periprocedural period
Gomez et al. [31] 2000	USA	Single center	12/10 (83.30 %)	62.6 ± 10.9	BA 12 (100%)	71.40%	Duet, GFX, Microstent II and GFX	5.9	N/A	N/A	0 (0%)	N/A	0 (0%)	N/A

BA, basilar artery; VA, internal vertebral artery; VBA, vertebrobasilar artery; *N/A*, not available; SD, standard deviation; NIHSS, National Institutes of Health Stroke Scale; mTICI, modified treatment in cerebral ischemia; sICH, symptomatic intracerebral hemorrhage

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Supplemental Table 2. Risk of bias assessment for included studies

NIH study Quality assessment tool for Cohort studies – Criteria

Q 1. Was the research question or objective in this paper clearly stated?
Q 2. Was the study population clearly specified and defined?
Q 3. Was the participation rate of eligible persons at least 50%?
Q 4. Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?
Q 5. Was a sample size justification, power description, or variance and effect estimates provided?
Q 6. For the analyses in this paper, were the exposure(s) of interest measured prior to the outcome(s) being measured?
Q 7. Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?
Q 8. For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (e.g., categories of exposure, or exposure measured as continuous variable)?
Q 9. Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?
Q 10. Was the exposure(s) assessed more than once over time?
Q 11. Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?
Q 12. Were the outcome assessors blinded to the exposure status of participants?
Q 13. Was loss to follow-up after baseline 20% or less?
Q 14. Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposure(s) and outcome(s)?

NIH study Quality assessment tool for case series studies – Criteria

Q1. Was the study question or objective clearly stated?
Q 2. Was the study population clearly and fully described, including a case definition?
Q 3. Were the cases consecutive?
Q 4. Were the subjects comparable?
Q 5. Was the intervention clearly described?
Q 6. Were the outcome measures clearly defined, valid, reliable, and implemented consistently across all study participants?
Q 7. Was the length of follow-up adequate?
Q 8. Were the statistical methods well-described?
Q 9. Were the results well-described?

NIH study Quality assessment tool for clinical trial studies – Criteria

Q 1. Was the study described as randomized, a randomized trial, a randomized clinical trial, or an RCT?

Q 2. Was the method of randomization adequate (i.e., use of randomly generated assignment)?
Q 3. Was the treatment allocation concealed (so that assignments could not be predicted)?
Q 4. Were study participants and providers blinded to treatment group assignment?
Q 5. Were the people assessing the outcomes blinded to the participants' group assignments?
Q 6. Were the groups similar at baseline on important characteristics that could affect outcomes (e.g., demographics, risk factors, co-morbid conditions)?
Q 7. Was the overall drop-out rate from the study at endpoint 20% or lower of the number allocated to treatment?
Q 8. Was the differential drop-out rate (between treatment groups) at endpoint 15 percentage points or lower?
Q 9. Was there high adherence to the intervention protocols for each treatment group?
Q 10. Were other interventions avoided or similar in the groups (e.g., similar background treatments)?
Q 11. Were outcomes assessed using valid and reliable measures, implemented consistently across all study participants?
Q 12. Did the authors report that the sample size was sufficiently large to be able to detect a difference in the main outcome between groups with at least 80% power?
Q 13. Were outcomes reported or subgroups analyzed prespecified (i.e., identified before analyses were conducted)?
Q 14. Were all randomized participants analyzed in the group to which they were originally assigned, i.e., did they use an intention-to-treat analysis?

Table 1.*

No.	Study	Type of study	Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q10	Q11	Q12	Q13	Q14	Overall rate
1	(Gao, Sun et al. 2020)	Cohort	+	+	+	+	-	+	+	+	-	-	+	NR	-	NR	Good
2	(Bai, Gao et al. 2016)	Cohort	+	+	+	+	+	+	+	-	-	-	-	-	+	+	Fair
3	(Tanja, André et al. 2019)	Cohort	+	+	+	+	-	-	+	-	-	-	+	-	+	-	Poor
4	(Gomez, Misra et al. 2000)	Case series	-	+	+	-	+	+	+	+	-	/	/	/	/	/	Fair
5	(Chow, Masaryk et al. 2005)	Cohort	+	-	-	-	-	-	+	-	-	+	+	NR	+	NR	Poor
6	(Jiang, Du et al. 2010)	Cohort	+	+	+	+	+	-	+	-	-	+	NR	NR	+	-	Good
7	(Li, Yan et al. 2021)	Cohort	+	+	+	+	+	-	+	-	+	-	+	-	+	-	Good
8	(Liu, Li et al. 2020)	Trial	-	-	-	+	+	+	+	+	+	+	+	-	+	-	Good
9	(Nordmeyer,	Cohor	+	+	+	+	-	+	+	-	+	+	+	-	+	+	Good

	Chapot et al. 2018)	t															
10	(Weber, Mayer et al. 2005)	Case series	+	-	-	+	-	+	+	-	+	/	/	/	/	/	Poor
11	(Wang, Gao et al. 2015)	Cohort	+	+	+	+	-	-	+	-	+	-	+	-	-	+	Fair
12	(Jia, Zhao et al. 2021)	Cohort	+	+	+	+	-	+	-	-	+	-	+	-	+	+	Good
13	(He, Bai et al. 2014)	Cohort	+	+	+	+	-	+	+	-	+	-	-	-	+	-	Good
14	(Hatano and Tsukahara 2014)	Case series	+	-	+	+	-	-	+	-	-	/	/	/	/	/	Poor
15	(Li, Li et al. 2020)	Cohort	+	+	+	+	-	+	+	-	+	-	+	-	+	-	Good
16	(Levy, Hanel et al. 2002)	Case Series	+	+	-	+	+	+	+	+	+	/	/	/	/	/	Good
17	(Zhou, Wang et al. 2019)	Cohort	+	+	+	+	-	+	+	+	+	+	+	-	-	-	Good
18	(Jia, Liebeskind et al. 2017)	Cohort	+	+	+	+	+	+	+	+	+	-	+	-	+	-	Good
19	(Li, Zhao et al. 2012)	Case Series	+	+	-	+	+	+	+	-	+	/	/	/	/	/	Good
20	(Ralea, Nighoghossian et al. 2008)	Case Series	-	+	-	+	+	+	+	-	+	/	/	/	/	/	Good
21	(Steinfort, Ng et al. 2007)	Case Series	+	+	-	+	+	+	+	-	+	/	/	/	/	/	Good
22	(Yu, Smith et al. 2005)	Cohort	+	+	+	+	+	+	+	+	+	+	+	-	+	-	Good
23	(Kim, Lee et al. 2005)	Case Series	+	+	-	+	+	+	+	-	+	/	/	/	/	/	Good
24	(Guimaraens, Vivas et al. 2005)	Case Series	+	+	+	+	+	+	+	+	+	/	/	/	/	/	Good
25	(Machado, Borges de Almeida et al. 2022)	Cohort	+	+	+	+	-	+	+	-	+	+	+	+	+	-	Good
26	(Tsuura, Terada et al. 2004)	Case Series	+	+	+	+	-	+	+	+	+	/	/	/	/	/	Good
27	(Levy, Hanel et al. 2003)	Case Series	+	+	+	+	-	+	+	-	+	/	/	/	/	/	Good
28	(Levy, Horowitz et al. 2001)	Case Series	+	+	+	+	-	+	+	-	+	/	/	/	/	/	Good
29	(Maier,	Cohor	+	+	+	+	-	+	+	-	+	+	+	-	+	+	Good

	Karch et al. 2018)	t															
30	(Wang, Wang et al. 2020)	Case series	+	+	+	+	+	+	+	+	+	/	/	/	/	/	Good
31	(Zhang, Rajah et al. 2019)	Trial	-	-	-	+	+	+	+	+	+	+	+	-	-	-	Fair

As the criteria for case series studies include 9 questions, the cells from Q10-Q14 have been filled with "/" mark.

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Supplementary figures:

Figure s1A

Figure s1B

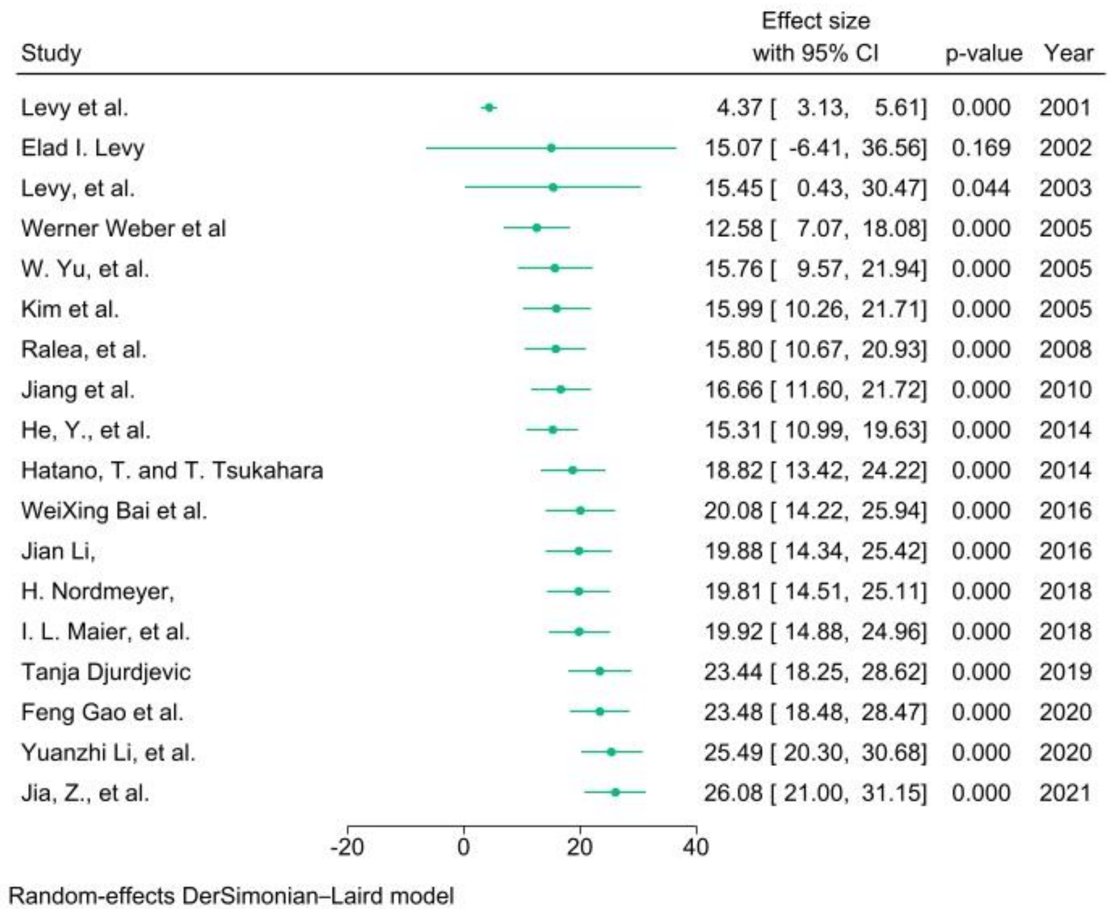

Study
Effect size with 95% CI
p-value
Year
Levy et al. 4.37 [3.13, 5.61] 0.000 2001
Elad I. Levy 15.07 [-6.41, 36.56] 0.169 2002
Levy, et al. 15.45 [0.43, 30.47] 0.044 2003
Werner Weber et al 12.58 [7.07, 18.08] 0.000 2005
W. Yu, et al. 15.76 [9.57, 21.94] 0.000 2005
Kim et al. 15.99 [10.26, 21.71] 0.000 2005
Ralea, et al. 15.80 [10.67, 20.93] 0.000 2008
Jiang et al. 16.66 [11.60, 21.72] 0.000 2010
He, Y., et al. 15.31 [10.99, 19.63] 0.000 2014
Hatano, T. and T. Tsukahara 18.82 [13.42, 24.22] 0.000 2014
WeiXing Bai et al. 20.08 [14.22, 25.94] 0.000 2016
Jian Li, 19.88 [14.34, 25.42] 0.000 2016
H. Nordmeyer, 19.81 [14.51, 25.11] 0.000 2018
I. L. Maier, et al. 19.92 [14.88, 24.96] 0.000 2018
Tanja Djurdjevic 23.44 [18.25, 28.62] 0.000 2019
Feng Gao et al. 23.48 [18.48, 28.47] 0.000 2020
Yuanzhi Li, et al. 25.49 [20.30, 30.68] 0.000 2020
Jia, Z., et al. 26.08 [21.00, 31.15] 0.000 2021
-20
0
20
40
Random-effects DerSimonian–Laird model

Figure s1C

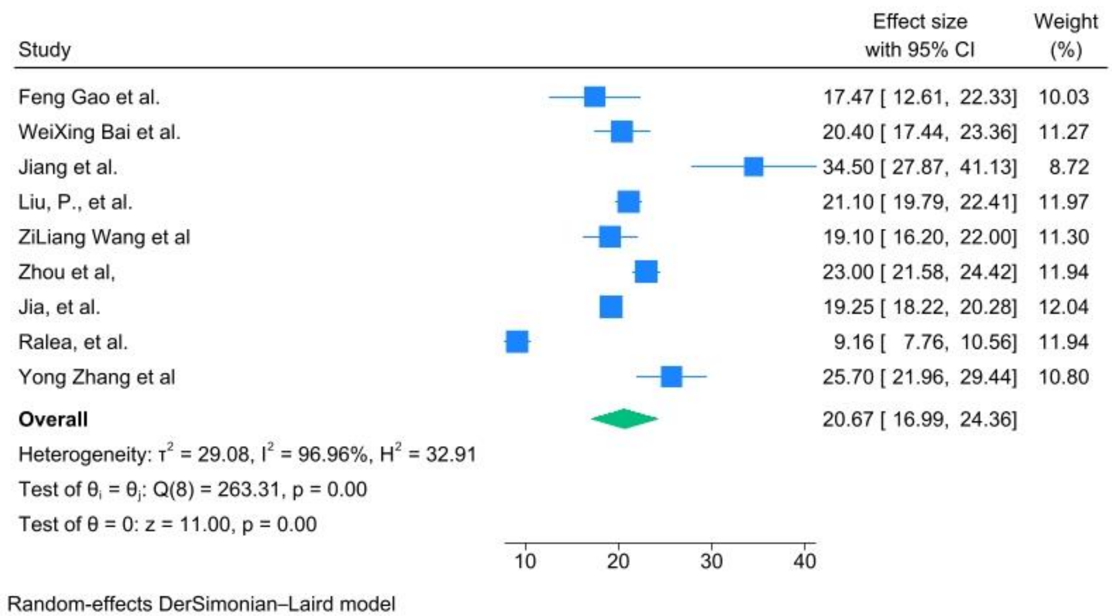

Study
Effect size with 95% CI
Weight (%)
Feng Gao et al. 17.47 [12.61, 22.33] 10.03
WeiXing Bai et al. 20.40 [17.44, 23.36] 11.27
Jiang et al. 34.50 [27.87, 41.13] 8.72
Liu, P., et al. 21.10 [19.79, 22.41] 11.97
ZiLiang Wang et al 19.10 [16.20, 22.00] 11.30
Zhou et al, 23.00 [21.58, 24.42] 11.94
Jia, et al. 19.25 [18.22, 20.28] 12.04
Ralea, et al. 9.16 [7.76, 10.56] 11.94
Yong Zhang et al 25.70 [21.96, 29.44] 10.80
Overall 20.67 [16.99, 24.36]
Heterogeneity: τ^2 = 29.08, I^2 = 96.96%, H^2 = 32.91
Test of $\theta_i = \theta_j$: Q(8) = 263.31, p = 0.00
Test of θ = 0: z = 11.00, p = 0.00
10
20
30
40
Random-effects DerSimonian–Laird model

