

APPENDICES

Appendix 1: Search strategy

#1	'hypertension' or 'blood pressure' or 'hypertens*'
#2	'population based' or 'aetiology' or 'etiology' or 'prevalence' 'epidemiolog*' or
#3	'low-and middle-income countries' or 'developing countries' or 'Afghanistan' or 'Albania' or 'Algeria' or 'American Samoa' or 'Angola' or 'Antigua and Barbuda' or 'Argentina' or 'Armenia' or 'Azerbaijan' or 'Bangladesh' or 'Belarus' or 'Belize' or 'Benin' or 'Bhutan' or 'Bolivia' or 'Bosnia and Herzegovina' or 'Botswana' or 'Brazil' or 'Bulgaria' or 'Burkina Faso' or 'Burundi' or 'Cambodia' or 'Cameroon' or 'Cape Verde' or 'Central African Republic' or 'Chad' or 'China' or 'Colombia' or 'Comoros' or 'Congo Democratic Republic' or 'Congo' or 'Costa Rica' or 'Cote d'Ivoire' (Ivory Coast) or 'Cuba' or 'Djibouti' or 'Dominica' or 'Dominican Republic' or 'Egypt' or 'El Salvador' or 'Eritrea' or 'Ethiopia' or 'Fiji' or 'Gabon' or 'Gambia' or 'Georgia' or 'Ghana' or 'Grenada' or 'Guatemala' or 'Guinea' or 'Guinea-Bissau' or 'Guyana' or 'Haiti' or 'Honduras' or 'India' or 'Indonesia' or 'Iran Islamic Republic' or 'Iraq' or 'Jamaica' or 'Jordan' or 'Kazakhstan' or 'Kenya' or 'Kiribati' or 'Korea Democratic Republic' or 'Kosovo' or 'Kyrgyz Republic' or 'Lao Peoples Democratic Republic' or 'Lebanon' or 'Lesotho' or 'Liberia' or 'Libya' or 'Macedonia' or 'Madagascar' or 'Malawi' or 'Malaysia' or 'Maldives' or 'Mali' or 'Marshall Islands' or 'Mauritania' or 'Mauritius' or 'Mayotte' or 'Mexico' or 'Federated States of Micronesia' or 'Moldova' or 'Mongolia' or 'Montenegro' or 'Morocco' or 'Mozambique' or 'Myanmar' or 'Namibia' or 'Nepal' or 'Nicaragua' or 'Niger' or 'Nigeria' or 'Pakistan' or 'Palau' or 'Panama' or 'Papua New Guinea' or 'Paraguay' or 'Peru' or 'Philippines' or 'Romania' or 'Rwanda' or 'Samoa' or 'Sao Tome and Principe' or 'Senegal' or 'Serbia' or 'Seychelles' or 'Sierra Leone' or 'Solomon Islands' or 'Somalia' or 'South Africa' or 'Sri Lanka' or 'Saint Lucia' or 'Saint Vincent and the Grenadines' or 'Sudan' or 'Suriname' or 'Swaziland' or 'Syrian Arab Republic' or 'Tajikistan' or 'Tanzania' or 'Thailand' or 'Timor-Leste' or 'Togo' or 'Tonga' or 'Tunisia' or 'Turkey' or 'Turkmenistan' or 'Tuvalu' or 'Uganda' or 'Ukraine' or 'Uzbekistan' or 'Vanuatu' or 'Venezuela' or 'Vietnam' or 'West Bank and Gaza' or 'Yemen Republic' or 'Zambia' or 'Zimbabwe'.
#4	#1 and #2 and #3

Appendix 2: Risk of bias assessment tool (Newcastle-Ottawa scale)

Domain (source of bias)	Assessment	Risk of bias
Selection (representativeness of the sample)	All subjects or random sampling (A)	Low
	Non-random sampling (B)	Moderate
	Selected group of users (C)	High
	No description of sampling strategy (D)	Unclear/High
Selection (sample size)	Justified and satisfactory (A)	Low
	Not justified (B)	High
Detection (outcome measurement)	Validated measurement tool (A)	Low
	Tool described but non-validated (B)	High
	Tool not described (C)	Unclear/High
Confounding	Adjusted for confounders (A)	Low
	No adjustment for confounders (B)	High
(Detection) Outcome assessment	Independent blind assessment (A)	-
	Record linkage (B)	-
	Self-report (C)	-
	No description (D)	-

Appendix 3: Freeman-Tukey double arcsine method

We first transformed the proportion of participants with hypertension in each study via the Freeman-Tukey double arcsine method¹ then performs an inverse-variance weighted random effects meta-analysis by conventional methods².

The pooled proportion can be calculated as the back-transform of the weighted mean of the transformed proportions:

$$\hat{p} = \frac{1}{2} \left[1 - \text{sign}(\cos(\hat{x})) \sqrt{1 - \left(\sin(\hat{x}) + \frac{1}{n} \right)^2} \right]$$

$$\hat{x} = \frac{\sum xw}{\sum w}$$

$$x = \sin^{-1} \left(\sqrt{\frac{r}{n+1}} \right) + \sin^{-1} \left(\sqrt{\frac{r+1}{n+1}} \right)$$

$$w = n + 0.5$$

$$q = \sum w(x - \hat{x})^2$$

¹ Miller JJ. Inverse of the Freeman-Tukey Double Arcsine Transformation. *The American Statistician* 1978;32(4):138.

² DerSimonian R, Laird N. Meta-analysis in Clinical Trials. *Controlled Clinical Trials* 1986;7:177-188.

- where \hat{p} is the fixed effects pooled proportion, x is the Freeman-Tukey transformed proportion, w is the inverse variance weight for the transformed proportion, q is the Cochran q statistic, τ^2 is the moment-based estimate of the between-studies variance, w_r is the DerSimonian-Laird weight, and \hat{p}_r is the random effects estimate of the pooled proportion.

