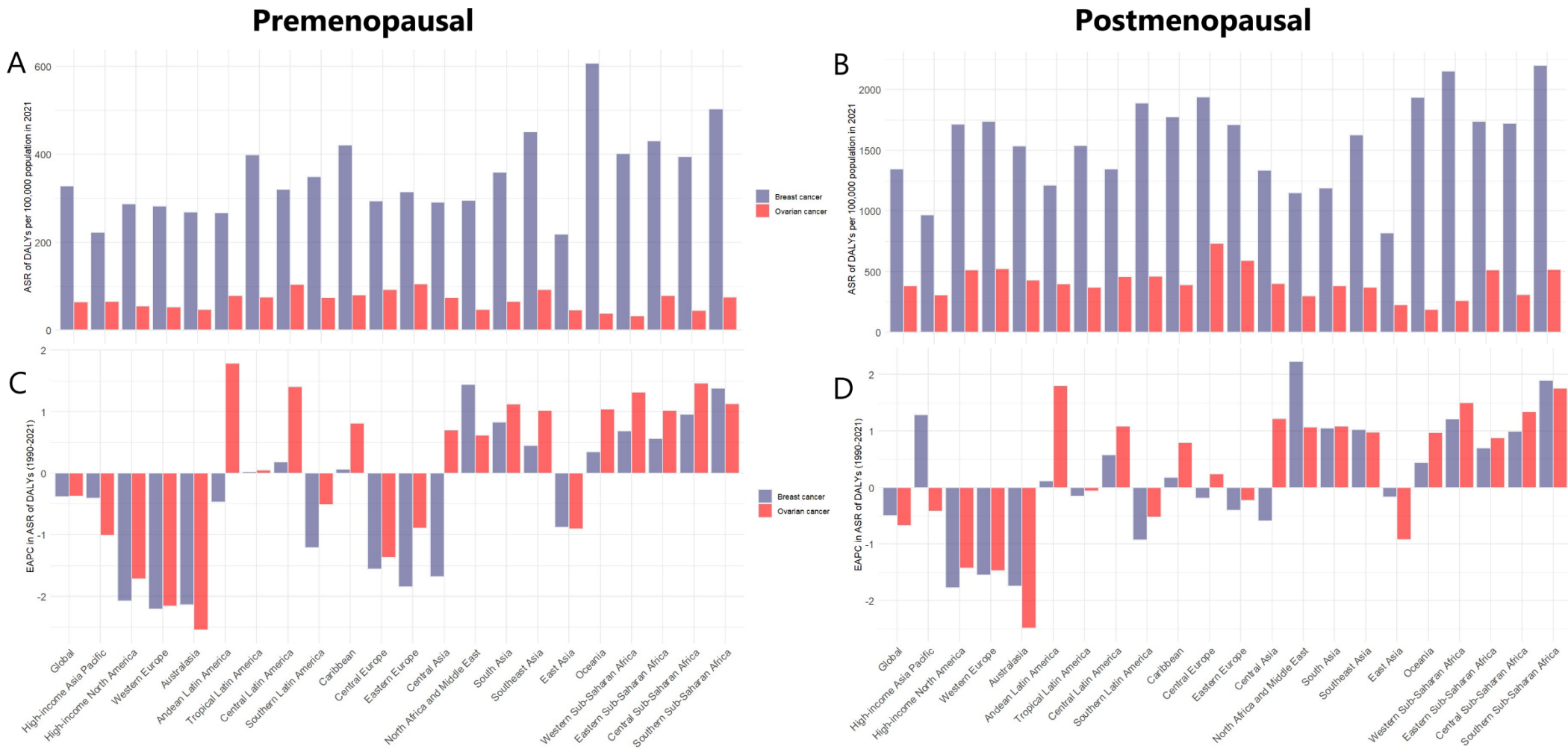


**Supplementary Table SI.** DALYs of estrogen-related cancers in 2021, and their estimated annual percentage changes from 1990 to 2021. DALYs, disability-adjusted life years. EAPC, estimated annual percentage change. SDI, socio-demographic index

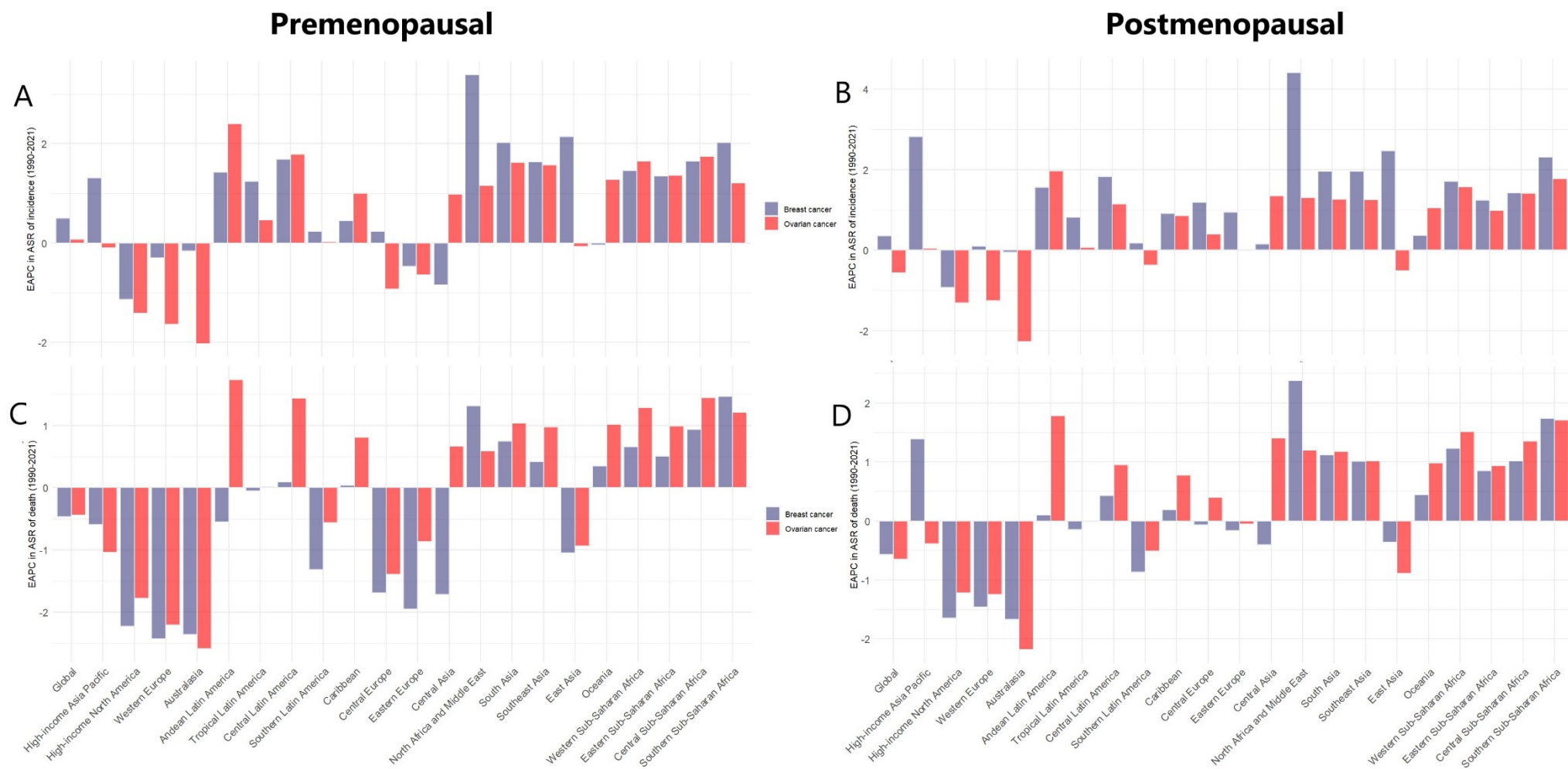
	Premenopausal (age<50 years)			Postmenopausal (age≥50 years)		
	DALYs			DALYs		
	Count,2021	Age-standardised rate,2021	EAPC,1990-2021	Count,2021	Age-standardised rate,2021	EAPC,1990-2021
<b>Breast cancer</b>						
Global	6659459.91(6111787.74,7245687.69)	327.24(300.15,356.24)	-0.38(-0.49,-0.28)	13595341.70(12378270.45,14729909.15)	1345.82(1225.74,1458.07)	-0.50(-0.54,-0.46)
High SDI	791735.03(748403.20,837604.93)	269.20(254.46,284.83)	-1.80(-1.87,-1.73)	3531371.21(3159211.66,3822008.95)	1530.25(1392.24,1645.70)	-1.33(-1.36,-1.30)
