

Supplementary Material:

1.- SEARCH STRATEGY FOR PUBMED

("menopause"[tw] OR "postmenopause"[tw] OR "post-menopausal women"[tw] OR "perimenopause"[tw] OR "peri-menopausal"[tw] OR "surgical menopause"[tw] OR "hysterectomy"[tw] OR "bilateral oophorectomy"[tw] OR "oophorectomy"[tw] OR "menopausal transition"[tw] OR "menopause"[Mesh] OR "postmenopause"[Mesh] OR "perimenopause"[Mesh] OR "hysterectomy"[Mesh]) AND ("hormone therapy"[tw] OR "hormone replacement therapy"[tw] OR "HRT"[tw] OR "estrogen therap*" [tw] OR "oestrogen therap*" [tw] OR "estradiol"[tw] OR "progest*" [tw] OR "combined hormone therapy"[tw] OR "estrogen replacement therapy"[Mesh] OR "hormone replacement therapy"[Mesh] OR "estradiol"[Mesh] OR "progesterone"[Mesh] OR "progestins"[Mesh] OR "estrogens"[Mesh]) AND ("dementia"[tw] OR "alzheimer*" [tw] OR "alzheimer's disease"[tw] OR "cognitive decline"[tw] OR "cognitive dysfunction"[tw] OR "cognitive impairment"[tw] OR "cognitive deficits"[tw] OR "neurodegeneration"[tw] OR "neurocognitive disorder"[tw] OR "major neurocognitive disorder"[tw] OR "neurodegenerative disease*" [tw] OR "cognitive disorder"[tw] OR "alzheimer disease"[Mesh] OR "dementia"[Mesh] OR "cognitive dysfunction"[Mesh] OR "neurodegenerative diseases"[Mesh] OR "neurocognitive disorders"[Mesh])

2.- SEARCH STRATEGY FOR SCOPUS

(TITLE-ABS-KEY(menopause OR postmenopause OR "post-menopausal women" OR perimenopause OR "peri-menopausal" OR "surgical menopause" OR hysterectomy OR "bilateral oophorectomy" OR oophorectomy OR "menopausal transition")) AND (TITLE-ABS-KEY("hormone therapy" OR "hormone replacement therapy" OR HRT OR "estrogen therap*" OR "oestrogen therap*" OR estradiol OR progest* OR "combined hormone therapy")) AND (TITLE-ABS-KEY(dementia OR alzheimer* OR "alzheimer's disease" OR "cognitive decline" OR "cognitive dysfunction" OR "cognitive impairment" OR "cognitive deficits" OR neurodegeneration OR "neurocognitive disorder" OR "major neurocognitive disorder" OR "neurodegenerative disease*" OR "cognitive disorder"))

Figure S1.- Risk of Bias Assessment of the Randomized Controlled Trials using Cochrane's RoB-2 tool

		Risk of bias domains					
		D1	D2	D3	D4	D5	Overall
Study	Shumaker et. al., 2003						
	Shumaker et. al., 2004						
		Domains: D1: Bias arising from the randomization process. D2: Bias due to deviations from intended intervention. D3: Bias due to missing outcome data. D4: Bias in measurement of the outcome. D5: Bias in selection of the reported result.					Judgement Low

Figure S2.- Risk of Bias Assessment of the Case-Control studies using the Newcastle-Ottawa Scale

STUDIES	SELECTION	COMPARABILITY	EXPOSURE OR OUTCOME	TOTAL
Paganini-Hill, et al. 1996	★		★	2
Costa, et al. 1999	★★★★			3
Waring, et al. 1999	★★★★★	★★	★★	8
Seshadri, et al. 2001	★★★★★	★★	★★★★	9
Roberts, et al. 2006	★★★★★	★★	★★★★	9
Imtiaz, et al. 2014	★★	★	★★★★	6
Imtiaz, et al. 2017	★★★★★	★★	★★★★	9
Savolainen-Peltonen, et al. 2019	★★★★★	★	★★★★	8
Vinogradova, et al. 2021	★★★★★	★	★★★★	8
Løkkegaard, et al. 2022	★		★★	3
Pourhadi, et al. 2023	★★★★★	★	★★★★	8
Pourhadi, et al. 2024	★★★★★	★★	★★★★	9