Appendix 4: PRISMA checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	3
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	3
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	4
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	4
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	5
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	5
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	5
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	5-6
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	5-6
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	6

Section/topic	#	Checklist item	Reported on page #
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	6-7
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	6-7
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	6
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	6-7
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	6-7
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	6-8
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	8-9
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	9-11
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	9-11
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	9
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	11-12
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	12-14
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	15-16
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	17-18

Section/topic	#	Checklist item	Reported on page #
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	18

Appendix 5: Risk of bias assessment for each study

Publication year	First Author	Country	Selection (sampling)	Selection (sample size)	Detection (outcome exposure)	Control confounders	Detection (outcome assessment)
1994	Gupta	India	D	A	C	A	D
1995	Gupta	India	A	A	A	A	D
1995	Ibrahim	Egypt	A	B	A	A	D
1996	Kaufman	Nigeria	A	A	A	A	D
1996	Goel	India	B	B	A	A	D
1998	Singh	India	A	B	A	A	D
1998	Ordunez-Garcia	Cuba	D	B	A	A	C
1999	Malhotra	India	A	A	A	A	D
2000	Edwards	Tanzania	A	B	C	A	D
2001	Barreto	Brazil	B	A	A	A	D
2001	Gurav	India	A	A	A	A	D
2001	Shmulewitz	Federated States of Micronesia	A	A	A	A	D
2001	Freitas	Brazil	A	B	A	A	D
2001	Wu	China	A	A	B	A	C
2002	Swami	India	A	B	A	A	D
2002	Hazarika	India	D	B	A	A	D
2002	Reddy	India	B	B	B	A	C
2002	Lorenzo	Mexico	B	A	D	B	D
2002	Gupta	India	B	A	A	A	D
2002	Gu	China	B	B	A	A	D
2003	Shapo	Albania	B	A	A	A	D
2003	Amoah	Ghana	C	B	A	A	D
2003	Matos	Brazil	A	A	C	A	D
2003	Bharucha	India	A	A	A	A	D
2003	Shanthirani	India	A	A	A	A	D
2003	Deepa	India	B	A	A	A	D
2003	Hazarika	India	D	B	A	A	D
2004	Onal	Turkey	A	B	A	A	D
2004	Cappuccio	Ghana	A	B	A	A	D
2004	Gus	Brazil	B	B	A	A	D
2004	Lim	Malaysia	A	A	A	A	D
2004	Gupta	India	C	B	A	A	D
2004	Hazarika	India	D	B	A	A	D
2005	Erhun	Nigeria	B	B	A	A	D
2005	Ordunez	Cuba	B	B	A	A	D
2005	Ahmad	Pakistan	B	A	C	A	C
2005	Siddiqui	Pakistan	A	A	A	A	D

Publication year	First Author	Country	Selection (sampling)	Selection (sample size)	Detection (outcome exposure)	Control confounders	Detection (outcome assessment)
2005	Das	India	A	B	A	A	D
2005	Prabhakaran	India	B	B	A	A	D
2006	Bahrami	Iran	A	A	A	A	D
2006	Agyemang	Ghana	B	B	A	A	D
2006	Lessa	Brazil	A	A	A	A	D
2006	Jean-Baptiste	Haiti	D	B	A	A	D
2006	Kamadjeu	Cameroon	A	A	A	A	D
2006	Minh	Vietnam	A	A	A	A	D
2006	Almeida-Pititto	Brazil	A	A	A	A	D
2006	Mishra	Uzbekistan	A	A	A	A	D
2006	Thankappan	India	A	A	A	A	D
2007	Jardim	Brazil	B	B	C	A	C
2007	Niakara	Burkina Faso	B	B	A	A	D
2007	Medina-Lezama	Peru	C	B	A	A	D
2007	Duda	Ghana	A	A	A	A	D
2007	Kengme	Cameroon	B	B	A	A	D
2007	Thorogood	South Africa	D	A	A	A	D
2007	Omuemu	Nigeria	A	B	A	A	D
2007	Vaidya	Nepal	B	A	A	A	D
2007	Mohan	India	A	A	A	A	D
2007	Wijewardene	SriLanka	B	A	A	A	D
2007	Reddyet	India	B	A	A	A	D
2007	Gupta	India	D	B	A	A	D
2007	Chaturvedi	India	A	B	B	A	D
2008	Rampal	Malaysia	D	B	A	A	D
2008	Ordunez	Cuba	C	B	B	A	D
2008	Capilheira	Brazil	A	B	A	A	D
2008	Sun	China	A	A	A	A	D
2008	Sparrenberger	Brazil	A	A	A	A	D
2008	Erem	Turkey	A	A	A	A	D
2008	Agrawal	India	D	B	A	A	D
2008	Yadav	India	D	B	A	A	D
2009	Azimi-Nezhad	Iran	A	A	A	A	D
2009	Ramezani	Iran	D	B	C	A	D
2009	Longo	Brazil	D	B	A	A	D
2009	Rosario	Brazil	B	A	A	A	D
2009	Zhang	China	A	B	B	A	D
2009	Rodrigues	Brazil	B	B	B	A	C
2009	Reichert	Brazil	B	B	B	A	C
2009	Diaz	Cuba	B	B	B	A	C
2009	Grimsrud	South Africa	B	B	B	A	C
2009	Wamala	Uganda	B	B	B	A	C

Publication year	First Author	Country	Selection (sampling)	Selection (sample size)	Detection (outcome exposure)	Control confounders	Detection (outcome assessment)
2009	Tesfaye	Ethiopia	B	B	B	A	C
2009	Damasceno	Mozambique	B	B	B	A	C
2009	Kusuma	India	B	B	B	A	C
2009	Pednekar	India	A	B	A	A	D
2009	Pednekar	India	B	A	A	A	D
2009	Midha	India	A	B	A	A	D
2010	Ebrahimi	Iran	B	B	A	A	D
2010	Cipullo	Brazil	A	B	C	A	D
2010	Nascente	Brazil	B	B	A	A	D
2010	Lee	China	B	B	A	A	D
2010	Swaddiwudhipong	Thailand	D	B	C	A	D
2010	Thuy	Vietnam	B	B	A	A	D
2010	Wu	China	D	B	A	A	D
2010	Dorobantu	Romania	D	B	A	A	D
2010	Ulasi	Nigeria	B	A	C	A	D
2010	Ekwunife	Nigeria	B	B	A	A	D
2010	Oladapo	Nigeria	B	B	A	A	D
2010	Sani	Nigeria	A	B	A	A	D
2010	Bhardwaj	India	D	B	A	A	D
2010	Jonas	India	A	A	C	A	D
2010	Kinra	India	A	B	A	A	D
2010	Kar	India	A	B	A	A	D
2011	Maher	Uganda	A	B	A	A	D
2011	Ulasi	Nigeria	A	B	A	A	D
2011	Wokoma	Nigeria	B	B	C	A	D
2011	Chataut	Nepal	D	B	A	A	D
2011	Norboo	India	D	B	C	A	D
2011	Manimunda	India	B	B	A	A	D
2011	Thrift	India	A	B	A	A	D
2012	Lyra	Brazil	A	B	C	A	D
2012	Berraho	Morocco	B	B	A	A	D
2012	Hofelmann	Brazil	A	B	A	A	D
2012	Kerkhoff	Brazil	A	A	A	A	D
2012	Altun	Turkey	A	A	A	A	D
2012	Prince	Cuba	D	B	A	A	D
2012	Dogan	Turkey	C	B	A	A	D
2012	Prince	Dominican Republic	A	A	C	A	D
2012	Prince	Peru	A	B	A	A	D
2012	Prince	Venezuela	A	B	A	A	D
2012	Prince	Mexico	A	B	A	A	D
2012	Prince	China	A	B	A	A	D
2012	Macia	Senegal	A	B	A	A	D