High-middle SDI	1049179.39(931683.50,1184651.63)	274.78(243.77,310.56)	-1.32(-1.41,-1.22)	3140943.20(2812099.59,3501652.65)	1323.88(1185.78,1477.10)	-0.77(-0.89,-0.65)
Middle SDI	2202113.75(1984729.78,2443177.82)	323.73(291.78,359.18)	0.02(-0.08,0.12)	3838844.01(3400937.85,4302297.56)	1171.34(1036.76,1312.54)	0.34(0.28,0.40)
Low-middle SDI	1818680.64(1572636.03,2089027.93)	385.56(333.99,441.83)	0.98(0.92,1.05)	2242426.87(1962805.32,2529785.07)	1316.70(1152.10,1485.28)	1.30(1.25,1.36)
Low SDI	791378.41(658840.08,938445.60)	360.67(302.00,425.62)	0.68(0.57,0.80)	825564.84(710386.09,944618.25)	1419.80(1220.44,1624.63)	0.80(0.67,0.93)
<b>Ovarian cancer</b>						
Global	1294995.57(1125255.20,1446127.87)	64.04(55.59,71.56)	-0.37(-0.45,-0.30)	3868260.73(3466577.33,4235616.09)	382.55(342.86,418.91)	-0.67(-0.72,-0.62)
High SDI	169608.97(159531.44,179383.12)	58.76(55.23,62.18)	-1.73(-1.79,-1.67)	1106041.46(994471.34,1184584.88)	480.00(437.41,510.88)	-1.41(-1.51,-1.31)