Figure S3.- Risk of Bias Assessment of the Cohort studies using the Newcastle-Ottawa Scale

STUDIES	SELECTION	COMPARABILITY	EXPOSURE OR OUTCOME	TOTAL
Tang, et al. 1996	★★★★	★★	★★★★	9
Kawas, et al. 1997	★★★★	★★	★★★★	8
Baldereschi, et al. 1997	★★★★	★★	★★	7
Mitchell, et al. 2003	★★★★	★★	★★	8
Petitti, et al. 2007	★★★★	★	★★★★	8
Ryan, et al. 2009	★★★★	★	★★★★	8
Whitmer, et al. 2011	★★★★	★	★★	6
Shao, et al. 2012	★★★★	★	★★★★	8
Bove, et al. 2013	★★★★	★★	★★★★	9
Imtiaz, et al. 2017	★★★★	★★	★★★★	9
Song, et al. 2020	★★★★	★★	★★★★	9
Kim, et al. 2021	★★★★	★★	★★	8
Kim, et al. 2022	★★★★	★	★★	6
Sung, et al. 2022	★★★★	★	★★	6
Yuk, et al. 2023	★★★★	★★	★★★★	9
Liao, et al. 2023	★★★★	★★	★★★★	9
Baik, et al. 2024	★★★★	★★	★★★★	9
Huh, et al. 2024	★★★★	★★	★★	8

