Supplementary Information

Aromatase inhibitors and plasma lipid changes in postmenopausal women with breast cancer: A systematic review and meta-analysis

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1. Supplementary Tables

1.1. Supplementary Table S1. Search query for Web of Science

Reference: 2021 Clarivate Analytics, Web of Science Group, Web of Science
Available from: https://clarivate.com/webofsciencegroup/solutions/web-of-science/
Research interface: https://apps.webofknowledge.com
Type of database: "All Databases" (searching across all subscribed resources)
Type of search: "TOPIC" (searching across the following fields within a record: Title, Abstract, Author Keywords, Keywords Plus ®)
Timespan: "All years (1975–2023)"
Date of search: June 15, 2023

The database was accessible via the Hungarian Electronic Information Service National Programme and the University Library of Pécs

Date of search	Search algorithm	Results
15/06/2023	TOPIC: (aromatase inhibitor) AND TOPIC: (lipid) AND TOPIC: (breast cancer)	415

1.2. Supplementary Table S2. Search query for MEDLINE (via PubMed)

Reference: National Center for Biotechnology Information (NCBI), Bethesda (MD): U.S. National Library of Medicine
Available from: https://www.ncbi.nlm.nih.gov/
Research interface: https://www.ncbi.nlm.nih.gov/pubmed/advanced (PubMed Advanced Search Builder)
Type of search: "All Fields"

The database was accessible via the University Library of Pécs

Date of search	Search algorithm	Results
15/06/2023	((aromatase inhibitor) AND (lipid)) AND (breast cancer)	294

1.3. Supplementary Table S3. Search query for Embase

Reference: 2023 Elsevier Life Sciences, Excerpta Medica dataBASE (Embase)
Available from: https://www.elsevier.com/solutions/embase-biomedical-research
Research interface: https://www.embase.com/#search
Type of search: "All Fields"
Timespan: "Limited to <1966–2023"
Date of search: June 15, 2023

The database was accessible via the University Library of Pécs

Date of search	Search algorithm	Results
15/06/2023	aromatase inhibitor AND lipid AND breast cancer	771

1.4. Supplementary Table S4. Search query for the Cochrane library

Reference: 2000–2023 by John Wiley & Sons, Inc., The Cochrane Collaboration,
Available from: https://www.cochranelibrary.com/
Research interface: https://www.cochranelibrary.com/advanced-search
Type of search: "Title Abstract Keyword"
Date of search: June 15, 2023
Timespan: "All dates"

The database was accessible via the University Library of Pécs

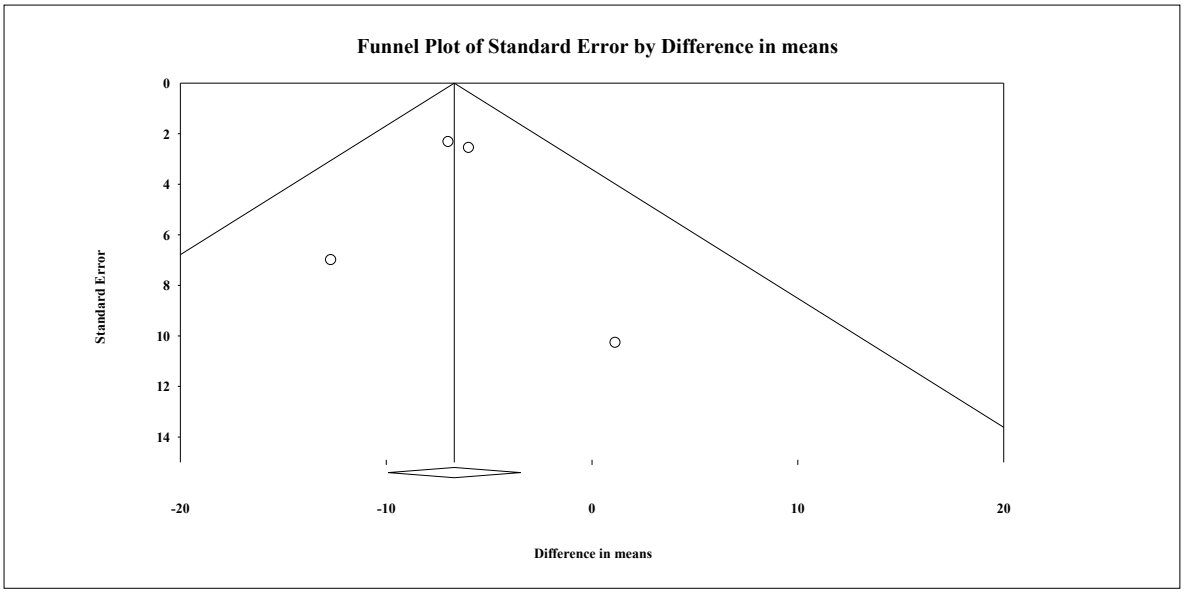
Date of search	Search algorithm	Results
15/06/2023	aromatase inhibitor in Title Abstract Keyword AND lipid in Title Abstract Keyword AND breast cancer in Title Abstract Keyword (word variations have been searched)	76

All research hits were exported as 'txt,' 'html,' 'csv,' 'xml,' 'docx,' 'pdf,' 'xlsx,' and 'bib' file formats to record the results and as 'ciw,' 'nbib,' and 'ris' file formats to import and perform the study selection process using EndNote version X7.0.2 (Thomson Reuters).

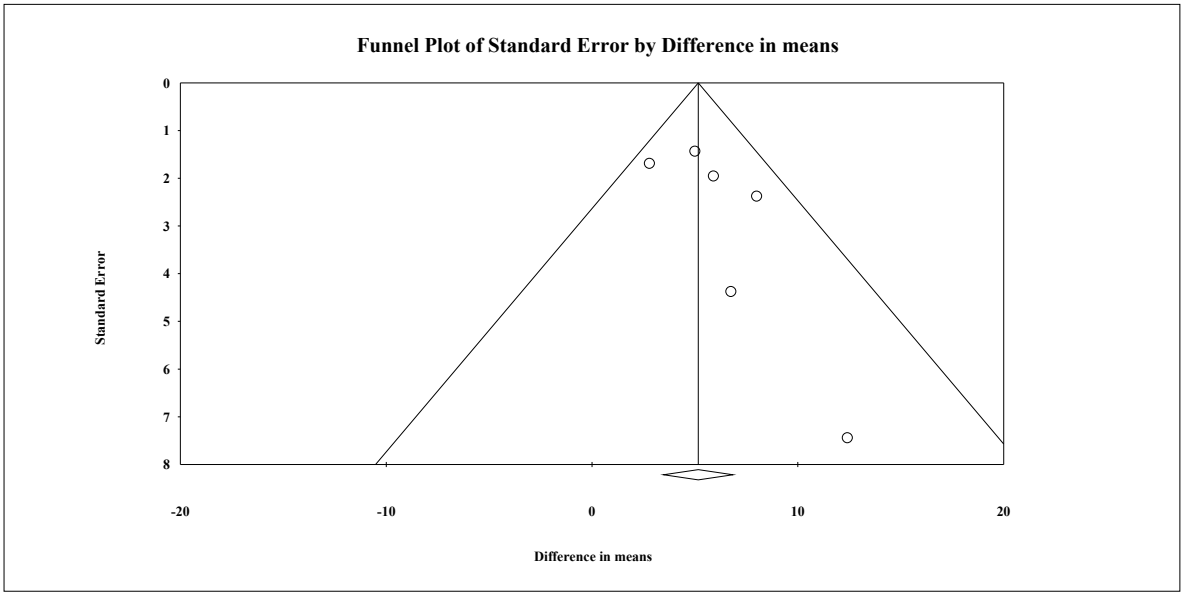
Trials	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Lønning PE et al., 2005[1]	?	?	-	-	-	-	-
Francini G et al., 2006[2]	-	-	?	-	-	-	-
Montagnani A et al., 2008[3]	-	-	-	-	-	-	-
Markopoulos C et al. (TEAM Greek Substudy), 2008[4]	?	?	+	+	-	-	-
Markopoulos C et al (ATENA lipid substudy), 2009[5]	?	?	+	+	+	-	-
Sawada S et al., 2005[6]	?	?	+	+	-	-	-
Zidan J et al., 2010[7]	+	+	+	+	-	-	+
Anan K et al., 2011[8]	?	?	+	+	+	+	-
Bell LN et al., 2012[9]	?	?	+	+	+	-	-
Iwata H et al., 2013[10]	?	?	?	?	-	-	-
Santa-Maria CA et al., 2015[11]	?	?	+	+	+	-	-
López AM et al., 2015[12]	?	?	-	-	-	-	-
Gatti-Mays ME et al., 2016[13]	+	+	+	+	-	-	-
Al-Biati HA et al., 2016[14]	+	+	+	+	-	-	+
Tian W et al., 2017[15]	+	+	+	+	?	-	+

1.5. Supplementary Table S5. Risk of bias assessment. ?: unclear risk of bias, -: low risk of bias, +: high risk of bias [1-15).