High-middle SDI	244570.22(209706.96,282257.50)	65.73(56.31,75.92)	-1.12(-1.21,-1.02)	949671.94(825597.91,1070630.42)	399.98(347.78,451.30)	-0.78(-0.86,-0.69)
Middle SDI	432907.92(361666.05,491291.35)	64.93(54.18,73.72)	0.38(0.29,0.47)	983240.94(852137.33,1123608.21)	300.83(260.48,343.68)	0.28(0.18,0.38)
Low-middle SDI	316111.50(257987.91,382875.10)	66.20(54.20,80.13)	1.29(1.22,1.35)	609739.31(517779.50,751405.38)	360.46(305.80,444.43)	1.29(1.23,1.35)
Low SDI	130530.46(93832.09,163222.28)	57.08(41.21,71.17)	0.99(0.87,1.10)	214839.01(165661.71,259621.00)	368.83(284.46,445.61)	0.98(0.90,1.07)

**Supplementary Figure S1.** Age-standardised DALY rates in 2021, and their EAPC from 1990 to 2021 for estrogen-related cancers, globally and by 21 GBD regions. Age-standardised rates of DALY (A, B), and estimated annual percentage changes of age-standardised rates of DALY (C, D). DALY, disability-adjusted life years. ASR, age-standardised rate. EAPC, estimated annual percentage change.