Figure s2A

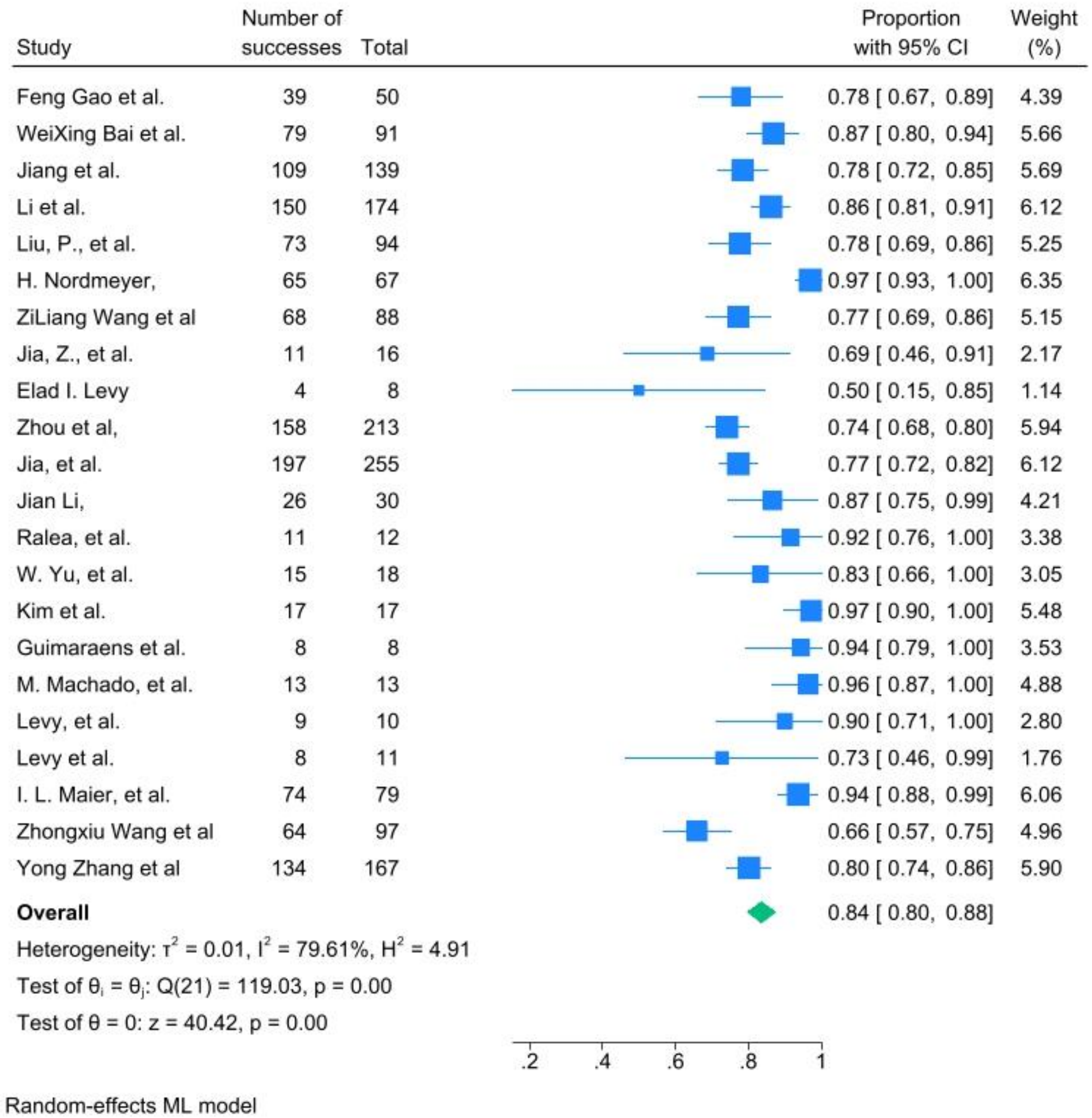

Study
Number of successes
Total
Proportion with 95% CI
Weight (%)
Feng Gao et al. 39 50 0.78 [0.67, 0.89] 4.39
WeiXing Bai et al. 79 91 0.87 [0.80, 0.94] 5.66
Jiang et al. 109 139 0.78 [0.72, 0.85] 5.69
Li et al. 150 174 0.86 [0.81, 0.91] 6.12
Liu, P., et al. 73 94 0.78 [0.69, 0.86] 5.25
H. Nordmeyer, 65 67 0.97 [0.93, 1.00] 6.35
ZiLiang Wang et al 68 88 0.77 [0.69, 0.86] 5.15
Jia, Z., et al. 11 16 0.69 [0.46, 0.91] 2.17
Elad I. Levy 4 8 0.50 [0.15, 0.85] 1.14
Zhou et al, 158 213 0.74 [0.68, 0.80] 5.94
Jia, et al. 197 255 0.77 [0.72, 0.82] 6.12
Jian Li, 26 30 0.87 [0.75, 0.99] 4.21
Ralea, et al. 11 12 0.92 [0.76, 1.00] 3.38
W. Yu, et al. 15 18 0.83 [0.66, 1.00] 3.05
Kim et al. 17 17 0.97 [0.90, 1.00] 5.48
Guimaraens et al. 8 8 0.94 [0.79, 1.00] 3.53
M. Machado, et al. 13 13 0.96 [0.87, 1.00] 4.88
Levy, et al. 9 10 0.90 [0.71, 1.00] 2.80
Levy et al. 8 11 0.73 [0.46, 0.99] 1.76
I. L. Maier, et al. 74 79 0.94 [0.88, 0.99] 6.06
Zhongxiu Wang et al 64 97 0.66 [0.57, 0.75] 4.96
Yong Zhang et al 134 167 0.80 [0.74, 0.86] 5.90
Overall 0.84 [0.80, 0.88]
Heterogeneity: τ² = 0.01, I² = 79.61%, H² = 4.91
Test of θi = θj: Q(21) = 119.03, p = 0.00
Test of θ = 0: z = 40.42, p = 0.00
.2
.4
.6
.8
1
Random-effects ML model

Figure s2B

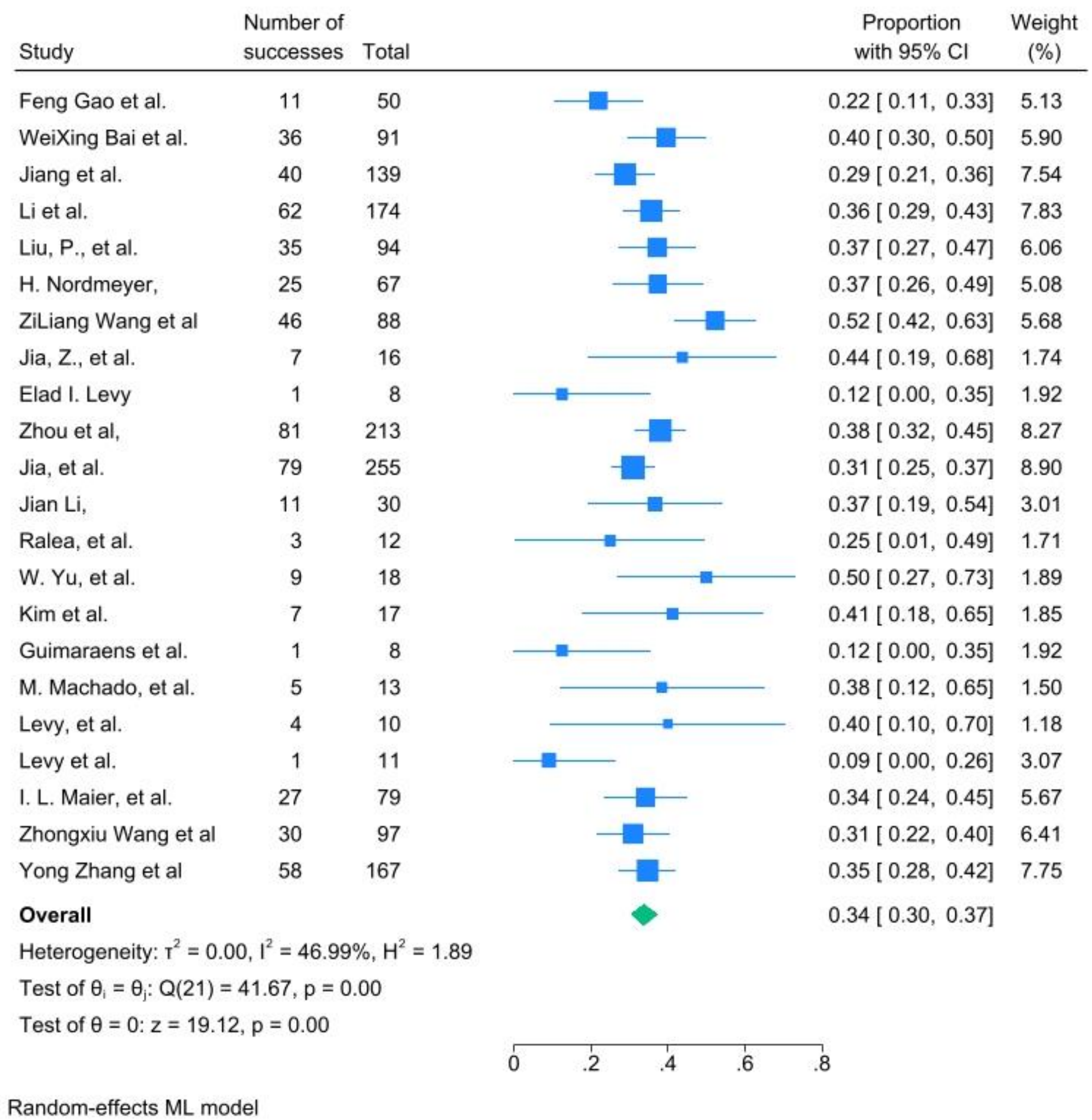

Study
Number of successes
Total
Proportion with 95% CI
Weight (%)
Feng Gao et al. 11 50 0.22 [0.11, 0.33] 5.13
WeiXing Bai et al. 36 91 0.40 [0.30, 0.50] 5.90
Jiang et al. 40 139 0.29 [0.21, 0.36] 7.54
Li et al. 62 174 0.36 [0.29, 0.43] 7.83
Liu, P., et al. 35 94 0.37 [0.27, 0.47] 6.06
H. Nordmeyer, 25 67 0.37 [0.26, 0.49] 5.08
ZiLiang Wang et al 46 88 0.52 [0.42, 0.63] 5.68
Jia, Z., et al. 7 16 0.44 [0.19, 0.68] 1.74
Elad I. Levy 1 8 0.12 [0.00, 0.35] 1.92
Zhou et al, 81 213 0.38 [0.32, 0.45] 8.27
Jia, et al. 79 255 0.31 [0.25, 0.37] 8.90
Jian Li, 11 30 0.37 [0.19, 0.54] 3.01
Ralea, et al. 3 12 0.25 [0.01, 0.49] 1.71
W. Yu, et al. 9 18 0.50 [0.27, 0.73] 1.89
Kim et al. 7 17 0.41 [0.18, 0.65] 1.85
Guimaraens et al. 1 8 0.12 [0.00, 0.35] 1.92
M. Machado, et al. 5 13 0.38 [0.12, 0.65] 1.50
Levy, et al. 4 10 0.40 [0.10, 0.70] 1.18
Levy et al. 1 11 0.09 [0.00, 0.26] 3.07
I. L. Maier, et al. 27 79 0.34 [0.24, 0.45] 5.67
Zhongxiu Wang et al 30 97 0.31 [0.22, 0.40] 6.41
Yong Zhang et al 58 167 0.35 [0.28, 0.42] 7.75
Overall 0.34 [0.30, 0.37]
Heterogeneity: τ^2 = 0.00, I^2 = 46.99%, H^2 = 1.89
Test of $\theta_i = \theta_j$: Q(21) = 41.67, p = 0.00
Test of θ = 0: z = 19.12, p = 0.00
0 .2 .4 .6 .8
Random-effects ML model

Figure s2C

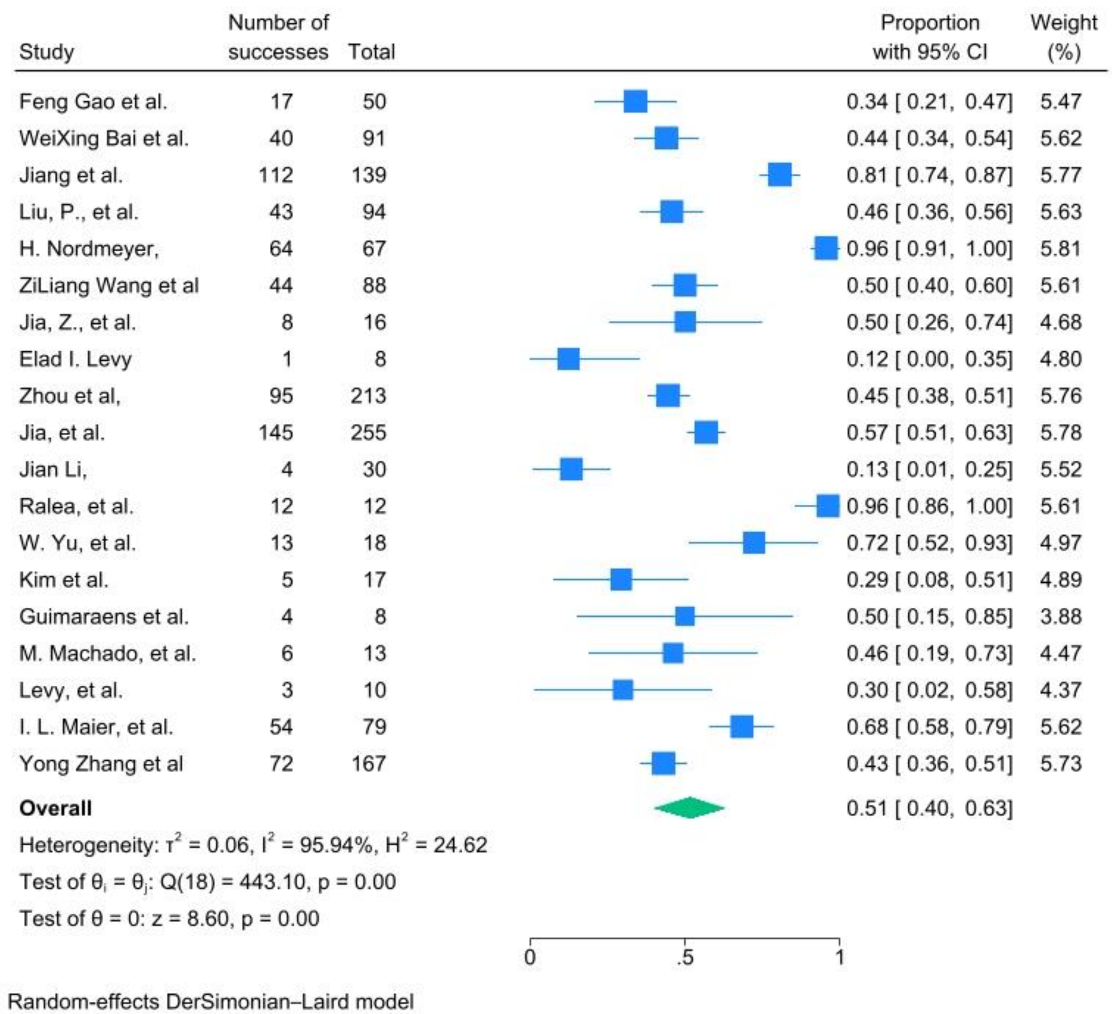

Study
Number of successes
Total
Proportion with 95% CI
Weight (%)
Feng Gao et al. 17 50 0.34 [0.21, 0.47] 5.47
WeiXing Bai et al. 40 91 0.44 [0.34, 0.54] 5.62
Jiang et al. 112 139 0.81 [0.74, 0.87] 5.77
Liu, P., et al. 43 94 0.46 [0.36, 0.56] 5.63
H. Nordmeyer, 64 67 0.96 [0.91, 1.00] 5.81
ZiLiang Wang et al 44 88 0.50 [0.40, 0.60] 5.61
Jia, Z., et al. 8 16 0.50 [0.26, 0.74] 4.68
Elad I. Levy 1 8 0.12 [0.00, 0.35] 4.80
Zhou et al, 95 213 0.45 [0.38, 0.51] 5.76
Jia, et al. 145 255 0.57 [0.51, 0.63] 5.78
Jian Li, 4 30 0.13 [0.01, 0.25] 5.52
Ralea, et al. 12 12 0.96 [0.86, 1.00] 5.61
W. Yu, et al. 13 18 0.72 [0.52, 0.93] 4.97
Kim et al. 5 17 0.29 [0.08, 0.51] 4.89
Guimaraens et al. 4 8 0.50 [0.15, 0.85] 3.88
M. Machado, et al. 6 13 0.46 [0.19, 0.73] 4.47
Levy, et al. 3 10 0.30 [0.02, 0.58] 4.37
I. L. Maier, et al. 54 79 0.68 [0.58, 0.79] 5.62
Yong Zhang et al 72 167 0.43 [0.36, 0.51] 5.73
Overall 0.51 [0.40, 0.63]
Heterogeneity: τ^2 = 0.06, I^2 = 95.94%, H^2 = 24.62
Test of $\theta_i = \theta_j$: Q(18) = 443.10, p = 0.00
Test of θ = 0: z = 8.60, p = 0.00
0
.5
1
Random-effects DerSimonian–Laird model

Figure s2D

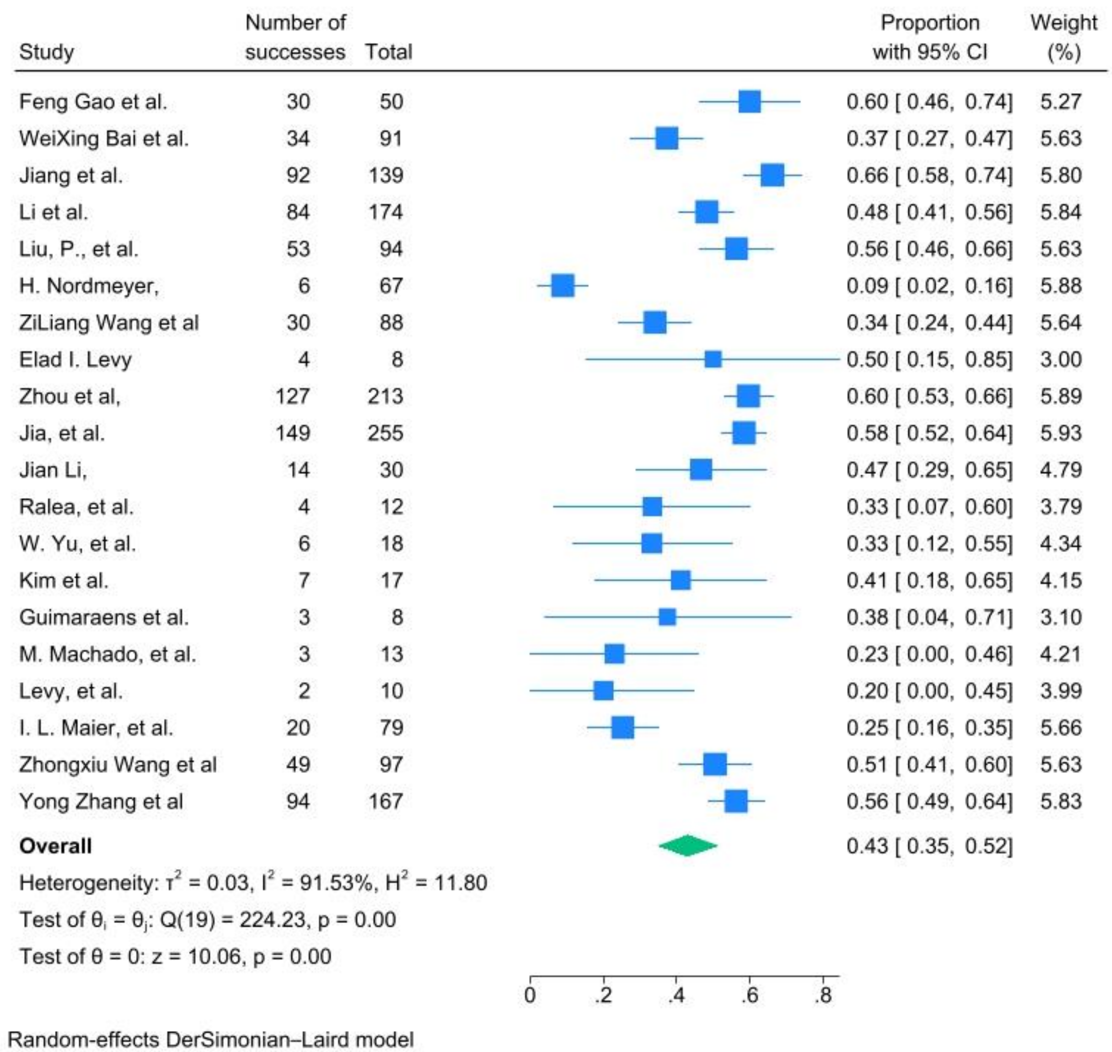

Study
Number of successes
Total
Proportion with 95% CI
Weight (%)
Feng Gao et al. 30 50 0.60 [0.46, 0.74] 5.27
WeiXing Bai et al. 34 91 0.37 [0.27, 0.47] 5.63
Jiang et al. 92 139 0.66 [0.58, 0.74] 5.80
Li et al. 84 174 0.48 [0.41, 0.56] 5.84
Liu, P., et al. 53 94 0.56 [0.46, 0.66] 5.63
H. Nordmeyer, 6 67 0.09 [0.02, 0.16] 5.88
ZiLiang Wang et al 30 88 0.34 [0.24, 0.44] 5.64
Elad I. Levy 4 8 0.50 [0.15, 0.85] 3.00
Zhou et al, 127 213 0.60 [0.53, 0.66] 5.89
Jia, et al. 149 255 0.58 [0.52, 0.64] 5.93
Jian Li, 14 30 0.47 [0.29, 0.65] 4.79
Ralea, et al. 4 12 0.33 [0.07, 0.60] 3.79
W. Yu, et al. 6 18 0.33 [0.12, 0.55] 4.34
Kim et al. 7 17 0.41 [0.18, 0.65] 4.15
Guimaraens et al. 3 8 0.38 [0.04, 0.71] 3.10
M. Machado, et al. 3 13 0.23 [0.00, 0.46] 4.21
Levy, et al. 2 10 0.20 [0.00, 0.45] 3.99
I. L. Maier, et al. 20 79 0.25 [0.16, 0.35] 5.66
Zhongxiu Wang et al 49 97 0.51 [0.41, 0.60] 5.63
Yong Zhang et al 94 167 0.56 [0.49, 0.64] 5.83
Overall 0.43 [0.35, 0.52]
Heterogeneity: τ^2 = 0.03, I^2 = 91.53%, H^2 = 11.80
Test of $\theta_i = \theta_j$: Q(19) = 224.23, p = 0.00
Test of θ = 0: z = 10.06, p = 0.00
0
.2
.4
.6
.8
Random-effects DerSimonian–Laird model