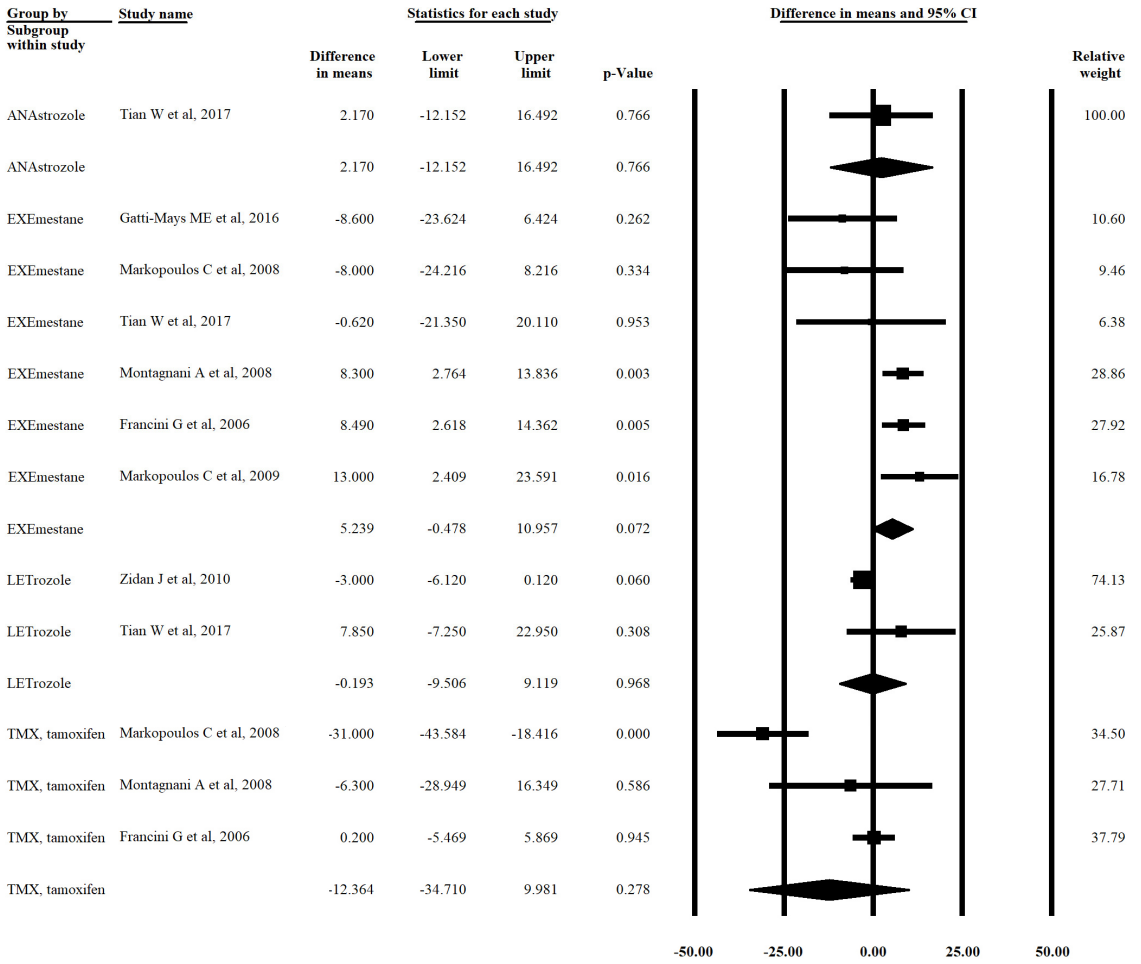
2. Supplementary Figures



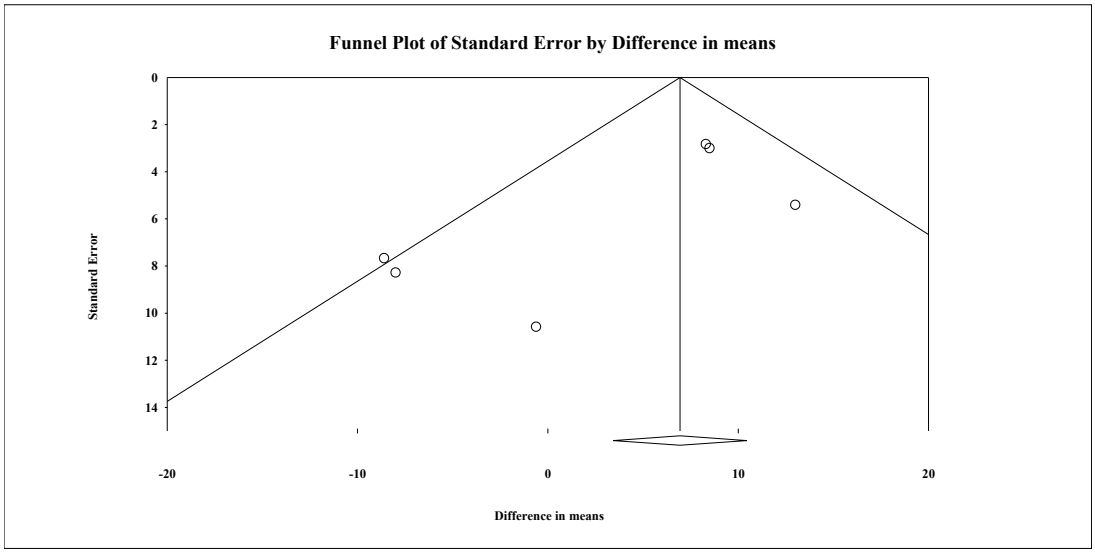
2.1. Supplementary Figure S1. Funnel plot for publication bias among studies reporting TC after 3-month administration of EXE. Visual inspection of funnel plot reveals symmetry and absence of publication bias. EXE exemestane, TC total cholesterol.