Publication year	First Author	Country	Selection (sampling)	Selection (sample size)	Detection (outcome exposure)	Control confounders	Detection (outcome assessment)
2012	Awoke	Ethiopia	B	A	A	A	D
2012	Mayega	Uganda	B	B	A	A	D
2012	Msyamboza	Malawi	A	B	C	A	D
2012	Hendriks	Nigeria	B	B	A	A	D
2012	Hendriks	Kenya	D	A	A	A	D
2012	Hendriks	Tanzania	D	B	A	A	D
2012	Hendriks	Namibia	D	B	A	A	D
2012	Dzudie	Cameroon	B	B	C	A	D
2012	Oladimeji	Nigeria	A	A	A	A	D
2012	Bharati	India	D	B	A	A	D
2012	Bansal	India	A	A	A	A	D
2012	Vaidya	Nepal	D	B	A	A	D
2012	Vaidya	Nepal	A	A	A	A	D
2012	Esam	India	D	B	A	A	D
2012	Dutta	India	D	A	A	B	D
2012	Prasad	India	D	B	A	A	D
2012	Prince	India	D	B	C	B	D
2012	Meshram	India	A	B	A	B	D
2012	Samuel	India	A	B	C	A	D
2012	Kaur	India	D	B	A	A	D
2012	Jeemon	India	A	B	A	A	D
2012	Gupta	India	D	A	A	A	D
2012	Gupta	India	A	A	A	B	D
2012	Chinnakali	India	B	B	A	B	D
2012	Kokiwar	India	A	B	A	A	D
2012	Borah	India	A	B	A	B	D
2012	Kaur	India	B	B	A	B	D
2013	Modesti	Yemen	A	B	A	A	D
2013	Harhay	Albania	B	B	A	A	D
2013	Harhay	Armenia	A	B	A	B	D
2013	Harhay	Azerbaijan	A	B	A	A	D
2013	Mendes	Brazil	B	B	A	A	D
2013	Selem	Brazil	A	A	C	A	D
2013	Ha	Vietnam	A	B	A	A	D
2013	Kiau	Malaysia	A	B	A	A	D
2013	Silva	Brazil	A	B	A	A	D
2013	Harhay	Ukraine	A	B	A	A	D
2013	Ogah	Nigeria	A	B	A	A	D
2013	Pessinaba	Senegal	B	A	A	A	D
2013	Peltzer	South Africa	B	B	A	A	D
2013	Kandala	South Africa	A	B	C	A	D
2013	Asekun-Olarinmoye	Nigeria	B	B	A	A	D

Publication year	First Author	Country	Selection (sampling)	Selection (sample size)	Detection (outcome exposure)	Control confounders	Detection (outcome assessment)
2013	Okpechi	Nigeria	D	A	A	A	D
2013	Veghari	Iran	D	B	A	A	D
2013	Ogunmola	Nigeria	D	B	A	A	D
2013	Ekanem	Nigeria	B	B	C	A	D
2013	Adebayo	Nigeria	A	A	A	A	D
2013	Peer	South Africa	D	B	A	A	D
2013	Musinguzi	Uganda	A	A	A	A	D
2013	Bhagyalaxmi	India	D	B	A	A	D
2013	Gupta	India	A	A	A	A	D
2013	Khan	Nepal	D	B	A	A	D
2014	Wang	China	D	A	A	B	D
2014	Feng	China	D	B	A	A	D
2014	Lloyd-Sherlock	China	D	B	C	B	D
2014	Fan	China	A	B	A	B	D
2014	Posso	Panama	A	B	C	A	D
2014	Awosan	Nigeria	D	B	A	A	D
2014	Lloyd-Sherlock	Ghana	A	B	A	A	D
2014	Lloyd-Sherlock	South Africa	D	A	A	A	D
2014	Helelo	Ethiopia	A	A	A	B	D
2014	Moges	Ethiopia	B	B	A	B	D
2014	Duboz	Senegal	A	B	A	A	D
2014	Doulougou	Burkina Faso	A	B	A	B	D
2014	Awuah	Ghana	B	B	A	B	D
2014	Doulougou	Burkina Faso	A	B	A	A	D
2014	Oluyombo	Nigeria	B	B	A	A	D
2014	Nguyen	Vietnam	A	B	A	B	D
2014	Lloyd-Sherlock	Mexico	A	B	A	A	D
2014	Amiri	Malaysia	B	B	A	A	D
2014	Zhao	China	A	A	C	A	D
2014	Adhikari	Nepal	A	B	A	A	D
2014	Lloyd-Sherlock	India	A	B	A	A	D
2014	Zaman	Bangladesh	A	B	A	A	D
2015	Abebe	Ethiopia	A	B	A	A	D
2015	Akpan	Nigeria	A	B	A	A	D
2015	Angaw	Ethiopia	B	A	A	A	D
2015	Bernabe Ortiz	Peru	B	B	A	A	D
2015	Bresan	Brazil	A	B	C	A	D
2015	De Souza	Brazil	B	B	A	A	D
2015	Anteneh	Ethiopia	D	A	A	A	D
2015	Asiki	Uganda	D	B	A	A	D
2015	Isara	Nigeria	D	B	A	A	D
2015	Musinguzi	Uganda	B	B	C	A	D

