frontiers

Supplementary Material

Supplementary Table 1. Search strategies

Search	Query
1. PubMed/MEDLINE	
1	((neoplasms[MeSH Terms]) OR (cancer* OR neoplasm* OR malignan* OR carcinoma* OR oncolog* OR eukemi* OR lymphoma*))
2	((complementary therapies [MeSH Terms]) OR (herbal medicine [MeSH Terms]) OR (complementary medic*) OR (complementary therap*) OR (alternative medic*) OR (alternative therap*) OR (integrative medic*) OR (integrative therap*) OR (traditional medic*) OR (unconventional medic*) OR (unconventional therap*) OR (Non-hospital treat*) OR (herbal medic*) OR (herbal therap*))
3	1 AND 2
4	((Surveys and Questionnaires [MeSH Terms]) OR ("cross sectional studies"[MeSH Terms]) OR (survey) OR ("cross-sectional study") OR ("cross-sectional survey"))
5	3 AND 4
6	(names of Asian countries† using OR in between)
7	5 AND 6
8	("meta-analysis"[Title] OR "meta-analysis"[Publication Type] OR "review"[Title] OR "review"[Publication Type] OR "clinical trial"[Publication Type] OR "randomized controlled trial"[Publication Type] OR "Comment"[Publication Type] OR "Editorial"[Publication Type])
9	7 NOT 8
10	limit 9 to (human, and full text)
2. Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Daily and Versions(R)	
1	exp complementary medicine/
2	((complementary OR alternative OR integrat* OR traditional OR unconventional OR herbal) adj1 (therap* OR medicine)).tw,kw.
3	1 OR 2
4	exp neoplasms/
5	(cancer* OR neoplasm* OR malignan* OR carcinoma* OR oncolog* OR eukemi* OR lymphoma*)

Search	Query
6	4 OR 5
7	3 AND 6
8	(survey OR questionnaire OR cross-sectional survey OR cross-sectional stud*).af.
9	7 AND 8
10	(names of Asian countries† using OR in between).af.
11	9 AND 10
3. CINAHL (EBSCO)	
1	MH "neoplasms+"
2	cancer* OR neoplasm* OR malignan* OR carcinoma* OR oncolog* OR eukemi* OR lymphoma*
3	1 OR 2
4	TI ("Complementary and alternative medicine" OR "Complementary & alternative medicine" OR CAM) OR AB("Complementary and alternative medicine" OR "Complementary & alternative medicine" OR CAM) OR MH "Alternative Therapies+"
5	“complementary therap*” OR “herbal medic*” OR “complementary medic*” OR “alternative medic*” OR “integrative medic*” OR “integrative therap*” OR “traditional medic*” OR “unconventional medic*” OR “unconventional therap*” OR “Non-hospital treat* “ OR “herb* medic*” OR “herb* therap*” OR “herb*”
6	4 OR 5
7	3 AND 6
8	TI("cross sectional" OR "cross-sectional") OR AB("cross sectional" OR "cross-sectional") OR MH "Questionnaires" MH "Surveys" OR questionnaire* OR survey*
9	7 AND 8
10	(names of Asian countries† using OR in between)
11	9 AND 10
4. Web of Science	
1	cancer* OR neoplasm* OR malignan* OR carcinoma* OR oncolog* OR eukemi* OR lymphoma* (Topic)
2	((complementary therap*) OR (herbal medicine*) OR (complementary medic*) OR (complementary therap*) OR (alternative medic*) OR (alternative therap*) OR (integrative medic*) OR (integrative therap*) OR (traditional medic*) OR (unconventional medic*) OR (unconventional therap*) OR (Non-hospital treat*) OR (herbal medic*) OR (herbal therap*)) (All Fields)

Search	Query
3	1 AND 2
4	("cross sectional" OR "cross-sectional") (Title) OR ("cross sectional" OR "cross-sectional") (Abstract) OR ("Questionnaires" OR "Surveys" OR questionnaire* OR survey*) (All Fields)
5	3 AND 4
6	("meta-analysis" OR “meta analysis” OR "review" OR "clinical trial" OR "randomized controlled trial" OR "RCT*"OR "Comment" OR "Editorial") (All Fields)
7	5 NOT 6
8	TI("cross sectional" OR "cross-sectional") OR AB("cross sectional" OR "cross-sectional") OR MH "Questionnaires" MH "Surveys" OR questionnaire* OR survey*
9	7 AND 8

† The list of Asian countries follows the "World Economic Situation and Prospects 2020"s[1] classification criteria: Afghanistan, Bahrain, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Fiji, Hong Kong, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kiribati, Korea*, Lao*, Lebanon, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Oman, Pakistan, Palestine, Papua New Guinea, Philippines, Samoa, Saudi Arabia, Singapore, Solomon Islands, Sri Lanka, Syrian, Taiwan, Thailand, Timor-Leste, Turkey, Vanuatu, Vietnam, Yemen

[1] United Nations. World Economic Situation and Prospects 2020. UN Department of Economic and Social Affairs. Economic Analysis. 16th Jan. 2020. https://www.un.ORg/development/desa/dpad/publication/wORld-economic-situation-and-prospects-2020/ (last accessed 10th Sep. 2020).