Figure s3

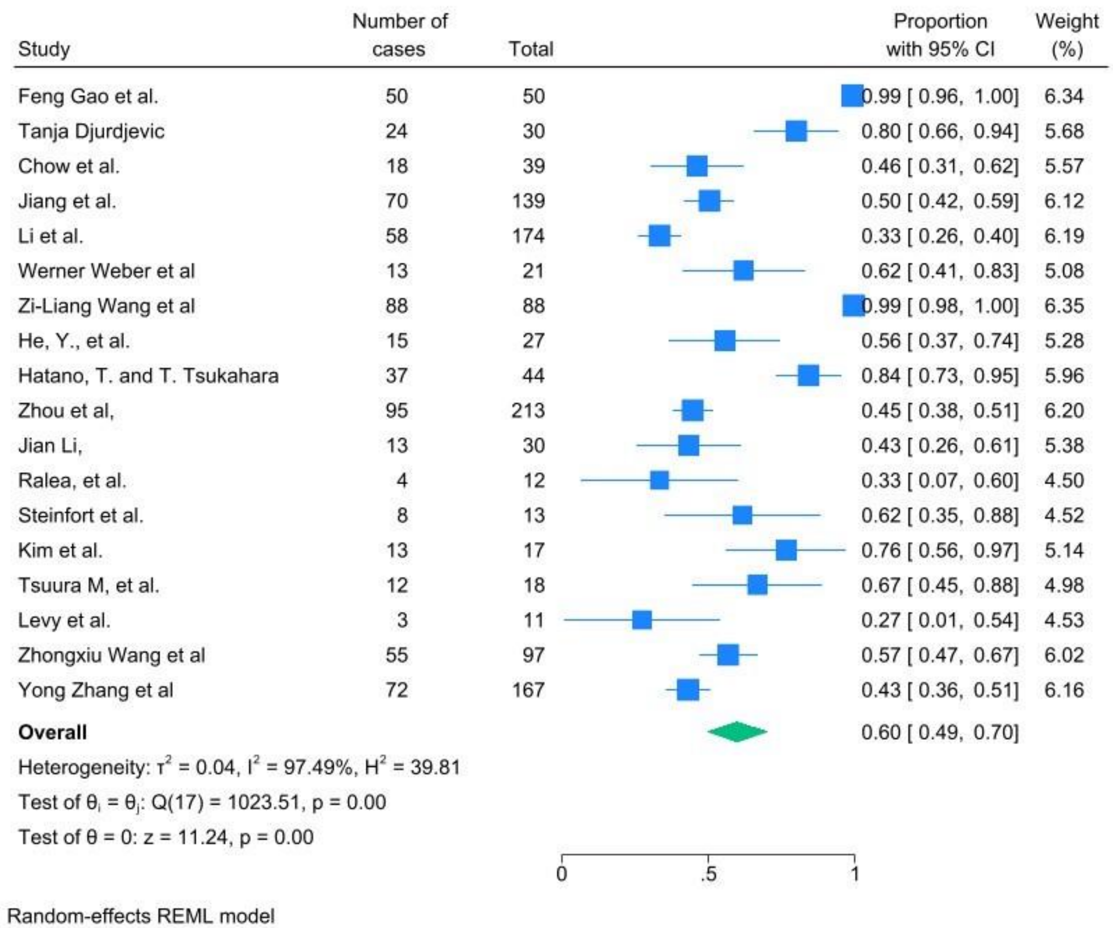

Study
Number of cases
Total
Proportion with 95% CI
Weight (%)
Feng Gao et al. 50 50 0.99 [0.96, 1.00] 6.34
Tanja Djurdjevic 24 30 0.80 [0.66, 0.94] 5.68
Chow et al. 18 39 0.46 [0.31, 0.62] 5.57
Jiang et al. 70 139 0.50 [0.42, 0.59] 6.12
Li et al. 58 174 0.33 [0.26, 0.40] 6.19
Werner Weber et al 13 21 0.62 [0.41, 0.83] 5.08
Zi-Liang Wang et al 88 88 0.99 [0.98, 1.00] 6.35
He, Y., et al. 15 27 0.56 [0.37, 0.74] 5.28
Hatano, T. and T. Tsukahara 37 44 0.84 [0.73, 0.95] 5.96
Zhou et al, 95 213 0.45 [0.38, 0.51] 6.20
Jian Li, 13 30 0.43 [0.26, 0.61] 5.38
Ralea, et al. 4 12 0.33 [0.07, 0.60] 4.50
Steinfort et al. 8 13 0.62 [0.35, 0.88] 4.52
Kim et al. 13 17 0.76 [0.56, 0.97] 5.14
Tsuura M, et al. 12 18 0.67 [0.45, 0.88] 4.98
Levy et al. 3 11 0.27 [0.01, 0.54] 4.53
Zhongxiu Wang et al 55 97 0.57 [0.47, 0.67] 6.02
Yong Zhang et al 72 167 0.43 [0.36, 0.51] 6.16
Overall 0.60 [0.49, 0.70]
Heterogeneity: τ² = 0.04, I² = 97.49%, H² = 39.81
Test of θi = θj: Q(17) = 1023.51, p = 0.00
Test of θ = 0: z = 11.24, p = 0.00
0
.5
1
Random-effects REML model

Figure s4A

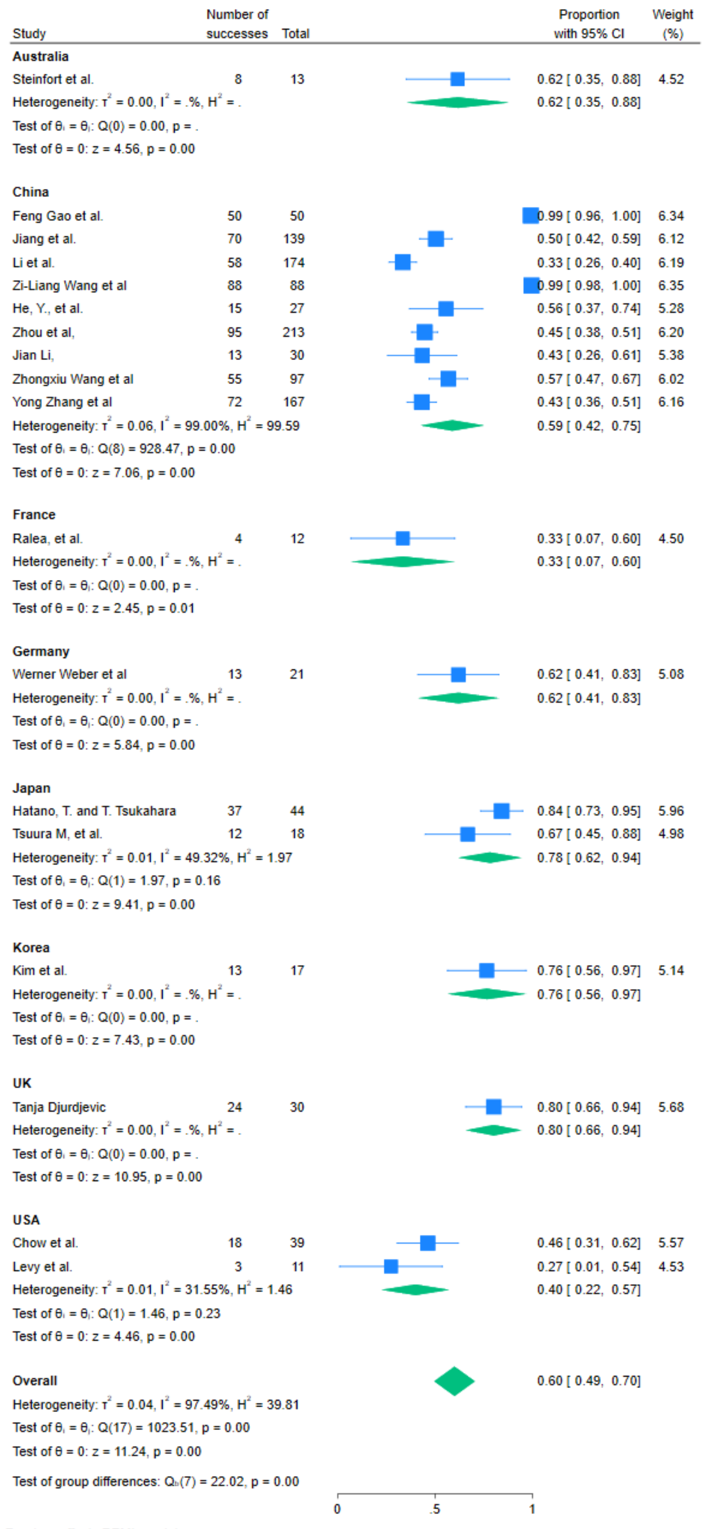

Study
Number of successes
Total
Proportion with 95% CI
Weight (%)
Australia
Steinfort et al. 8 13 0.62 [0.35, 0.88] 4.52
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = . 0.62 [0.35, 0.88]
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .
Test of θ = 0: z = 4.56, p = 0.00
China
Feng Gao et al. 50 50 0.99 [0.96, 1.00] 6.34
Jiang et al. 70 139 0.50 [0.42, 0.59] 6.12
Li et al. 58 174 0.33 [0.26, 0.40] 6.19
Zi-Liang Wang et al 88 88 0.99 [0.98, 1.00] 6.35
He, Y., et al. 15 27 0.56 [0.37, 0.74] 5.28
Zhou et al, 95 213 0.45 [0.38, 0.51] 6.20
Jian Li, 13 30 0.43 [0.26, 0.61] 5.38
Zhongxiu Wang et al 55 97 0.57 [0.47, 0.67] 6.02
Yong Zhang et al 72 167 0.43 [0.36, 0.51] 6.16
Heterogeneity: τ^2 = 0.06, I^2 = 99.00%, H^2 = 99.59 0.59 [0.42, 0.75]
Test of $\theta_i = \theta_j$: Q(8) = 928.47, p = 0.00
Test of θ = 0: z = 7.06, p = 0.00
France
Ralea, et al. 4 12 0.33 [0.07, 0.60] 4.50
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = . 0.33 [0.07, 0.60]
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .
Test of θ = 0: z = 2.45, p = 0.01
Germany
Werner Weber et al 13 21 0.62 [0.41, 0.83] 5.08
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = . 0.62 [0.41, 0.83]
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .
Test of θ = 0: z = 5.84, p = 0.00
Japan
Hatano, T. and T. Tsukahara 37 44 0.84 [0.73, 0.95] 5.96
Tsuura M, et al. 12 18 0.67 [0.45, 0.88] 4.98
Heterogeneity: τ^2 = 0.01, I^2 = 49.32%, H^2 = 1.97 0.78 [0.62, 0.94]
Test of $\theta_i = \theta_j$: Q(1) = 1.97, p = 0.16
Test of θ = 0: z = 9.41, p = 0.00
Korea
Kim et al. 13 17 0.76 [0.56, 0.97] 5.14
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = . 0.76 [0.56, 0.97]
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .
Test of θ = 0: z = 7.43, p = 0.00
UK
Tanja Djurdjevic 24 30 0.80 [0.66, 0.94] 5.68
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = . 0.80 [0.66, 0.94]
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .
Test of θ = 0: z = 10.95, p = 0.00
USA
Chow et al. 18 39 0.46 [0.31, 0.62] 5.57
Levy et al. 3 11 0.27 [0.01, 0.54] 4.53
Heterogeneity: τ^2 = 0.01, I^2 = 31.55%, H^2 = 1.46 0.40 [0.22, 0.57]
Test of $\theta_i = \theta_j$: Q(1) = 1.46, p = 0.23
Test of θ = 0: z = 4.46, p = 0.00
Overall 0.60 [0.49, 0.70]
Heterogeneity: τ^2 = 0.04, I^2 = 97.49%, H^2 = 39.81
Test of $\theta_i = \theta_j$: Q(17) = 1023.51, p = 0.00
Test of θ = 0: z = 11.24, p = 0.00
Test of group differences: $Q_b(7)$ = 22.02, p = 0.00
0
.5
1
Random-effects REML model