Publication year	First Author	Country	Selection (sampling)	Selection (sample size)	Detection (outcome exposure)	Control confounders	Detection (outcome assessment)
2015	Khalifeh	Lebanon	A	A	A	A	D
2015	Matar	Lebanon	D	B	A	A	D
2015	Minicuci	Ghana	A	A	A	A	D
2015	Sepanlou	Iran	D	B	A	A	D
2015	Supiyev	Kazakhstan	A	A	A	A	D
2015	Oguoma	Nigeria	D	B	A	A	D
2015	Wandera	Uganda	D	A	A	B	D
2015	Hou	China	D	B	A	A	D
2015	Chen	China	D	B	C	B	D
2015	Lim	China	A	B	A	B	D
2015	Iazdanpanah	Iran	A	B	C	A	D
2015	Wang	China	D	B	A	A	D
2015	Sowemimo	Nigeria	A	B	A	A	D
2015	Guo	China	D	A	A	A	D
2015	Kingue	Cameroon	A	A	A	B	D
2015	Bushara	Sudan	B	B	A	B	D
2015	Seck	Senegal	A	B	A	A	D
2015	Ezeala-Adekaibe	Nigeria	A	B	A	B	D
2015	Li	China	B	B	A	B	D
2015	Unger	Brazil	A	B	A	A	D
2015	Ibekwe	Nigeria	B	B	A	A	D
2015	Ugwuja	Nigeria	A	B	A	A	D
2015	Botha	South Africa	A	A	A	A	D
2015	Vieira	Brazil	A	A	A	A	D
2015	Gu	China	A	A	A	A	D
2015	Almeida	Brazil	D	B	A	A	D
2015	Sander	Uganda	D	B	A	A	D
2015	Lu	China	A	A	A	A	D
2015	Ke	China	D	B	C	A	D
2015	Wei	China	D	B	A	A	D
2015	Do	Vietnam	B	A	A	A	D
2015	Gupta	India	A	B	B	A	D
2015	Menon	India	B	B	B	A	C
2015	Ranasighe	Sri Lanka	B	B	B	A	C
2015	Rahman	Bangladesh	B	B	B	A	C
2015	Bhansali	India	B	B	B	A	C

eTable 1: Characteristics of included studies for the East Asia and Pacific region

First author, year	Year of data collection	Country	Setting	Age (years)	Mean age ± SD (years)	Sample size	% Males	Hypertension prevalence (male/female)	BP cut-off (mmHg)	Country income group
Shmulewitz, 2001 ¹⁹	1994	FS Micronesia	rural	>20	42.0±14.0	2188	42.0	17.0	140/90	lower-middle
Wu, 2001 ²⁰	2001	China	urban	≥60	67.9±5.8	2272	41.5	59.8	140/90	upper-middle
Gu, 2002 ²¹	2000-01	China	urban and rural	35-74	NR	13198	47.8	27.2(28.6/25.8)	140/90	upper-middle
Lim, 2004 ²²	1996	Malaysia	urban and rural	≥30	NR	21391	47.0	33.0(31.9/33.9)	140/90	upper-middle
Minh, 2006 ²³	2002	Vietnam	rural	25-64	NR	1996	50.1	14.1(18.1/10.1)	140/90	lower-middle
Rampal, 2008 ²⁴	2004	Malaysia	urban and rural	≥15	NR	16440	42.4	27.8(29.6/26.0)	140/90	upper-middle
Sun, 2008 ²⁵	2004-06	China	urban	≥35	51.2±11.8	45390	49.6	39.5(37.0/38.6)	140/90	upper-middle
Zhang, 2009 ²⁶	2006	China	urban	≥60	69.7±6.7	4141	35.3	48.5(48.4/48.6)	140/90	upper-middle
Lee, 2010 ²⁷	2002-06	China	urban	40-74	52.5±8.9	39252	100	25.1	140/90	upper-middle
Swaddiwudhipong, 2010 ²⁸	2009	Thailand	rural	≥15	52.8±11.9	5273	44.9	29.8(29.8/29.7)	140/90	upper-middle
Thuy, 2010 ²⁹	2005	Vietnam	urban	25-64	41.3±1.0	910	100	35.2	140/90	lower-middle
Wu, 2010 ²⁰	2010	China	urban	≥60	71.7±6.6	2074	41	70.4	140/90	upper-middle
Prince, 2012 ³⁰	2003-06	China	urban and rural	≥65	73.2±6.1	2157	43.7	60.4	140/90	upper-middle
Ha, 2013 ³¹	2011	Vietnam	urban and rural	≥25	45.0	2368	43.5	23.3(30.0/19.0)	140/90	lower-middle
Kiau, 2013 ³²	2006	Malaysia	urban and rural	≥18	NR	4933	46.3	74.0(70.1/77.4)	140/90	upper-middle
Amiri, 2014 ³³	2012	Malaysia	urban	≥18	41.5±14.9	1096	43.7	39.3	140/90	upper-middle
Fan, 2014 ³⁴	2010	China	urban and rural	15-74	38.2±15.1	18772	40.4	24.9	140/90	upper-middle
Feng, 2014 ³⁵	2011-12	China	urban and rural	≥45	NR	13707	46.7	38.6	140/90	upper-middle
Lloyd-Sherlock, 2014 ³⁶	2007-10	China	urban and rural	≥50	NR	13348	49.8	59.5(58.8/60.1)	140/90	upper-middle
Nguyen, 2014 ³⁷	2012	Vietnam	urban and rural	34-65	47.4±8	3779	43.3	12.3(28.3/14.6)	140/90	upper-middle
Wang, 2014 ³⁸	2003-10	China	urban	≥18	45.2±13.9	37141	60.7	32.1(33.7/19.3)	140/90	upper-middle
Zhao, 2015 ³⁹	2008-12	China	rural	18-60	53.4±10.3	6324	100	48.8	140/90	upper-middle
Hou, 2015 ⁴⁰	2008-12	China	urban and rural	≥45	NR	3797	47.7	46.2	140/90	upper-middle
Chen, 2015 ⁴¹	2012	China	rural	≥50	NR	2208	43.1	38.5	140/90	upper-middle
Li, 2015 ⁴²	2015	China	urban and rural	≥18	45.1±3.6	58985	43.2	37.4	140/90	upper-middle
First author, year	Year of data collection	Country	Setting	Age (years)	Mean age ± SD (years)	Sample size	% Males	Hypertension prevalence (male/female)	BP cut-off (mmHg)	Country income group
Wang, 2015 ⁴³	2009	China	urban and rural	18-87	41.2±15.5	15172	45.7	42	140/90	upper-middle

Guo, 2015 ⁴⁴	1991-2011	China	urban and rural	≥ 18	NR	24410	-	28.6	140/90	upper-middle
Li, 2015 ⁴⁵	2015	China	urban	≥ 18	NR	2026	-	26.9	140/90	upper-middle
Gu, 2015 ⁴⁶	2002	China	urban and rural	35-70	NR	7137	-	40.9	140/90	upper-middle
Lu, 2015 ⁴⁷	2013	China	urban	≥ 18	45	4675	-	31.6	140/90	upper-middle
Ke, 2015 ⁴⁸	2012	China	urban	18-93	NR	1410	45.2	34	140/90	upper-middle
Wei, 2015 ⁴⁹	2015	China	urban	≥ 18	NR	3778	47.3	41	140/90	upper-middle
Do, 2015 ⁵⁰	2005	Vietnam	urban and rural	25-64	NR	17199	-	20.7	140/90	lower-middle