Results of Quality assessment with the Appraisal tool for Cross-Sectional Studies (AXIS tool)

Supplementary Table 2. The proportion to meet individual AXIS criteria

Item	AXIS criteria	meet the criteria (%)
	Introduction	
1	Were the aims/objectives of the study clear?	97.6
	Methods	
2	Was the study design appropriate for the stated aim(s)?	100.0
3	Was the sample size justified?	19.5
4	Was the target/reference population clearly defined? (Is it clear who the research was about?)	97.6
5	Was the sample frame taken from an appropriate population base so that it closely represented the target/reference population under investigation?	95.1
6	Was the selection process likely to select subjects/participants that were representative of the target/reference population under investigation?	90.2
7	Were measures undertaken to address and categorise non-responders?	2.4
8	Were the risk factor and outcome variables measured appropriate to the aims of the study?	97.6
9	Were the risk factor and outcome variables measured correctly using instruments/measurements that had been trialed, piloted or published previously?	68.3
10	Is it clear what was used to determine statistical significance and/or precision estimates? (e.g. p-values, confidence intervals)	75.6
11	Were the methods (including statistical methods) sufficiently described to enable them to be repeated?	78.0
	Results	
12	Were the basic data adequately described?	90.2
13#	Does the response rate raise concerns about non-response bias?	51.2
14*	If appropriate, was information about non-responders described?	-
15	Were the results internally consistent?	73.2
16	Were the results presented for all the analyses described in the methods?	82.9
	Discussion	
17	Were the authors' discussion and conclusions justified by the results?	87.8
18	Were the limitations of the study discussed?	68.3
	Other	
19#	Were there any funding sources or conflicts of interest that may affect the authors' interpretation of the results?	65.9
20	Was ethical approval or consent of participants attained?	87.8

AXIS = Appraisal tool for Cross-Sectional Studies

Item was reverse coded (a 'No' answer to these questions meant that the criteria were met)

* Not included as an item of critical appraisal for this review

Supplementary Table 3. Results of quality assessment of each study

Author (Year)	1	2	3	4	5	6	7	8	9	10	11	12	13 †	15	16	17	18	19 †	20	Total
Choi *et al.* (2022)	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	18
Nejat *et al.* (2022)	Y	Y	Y	Y	N	Y	N	Y	Y	N	N	Y	Y	N	N	N	N	N	Y	10
Choi *et al.* (2021)	Y	Y	N	Y	N	N	N	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	14
Kanimozhi *et al.* (2021)	N	Y	N	Y	Y	N	N	Y	Y	N	Y	Y	Y	N	N	N	Y	N	Y	10
Pandey *et al.* (2021)	Y	Y	N	Y	Y	Y	N	Y	Y	N	N	N	N	Y	Y	N	Y	N	Y	12
Salleh *et al.* (2021)	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	15
Sarada *et al.* (2021)	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	Y	Y	N	Y	N	Y	16
Hamed Abdalla *et al.* (2020)	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	16
Bazrafshani *et al.* (2019)	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	15
Cevik *et al.* (2019)	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	17
Chotipanich *et al.* (2019)	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	16
Dehghan *et al.* (2019)	Y	Y	N	DK	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	16
Chui *et al.* (2018)	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	18
Yang *et al.* (2018)	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	16
Zulkipli *et al.* (2018)	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	16
Jang *et al.* (2017)	Y	Y	N	Y	Y	Y	N	Y	DK	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	15
Mohd Mujar *et al.* (2017)	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	16
Naja *et al.* (2017)	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	18
Oyunchimeg *et al.* (2017)	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	17
Azhar *et al.* (2016)	Y	Y	N	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	N	N	N	DK	Y	11
Dişsiz & Yilmaz (2015)	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	17
Naja *et al.* (2015)	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	17