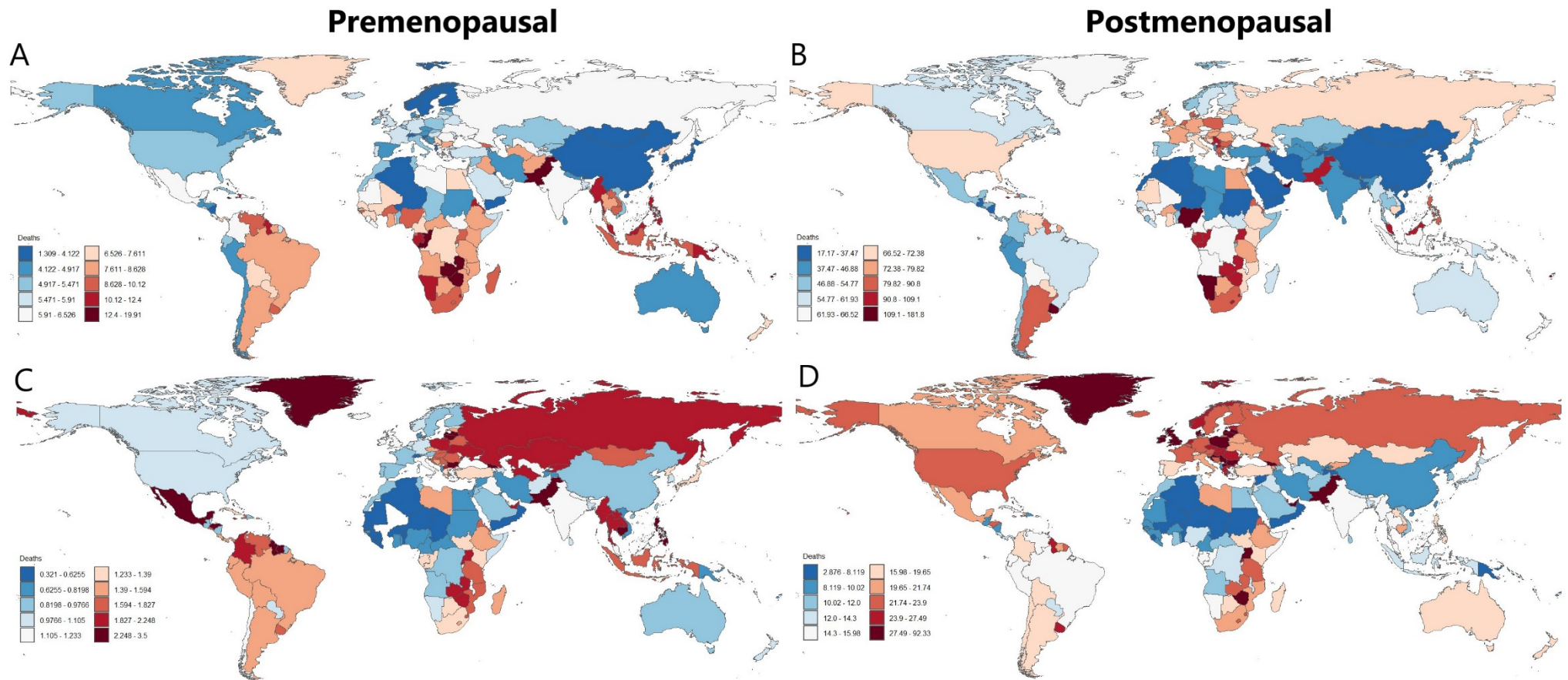




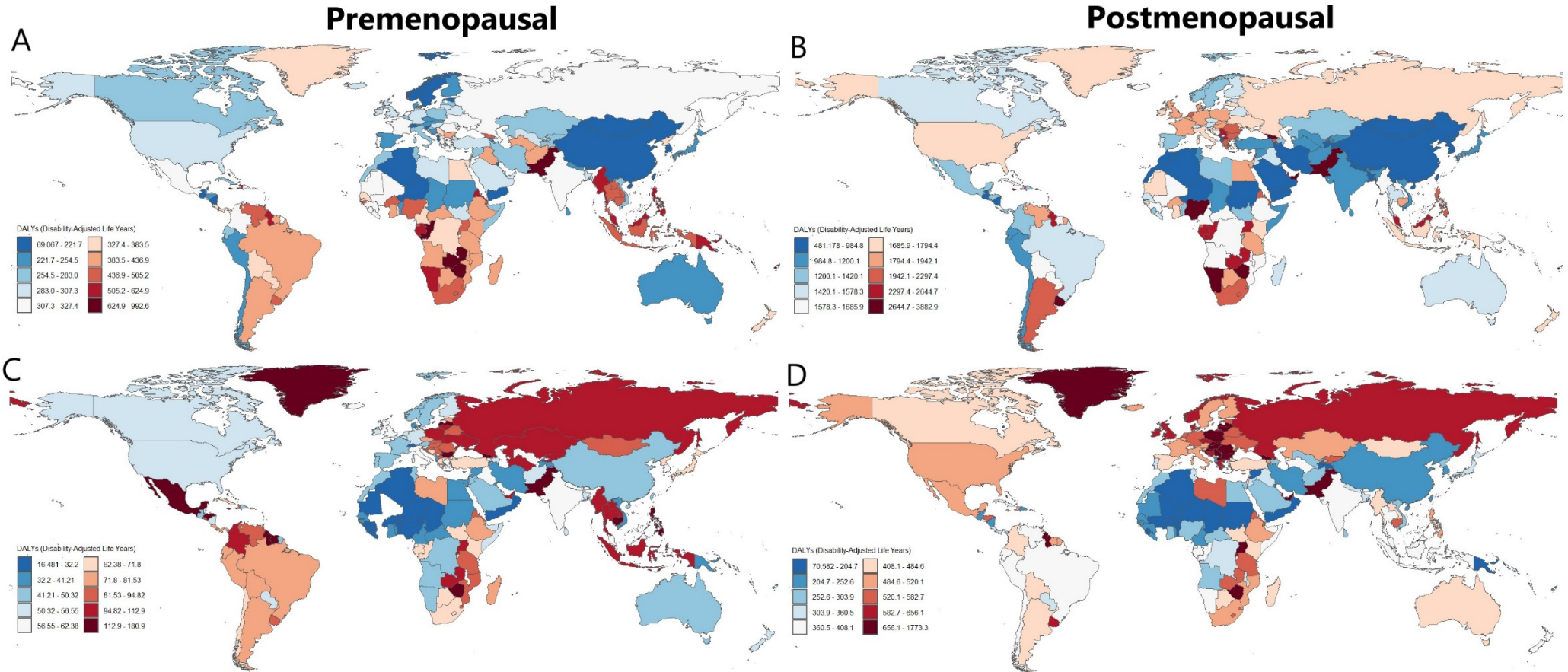
**Supplementary Figure S2.** EAPC of age-standardised incidence and mortality rates from 1990 to 2021 for estrogen-related cancers, globally and by 21 GBD regions. Estimated annual percentage changes of age-standardised rates of incidence (A, B), estimated annual percentage changes of age-standardised rates of mortality (C, D). EAPC, estimated annual percentage change. ASR, age-standardised rate.