BP=blood pressure, FS Micronesia=Federal States of Micronesia, SD=standard deviation, mmHg=millimetre mercury, NR=not reported in original paper.
Country income group is classified according to World Bank indicators

eFigure 1: Contour-enhanced funnel plot

eFigure 2: Prevalence estimate of hypertension in the Latin America and Caribbean region

eFigure 3: Prevalence estimate of hypertension in the Middle East and North Africa region

eFigure 4: Prevalence estimate of hypertension in the East Asia and Pacific region

eFigure 5: Prevalence estimate of hypertension in the Sub-Saharan Africa region

eFigure 6: Prevalence estimate of hypertension in the Europe and Central Asia region

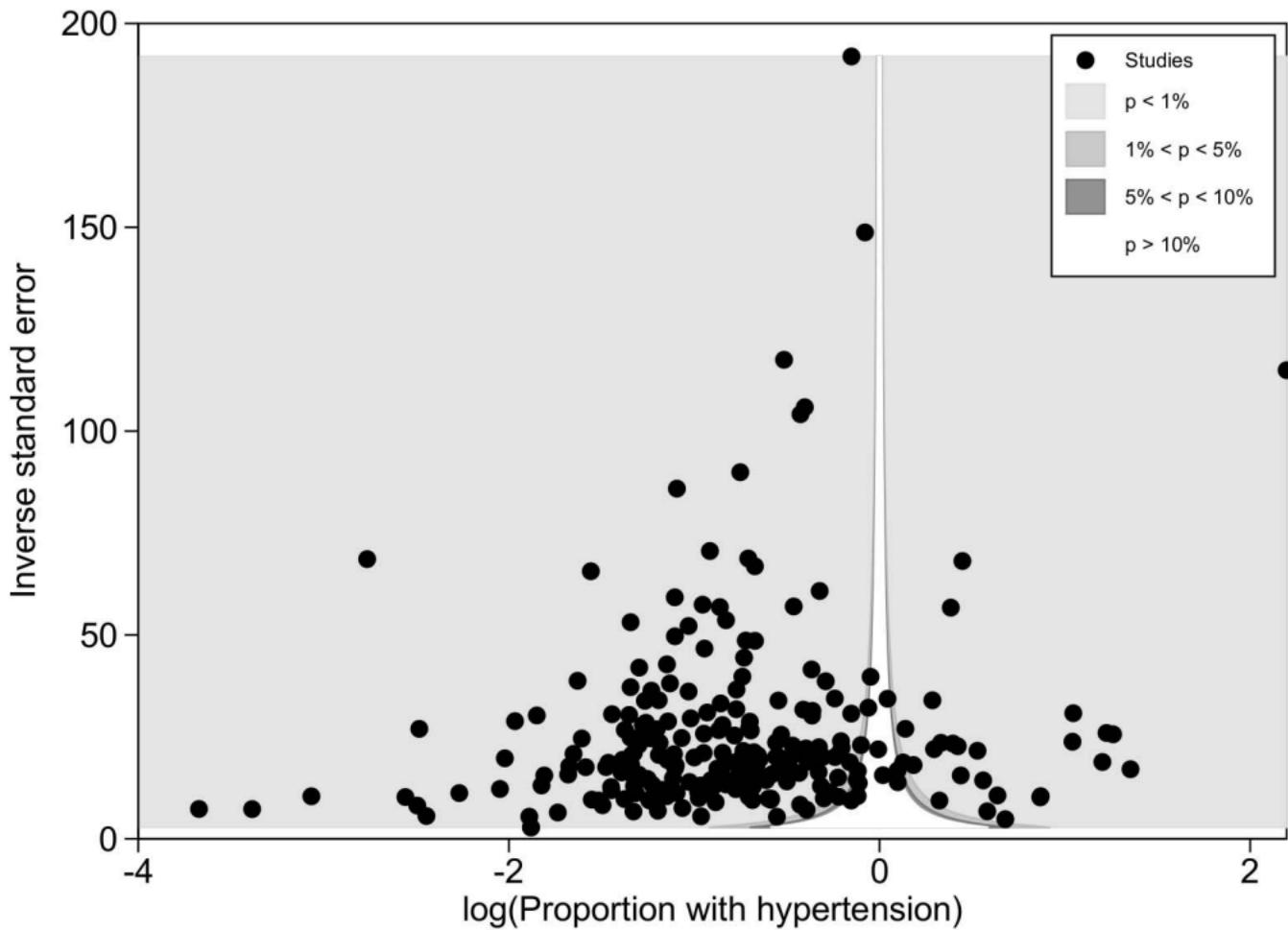
eFigure 7: Prevalence estimate of hypertension in the South Asia region