Author (Year)	1	2	3	4	5	6	7	8	9	10	11	12	13 †	15	16	17	18	19 †	20	Total
Üstündağ (2015)	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	Y	N	N	Y	Y	Y	DK	Y	14
Ku & Koo (2012)	Y	Y	N	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	15
McQuade *et al.* (2012)	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	17
Puataweepong *et al.* (2012)	Y	Y	N	Y	Y	Y	N	Y	N	Y	N	Y	Y	N	Y	Y	N	DK	Y	11
Aydin Avci *et al.* (2011)	Y	Y	N	Y	Y	Y	N	Y	Y	N	Y	Y	N	Y	Y	Y	Y	N	N	15
Chow *et al.* (2010)	Y	Y	N	Y	Y	Y	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	DK	Y	15
Shih *et al.* (2009)	Y	Y	N	Y	Y	Y	N	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	Y	14
Supoken *et al.* (2009)	Y	Y	Y	Y	Y	N	N	N	Y	N	N	Y	Y	Y	Y	N	N	DK	Y	10
Tarhan *et al.* (2009)	Y	Y	N	Y	Y	Y	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	14
Aksu *et al.* (2008)	Y	Y	N	Y	Y	Y	N	Y	N	Y	Y	N	Y	Y	Y	Y	N	DK	N	11
Ucan *et al.* (2008)	Y	Y	N	Y	Y	Y	N	Y	N	N	N	Y	Y	Y	Y	Y	N	DK	N	10
Kim *et al.* (2007a)	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	17
Kim *et al.* (2007b)	Y	Y	N	Y	Y	Y	N	Y	Y	N	N	Y	N	N	N	Y	N	DK	N	10
Algier *et al.* (2005)	Y	Y	N	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	N	Y	N	DK	Y	12
Tas *et al.* (2005)	Y	Y	N	Y	Y	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	N	DK	Y	13
Yildirim *et al.* (2005)	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	Y	14
Gözüm *et al.* (2003)	Y	Y	N	Y	Y	Y	N	Y	N	Y	Y	Y	Y	N	Y	Y	Y	DK	Y	13
Malik & Gopalan (2003)	Y	Y	N	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	N	DK	Y	13
Ceylan *et al.* (2002)	Y	Y	N	Y	Y	Y	N	Y	N	N	N	Y	N	Y	Y	Y	N	DK	N	11

* Note. Y="Yes", N="No", DK="Don't know" (this was counted as N in the 'Total' column)

† Item was reverse coded (a 'No' answer to these questions meant that the criteria were met)

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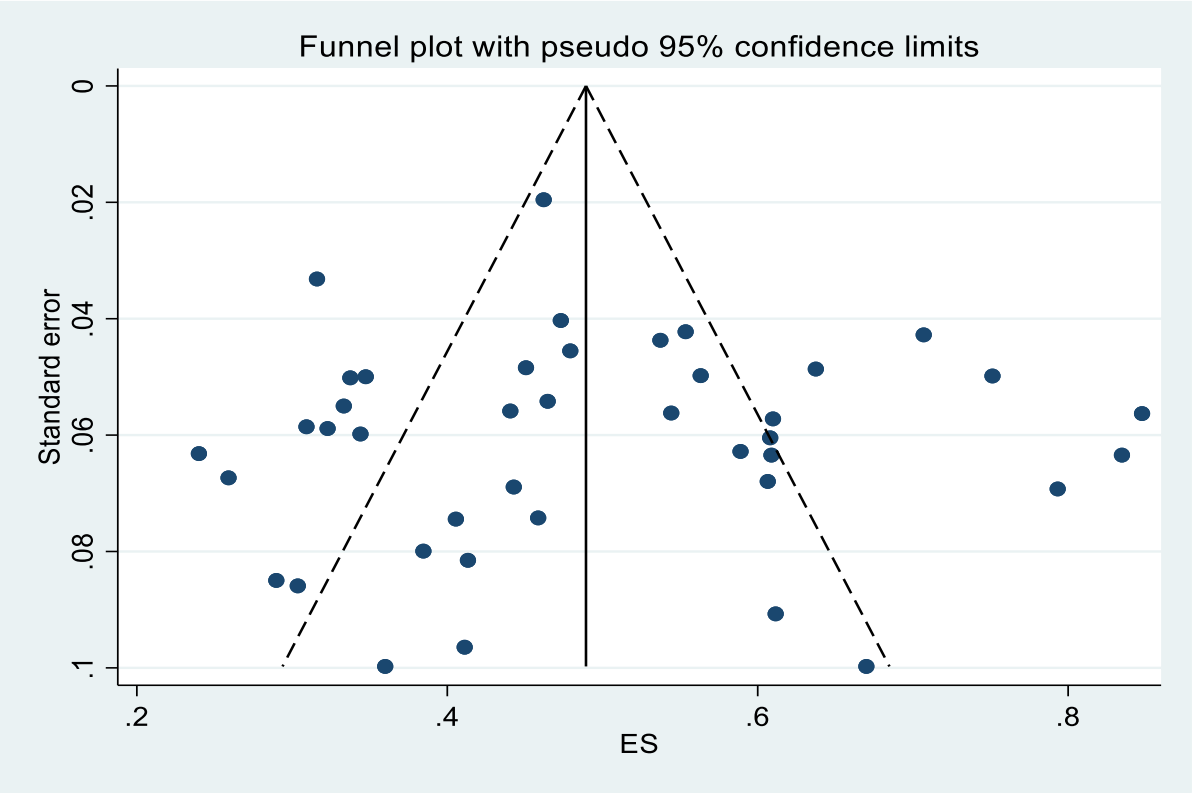
Supplementary Table 4. Average score by domains of AXIS tool