Figure s4B

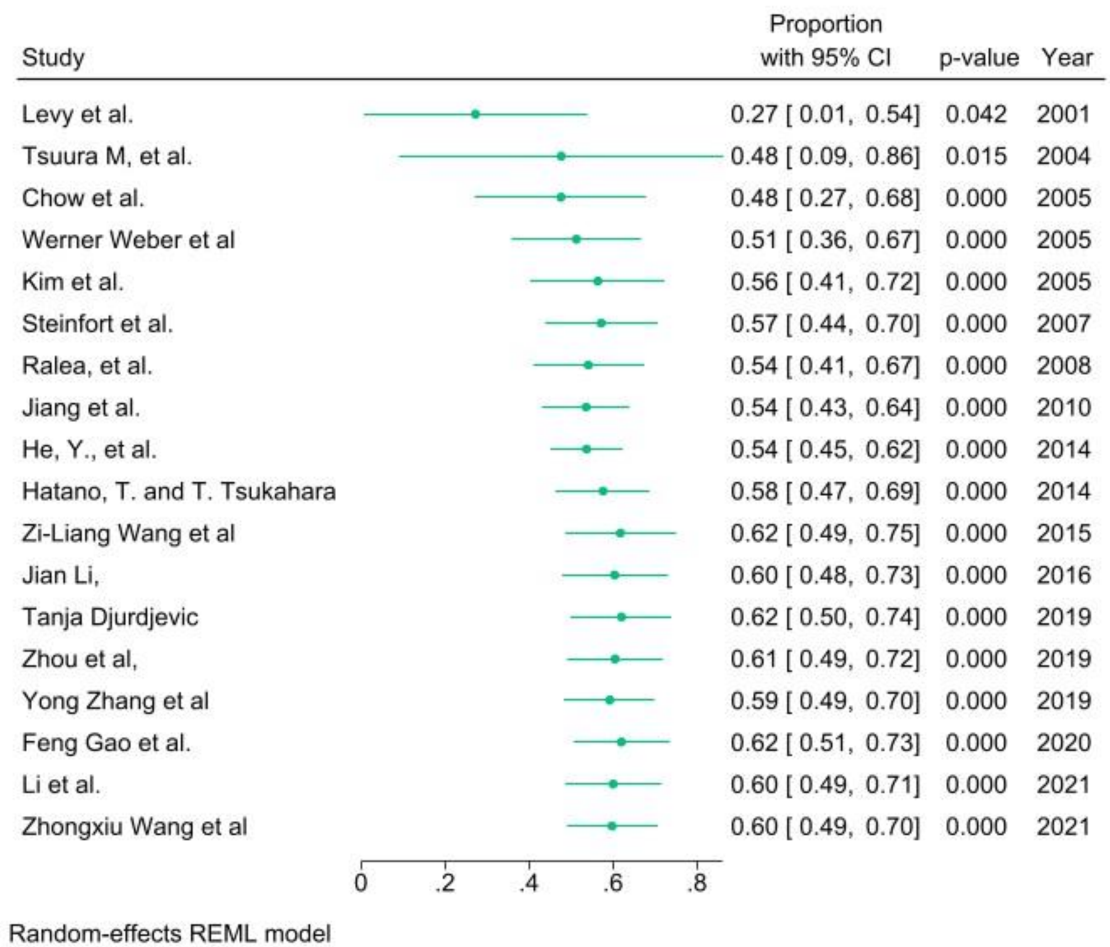


Figure s5

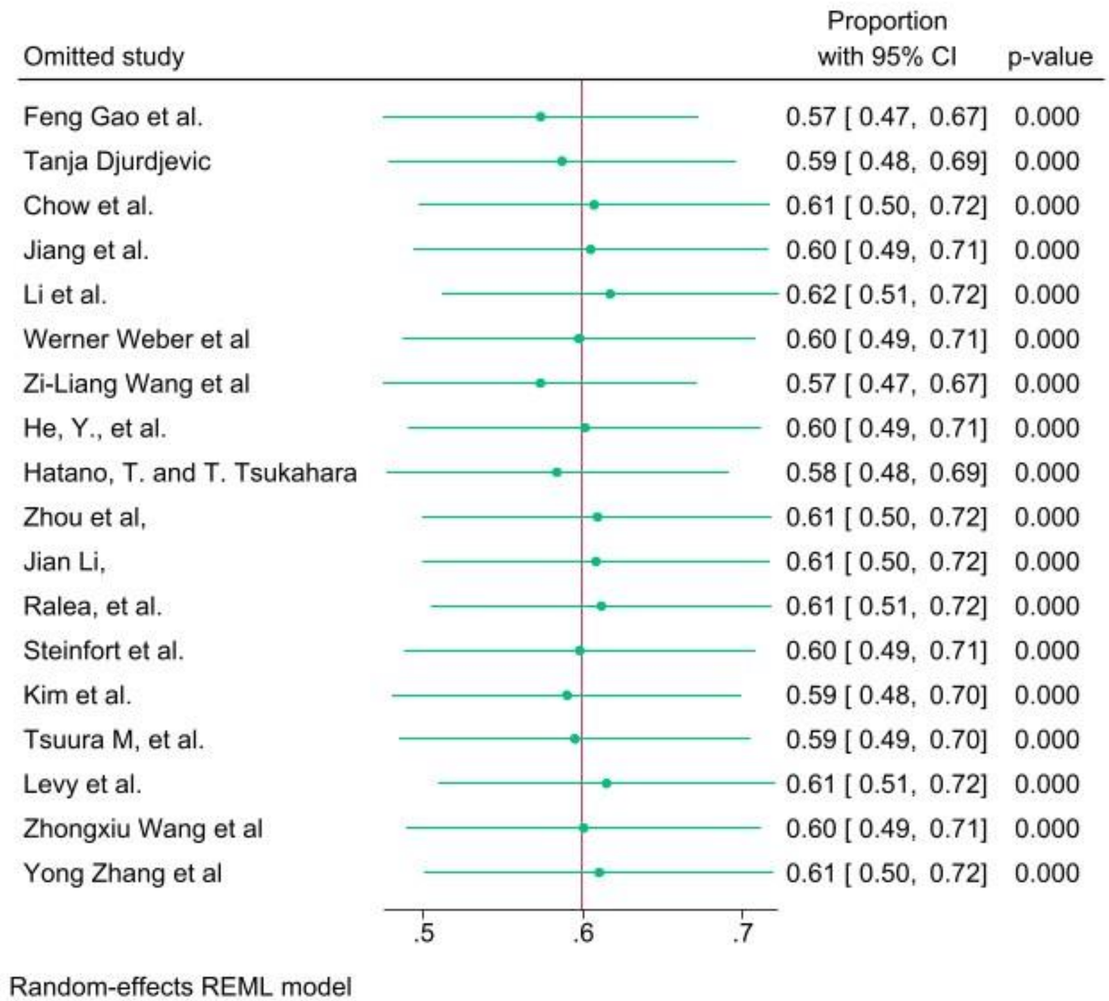

Omitted study
Proportion with 95% CI
p-value
Feng Gao et al. 0.57 [0.47, 0.67] 0.000
Tanja Djurdjevic 0.59 [0.48, 0.69] 0.000
Chow et al. 0.61 [0.50, 0.72] 0.000
Jiang et al. 0.60 [0.49, 0.71] 0.000
Li et al. 0.62 [0.51, 0.72] 0.000
Werner Weber et al 0.60 [0.49, 0.71] 0.000
Zi-Liang Wang et al 0.57 [0.47, 0.67] 0.000
He, Y., et al. 0.60 [0.49, 0.71] 0.000
Hatano, T. and T. Tsukahara 0.58 [0.48, 0.69] 0.000
Zhou et al, 0.61 [0.50, 0.72] 0.000
Jian Li, 0.61 [0.50, 0.72] 0.000
Ralea, et al. 0.61 [0.51, 0.72] 0.000
Steinfort et al. 0.60 [0.49, 0.71] 0.000
Kim et al. 0.59 [0.48, 0.70] 0.000
Tsuura M, et al. 0.59 [0.49, 0.70] 0.000
Levy et al. 0.61 [0.51, 0.72] 0.000
Zhongxiu Wang et al 0.60 [0.49, 0.71] 0.000
Yong Zhang et al 0.61 [0.50, 0.72] 0.000
.5
.6
.7
Random-effects REML model

Figure s6

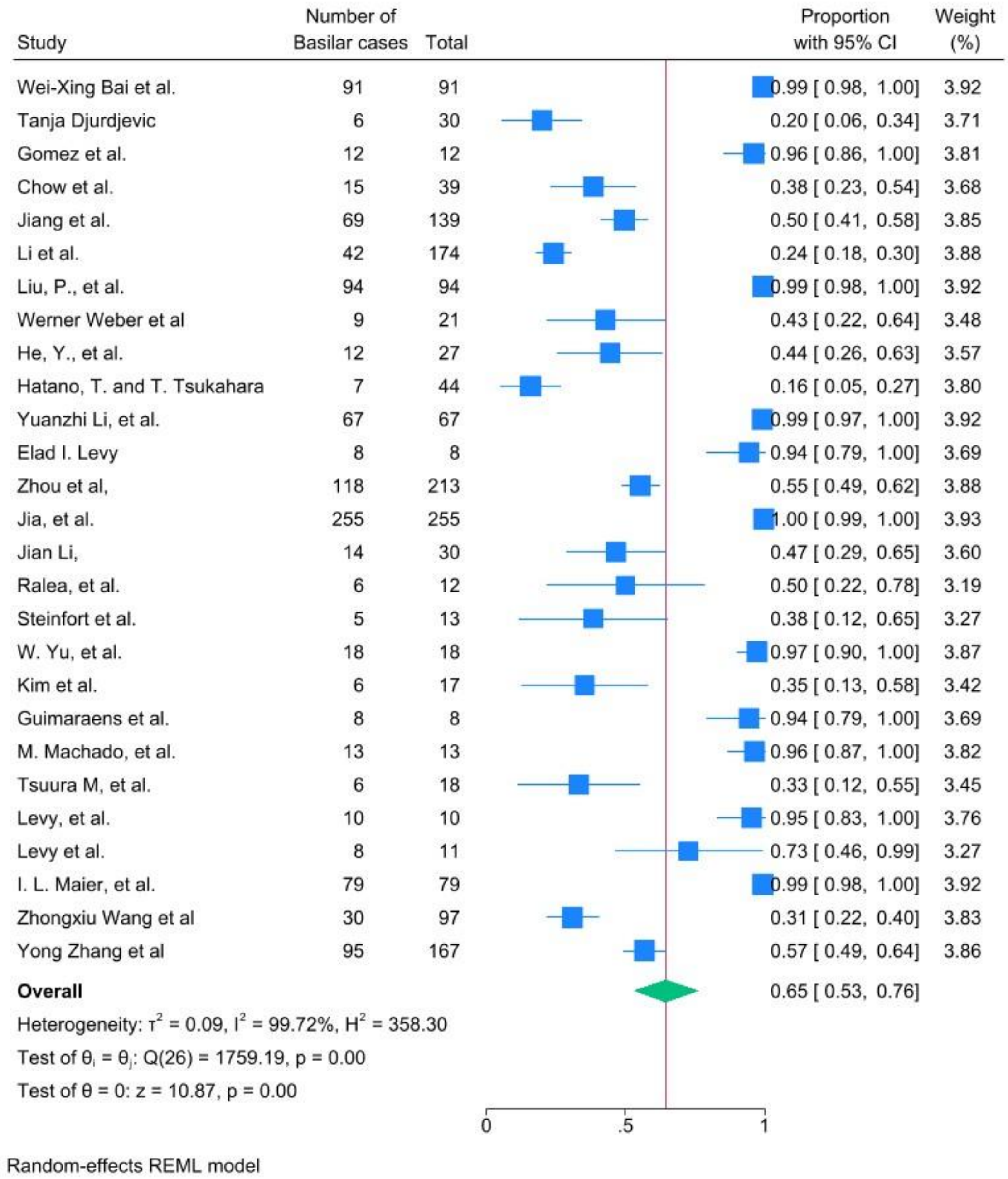

Study
Number of Basilar cases
Total
Proportion with 95% CI
Weight (%)
Wei-Xing Bai et al. 91 91 0.99 [0.98, 1.00] 3.92
Tanja Djurdjevic 6 30 0.20 [0.06, 0.34] 3.71
Gomez et al. 12 12 0.96 [0.86, 1.00] 3.81
Chow et al. 15 39 0.38 [0.23, 0.54] 3.68
Jiang et al. 69 139 0.50 [0.41, 0.58] 3.85
Li et al. 42 174 0.24 [0.18, 0.30] 3.88
Liu, P., et al. 94 94 0.99 [0.98, 1.00] 3.92
Werner Weber et al 9 21 0.43 [0.22, 0.64] 3.48
He, Y., et al. 12 27 0.44 [0.26, 0.63] 3.57
Hatano, T. and T. Tsukahara 7 44 0.16 [0.05, 0.27] 3.80
Yuanzhi Li, et al. 67 67 0.99 [0.97, 1.00] 3.92
Elad I. Levy 8 8 0.94 [0.79, 1.00] 3.69
Zhou et al, 118 213 0.55 [0.49, 0.62] 3.88
Jia, et al. 255 255 1.00 [0.99, 1.00] 3.93
Jian Li, 14 30 0.47 [0.29, 0.65] 3.60
Ralea, et al. 6 12 0.50 [0.22, 0.78] 3.19
Steinfort et al. 5 13 0.38 [0.12, 0.65] 3.27
W. Yu, et al. 18 18 0.97 [0.90, 1.00] 3.87
Kim et al. 6 17 0.35 [0.13, 0.58] 3.42
Guimaraens et al. 8 8 0.94 [0.79, 1.00] 3.69
M. Machado, et al. 13 13 0.96 [0.87, 1.00] 3.82
Tsuura M, et al. 6 18 0.33 [0.12, 0.55] 3.45
Levy, et al. 10 10 0.95 [0.83, 1.00] 3.76
Levy et al. 8 11 0.73 [0.46, 0.99] 3.27
I. L. Maier, et al. 79 79 0.99 [0.98, 1.00] 3.92
Zhongxiu Wang et al 30 97 0.31 [0.22, 0.40] 3.83
Yong Zhang et al 95 167 0.57 [0.49, 0.64] 3.86
Overall 0.65 [0.53, 0.76]
Heterogeneity: τ^2 = 0.09, I^2 = 99.72%, H^2 = 358.30
Test of $\theta_i = \theta_j$: Q(26) = 1759.19, p = 0.00
Test of θ = 0: z = 10.87, p = 0.00
0
.5
1
Random-effects REML model

Figure s7

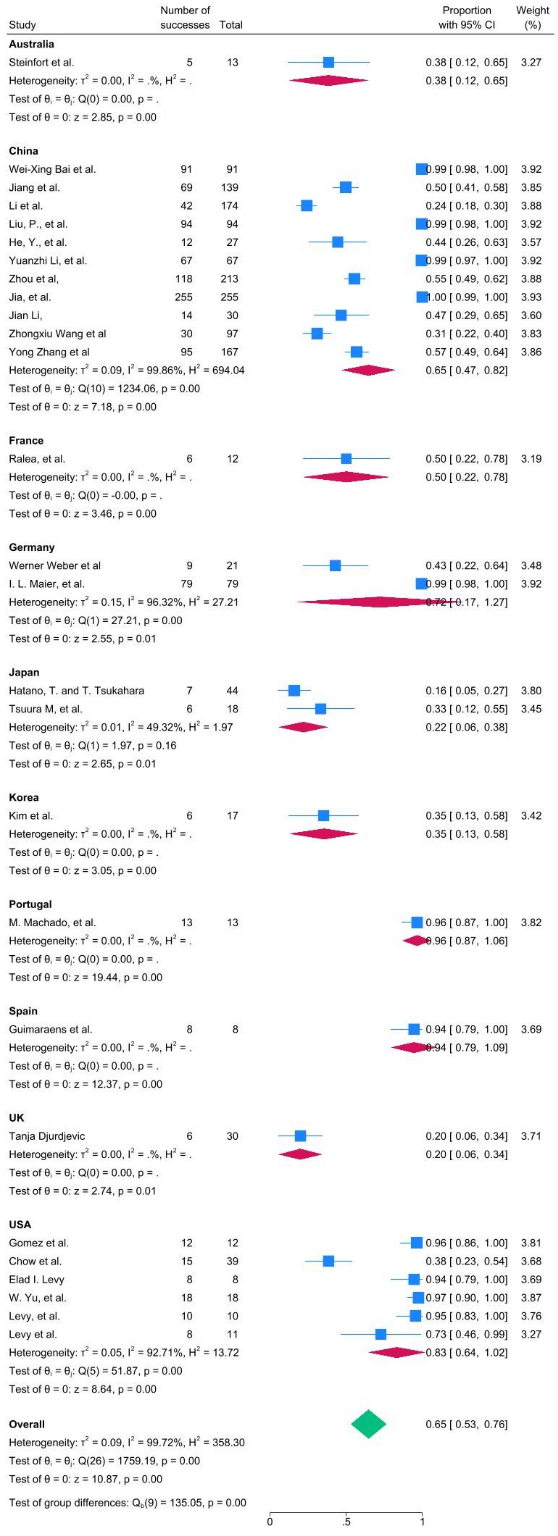

Study
Number of successes
Total
Proportion with 95% CI
Weight (%)
Australia
Steinfort et al. 5 13 0.38 [0.12, 0.65] 3.27
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = . 0.38 [0.12, 0.65]
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .
Test of θ = 0: z = 2.85, p = 0.00
China
Wei-Xing Bai et al. 91 91 0.99 [0.98, 1.00] 3.92
Jiang et al. 69 139 0.50 [0.41, 0.58] 3.85
Li et al. 42 174 0.24 [0.18, 0.30] 3.88
Liu, P., et al. 94 94 0.99 [0.98, 1.00] 3.92
He, Y., et al. 12 27 0.44 [0.26, 0.63] 3.57
Yuanzhi Li, et al. 67 67 0.99 [0.97, 1.00] 3.92
Zhou et al, 118 213 0.55 [0.49, 0.62] 3.88
Jia, et al. 255 255 1.00 [0.99, 1.00] 3.93
Jian Li, 14 30 0.47 [0.29, 0.65] 3.60
Zhongxiu Wang et al 30 97 0.31 [0.22, 0.40] 3.83
Yong Zhang et al 95 167 0.57 [0.49, 0.64] 3.86
Heterogeneity: τ^2 = 0.09, I^2 = 99.86%, H^2 = 694.04 0.65 [0.47, 0.82]
Test of $\theta_i = \theta_j$: Q(10) = 1234.06, p = 0.00
Test of θ = 0: z = 7.18, p = 0.00
France
Ralea, et al. 6 12 0.50 [0.22, 0.78] 3.19
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = . 0.50 [0.22, 0.78]
Test of $\theta_i = \theta_j$: Q(0) = -0.00, p = .
Test of θ = 0: z = 3.46, p = 0.00
Germany
Werner Weber et al 9 21 0.43 [0.22, 0.64] 3.48
I. L. Maier, et al. 79 79 0.99 [0.98, 1.00] 3.92
Heterogeneity: τ^2 = 0.15, I^2 = 96.32%, H^2 = 27.21 0.72 [0.17, 1.27]
Test of $\theta_i = \theta_j$: Q(1) = 27.21, p = 0.00
Test of θ = 0: z = 2.55, p = 0.01
Japan
Hatano, T. and T. Tsukahara 7 44 0.16 [0.05, 0.27] 3.80
Tsuura M, et al. 6 18 0.33 [0.12, 0.55] 3.45
Heterogeneity: τ^2 = 0.01, I^2 = 49.32%, H^2 = 1.97 0.22 [0.06, 0.38]
Test of $\theta_i = \theta_j$: Q(1) = 1.97, p = 0.16
Test of θ = 0: z = 2.65, p = 0.01
Korea
Kim et al. 6 17 0.35 [0.13, 0.58] 3.42
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = . 0.35 [0.13, 0.58]
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .
Test of θ = 0: z = 3.05, p = 0.00
Portugal
M. Machado, et al. 13 13 0.96 [0.87, 1.00] 3.82
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = . 0.96 [0.87, 1.06]
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .
Test of θ = 0: z = 19.44, p = 0.00
Spain
Guimaraens et al. 8 8 0.94 [0.79, 1.00] 3.69
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = . 0.94 [0.79, 1.09]
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .
Test of θ = 0: z = 12.37, p = 0.00
UK
Tanja Djurdjevic 6 30 0.20 [0.06, 0.34] 3.71
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = . 0.20 [0.06, 0.34]
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .
Test of θ = 0: z = 2.74, p = 0.01
USA
Gomez et al. 12 12 0.96 [0.86, 1.00] 3.81
Chow et al. 15 39 0.38 [0.23, 0.54] 3.68
Elad I. Levy 8 8 0.94 [0.79, 1.00] 3.69
W. Yu, et al. 18 18 0.97 [0.90, 1.00] 3.87
Levy, et al. 10 10 0.95 [0.83, 1.00] 3.76
Levy et al. 8 11 0.73 [0.46, 0.99] 3.27
Heterogeneity: τ^2 = 0.05, I^2 = 92.71%, H^2 = 13.72 0.83 [0.64, 1.02]
Test of $\theta_i = \theta_j$: Q(5) = 51.87, p = 0.00
Test of θ = 0: z = 8.64, p = 0.00
Overall 0.65 [0.53, 0.76]
Heterogeneity: τ^2 = 0.09, I^2 = 99.72%, H^2 = 358.30
Test of $\theta_i = \theta_j$: Q(26) = 1759.19, p = 0.00
Test of θ = 0: z = 10.87, p = 0.00
Test of group differences: $Q_b(9)$ = 135.05, p = 0.00
0
.5
1
Random-effects REML model