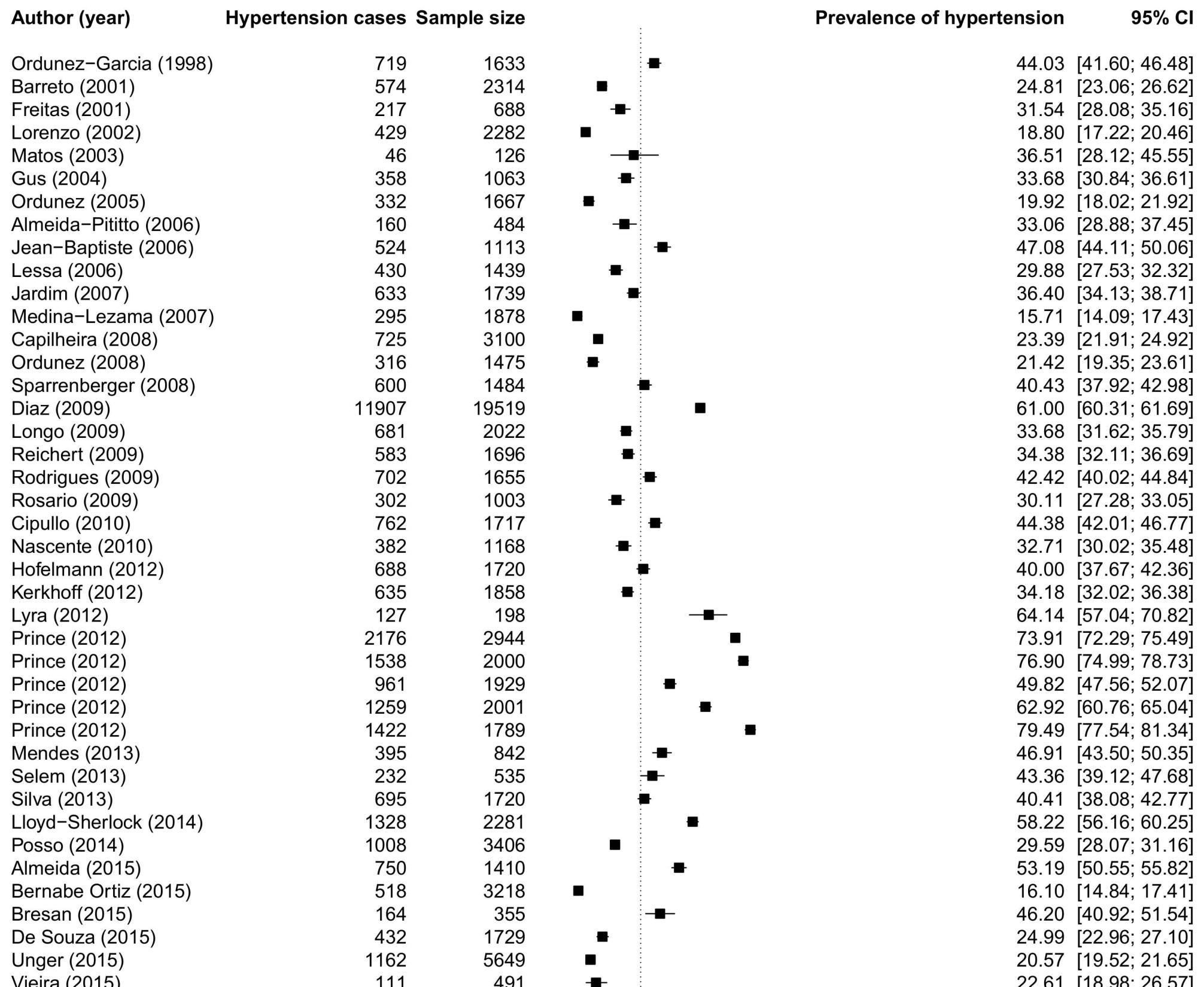
eFigure 8: Prevalence estimate of hypertension in upper-middle income countries