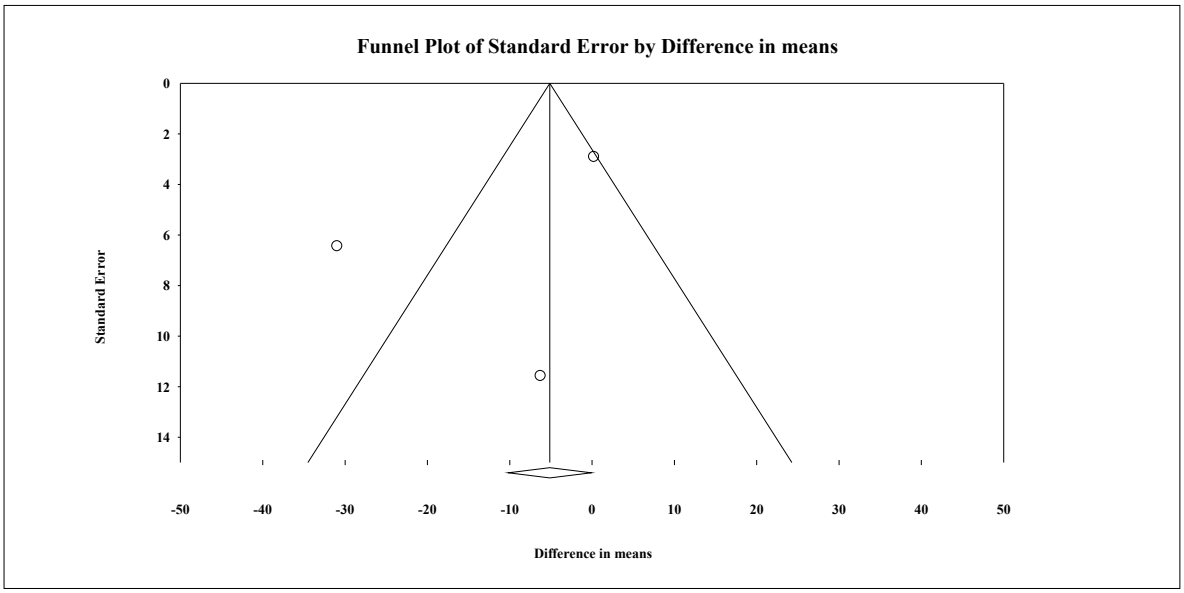
2.2. Supplementary Figure S2. Funnel plot for publication bias among studies reporting TC after 3-month administration of LET. Visual inspection of funnel plot reveals symmetry and absence of publication bias. LET letrozole, TC total cholesterol.



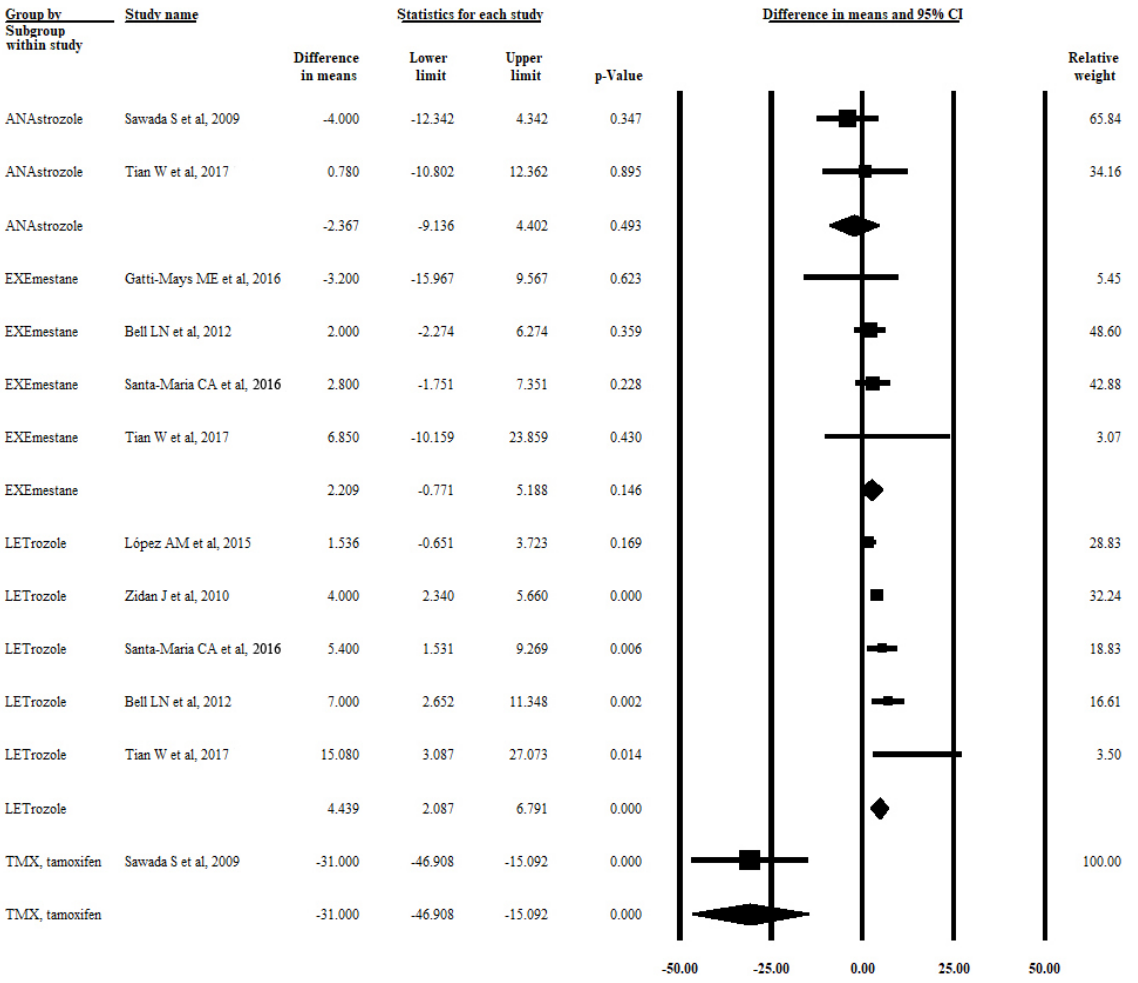
2.3. Supplementary Figure S3. Forest plot of TC after 12-month administration of AIs and TMX. Pooled differences in the means were calculated between the baseline and endpoint treatment times for each study. Studies here are stratified by AIs (ANA, EXE, LET) and TMX measured by mg/dl ($P<0.05$). Weight contribution of studies is represented by the size of each box. The vertical lines represent the points of summary for random effect model, diamonds represent overall differences in the means of TC for each strata. AI aromatase inhibitor, ANA anastrozole [44], EXE exemestane [31-34,42,44], LET letrozole [36,44], TC total cholesterol, TMX tamoxifen [31-33].



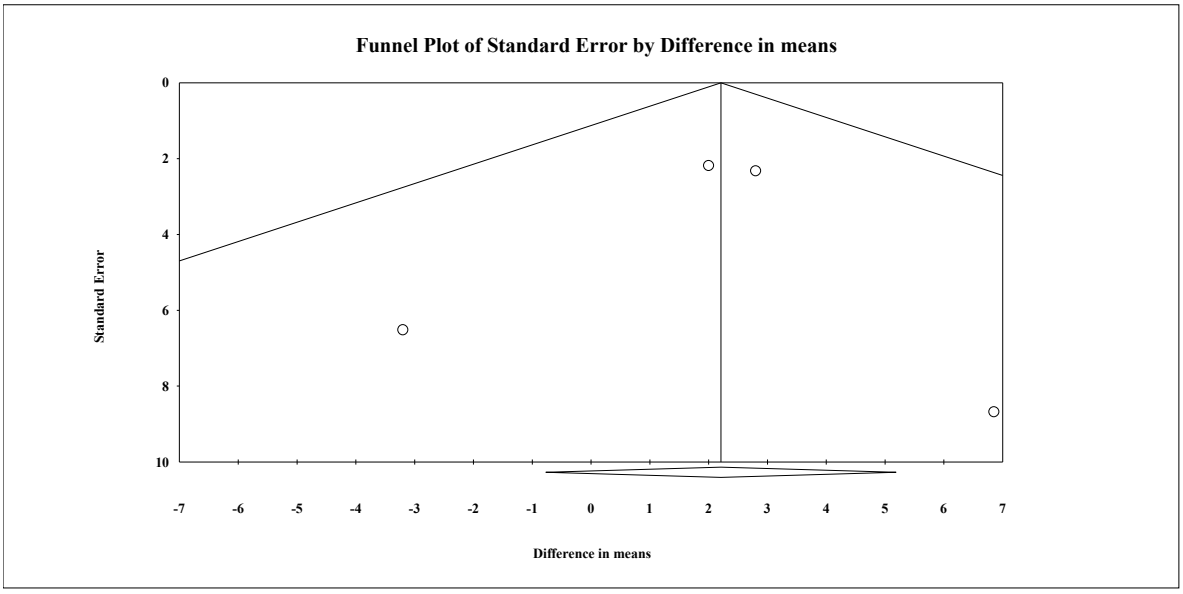
2.4. Supplementary Figure S4. Funnel plot for publication bias among studies reporting TC after 12-month administration of EXE. Visual inspection of funnel plot reveals symmetry and absence of publication bias. EXE exemestane, TC total cholesterol.