Author (Year)	Quality of study design	Quality of reporting	Risk of bias	Total
Choi *et al.* (2022)	7	7	4	18
Nejat *et al.* (2022)	5	3	2	10
Choi *et al.* (2021)	5	7	2	14
Kanimozhi *et al.* (2021)	5	4	1	10
Pandey *et al.* (2021)	6	2	4	12
Salleh *et al.* (2021)	6	6	3	15
Sarada *et al.* (2021)	6	6	4	16
Hamed Abdalla *et al.* (2020)	6	7	3	16
Bazrafshani *et al.* (2019)	6	7	2	15
Cevik *et al.* (2019)	6	7	4	17
Chotipanich *et al.* (2019)	6	7	3	16
Dehghan *et al.* (2019)	6	6	4	16
Chui *et al.* (2018)	7	7	4	18
Yang *et al.* (2018)	6	7	3	16
Zulkipli *et al.* (2018)	6	7	3	16
Jang *et al.* (2017)	6	7	2	15
Mohd Mujar *et al.* (2017)	6	7	3	16
Naja *et al.* (2017)	7	7	4	18
Oyunchimeg *et al.* (2017)	6	7	4	17
Azhar *et al.* (2016)	4	5	2	11
Dişsiz & Yilmaz (2015)	6	7	4	17
Naja *et al.* (2015)	7	7	3	17
Üstündağ (2015)	5	6	3	14
Ku & Koo (2012)	6	7	2	15
McQuade *et al.* (2012)	6	7	4	17
Puataweepong *et al.* (2012)	5	5	1	11
Aydin Avci *et al.* (2011)	5	6	4	15
Chow *et al.* (2010)	5	7	3	15
Shih *et al.* (2009)	6	6	2	14
Supoken *et al.* (2009)	4	4	2	10
Tarhan *et al.* (2009)	6	6	2	14
Aksu *et al.* (2008)	4	5	2	11
Ucan *et al.* (2008)	4	4	2	10
Kim *et al.* (2007a)	7	6	4	17
Kim *et al.* (2007b)	4	3	3	10
Algier *et al.* (2005)	5	5	2	12
Tas *et al.* (2005)	5	6	2	13
Yildirim *et al.* (2005)	5	5	4	14
Gözüm *et al.* (2003)	5	7	1	13
Malik & Gopalan (2003)	5	6	2	13
Ceylan *et al.* (2002)	4	4	3	11
Mean	5.54 / 7.0	5.90/ 7.0	2.85 / 5.0	14.29 / 19.0

* Supplementary Table 2 includes nineteen questions, seven of which pertain to study design quality (2, 3, 5, 8, 17, 19, and 20). Additionally, seven questions are related to the quality of reporting (1, 4, 10, 11, 12, 16, and 18), and five questions examine the potential introduction of biases in the study (6, 7, 9, 13, and 15).