Figure s8

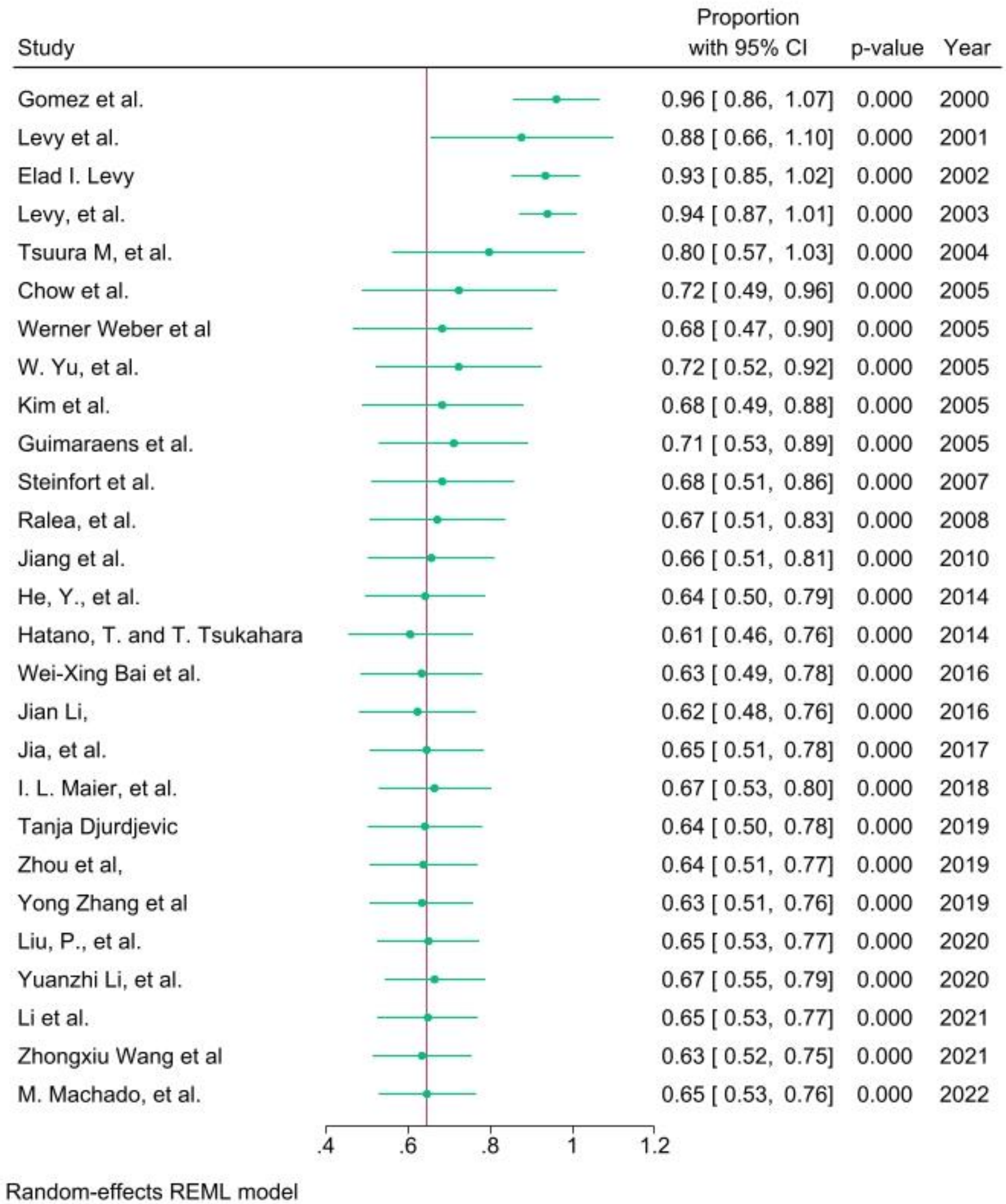


Figure s9

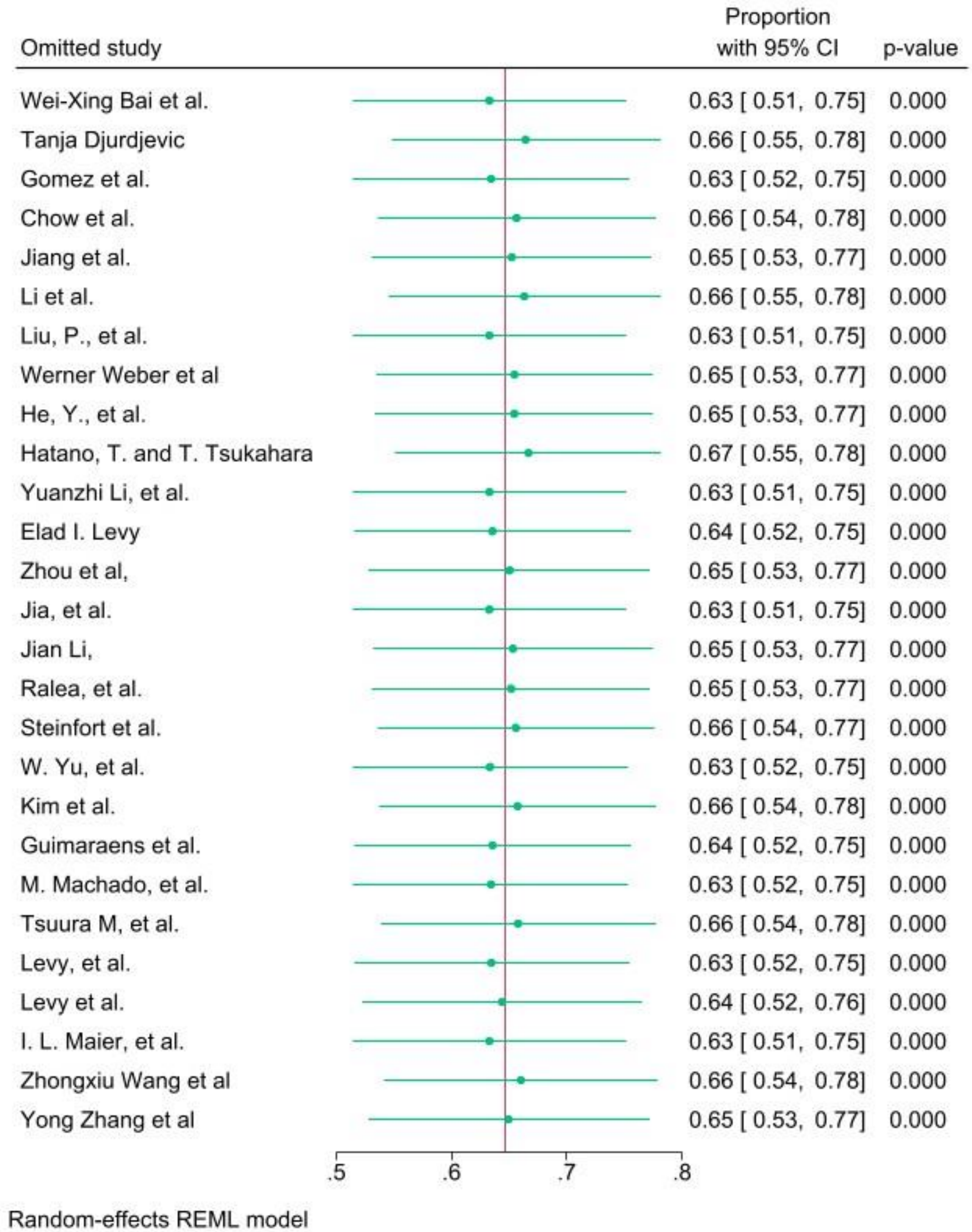

Omitted study
Proportion with 95% CI
p-value
Wei-Xing Bai et al. 0.63 [0.51, 0.75] 0.000
Tanja Djurdjevic 0.66 [0.55, 0.78] 0.000
Gomez et al. 0.63 [0.52, 0.75] 0.000
Chow et al. 0.66 [0.54, 0.78] 0.000
Jiang et al. 0.65 [0.53, 0.77] 0.000
Li et al. 0.66 [0.55, 0.78] 0.000
Liu, P., et al. 0.63 [0.51, 0.75] 0.000
Werner Weber et al 0.65 [0.53, 0.77] 0.000
He, Y., et al. 0.65 [0.53, 0.77] 0.000
Hatano, T. and T. Tsukahara 0.67 [0.55, 0.78] 0.000
Yuanzhi Li, et al. 0.63 [0.51, 0.75] 0.000
Elad I. Levy 0.64 [0.52, 0.75] 0.000
Zhou et al, 0.65 [0.53, 0.77] 0.000
Jia, et al. 0.63 [0.51, 0.75] 0.000
Jian Li, 0.65 [0.53, 0.77] 0.000
Ralea, et al. 0.65 [0.53, 0.77] 0.000
Steinfort et al. 0.66 [0.54, 0.77] 0.000
W. Yu, et al. 0.63 [0.52, 0.75] 0.000
Kim et al. 0.66 [0.54, 0.78] 0.000
Guimaraens et al. 0.64 [0.52, 0.75] 0.000
M. Machado, et al. 0.63 [0.52, 0.75] 0.000
Tsuura M, et al. 0.66 [0.54, 0.78] 0.000
Levy, et al. 0.63 [0.52, 0.75] 0.000
Levy et al. 0.64 [0.52, 0.76] 0.000
I. L. Maier, et al. 0.63 [0.51, 0.75] 0.000
Zhongxiu Wang et al 0.66 [0.54, 0.78] 0.000
Yong Zhang et al 0.65 [0.53, 0.77] 0.000
.5
.6
.7
.8
Random-effects REML model

Figure s10

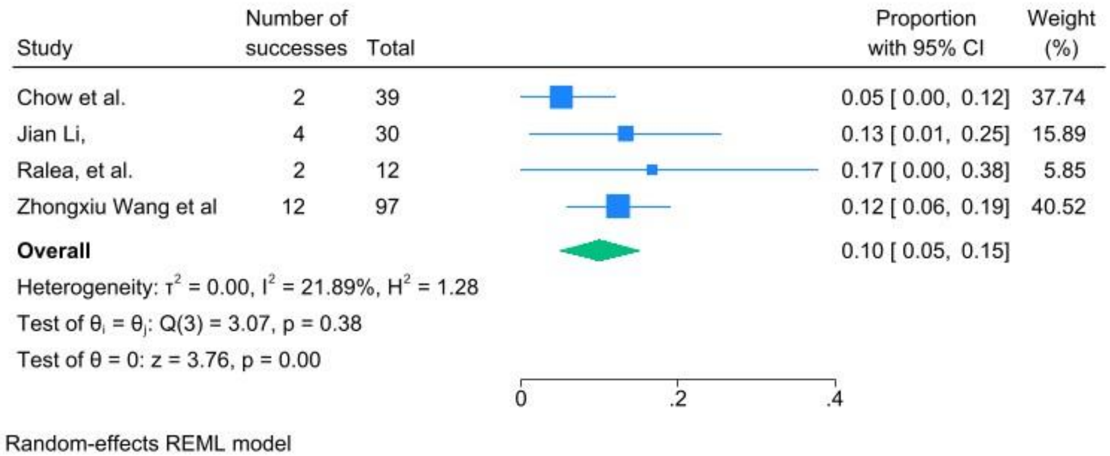


Figure s11

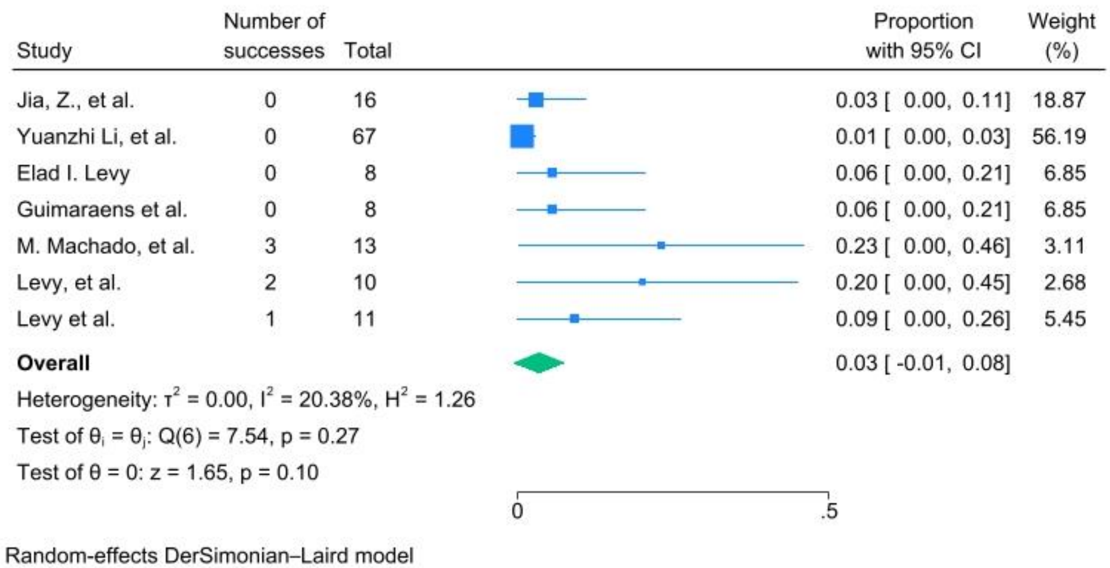


Figure s12A

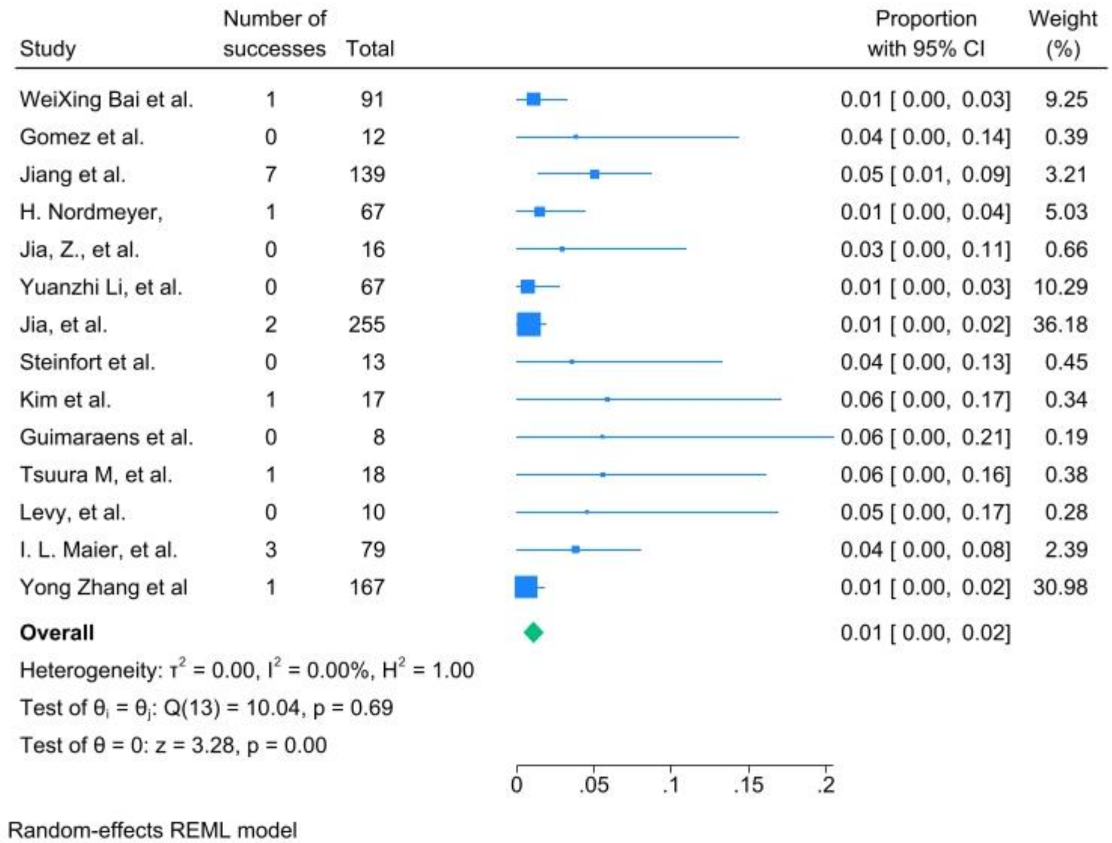

Study
Number of successes
Total
Proportion with 95% CI
Weight (%)
WeiXing Bai et al. 1 91 0.01 [0.00, 0.03] 9.25
Gomez et al. 0 12 0.04 [0.00, 0.14] 0.39
Jiang et al. 7 139 0.05 [0.01, 0.09] 3.21
H. Nordmeyer, 1 67 0.01 [0.00, 0.04] 5.03
Jia, Z., et al. 0 16 0.03 [0.00, 0.11] 0.66
Yuanzhi Li, et al. 0 67 0.01 [0.00, 0.03] 10.29
Jia, et al. 2 255 0.01 [0.00, 0.02] 36.18
Steinfort et al. 0 13 0.04 [0.00, 0.13] 0.45
Kim et al. 1 17 0.06 [0.00, 0.17] 0.34
Guimaraens et al. 0 8 0.06 [0.00, 0.21] 0.19
Tsuura M, et al. 1 18 0.06 [0.00, 0.16] 0.38
Levy, et al. 0 10 0.05 [0.00, 0.17] 0.28
I. L. Maier, et al. 3 79 0.04 [0.00, 0.08] 2.39
Yong Zhang et al 1 167 0.01 [0.00, 0.02] 30.98
Overall 0.01 [0.00, 0.02]
Heterogeneity: τ^2 = 0.00, I^2 = 0.00%, H^2 = 1.00
Test of $\theta_i = \theta_j$: Q(13) = 10.04, p = 0.69
Test of θ = 0: z = 3.28, p = 0.00
0 .05 .1 .15 .2
Random-effects REML model