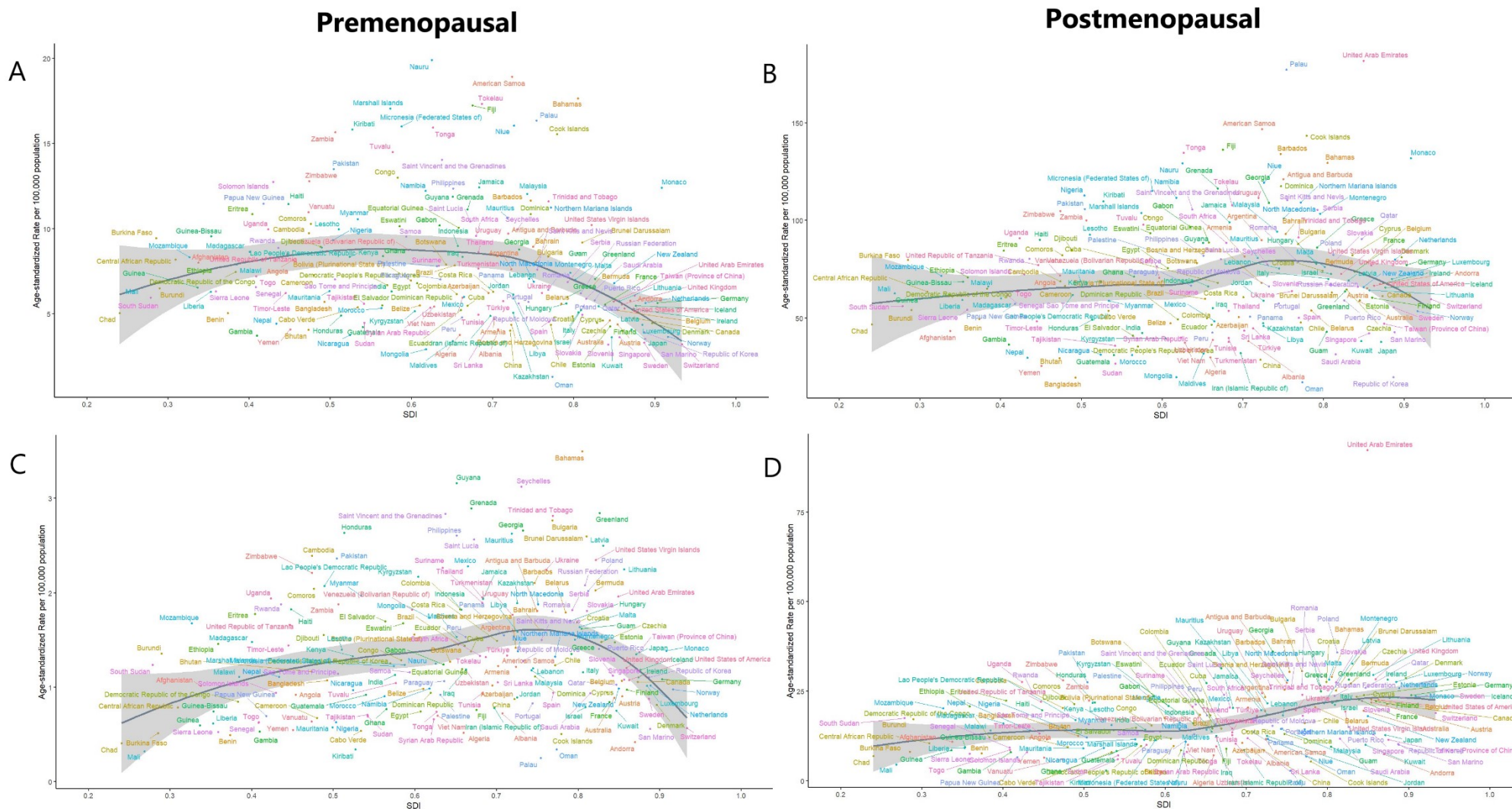
Supplementary Figure S3. National age-standardised mortality rates in 2021. Breast cancer (A, B), ovarian cancer (C, D).