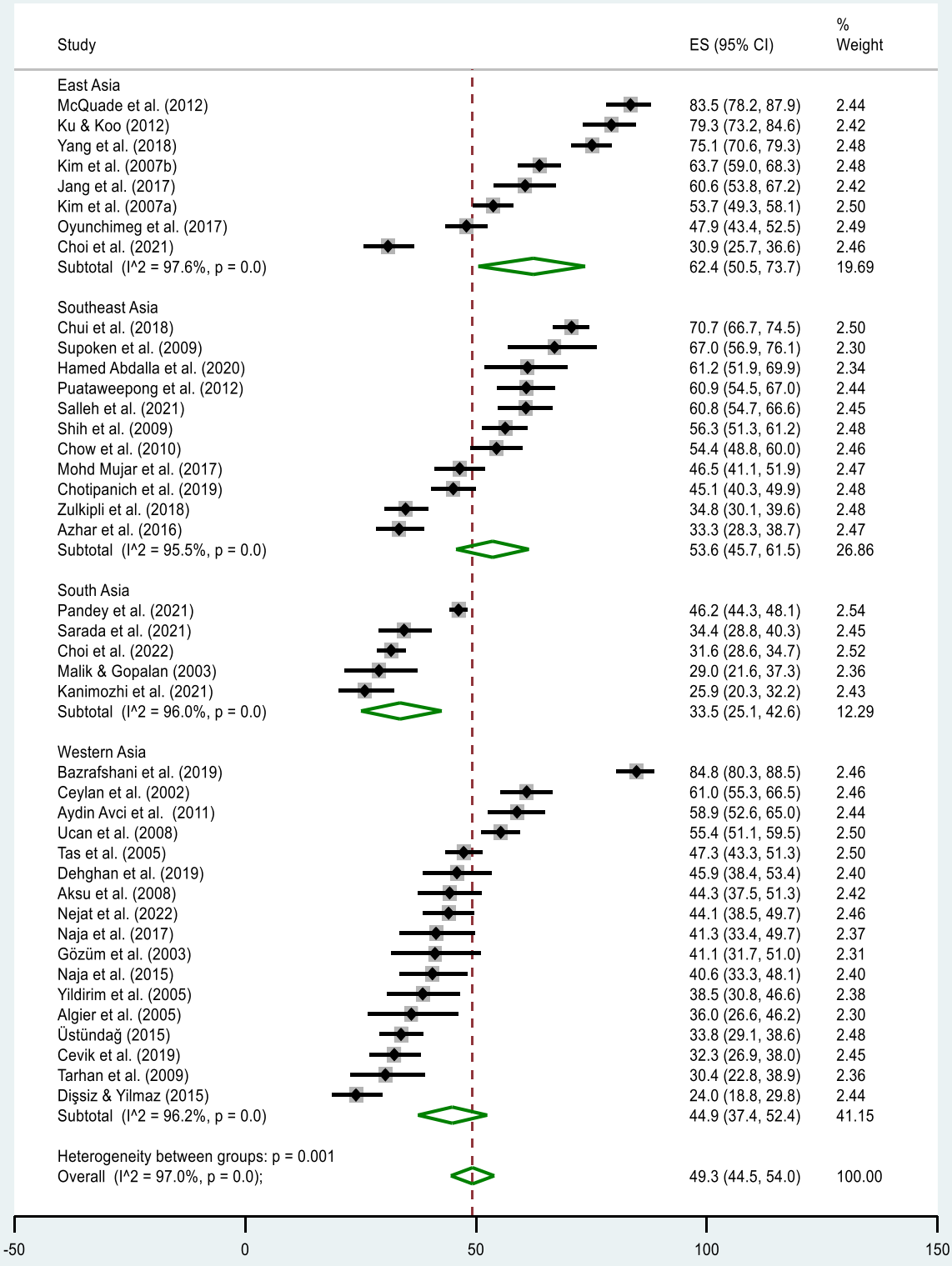
Funnel plot of publication bias

To assess the presence of small-study effects, we conducted an Egger's test using the metabias command. The estimated bias coefficient was calculated as 0.43, with a standard error of 1.22, resulting in a p-value of 0.73. The test results provided weak evidence suggesting the existence of small-study effects.