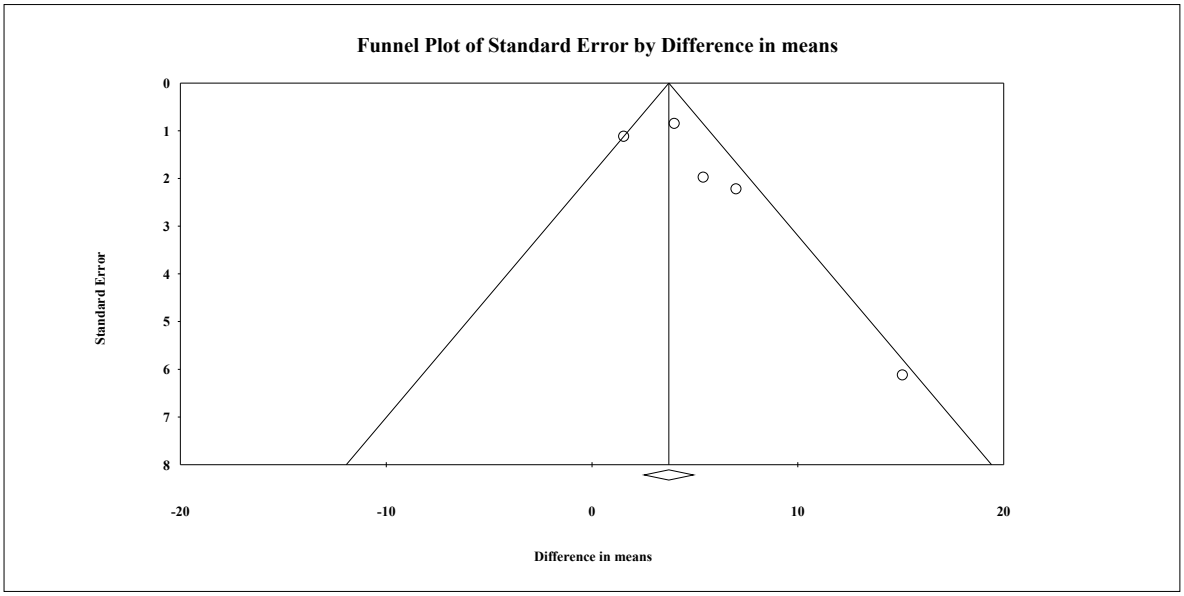
2.5. Supplementary Figure S5. Funnel plot for publication bias among studies reporting TC after 12-month administration of TMX. Visual inspection of funnel plot reveals symmetry and absence of publication bias. TC total cholesterol, TMX tamoxifen.



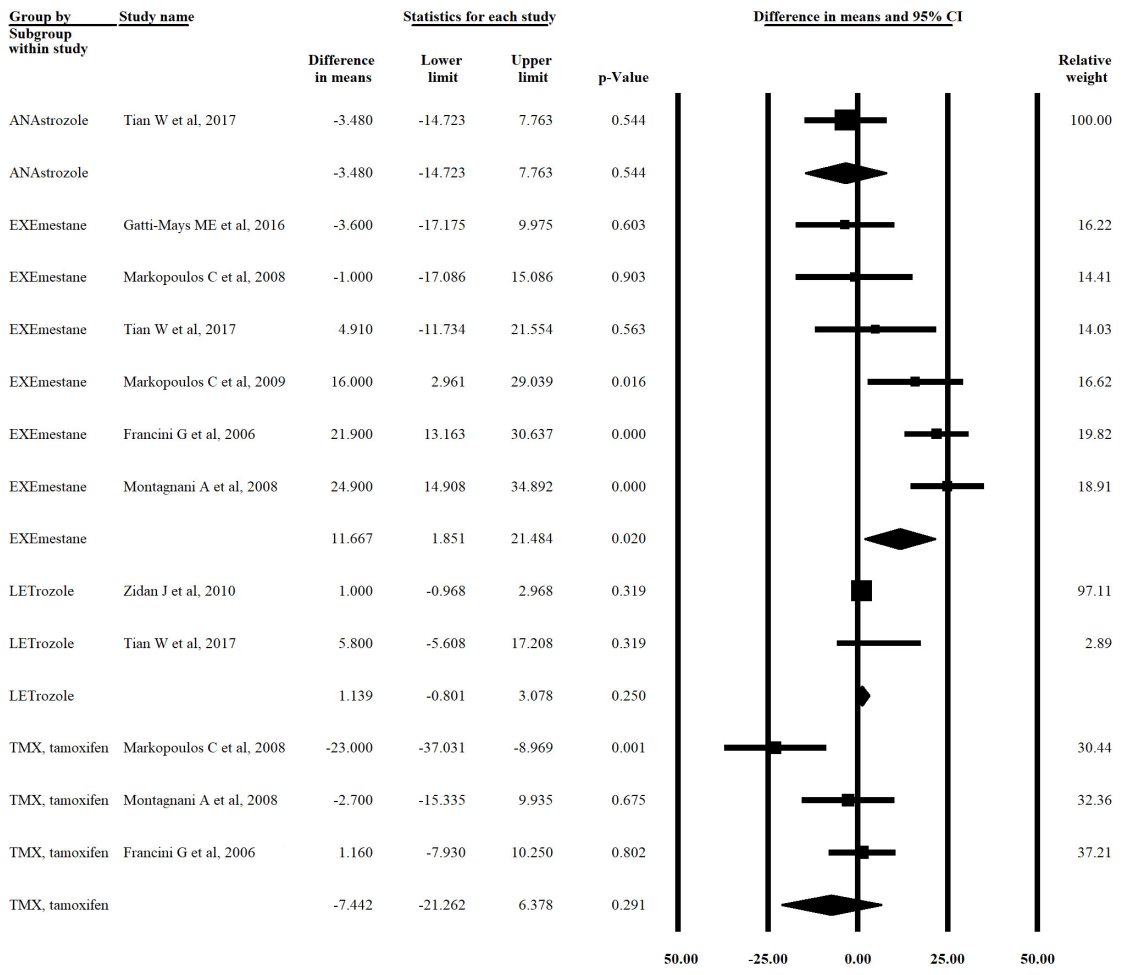
2.6. Supplementary Figure S6. Forest plot of LDL-C after 3-month administration of AIs and TMX. Pooled differences in the means were calculated between the baseline and endpoint treatment times for each study. Studies here are stratified by AIs (ANA, EXE, LET) and TMX measured by mg/dl ($P<0.05$). Weight contribution of studies is represented by the size of each box. The vertical lines represent the points of summary for random effect model, diamonds represent overall differences in the means of LDL-C for each strata. AI aromatase inhibitor, ANA anastrozole [35,44], CI confidence interval, EXE exemestane [38,40,42,44], LDL-C low-density lipoprotein, LET letrozole [36,38,40,41,44], TMX, tamoxifen [35].