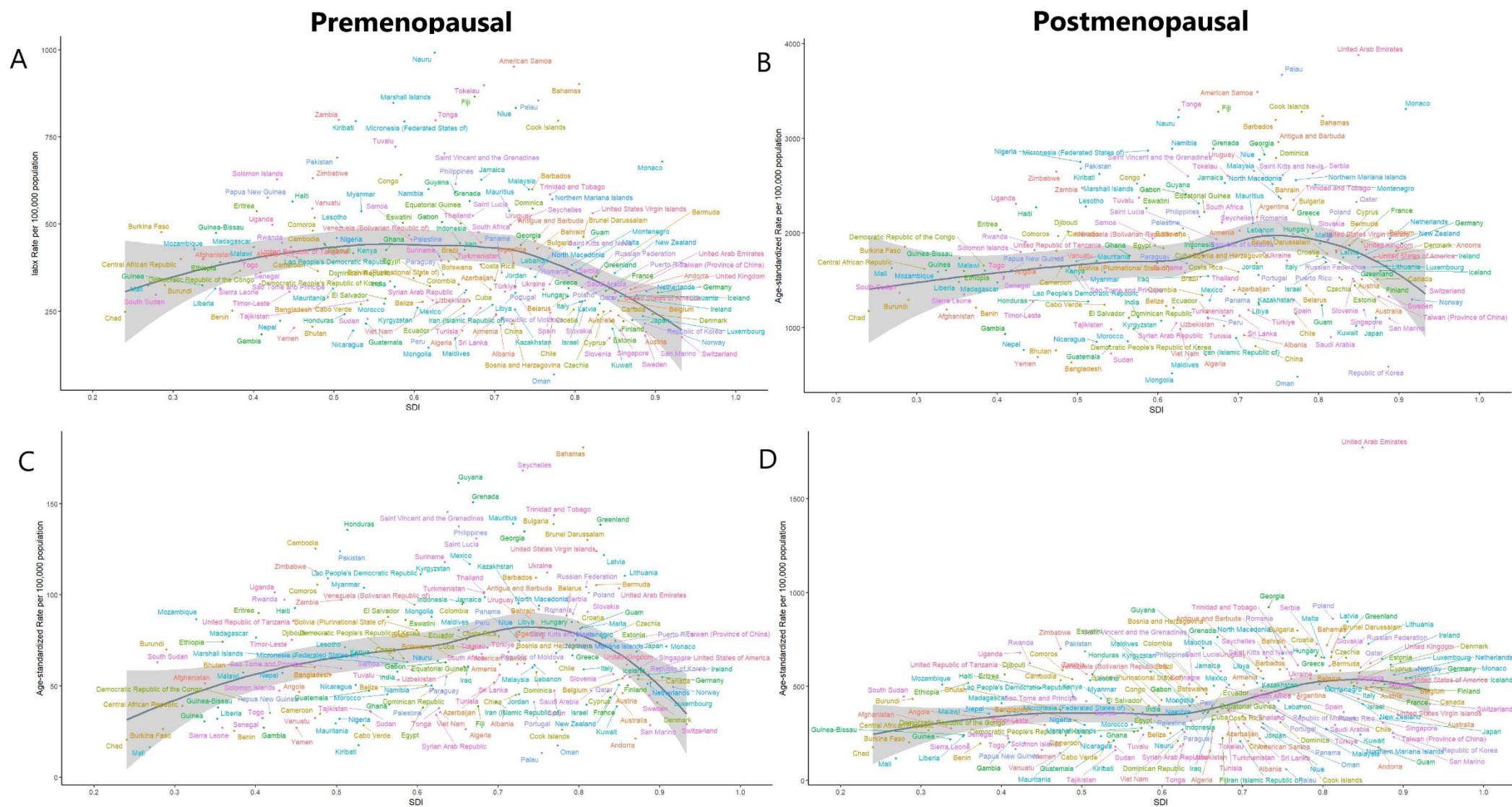
Supplementary Figure S4. National age-standardised DALY rates in 2021. Breast cancer (A, B), ovarian cancer (C, D). DALY, disability-adjusted life years.