eFigure 10: Prevalence estimate of hypertension in low-income countries

eFigure 11: Prevalence of hypertension in urban settings

eFigure 12: Prevalence of hypertension in rural settings



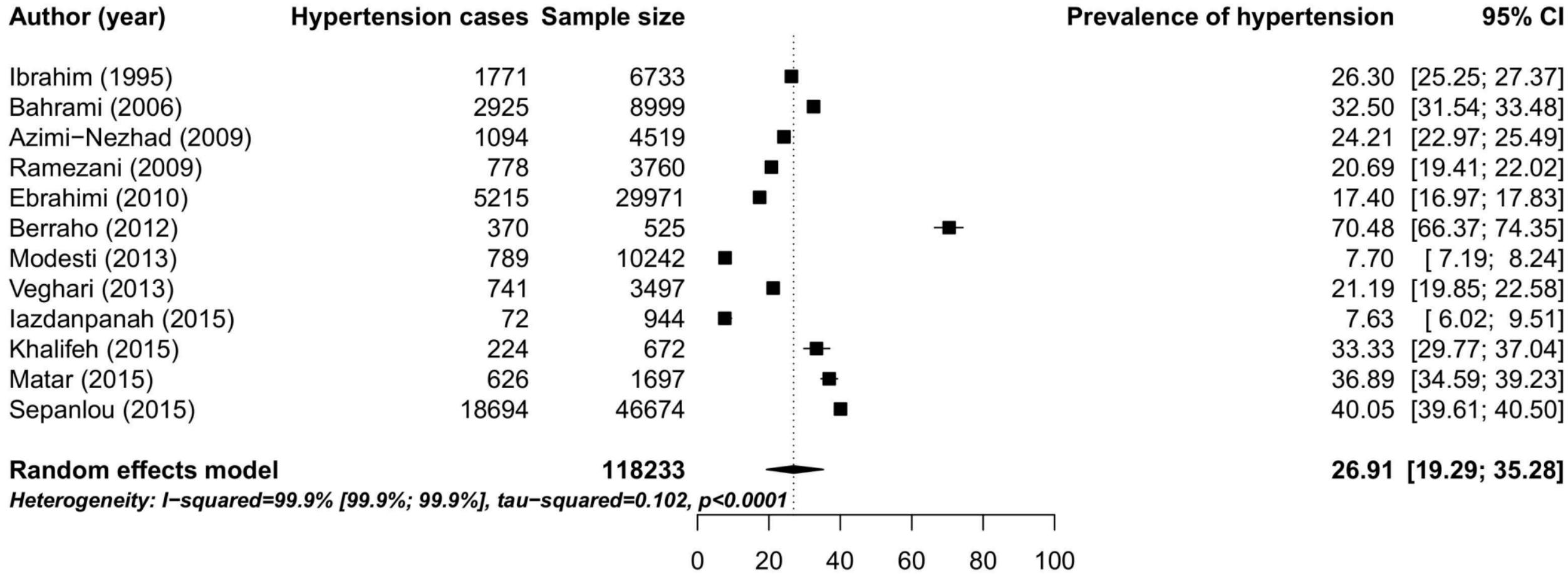


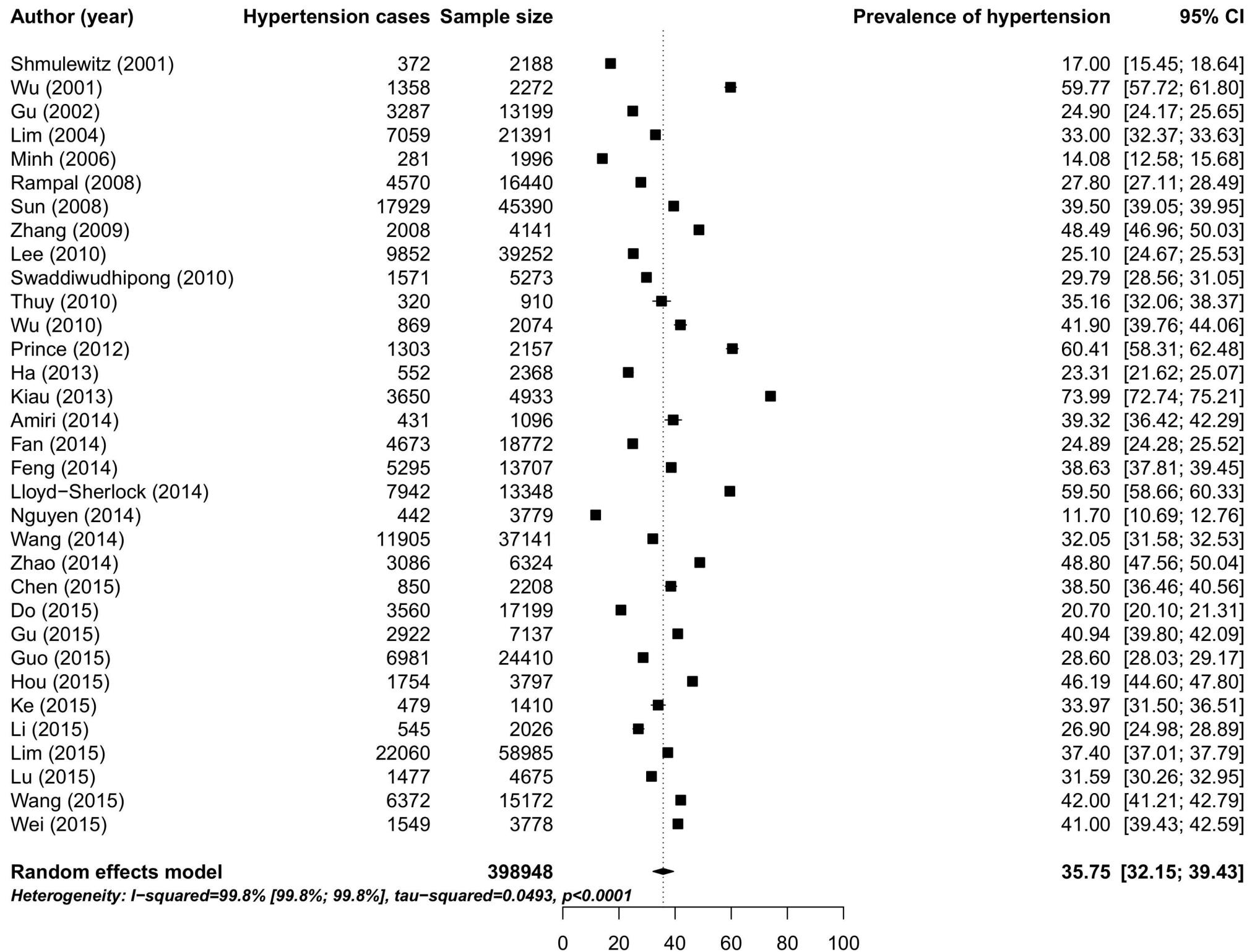
Random effects model

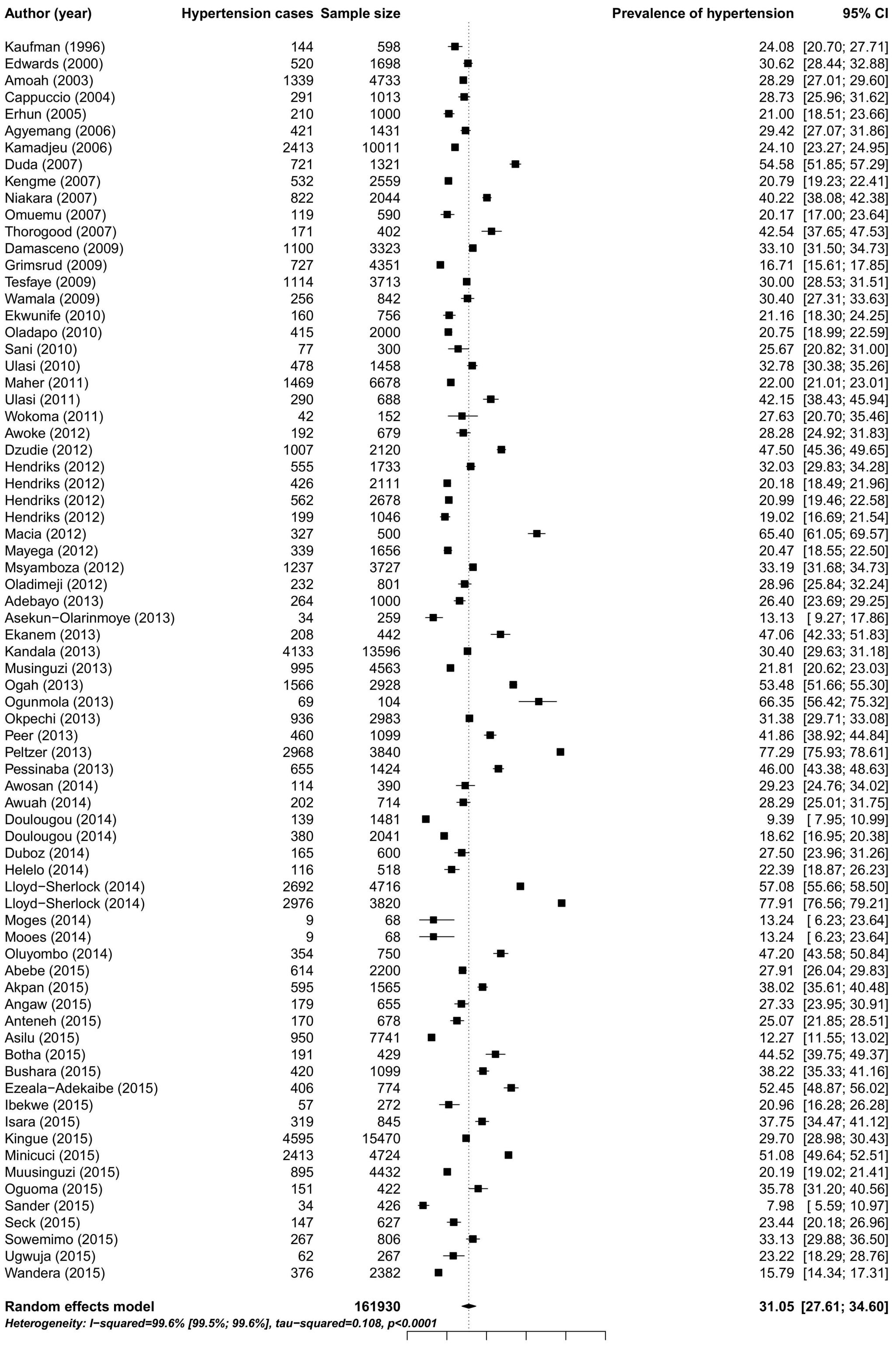
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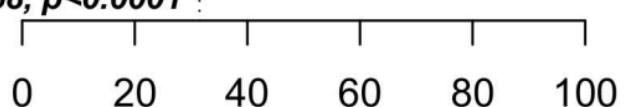
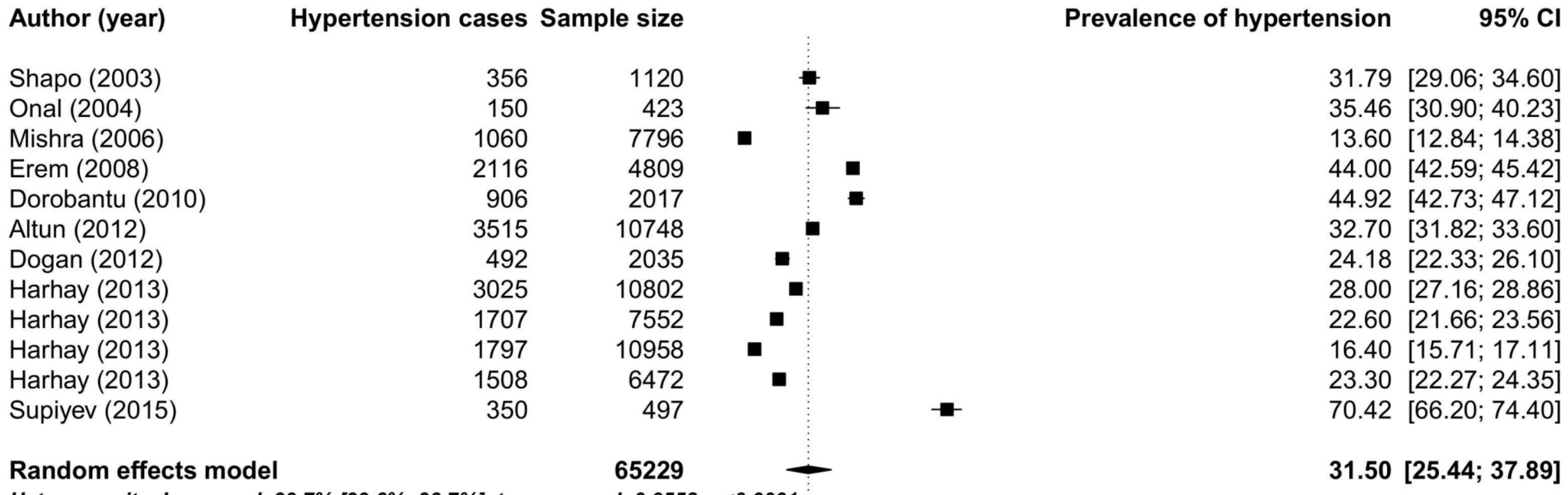
39.06 [33.12; 45.17]