Figure s12B

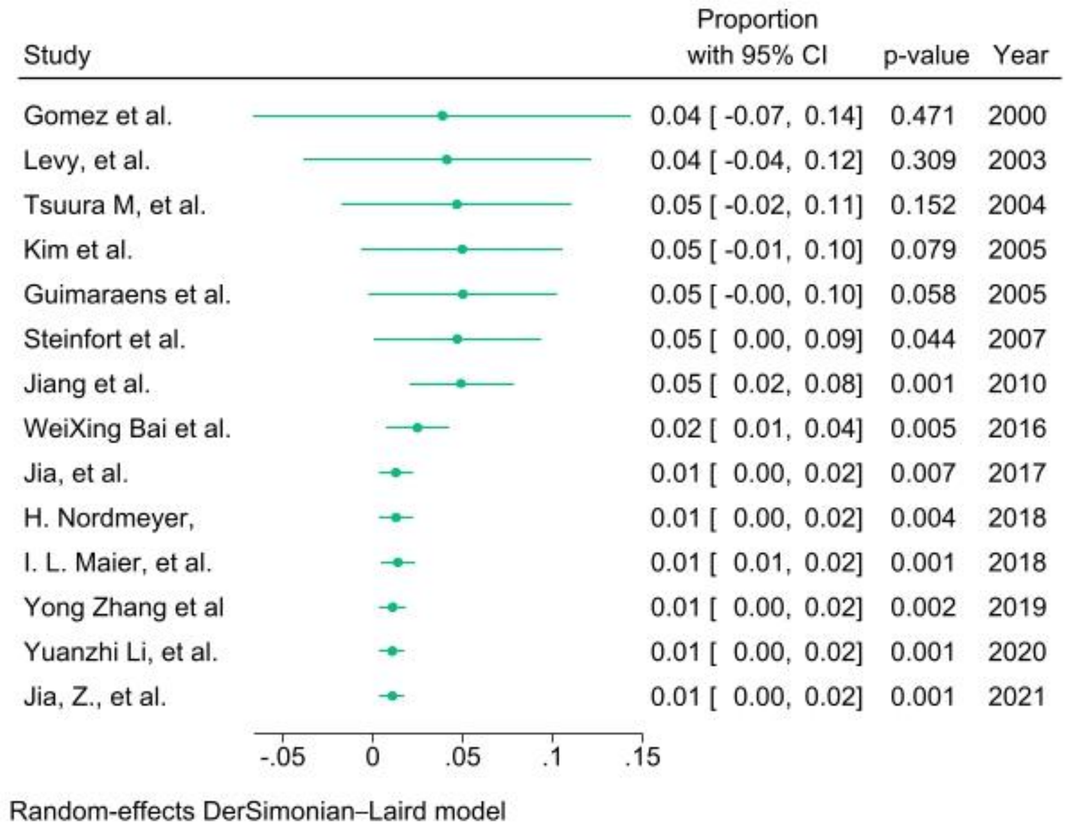

Study
Proportion with 95% CI
p-value
Year
Gomez et al. 0.04 [-0.07, 0.14] 0.471 2000
Levy, et al. 0.04 [-0.04, 0.12] 0.309 2003
Tsuura M, et al. 0.05 [-0.02, 0.11] 0.152 2004
Kim et al. 0.05 [-0.01, 0.10] 0.079 2005
Guimaraens et al. 0.05 [-0.00, 0.10] 0.058 2005
Steinfort et al. 0.05 [0.00, 0.09] 0.044 2007
Jiang et al. 0.05 [0.02, 0.08] 0.001 2010
WeiXing Bai et al. 0.02 [0.01, 0.04] 0.005 2016
Jia, et al. 0.01 [0.00, 0.02] 0.007 2017
H. Nordmeyer, 0.01 [0.00, 0.02] 0.004 2018
I. L. Maier, et al. 0.01 [0.01, 0.02] 0.001 2018
Yong Zhang et al 0.01 [0.00, 0.02] 0.002 2019
Yuanzhi Li, et al. 0.01 [0.00, 0.02] 0.001 2020
Jia, Z., et al. 0.01 [0.00, 0.02] 0.001 2021
-.05
0
.05
.1
.15
Random-effects DerSimonian–Laird model

Figure s13A

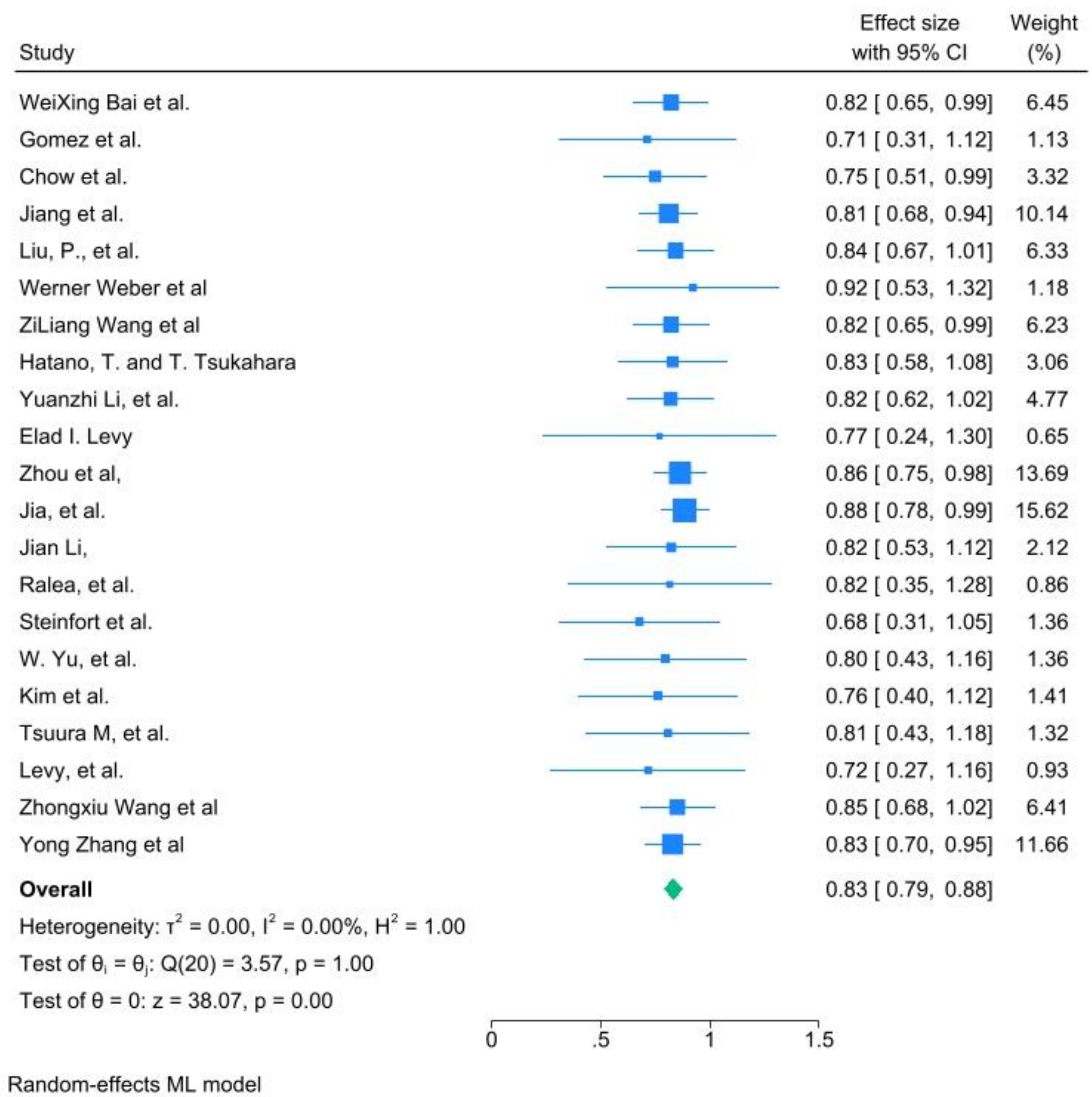

Study
Effect size with 95% CI
Weight (%)
WeiXing Bai et al. 0.82 [0.65, 0.99] 6.45
Gomez et al. 0.71 [0.31, 1.12] 1.13
Chow et al. 0.75 [0.51, 0.99] 3.32
Jiang et al. 0.81 [0.68, 0.94] 10.14
Liu, P., et al. 0.84 [0.67, 1.01] 6.33
Werner Weber et al 0.92 [0.53, 1.32] 1.18
ZiLiang Wang et al 0.82 [0.65, 0.99] 6.23
Hatano, T. and T. Tsukahara 0.83 [0.58, 1.08] 3.06
Yuanzhi Li, et al. 0.82 [0.62, 1.02] 4.77
Elad I. Levy 0.77 [0.24, 1.30] 0.65
Zhou et al, 0.86 [0.75, 0.98] 13.69
Jia, et al. 0.88 [0.78, 0.99] 15.62
Jian Li, 0.82 [0.53, 1.12] 2.12
Ralea, et al. 0.82 [0.35, 1.28] 0.86
Steinfort et al. 0.68 [0.31, 1.05] 1.36
W. Yu, et al. 0.80 [0.43, 1.16] 1.36
Kim et al. 0.76 [0.40, 1.12] 1.41
Tsuura M, et al. 0.81 [0.43, 1.18] 1.32
Levy, et al. 0.72 [0.27, 1.16] 0.93
Zhongxiu Wang et al 0.85 [0.68, 1.02] 6.41
Yong Zhang et al 0.83 [0.70, 0.95] 11.66
Overall 0.83 [0.79, 0.88]
Heterogeneity: τ^2 = 0.00, I^2 = 0.00%, H^2 = 1.00
Test of $\theta_i = \theta_j$: Q(20) = 3.57, p = 1.00
Test of θ = 0: z = 38.07, p = 0.00
0
.5
1
1.5
Random-effects ML model

Figure s13B

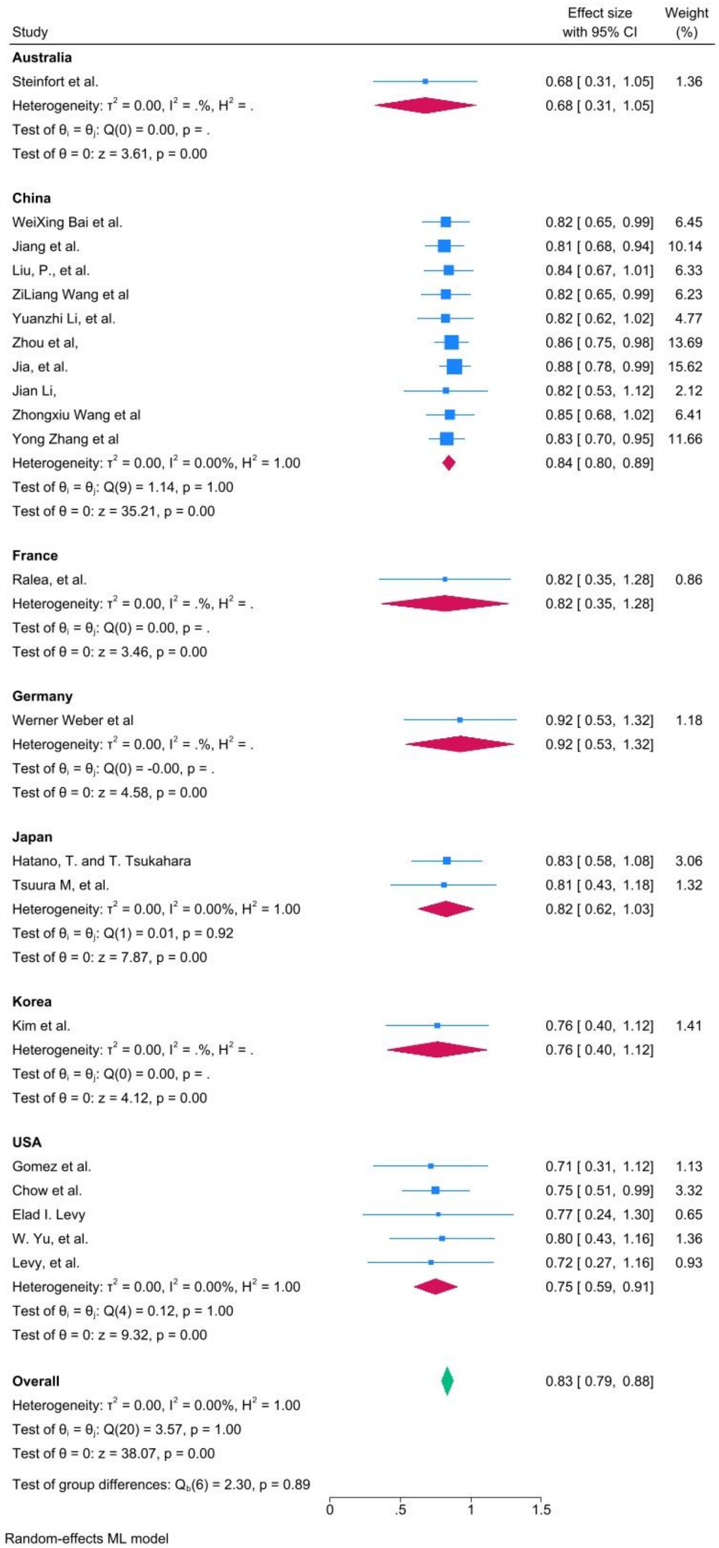

Study
Effect size with 95% CI
Weight (%)
Australia
Steinfort et al. 0.68 [0.31, 1.05] 1.36
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.68 [0.31, 1.05]
Test of θi = θj: Q(0) = 0.00, p = .
Test of θ = 0: z = 3.61, p = 0.00
China
WeiXing Bai et al. 0.82 [0.65, 0.99] 6.45
Jiang et al. 0.81 [0.68, 0.94] 10.14
Liu, P., et al. 0.84 [0.67, 1.01] 6.33
ZiLiang Wang et al 0.82 [0.65, 0.99] 6.23
Yuanzhi Li, et al. 0.82 [0.62, 1.02] 4.77
Zhou et al, 0.86 [0.75, 0.98] 13.69
Jia, et al. 0.88 [0.78, 0.99] 15.62
Jian Li, 0.82 [0.53, 1.12] 2.12
Zhongxiu Wang et al 0.85 [0.68, 1.02] 6.41
Yong Zhang et al 0.83 [0.70, 0.95] 11.66
Heterogeneity: τ² = 0.00, I² = 0.00%, H² = 1.00 0.84 [0.80, 0.89]
Test of θi = θj: Q(9) = 1.14, p = 1.00
Test of θ = 0: z = 35.21, p = 0.00
France
Ralea, et al. 0.82 [0.35, 1.28] 0.86
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.82 [0.35, 1.28]
Test of θi = θj: Q(0) = 0.00, p = .
Test of θ = 0: z = 3.46, p = 0.00
Germany
Werner Weber et al 0.92 [0.53, 1.32] 1.18
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.92 [0.53, 1.32]
Test of θi = θj: Q(0) = -0.00, p = .
Test of θ = 0: z = 4.58, p = 0.00
Japan
Hatano, T. and T. Tsukahara 0.83 [0.58, 1.08] 3.06
Tsuura M, et al. 0.81 [0.43, 1.18] 1.32
Heterogeneity: τ² = 0.00, I² = 0.00%, H² = 1.00 0.82 [0.62, 1.03]
Test of θi = θj: Q(1) = 0.01, p = 0.92
Test of θ = 0: z = 7.87, p = 0.00
Korea
Kim et al. 0.76 [0.40, 1.12] 1.41
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.76 [0.40, 1.12]
Test of θi = θj: Q(0) = 0.00, p = .
Test of θ = 0: z = 4.12, p = 0.00
USA
Gomez et al. 0.71 [0.31, 1.12] 1.13
Chow et al. 0.75 [0.51, 0.99] 3.32
Elad I. Levy 0.77 [0.24, 1.30] 0.65
W. Yu, et al. 0.80 [0.43, 1.16] 1.36
Levy, et al. 0.72 [0.27, 1.16] 0.93
Heterogeneity: τ² = 0.00, I² = 0.00%, H² = 1.00 0.75 [0.59, 0.91]
Test of θi = θj: Q(4) = 0.12, p = 1.00
Test of θ = 0: z = 9.32, p = 0.00
Overall 0.83 [0.79, 0.88]
Heterogeneity: τ² = 0.00, I² = 0.00%, H² = 1.00
Test of θi = θj: Q(20) = 3.57, p = 1.00
Test of θ = 0: z = 38.07, p = 0.00
Test of group differences: Qb(6) = 2.30, p = 0.89
0
.5
1
1.5
Random-effects ML model