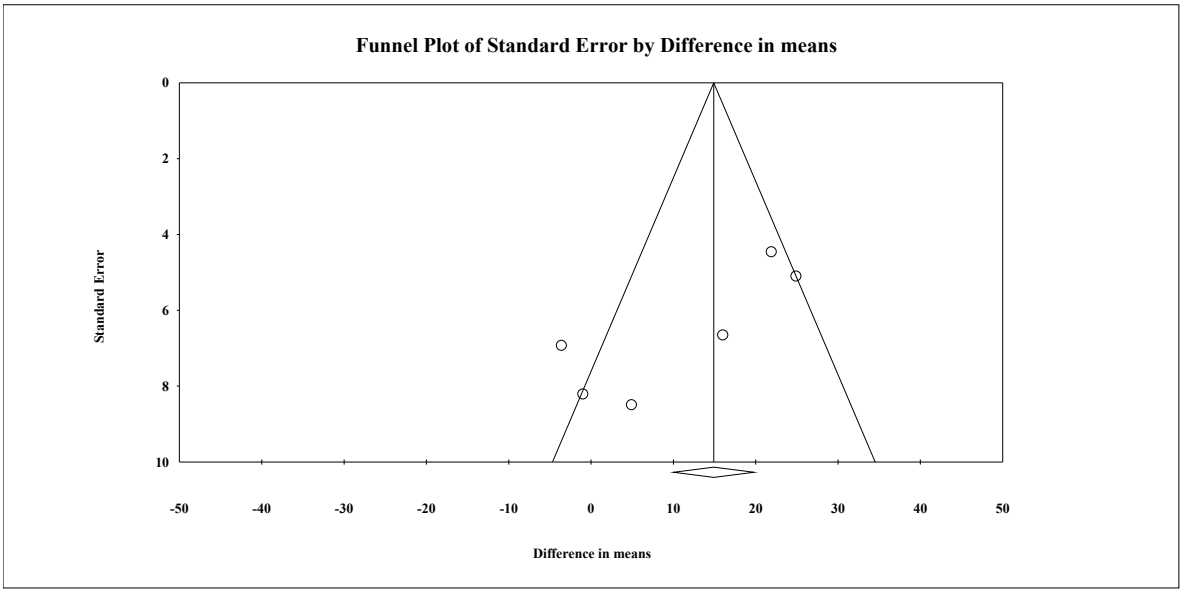
2.7. Supplementary Figure S7. Funnel plot for publication bias among studies reporting LDL-C after 3-month administration of EXE. Visual inspection of funnel plot reveals symmetry and absence of publication bias. EXE exemestane, LDL-C low-density lipoprotein cholesterol.



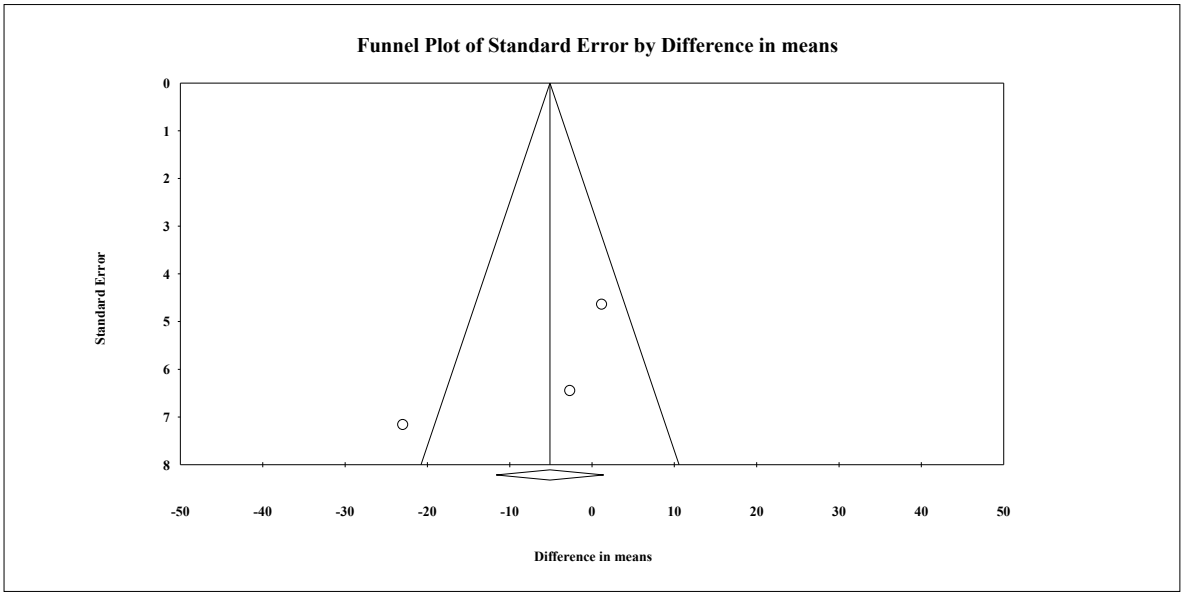
2.8. Supplementary Figure S8. Funnel plot for publication bias among studies reporting LDL-C after 3-month administration of LET. Visual inspection of funnel plot reveals asymmetry and presence of publication bias. LDL-C low-density lipoprotein cholesterol, LET letrozole.



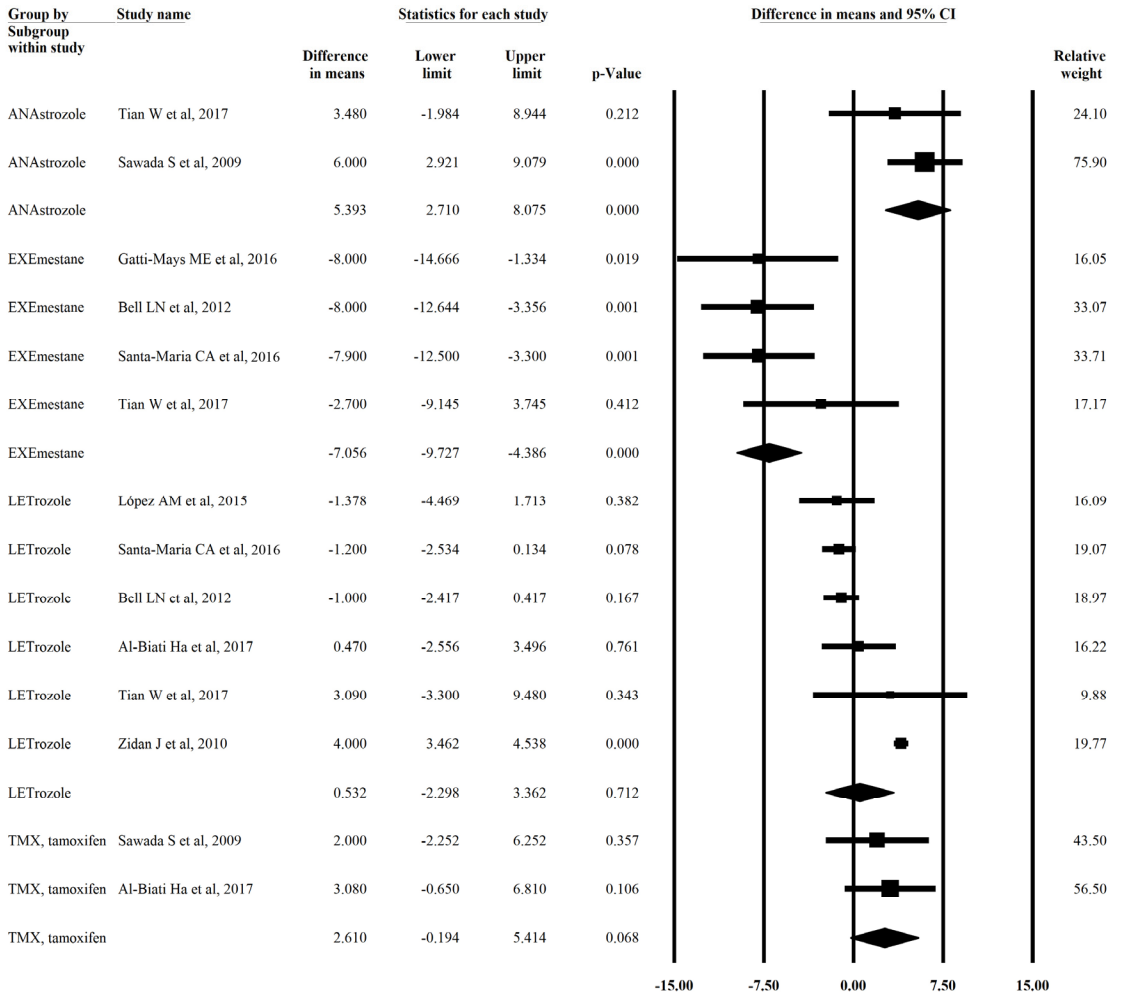
2.9. Supplementary Figure S9. Forest plot of LDL-C after 12-month administration of AIs and TMX. Pooled differences in the means were calculated between the baseline and endpoint treatment times for each study. Studies here are stratified by AIs (ANA, EXE, LET) and TMX measured by mg/dl ($P<0.05$). Weight contribution of studies is represented by the size of each box. The vertical lines represent the points of summary for random effect model, diamonds represent overall differences in the means of LDL-C for each strata. AI aromatase inhibitor, ANA anastrozole [44], CI confidence interval, EXE exemestane [31-34,42,44], LDL-C low-density lipoprotein, LET letrozole [36,44], TMX tamoxifen [31-33].