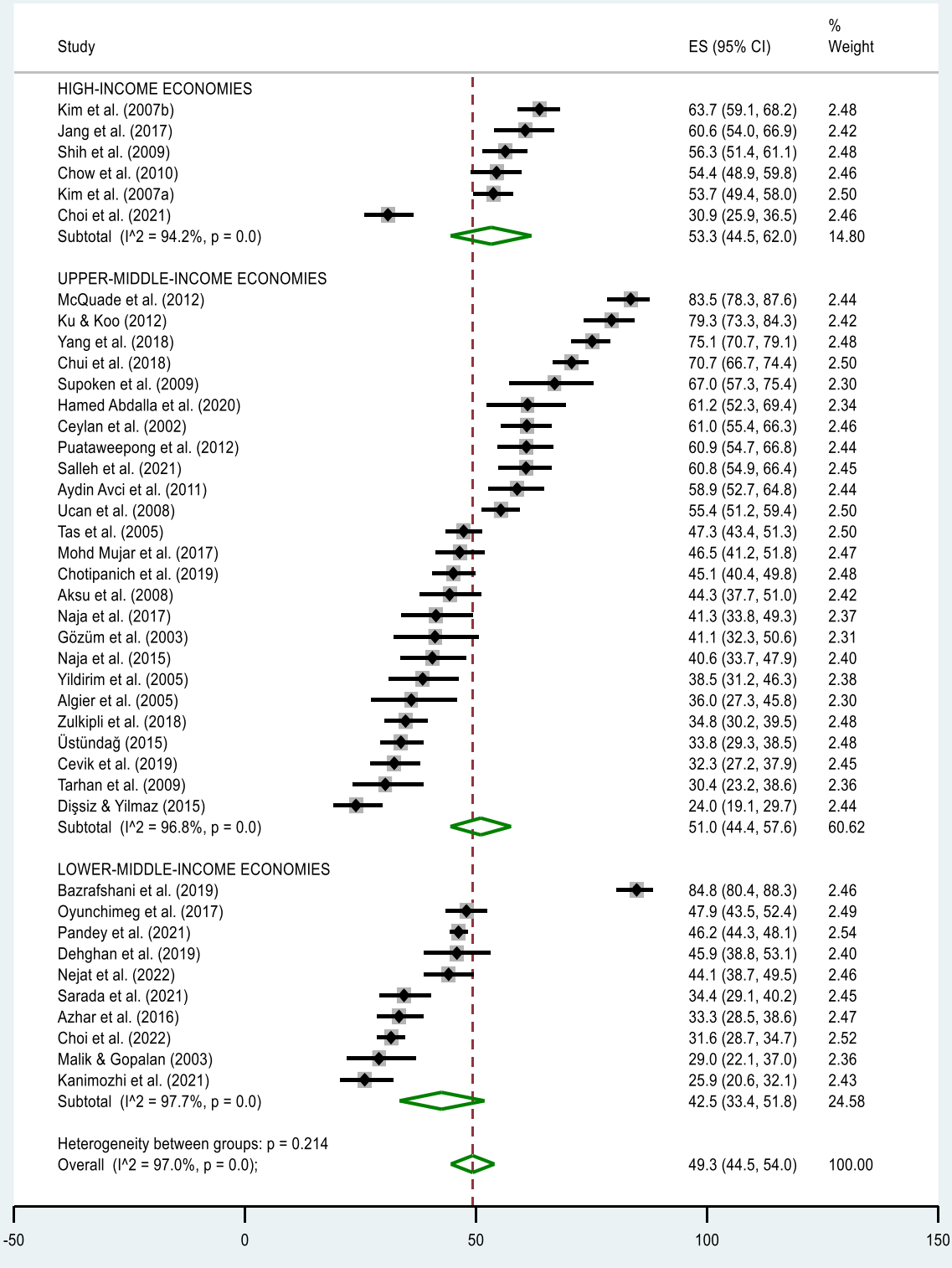


Supplementary Figure 1. Funnel plot of publication bias for 41 studies on the prevalence of T&CM use among patients with cancer