Figure S4.- Forrest plot depicting the subgroup analysis by type of HRT received

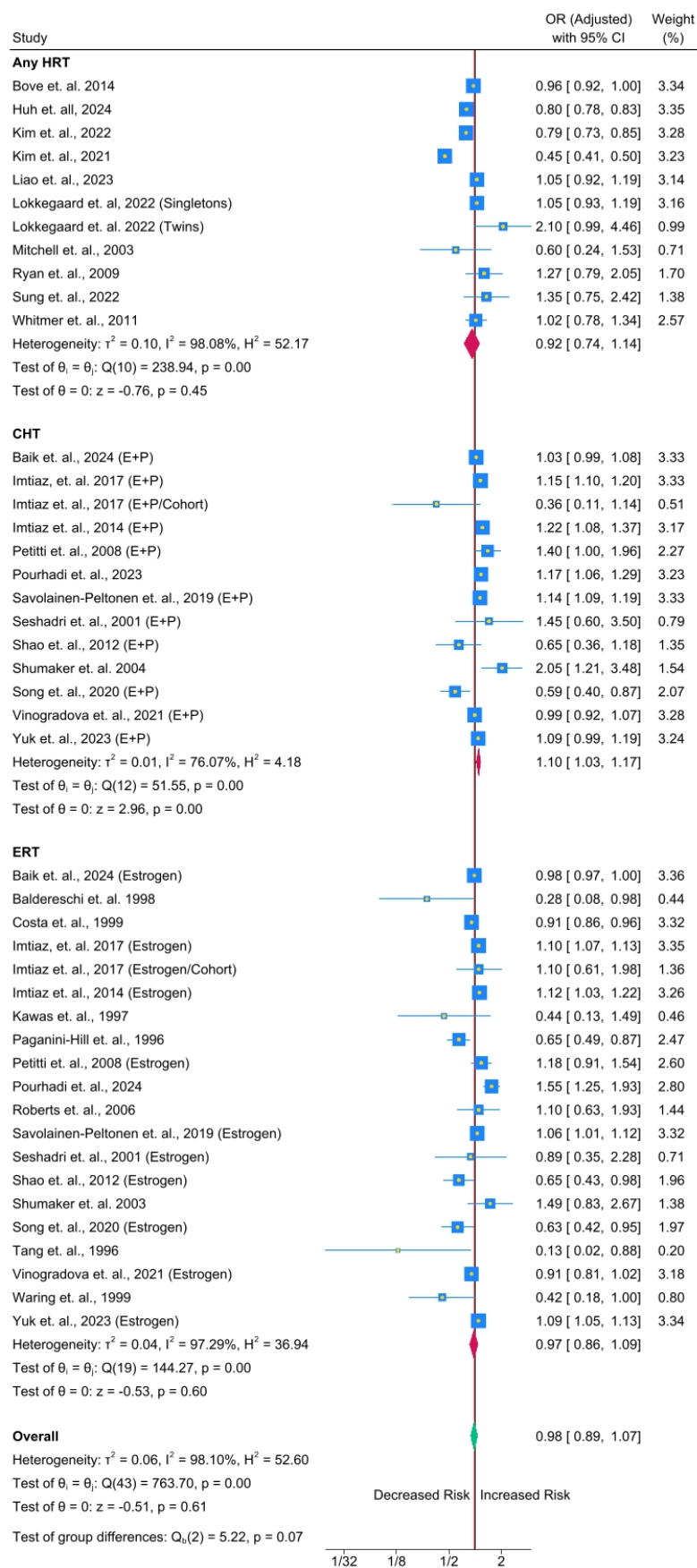
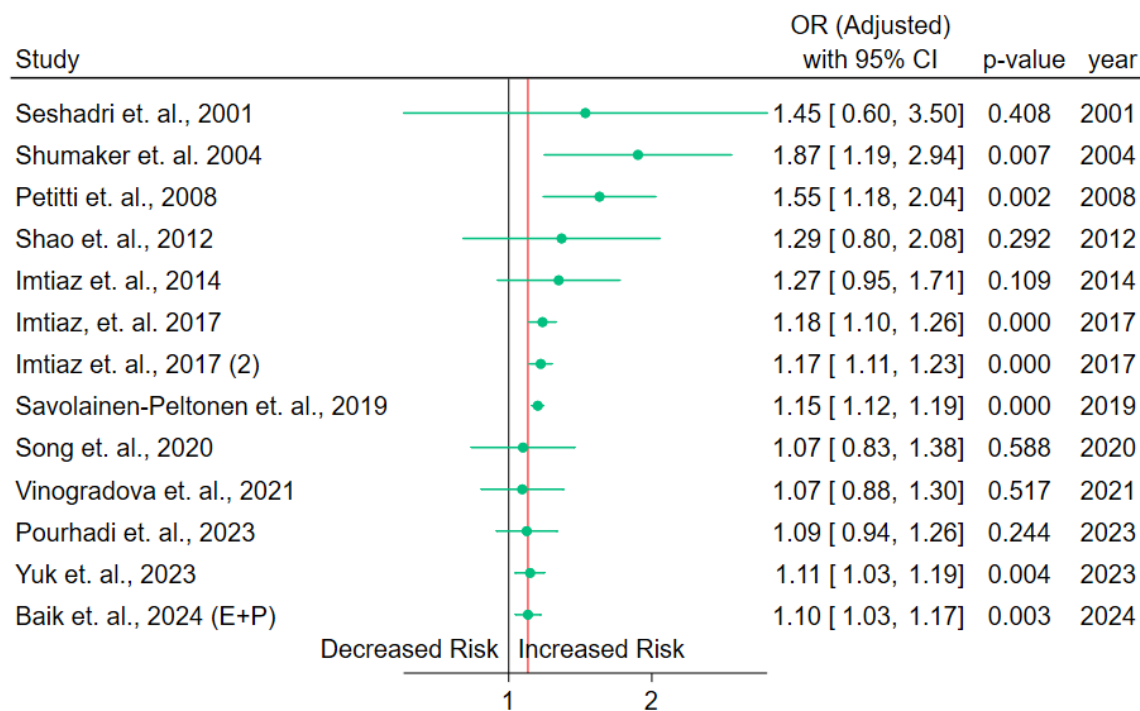


Figure S5.- Cumulative meta-analysis depicting temporal trends of the effect size in the subgroup of Combined Hormone Therapy



Random-effects REML model

Figure S6 - Cumulative meta-analysis depicting temporal trends of the effect size in the subgroup of Estrogen Replacement Therapy