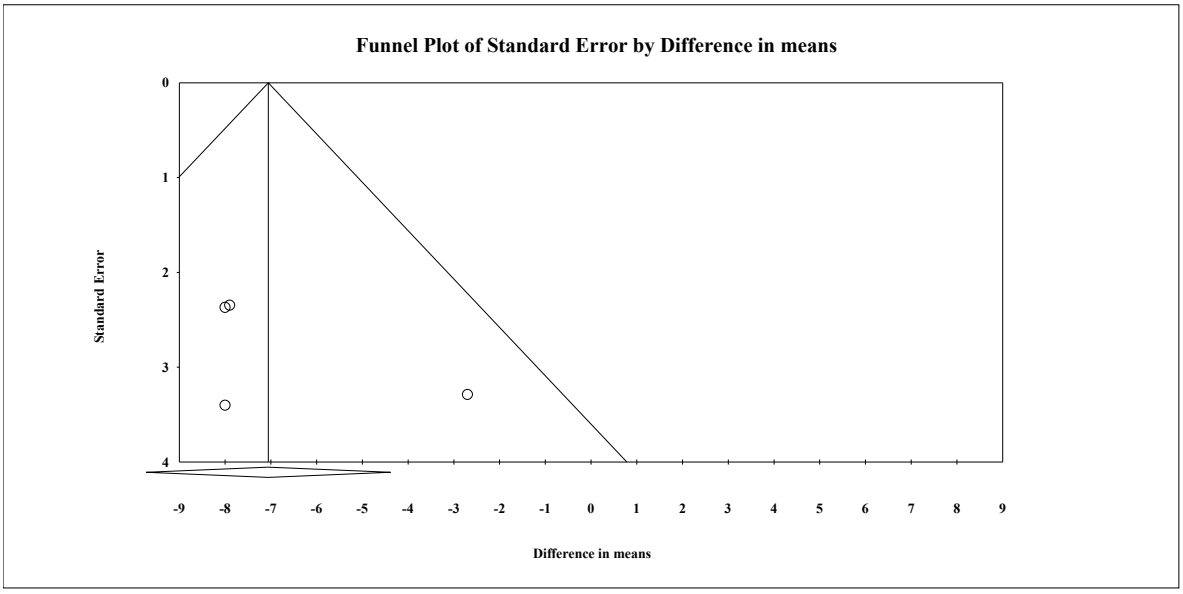
2.10. Supplementary Figure S10. Funnel plot for publication bias among studies reporting LDL-C after 12-month administration of EXE. Visual inspection of funnel plot reveals symmetry and absence of publication bias. EXE exemestane, LDL-C low-density lipoprotein cholesterol.



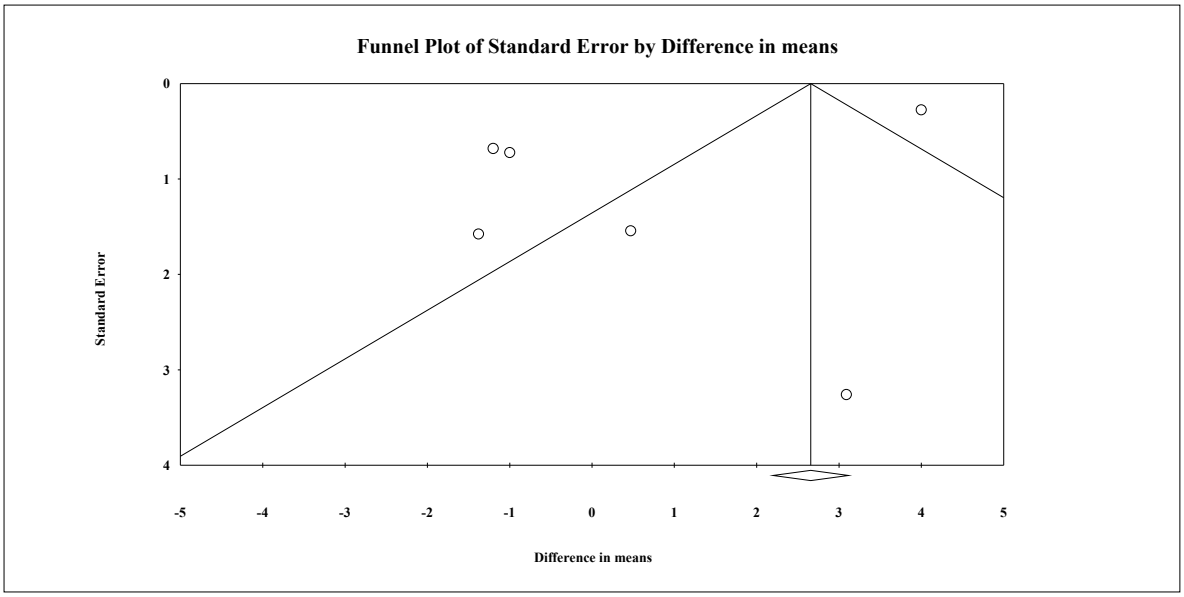
2.11. Supplementary Figure S11. Funnel plot for publication bias among studies reporting LDL-C after 12-month administration of TMX. Visual inspection of funnel plot reveals symmetry and absence of publication bias. LDL-C low-density lipoprotein cholesterol, TMX tamoxifen.



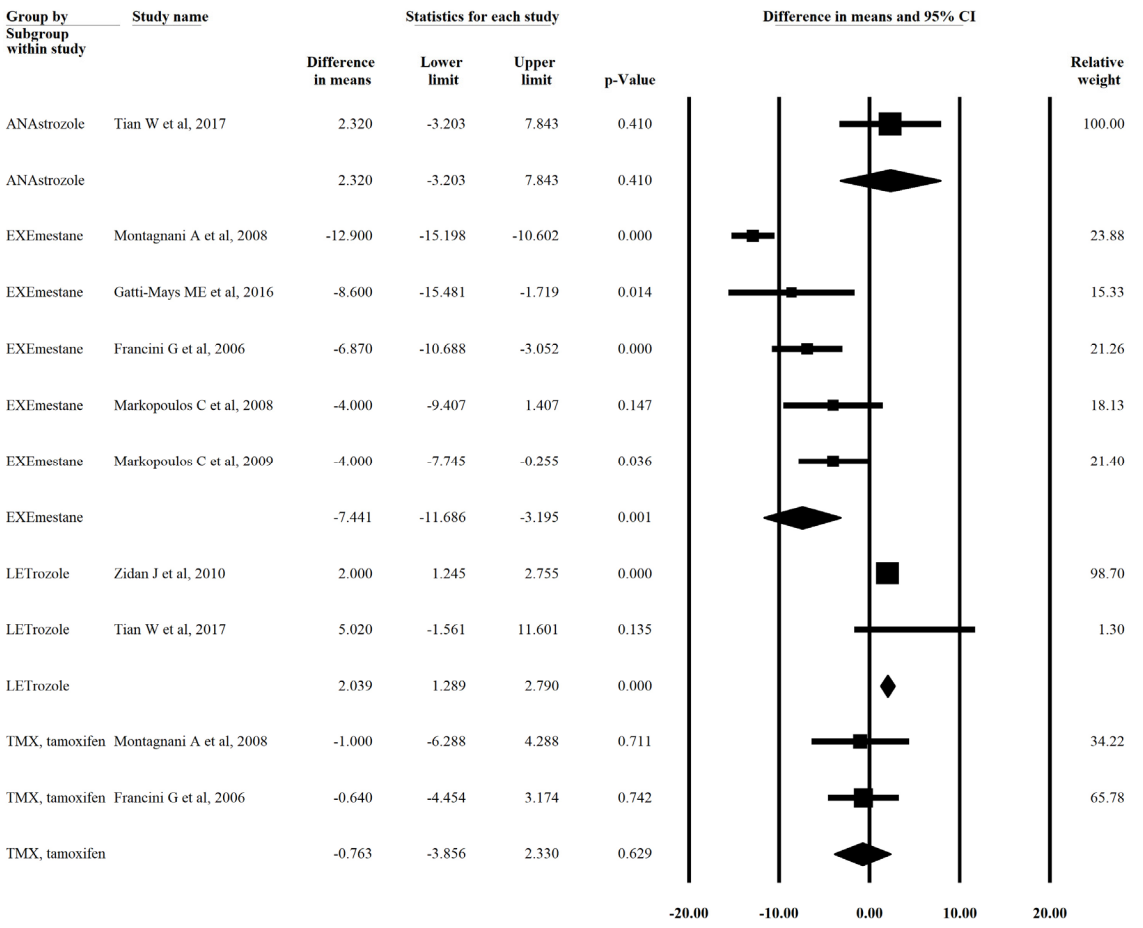
2.12. Supplementary Figure S12. Forest plot of HDL-C after 3-month administration of AIs and TMX. Pooled differences in the means were calculated between the baseline and endpoint treatment times for each study. Studies here are stratified by AIs (ANA, EXE, LET) and TMX measured by mg/dl ($P<0.05$). Weight contribution of studies is represented by the size of each box. The vertical lines represent the points of summary for random effect model, diamonds represent overall differences in the means of HDL-C for each strata. AI aromatase inhibitor, ANA anastrozole [35,44], CI confidence interval, EXE exemestane [38,40,42,44], HDL-C high-density lipoprotein, LET letrozole [36,38,40,41,43,44], TMX tamoxifen [35,43].