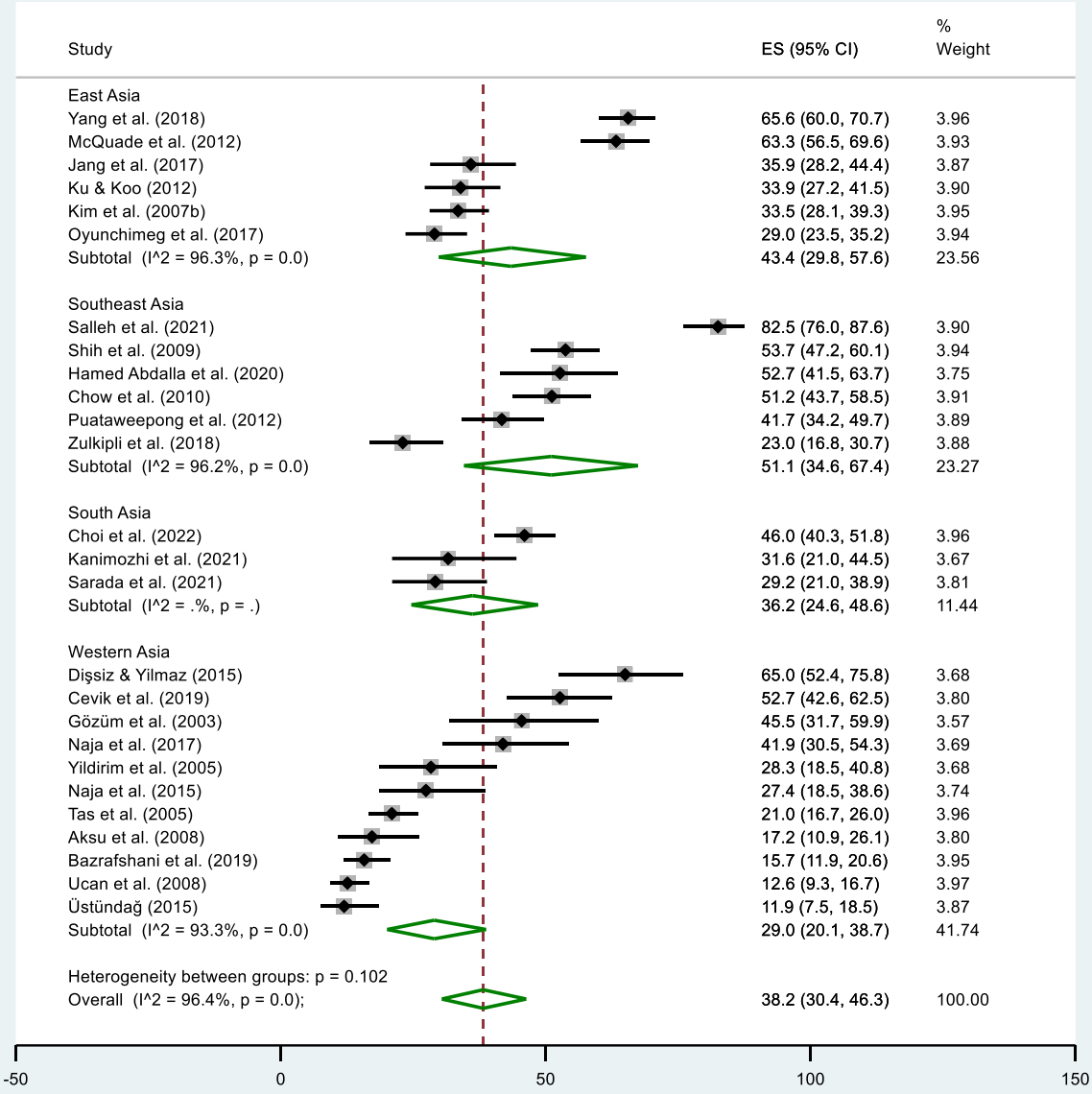
Subgroup analyses



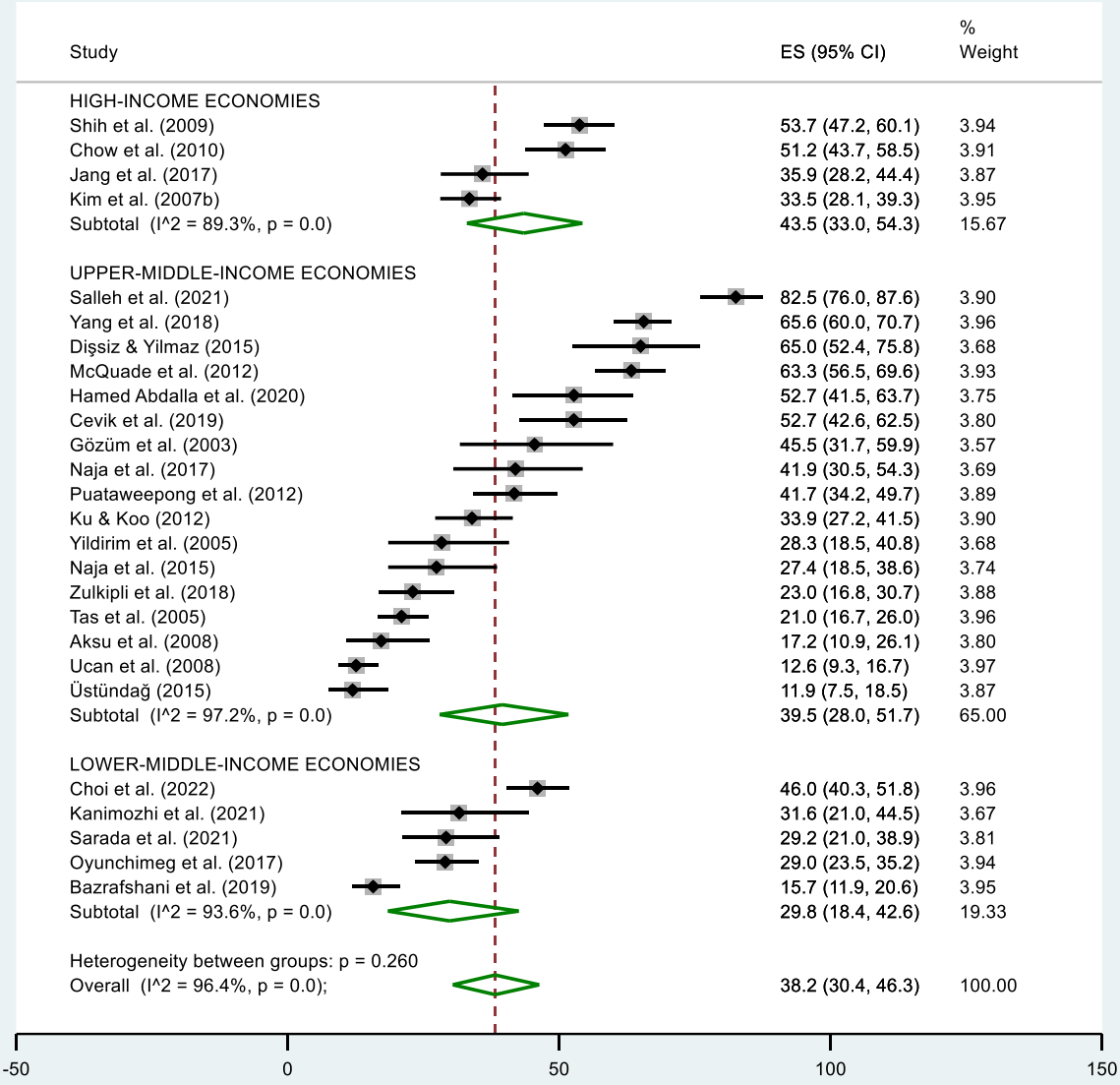
Supplementary Figure 2. Forest plot of the pooled prevalence estimates of T&CM use among Asian cancer patients by region