Figure s13C

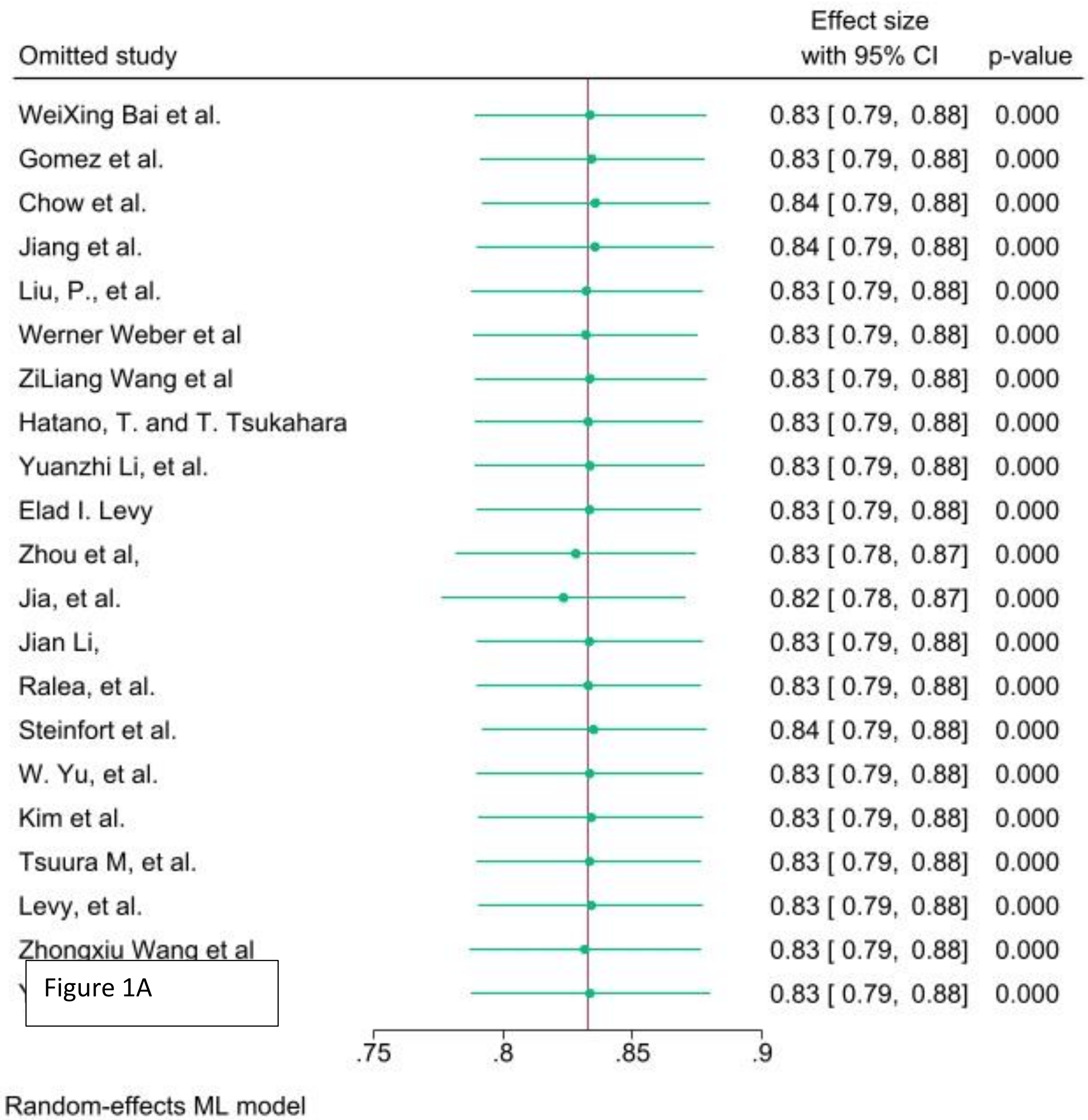


Figure s14A

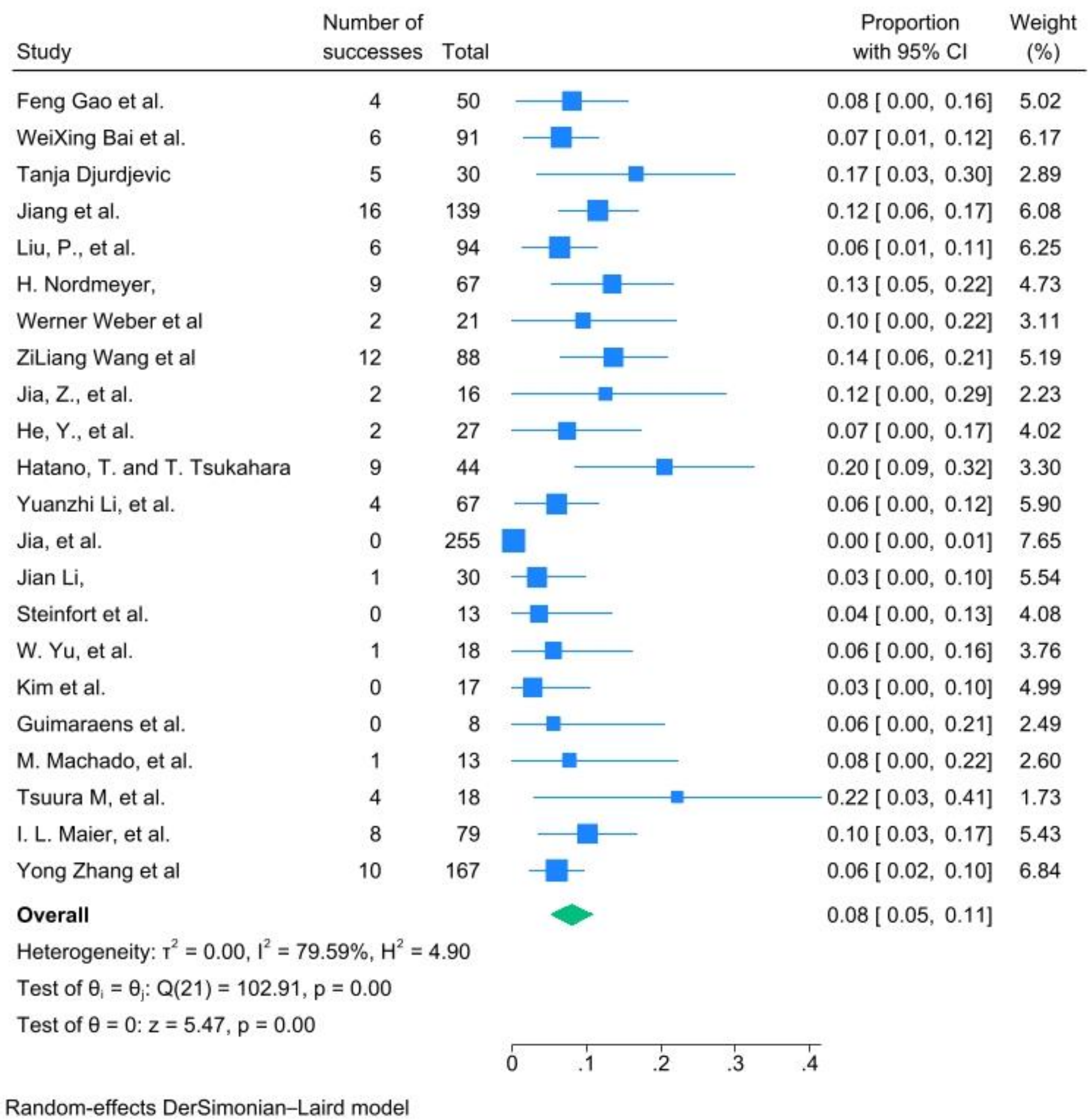
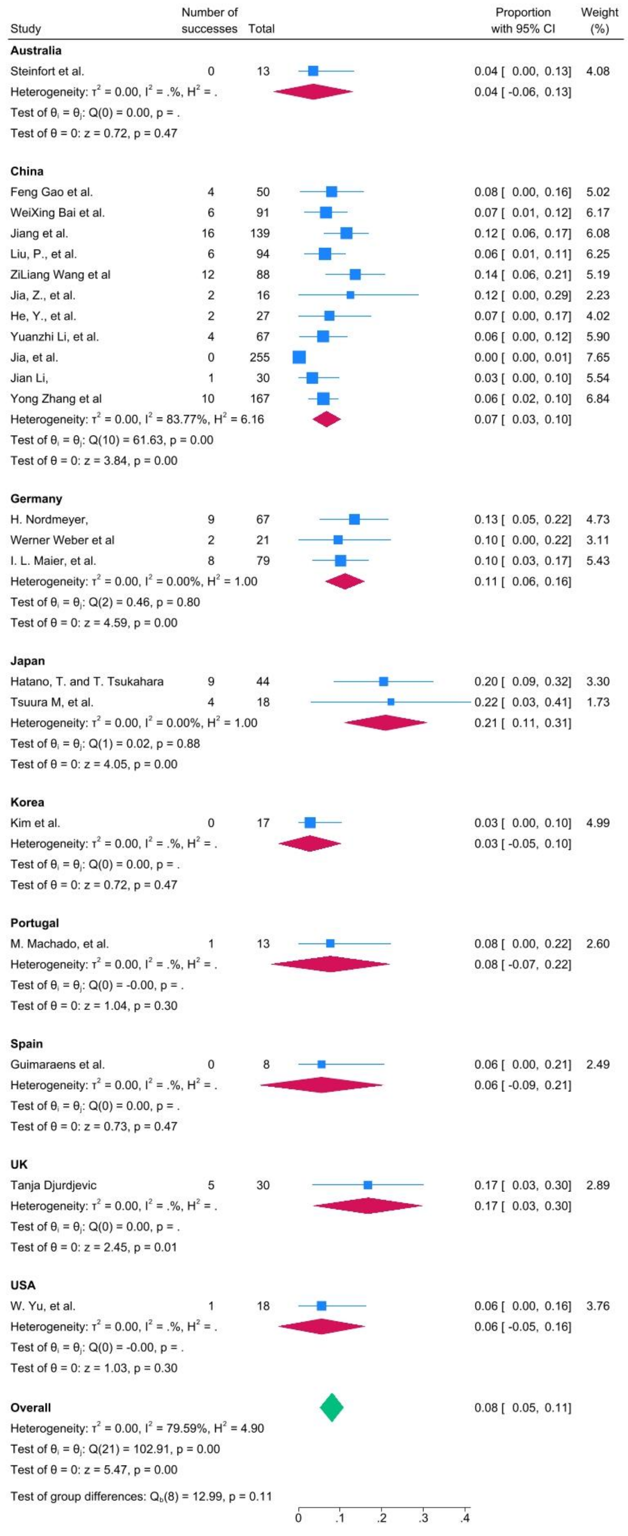

Study
Number of successes
Total
Proportion with 95% CI
Weight (%)
Feng Gao et al. 4 50 0.08 [0.00, 0.16] 5.02
WeiXing Bai et al. 6 91 0.07 [0.01, 0.12] 6.17
Tanja Djurdjevic 5 30 0.17 [0.03, 0.30] 2.89
Jiang et al. 16 139 0.12 [0.06, 0.17] 6.08
Liu, P., et al. 6 94 0.06 [0.01, 0.11] 6.25
H. Nordmeyer, 9 67 0.13 [0.05, 0.22] 4.73
Werner Weber et al 2 21 0.10 [0.00, 0.22] 3.11
ZiLiang Wang et al 12 88 0.14 [0.06, 0.21] 5.19
Jia, Z., et al. 2 16 0.12 [0.00, 0.29] 2.23
He, Y., et al. 2 27 0.07 [0.00, 0.17] 4.02
Hatano, T. and T. Tsukahara 9 44 0.20 [0.09, 0.32] 3.30
Yuanzhi Li, et al. 4 67 0.06 [0.00, 0.12] 5.90
Jia, et al. 0 255 0.00 [0.00, 0.01] 7.65
Jian Li, 1 30 0.03 [0.00, 0.10] 5.54
Steinfort et al. 0 13 0.04 [0.00, 0.13] 4.08
W. Yu, et al. 1 18 0.06 [0.00, 0.16] 3.76
Kim et al. 0 17 0.03 [0.00, 0.10] 4.99
Guimaraens et al. 0 8 0.06 [0.00, 0.21] 2.49
M. Machado, et al. 1 13 0.08 [0.00, 0.22] 2.60
Tsuura M, et al. 4 18 0.22 [0.03, 0.41] 1.73
I. L. Maier, et al. 8 79 0.10 [0.03, 0.17] 5.43
Yong Zhang et al 10 167 0.06 [0.02, 0.10] 6.84
Overall 0.08 [0.05, 0.11]
Heterogeneity: τ² = 0.00, I² = 79.59%, H² = 4.90
Test of θi = θj: Q(21) = 102.91, p = 0.00
Test of θ = 0: z = 5.47, p = 0.00
0
.1
.2
.3
.4
Random-effects DerSimonian–Laird model

Figure s14B



Study | Number of successes | Total | Proportion with 95% CI | Weight (%)
Australia
Steinfort et al. 0 13 0.04 [0.00, 0.13] 4.08
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.04 [-0.06, 0.13]
Test of θi = θj: Q(0) = 0.00, p = .
Test of θ = 0: z = 0.72, p = 0.47
China
Feng Gao et al. 4 50 0.08 [0.00, 0.16] 5.02
WeiXing Bai et al. 6 91 0.07 [0.01, 0.12] 6.17
Jiang et al. 16 139 0.12 [0.06, 0.17] 6.08
Liu, P., et al. 6 94 0.06 [0.01, 0.11] 6.25
ZiLiang Wang et al 12 88 0.14 [0.06, 0.21] 5.19
Jia, Z., et al. 2 16 0.12 [0.00, 0.29] 2.23
He, Y., et al. 2 27 0.07 [0.00, 0.17] 4.02
Yuanzhi Li, et al. 4 67 0.06 [0.00, 0.12] 5.90
Jia, et al. 0 255 0.00 [0.00, 0.01] 7.65
Jian Li, 1 30 0.03 [0.00, 0.10] 5.54
Yong Zhang et al 10 167 0.06 [0.02, 0.10] 6.84
Heterogeneity: τ² = 0.00, I² = 83.77%, H² = 6.16 0.07 [0.03, 0.10]
Test of θi = θj: Q(10) = 61.63, p = 0.00
Test of θ = 0: z = 3.84, p = 0.00
Germany
H. Nordmeyer, 9 67 0.13 [0.05, 0.22] 4.73
Werner Weber et al 2 21 0.10 [0.00, 0.22] 3.11
I. L. Maier, et al. 8 79 0.10 [0.03, 0.17] 5.43
Heterogeneity: τ² = 0.00, I² = 0.00%, H² = 1.00 0.11 [0.06, 0.16]
Test of θi = θj: Q(2) = 0.46, p = 0.80
Test of θ = 0: z = 4.59, p = 0.00
Japan
Hatano, T. and T. Tsukahara 9 44 0.20 [0.09, 0.32] 3.30
Tsuura M, et al. 4 18 0.22 [0.03, 0.41] 1.73
Heterogeneity: τ² = 0.00, I² = 0.00%, H² = 1.00 0.21 [0.11, 0.31]
Test of θi = θj: Q(1) = 0.02, p = 0.88
Test of θ = 0: z = 4.05, p = 0.00
Korea
Kim et al. 0 17 0.03 [0.00, 0.10] 4.99
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.03 [-0.05, 0.10]
Test of θi = θj: Q(0) = 0.00, p = .
Test of θ = 0: z = 0.72, p = 0.47
Portugal
M. Machado, et al. 1 13 0.08 [0.00, 0.22] 2.60
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.08 [-0.07, 0.22]
Test of θi = θj: Q(0) = -0.00, p = .
Test of θ = 0: z = 1.04, p = 0.30
Spain
Guimaraens et al. 0 8 0.06 [0.00, 0.21] 2.49
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.06 [-0.09, 0.21]
Test of θi = θj: Q(0) = 0.00, p = .
Test of θ = 0: z = 0.73, p = 0.47
UK
Tanja Djurdjevic 5 30 0.17 [0.03, 0.30] 2.89
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.17 [0.03, 0.30]
Test of θi = θj: Q(0) = 0.00, p = .
Test of θ = 0: z = 2.45, p = 0.01
USA
W. Yu, et al. 1 18 0.06 [0.00, 0.16] 3.76
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.06 [-0.05, 0.16]
Test of θi = θj: Q(0) = -0.00, p = .
Test of θ = 0: z = 1.03, p = 0.30
Overall 0.08 [0.05, 0.11]
Heterogeneity: τ² = 0.00, I² = 79.59%, H² = 4.90
Test of θi = θj: Q(21) = 102.91, p = 0.00
Test of θ = 0: z = 5.47, p = 0.00
Test of group differences: Qb(8) = 12.99, p = 0.11
0 .1 .2 .3 .4
Random-effects DerSimonian–Laird model

