

Supplemental material

Supplementary table 1: Definitions of variables

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Supplementary figure 1: Schoenfeld residuals of primary analysis. Diagnostic plot for assessing the proportional hazards assumption.

Supplementary table 1. Definitions of variables					
Variable	Register	Periode available	Codes	Criteria	Missing
Outcome variables					
Death	Central Persons Register	1975 – Sept. 2023	Date of death		-
Cardiovascular mortality	Cause of Death Register	1977 - 2022	Primary cause of death - Variable K_LISTEA - A-08 Heart diseases (ICD-10: I00-25, I27, I30-51) - A-09 Other circulatory diseases (ICD-10 I26, I28, I60-99) - Variable c_liste_49 23 Hypertension 24 Ischemic heart disease 25 Other heart diseases 26 Cerebrovascular diseases 27 Arterial, arteriolar, and capillary diseases 28 Other diseases of the circulatory system		-
Cancer mortality	Cause of Death Register	1977 - 2022	Primary cause of death - Variable K_LISTEA - A-02 Cancer (ICD-10: C00-C97) - Variable c_liste_49: 3 Cancer of the oral cavity and esophagus 4 Cancer of the stomach 5 Cancer of the intestines, excluding the rectum 6 Cancer of the rectum 7 Cancer of the larynx, trachea, bronchi, lungs 8 Cancer of bones and skin 9 Cancer of the breast 10 Cancer of the cervix 11 Cancer of other parts of the uterus 13 Cancer of other and unspecified locations 14 Cancer of lymphatic and blood-forming tissues		-
Other causes	Cause of Death Register	1977 - 2022		Death from all other causes than those above	-
Exclusion/censoring variables					
Thrombophilia	National Patient Register	1977- Sept. 2023	ICD-10: D685, D686	Incident diagnosis	-
Liver disease	National Patient Register	1977- Sept. 2023	ICD-10: K70-K77 ICD-8: 570-573	Incident diagnosis	-
Arterial thrombosis	National Patient Register	1977- Sept. 2023	ICD-10: I21-I22, I63-I64 ICD-8: 410, 433-434, 436	Incident diagnosis	-
Venous thrombosis	National Patient Register	1977- Sept. 2023	ICD-10: I26, I801-I803, I808-I809 ICD-8: 450, 45100, 45108-45109, 45199	Incident diagnosis	-
Breast-, endometrial- or ovarian cancer	Cancer Register, National Patient Register	1943-2017 1977- Sept. 2023	ICD-10: C50, C54-C57	Incident diagnosis	-
Covariate variables					
Hysterectomy	National Patient Register	1977- Sept. 2023	NCSP codes: KLCC10, KLCC11, KLCC20, KLCD, KLEF13, KMCA33, 61000, 61020, 61040, 61100, 72110, 72230, 72240, 72650		-
Bilateral oophorectomy	National Patient Register	1977- Sept. 2023	NCSP codes: KLAF1, 60120, 60121, 60320, 70210, 70310 Two unique occurrences of unilateral oophorectomy: KLAE1, KLAFO, 60100, 60101, 60300, 70200, 70300		-
Diabetes	National Prescription Register	1995 – July 2023	ATC: A10 (excluding Wegovy Flextouch)	Incident prescription	-
Hypertension	National Prescription Register	1995 – July 2023	Two or more classes of antihypertensive drugs: - Alfa adrenergic blockers: C02A, C02B, C02C - Non-loop diuretic: C02DA, C02L, C03[A, B, D, E], C03X, C07[C-D], C08G, C09BA, C09DA, C09XA52 - Vasodilator: C02DB, C02DD, C02DG, C04, C05 - Beta blocker: C07 - Calcium channel blocker: C07F, C08, C09BB, C09DB - Renin angiotensin inhibitor: C09		-
Hypercholesterolemia	National Prescription Register	1995 – July 2023	ATC: C10AA, C10AB	Incident prescription	-
Atrial Fibrillation	National Patient Register	1977- Sept. 2023	ICD-10: I48, ICD-8: 42793, 42794	Incident diagnosis	
Heart failure	National Prescription Register & National Patient Register	1977- Sept. 2023	Combination of diagnosis code: ICD-10: I110, I42, I50, J819 ICD-8: 425, 4270, 4271 AND Loop diuretic: C03C	Incident combination	
Valvular disease	National Patient Register	1977- Sept. 2023	ICD-10: I05, I06, I34, I35 ICD-8: 394-396, 4240, 4241	Incident diagnosis	
Parity	Medical Birth Register National Patient Register	1977- Sep. 2023	-	Individual variable	-
Civil status	Central Person Register	1973-2019	-	Individual variable	0.2%
Education	Statistics Denmark	1977-2022	-	Individual variable	1.0%
Income	Statistics Denmark	1995-2021	-	Individual variable	0.2%
Country of birth	Central Persons Register	1975-Sept. 2023	-	Individual variable	0.2%

Abbreviations: ATC- Anatomical Therapeutic Chemical Classification, ICD - International Classification of Diseases and Related Health Problems; NCSP - NOMESCO Classification of Surgical Procedures

Supplementary table 2: Definitions of menopausal hormone therapy and proportion of use

ATC	MHT-type	Dosage form*	Proportion (%)[†]
G03CA03	Oestrogen	Oral	18.1
G03CA03	Oestrogen	Transdermal	11.7
G03CA03	Oestrogen	Injection	<0.1
G03CA03	Oestrogen	Nose spray	<0.1
G03CA03	Oestrogen + Separate cyclic progestin	Transdermal	1.9
G03CA03	Oestrogen + Separate cyclic progestin	Oral	0.5
G03CA03	Oestrogen + Separate cyclic progestin	Injection	<0.1
G03CA03	Oestrogen + Separate cyclic progestin	Nose spray	<0.1
G03CA03	Oestrogen + Sperate continuous progestin	Transdermal	0.6
G03CA03	Oestrogen + Sperate continuous progestin	Oral	0.2
G03CA03	Oestrogen + Sperate continuous progestin	Injection	<0.1
G03CA03	Oestrogen + Sperate continuous progestin	Nose spray	<0.1
G03CA04	Oestrogen	Oral	0.6
G03CA04	Oestrogen + Separate cyclic progestin	Oral	<0.1
G03CA04	Oestrogen + Sperate continuous progestin	Oral	<0.1
G03CA53	Oestrogen	Oral	0.1
G03CA53	Oestrogen + Separate cyclic progestin	Oral	<0.1
G03FA01	Oestrogen and continuous progestin	Oral	32.3
G03FA01	Oestrogen and continuous progestin	Transdermal	2.3
G03FA11	Oestrogen and continuous progestin	Oral	<0.1
G03FA12	Oestrogen and continuous progestin	Oral	2.7
G03FA15	Oestrogen and continuous progestin	Oral	0.6
G03FA17	Oestrogen and continuous progestin	Oral	1.0
G03FB01	Oestrogen and cyclic progestin	Oral	0.7
G03FB05	Oestrogen and cyclic progestin	Oral	17.2
G03FB05	Oestrogen and cyclic progestin	Transdermal	1.7
G03FB06	Oestrogen and cyclic progestin	Oral	3.9
G03FB09	Oestrogen and cyclic progestin	Oral	3.6
G03FB11	Oestrogen and cyclic progestin	Oral	0.2

Abbreviations: ATC - Anatomical Therapeutic Chemical Classification System; MHT– menopausal hormone therapy

* Dosage form of oestrogen component

[†] Proportion of all MHT used in cohort

Supplementary figure 1. Schoenfeld residuals of primary analysis. Diagnostic plot for assessing the proportional hazards assumption.