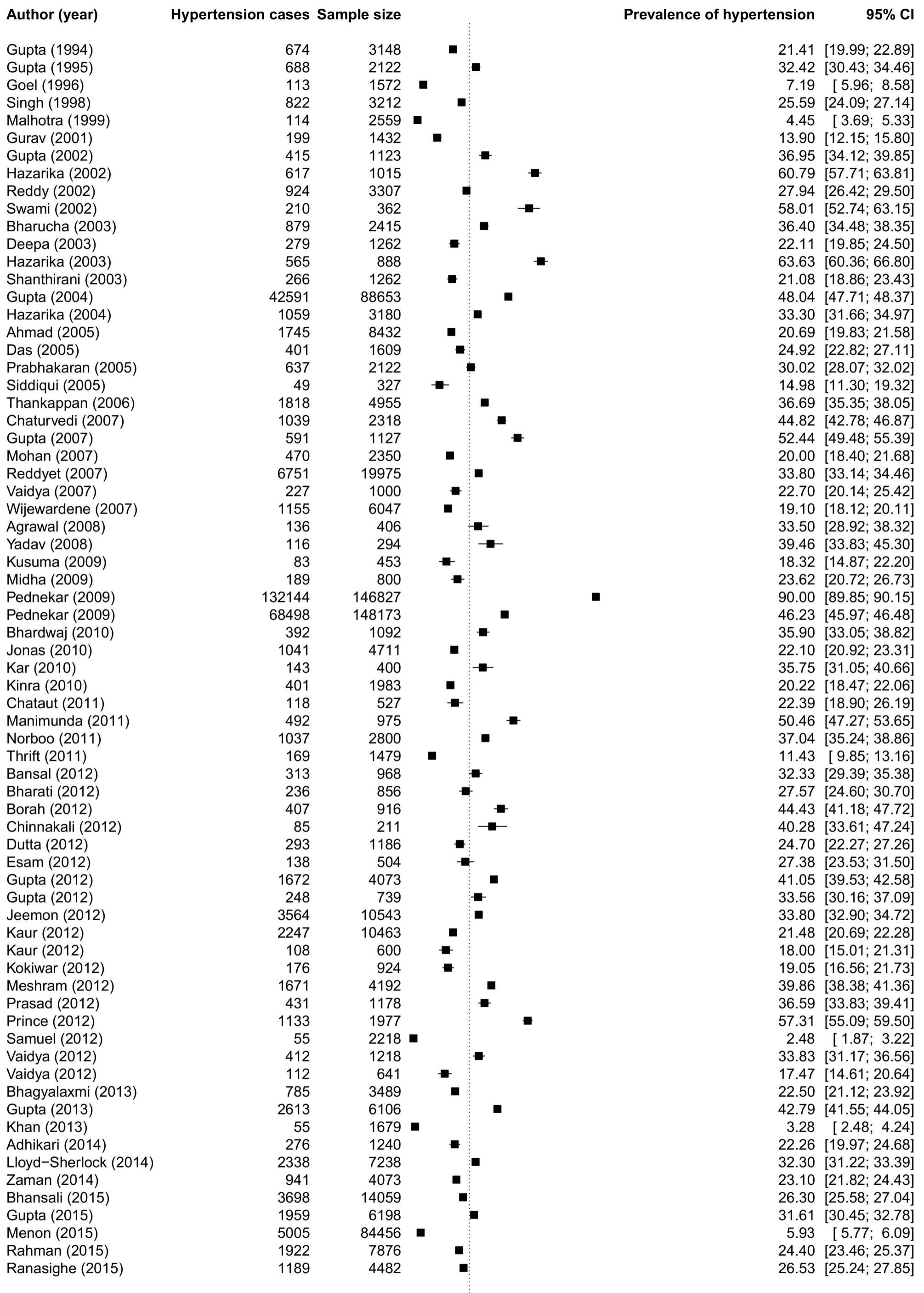
Heterogeneity: I^2 -squared=99.7% [99.7%; 99.7%], τ^2 -squared=0.162, p <0.0001











Random effects model

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29.40 [22.34; 37.00]

Heterogeneity: I^2 -squared=100% [100%; 100%], τ^2 -squared=0.4741, p <0.0001