Figure s15A

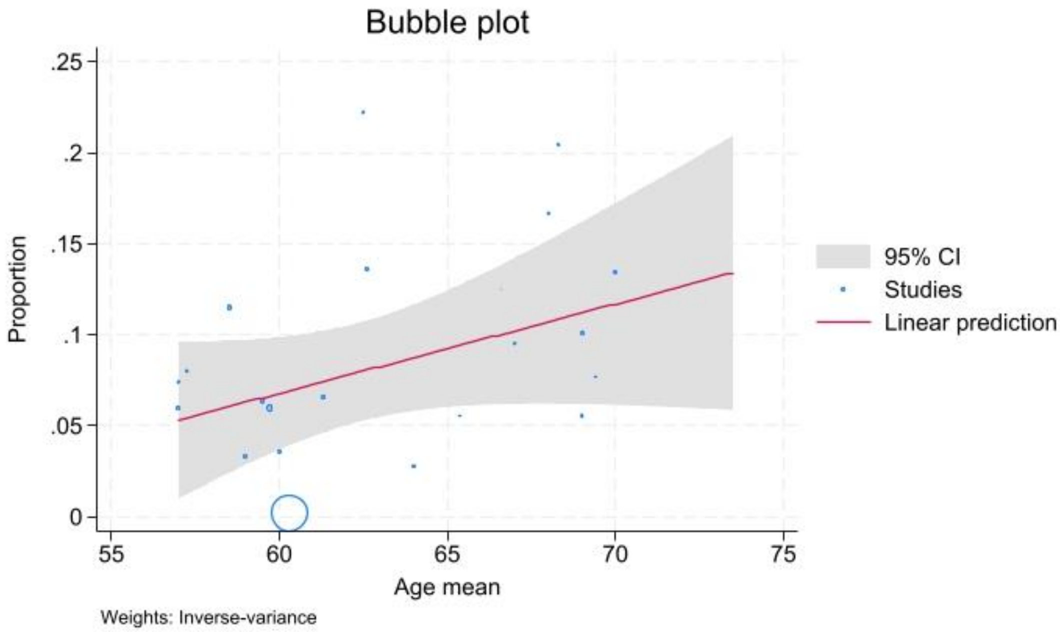


Figure s15B

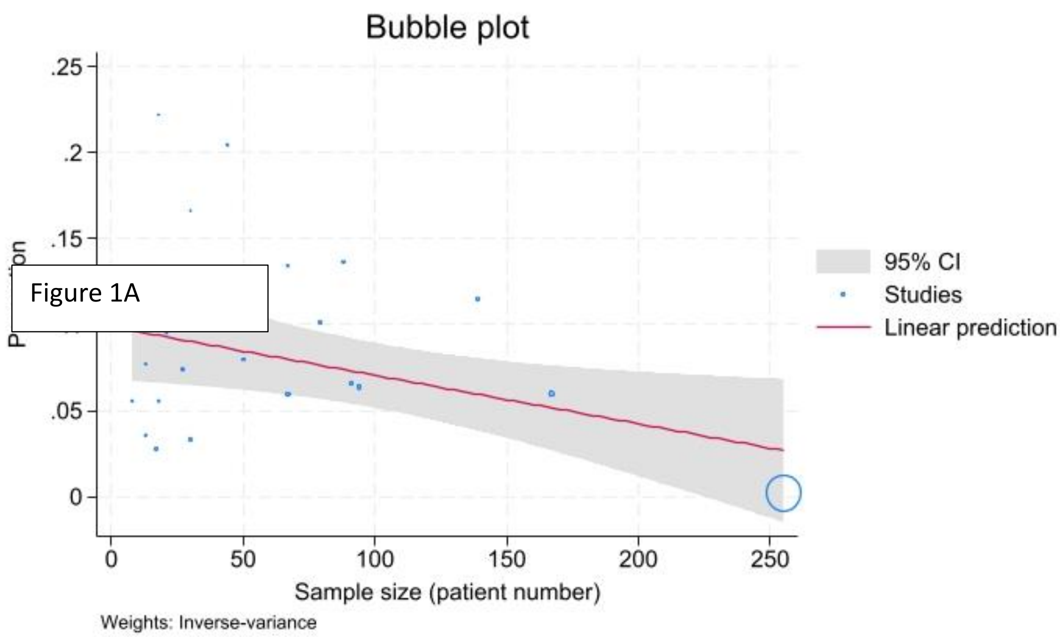


Figure s16A

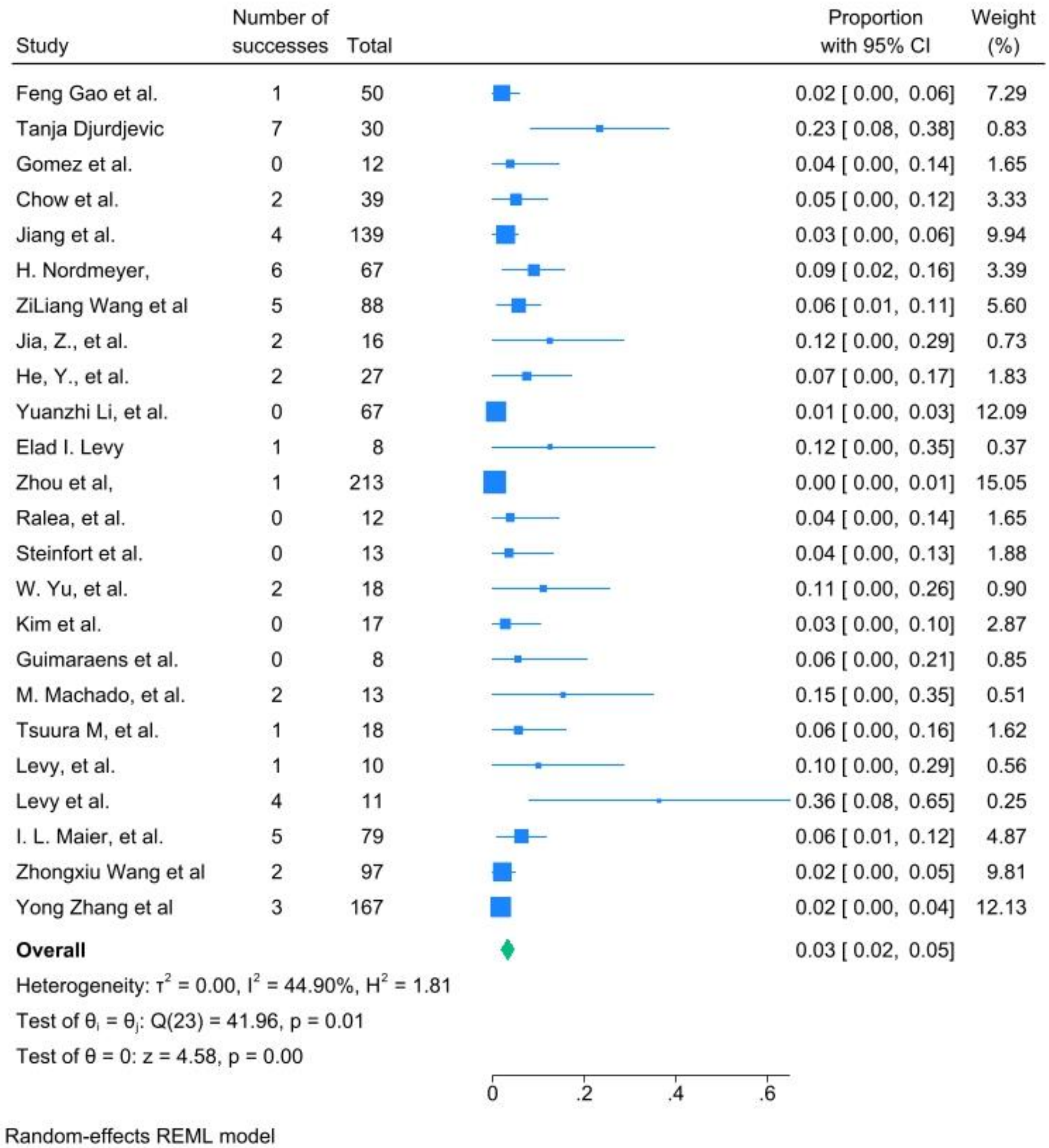

Study
Number of successes
Total
Proportion with 95% CI
Weight (%)
Feng Gao et al. 1 50 0.02 [0.00, 0.06] 7.29
Tanja Djurdjevic 7 30 0.23 [0.08, 0.38] 0.83
Gomez et al. 0 12 0.04 [0.00, 0.14] 1.65
Chow et al. 2 39 0.05 [0.00, 0.12] 3.33
Jiang et al. 4 139 0.03 [0.00, 0.06] 9.94
H. Nordmeyer, 6 67 0.09 [0.02, 0.16] 3.39
ZiLiang Wang et al 5 88 0.06 [0.01, 0.11] 5.60
Jia, Z., et al. 2 16 0.12 [0.00, 0.29] 0.73
He, Y., et al. 2 27 0.07 [0.00, 0.17] 1.83
Yuanzhi Li, et al. 0 67 0.01 [0.00, 0.03] 12.09
Elad I. Levy 1 8 0.12 [0.00, 0.35] 0.37
Zhou et al, 1 213 0.00 [0.00, 0.01] 15.05
Ralea, et al. 0 12 0.04 [0.00, 0.14] 1.65
Steinfort et al. 0 13 0.04 [0.00, 0.13] 1.88
W. Yu, et al. 2 18 0.11 [0.00, 0.26] 0.90
Kim et al. 0 17 0.03 [0.00, 0.10] 2.87
Guimaraens et al. 0 8 0.06 [0.00, 0.21] 0.85
M. Machado, et al. 2 13 0.15 [0.00, 0.35] 0.51
Tsuura M, et al. 1 18 0.06 [0.00, 0.16] 1.62
Levy, et al. 1 10 0.10 [0.00, 0.29] 0.56
Levy et al. 4 11 0.36 [0.08, 0.65] 0.25
I. L. Maier, et al. 5 79 0.06 [0.01, 0.12] 4.87
Zhongxiu Wang et al 2 97 0.02 [0.00, 0.05] 9.81
Yong Zhang et al 3 167 0.02 [0.00, 0.04] 12.13
Overall 0.03 [0.02, 0.05]
Heterogeneity: τ² = 0.00, I² = 44.90%, H² = 1.81
Test of θi = θj: Q(23) = 41.96, p = 0.01
Test of θ = 0: z = 4.58, p = 0.00
0 .2 .4 .6
Random-effects REML model

Figure s16B

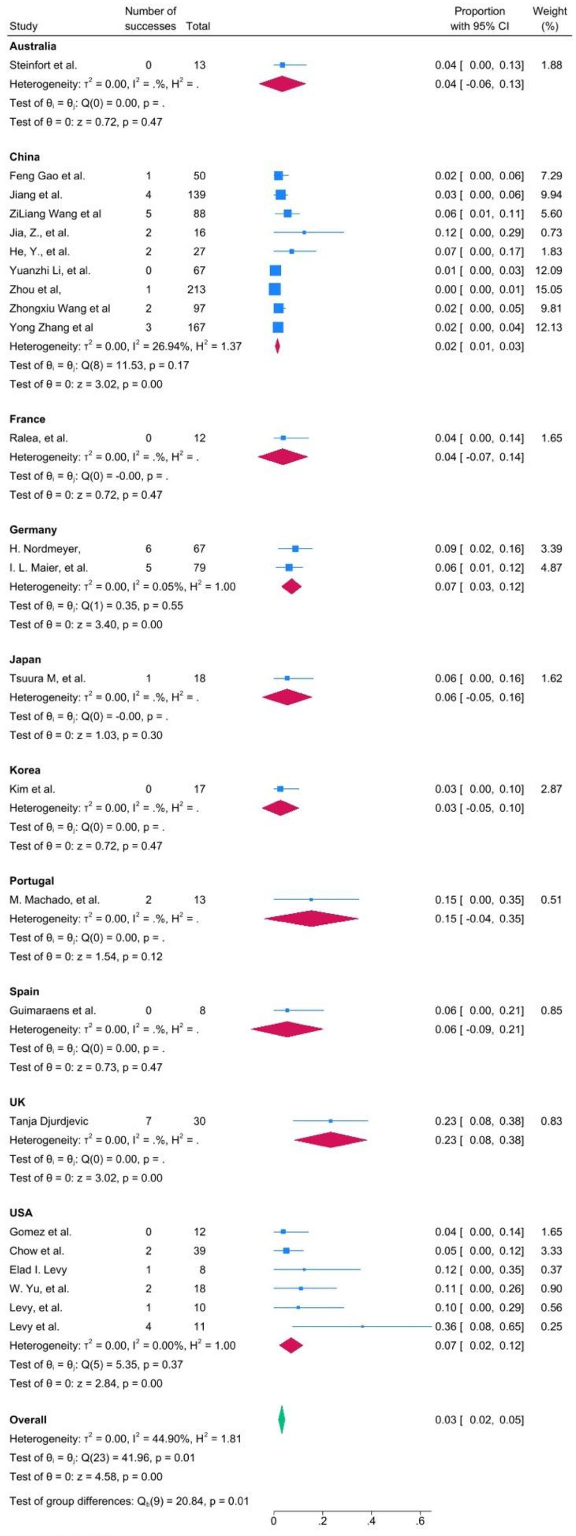

Study
Number of successes
Total
Proportion with 95% CI
Weight (%)
Australia
Steinfort et al. 0 13 0.04 [0.00, 0.13] 1.88
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.04 [-0.06, 0.13]
Test of θi = θj: Q(0) = 0.00, p = .
Test of θ = 0: z = 0.72, p = 0.47
China
Feng Gao et al. 1 50 0.02 [0.00, 0.06] 7.29
Jiang et al. 4 139 0.03 [0.00, 0.06] 9.94
ZiLiang Wang et al 5 88 0.06 [0.01, 0.11] 5.60
Jia, Z., et al. 2 16 0.12 [0.00, 0.29] 0.73
He, Y., et al. 2 27 0.07 [0.00, 0.17] 1.83
Yuanzhi Li, et al. 0 67 0.01 [0.00, 0.03] 12.09
Zhou et al, 1 213 0.00 [0.00, 0.01] 15.05
Zhongxiu Wang et al 2 97 0.02 [0.00, 0.05] 9.81
Yong Zhang et al 3 167 0.02 [0.00, 0.04] 12.13
Heterogeneity: τ² = 0.00, I² = 26.94%, H² = 1.37 0.02 [0.01, 0.03]
Test of θi = θj: Q(8) = 11.53, p = 0.17
Test of θ = 0: z = 3.02, p = 0.00
France
Ralea, et al. 0 12 0.04 [0.00, 0.14] 1.65
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.04 [-0.07, 0.14]
Test of θi = θj: Q(0) = -0.00, p = .
Test of θ = 0: z = 0.72, p = 0.47
Germany
H. Nordmeyer, 6 67 0.09 [0.02, 0.16] 3.39
I. L. Maier, et al. 5 79 0.06 [0.01, 0.12] 4.87
Heterogeneity: τ² = 0.00, I² = 0.05%, H² = 1.00 0.07 [0.03, 0.12]
Test of θi = θj: Q(1) = 0.35, p = 0.55
Test of θ = 0: z = 3.40, p = 0.00
Japan
Tsuura M, et al. 1 18 0.06 [0.00, 0.16] 1.62
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.06 [-0.05, 0.16]
Test of θi = θj: Q(0) = -0.00, p = .
Test of θ = 0: z = 1.03, p = 0.30
Korea
Kim et al. 0 17 0.03 [0.00, 0.10] 2.87
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.03 [-0.05, 0.10]
Test of θi = θj: Q(0) = 0.00, p = .
Test of θ = 0: z = 0.72, p = 0.47
Portugal
M. Machado, et al. 2 13 0.15 [0.00, 0.35] 0.51
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.15 [-0.04, 0.35]
Test of θi = θj: Q(0) = 0.00, p = .
Test of θ = 0: z = 1.54, p = 0.12
Spain
Guimaraens et al. 0 8 0.06 [0.00, 0.21] 0.85
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.06 [-0.09, 0.21]
Test of θi = θj: Q(0) = 0.00, p = .
Test of θ = 0: z = 0.73, p = 0.47
UK
Tanja Djurdjevic 7 30 0.23 [0.08, 0.38] 0.83
Heterogeneity: τ² = 0.00, I² = .%, H² = . 0.23 [0.08, 0.38]
Test of θi = θj: Q(0) = 0.00, p = .
Test of θ = 0: z = 3.02, p = 0.00
USA
Gomez et al. 0 12 0.04 [0.00, 0.14] 1.65
Chow et al. 2 39 0.05 [0.00, 0.12] 3.33
Elad I. Levy 1 8 0.12 [0.00, 0.35] 0.37
W. Yu, et al. 2 18 0.11 [0.00, 0.26] 0.90
Levy, et al. 1 10 0.10 [0.00, 0.29] 0.56
Levy et al. 4 11 0.36 [0.08, 0.65] 0.25
Heterogeneity: τ² = 0.00, I² = 0.00%, H² = 1.00 0.07 [0.02, 0.12]
Test of θi = θj: Q(5) = 5.35, p = 0.37
Test of θ = 0: z = 2.84, p = 0.00
Overall 0.03 [0.02, 0.05]
Heterogeneity: τ² = 0.00, I² = 44.90%, H² = 1.81
Test of θi = θj: Q(23) = 41.96, p = 0.01
Test of θ = 0: z = 4.58, p = 0.00
Test of group differences: Qb(9) = 20.84, p = 0.01
0 .2 .4 .6
Random-effects REML model

Figure s16C

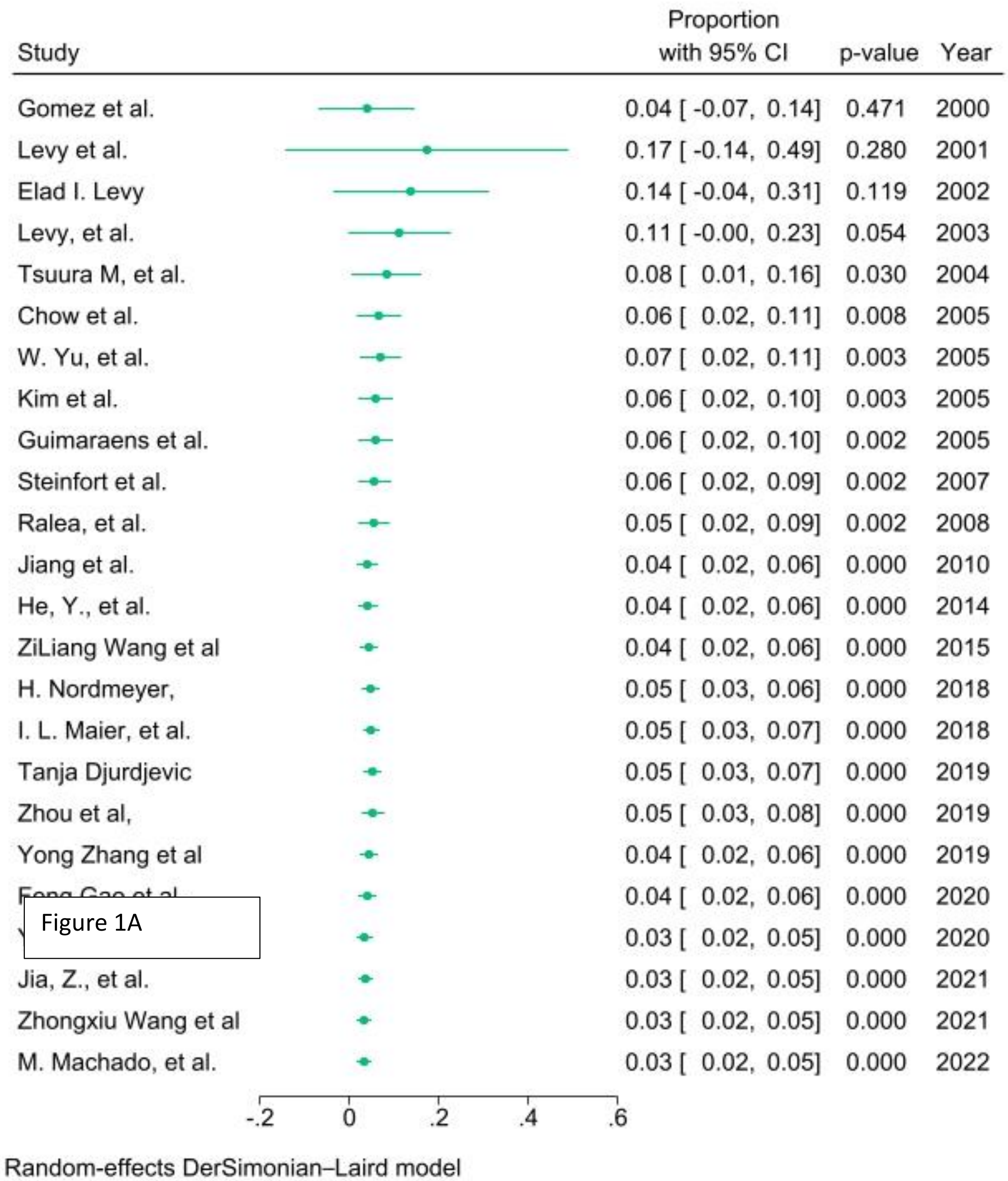
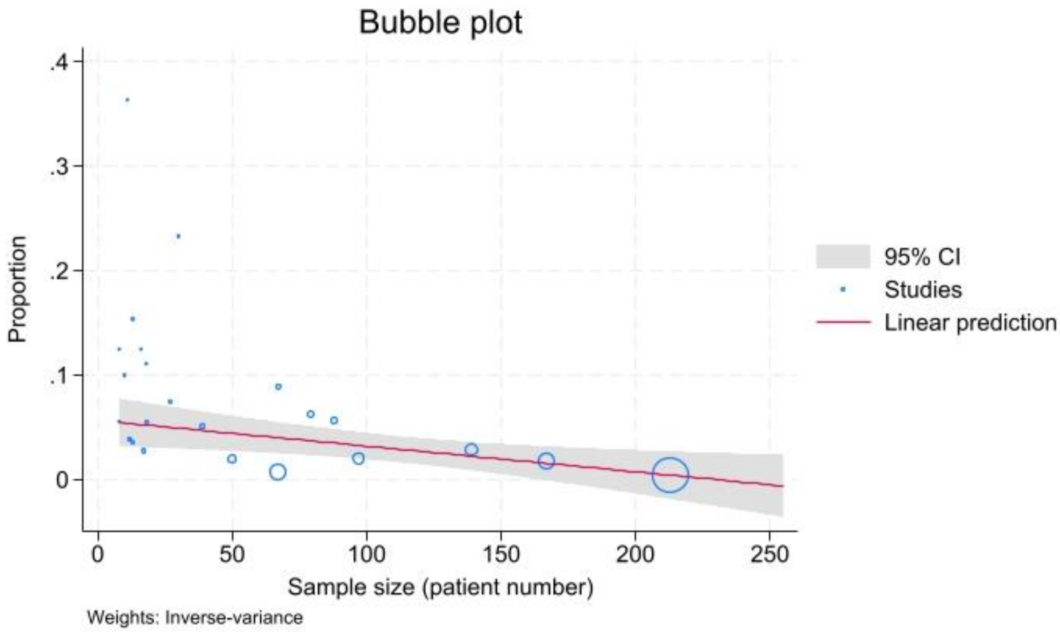


Figure s17


Bubble plot
Proportion
.4
.3
.2
.1
0
0
50
100
150
200
250
Sample size (patient number)
95% CI
Studies
Linear prediction
Weights: Inverse-variance