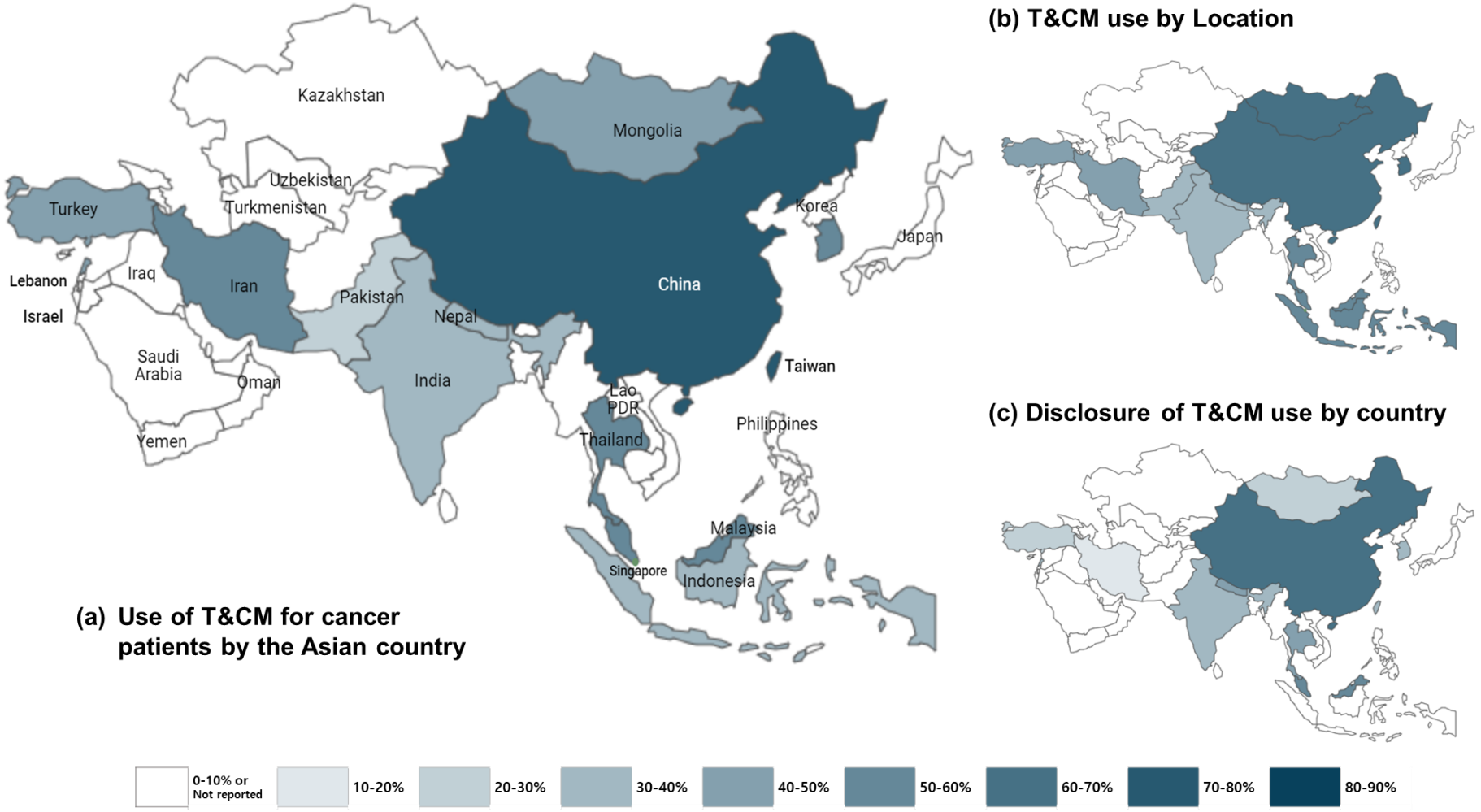
Supplementary Figure 3. Forest plot of the pooled prevalence estimates of T&CM use among Asian cancer patients by level of income economics



Supplementary Figure 4. Forest plot of the pooled prevalence estimates of T&CM disclosure rate among Asian cancer patients by the region



Supplementary Figure 5. Forest plot of the pooled prevalence estimates of T&CM disclosure rate among Asian cancer patients by level of income economics



Supplementary Figure 6. Map of random pool estimates of T&CM use and disclosure during cancer treatment: (a) The use of T&CM for cancer patients by Asian country; (b) T&CM use by location; (c) Disclosure of T&CM use by countries