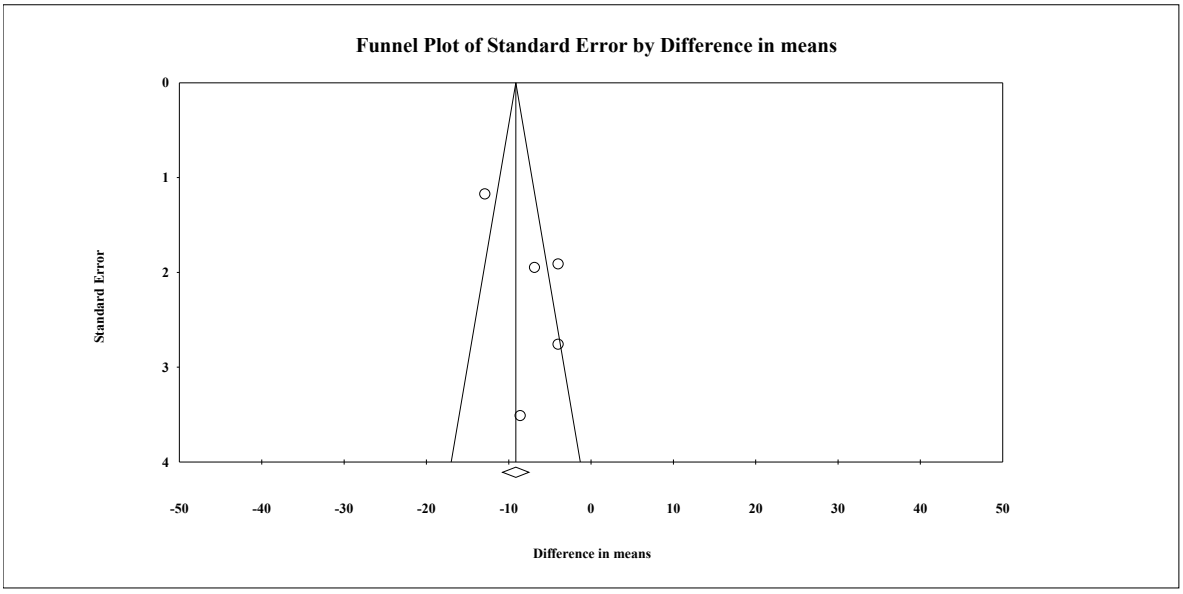
2.13. Supplementary Figure S13. Funnel plot for publication bias among studies reporting HDL-C after 3-month administration of EXE. Visual inspection of funnel plot reveals asymmetry and presence of publication bias. EXE exemestane, HDL-C high-density lipoprotein cholesterol.



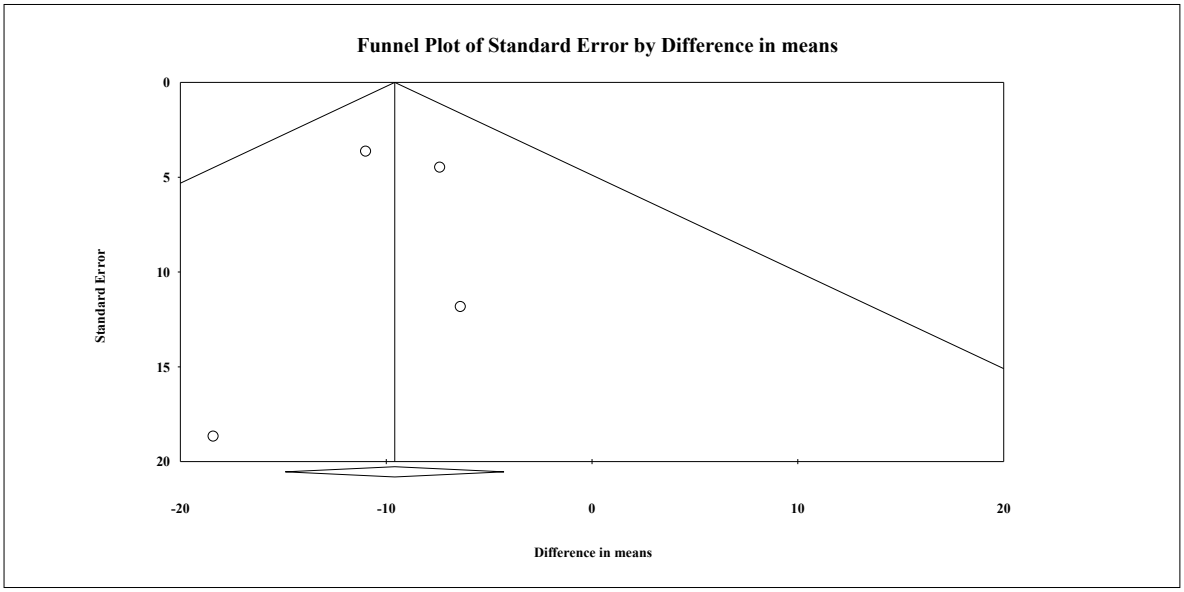
2.14. Supplementary Figure S14. Funnel plot for publication bias among studies reporting HDL-C after 3-month administration of LET. Visual inspection of funnel plot reveals asymmetry and presence of publication bias. HDL-C high-density lipoprotein cholesterol, LET letrozole.



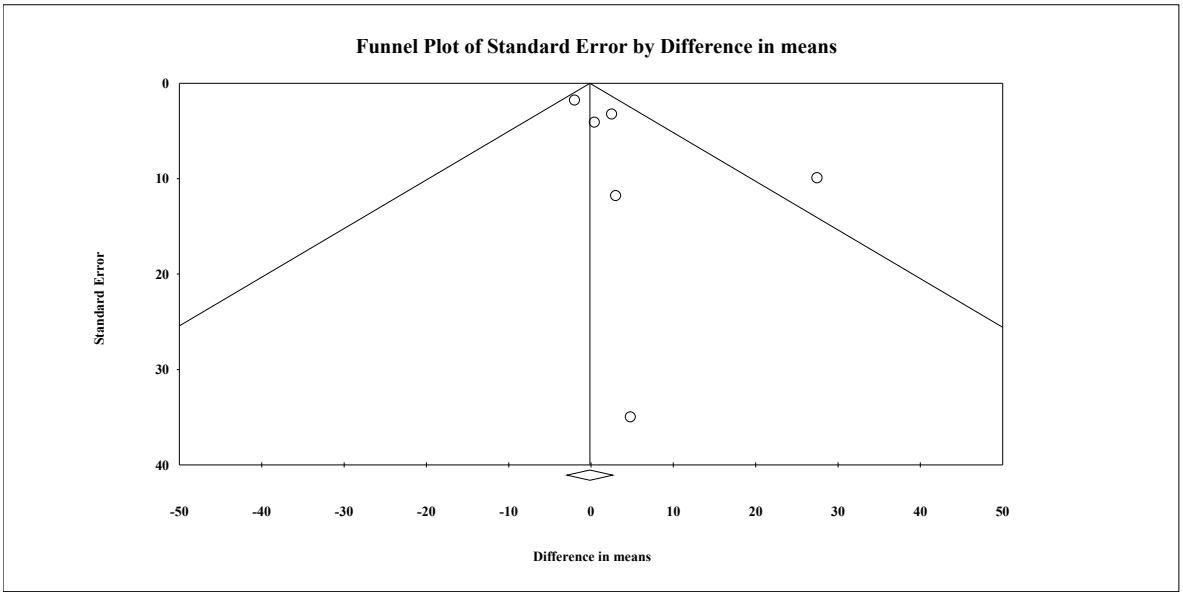
2.8.15. Supplementary Figure S15. Forest plot of HDL-C after 12-month administration of AIs and TMX. Pooled differences in the means were calculated between the baseline and endpoint treatment times for each study. Studies here are stratified by AIs (ANA, EXE, LET) and TMX measured by mg/dl ($P<0.05$). Weight contribution of studies is represented by the size of each box. The vertical lines represent the points of summary for random effect model, diamonds represent overall differences in the means of HDL-C for each strata. AI aromatase inhibitor, ANA anastrozole [44], CI confidence interval, EXE exemesthane [31-34,42], HDL-C high-density lipoprotein, LET letrozole [36,44], TMX, tamoxifen [31,32].



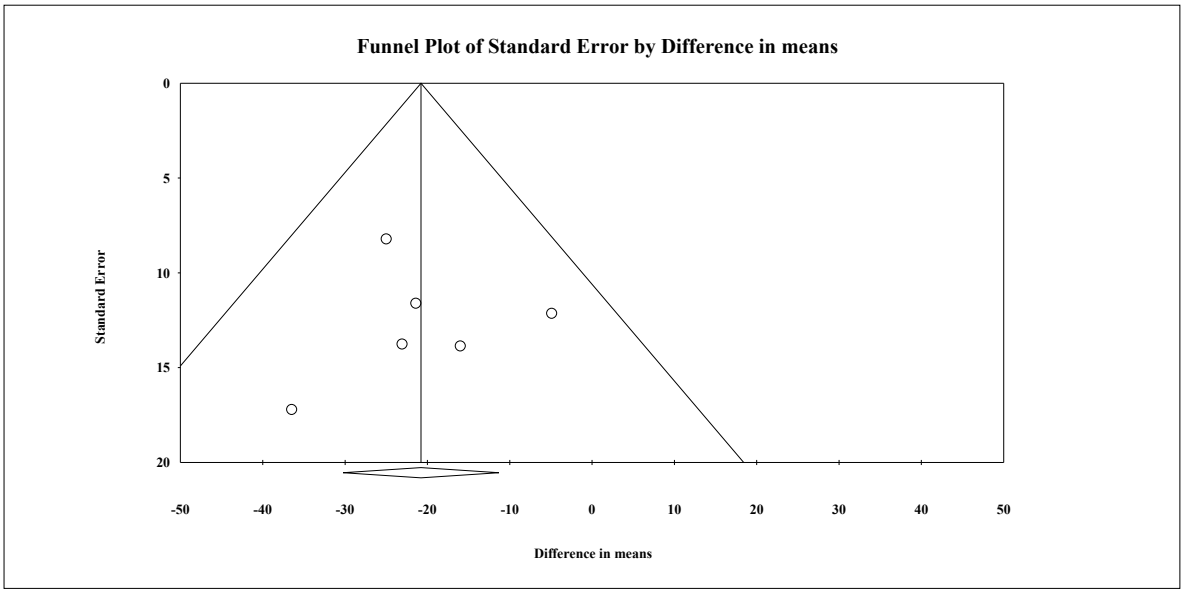
2.8.16. Supplementary Figure S16. Funnel plot for publication bias among studies reporting HDL-C after 12-month administration of EXE. Visual inspection of funnel plot reveals symmetry and absence of publication bias. EXE exemestane, HDL-C high-density lipoprotein cholesterol.



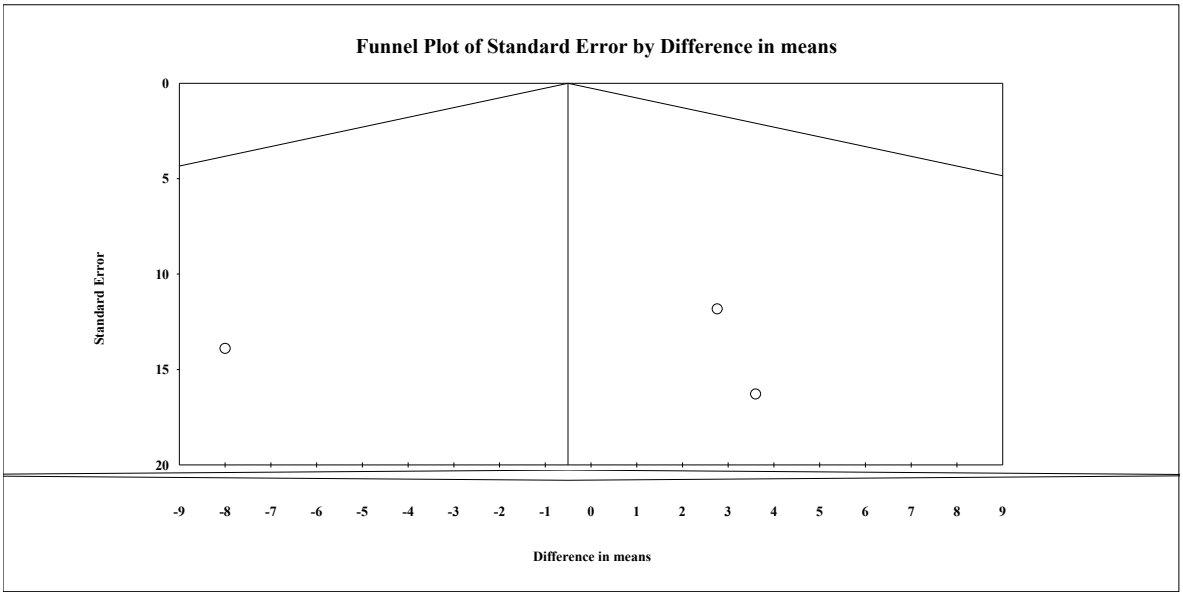
2.8.17. Supplementary Figure S17. Funnel plot for publication bias among studies reporting TG after 3-month administration of EXE. Visual inspection of funnel plot reveals symmetry and absence of publication bias. EXE exemestane, TG triglycerides.



2.8.18. Supplementary Figure S18. Funnel plot for publication bias among studies reporting TG after 3-month administration of LET. Visual inspection of funnel plot reveals asymmetry and presence of publication bias. LET letrozole, TG triglycerides.



2.8.19. Supplementary Figure S19. Funnel plot for publication bias among studies reporting TG after 12-month administration of EXE. Visual inspection of funnel plot reveals symmetry and absence of publication bias. EXE exemestane, TG triglycerides.



2.8.20. Supplementary Figure S20. Funnel plot for publication bias among studies reporting TG after 12-month administration of TMX. Visual inspection of funnel plot reveals symmetry and absence of publication bias. TG triglycerides, TMX tamoxifen.

3. References

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