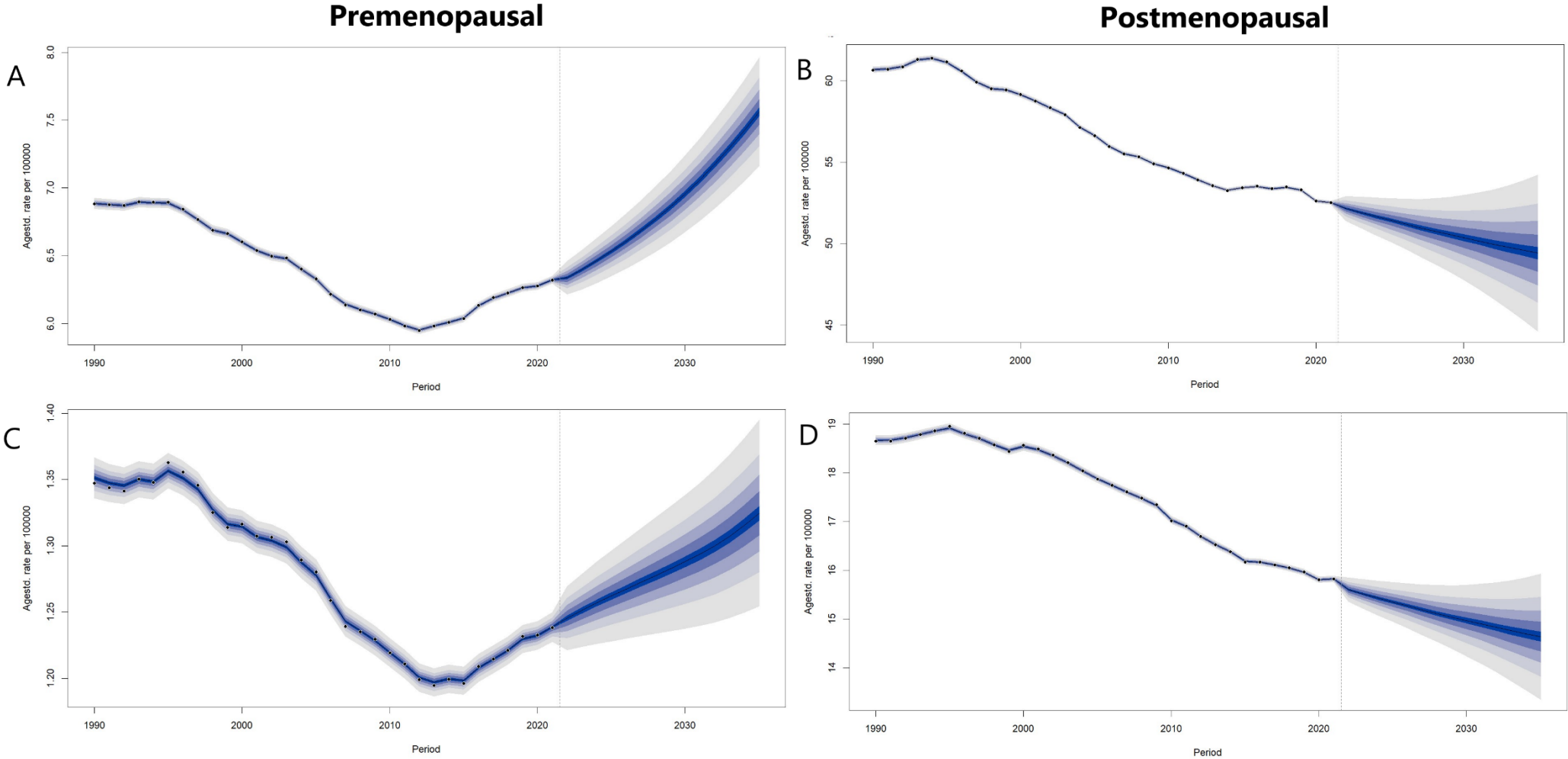
**Supplementary Figure S5.** Estimated ASMR of pre- and post-menopausal estrogen-related cancers for 204 countries and territories versus SDI in 2021. Breast cancer (A, B), ovarian cancer (C, D). ASMR, age-standardized mortality rate. SDI, socio-demographic index.



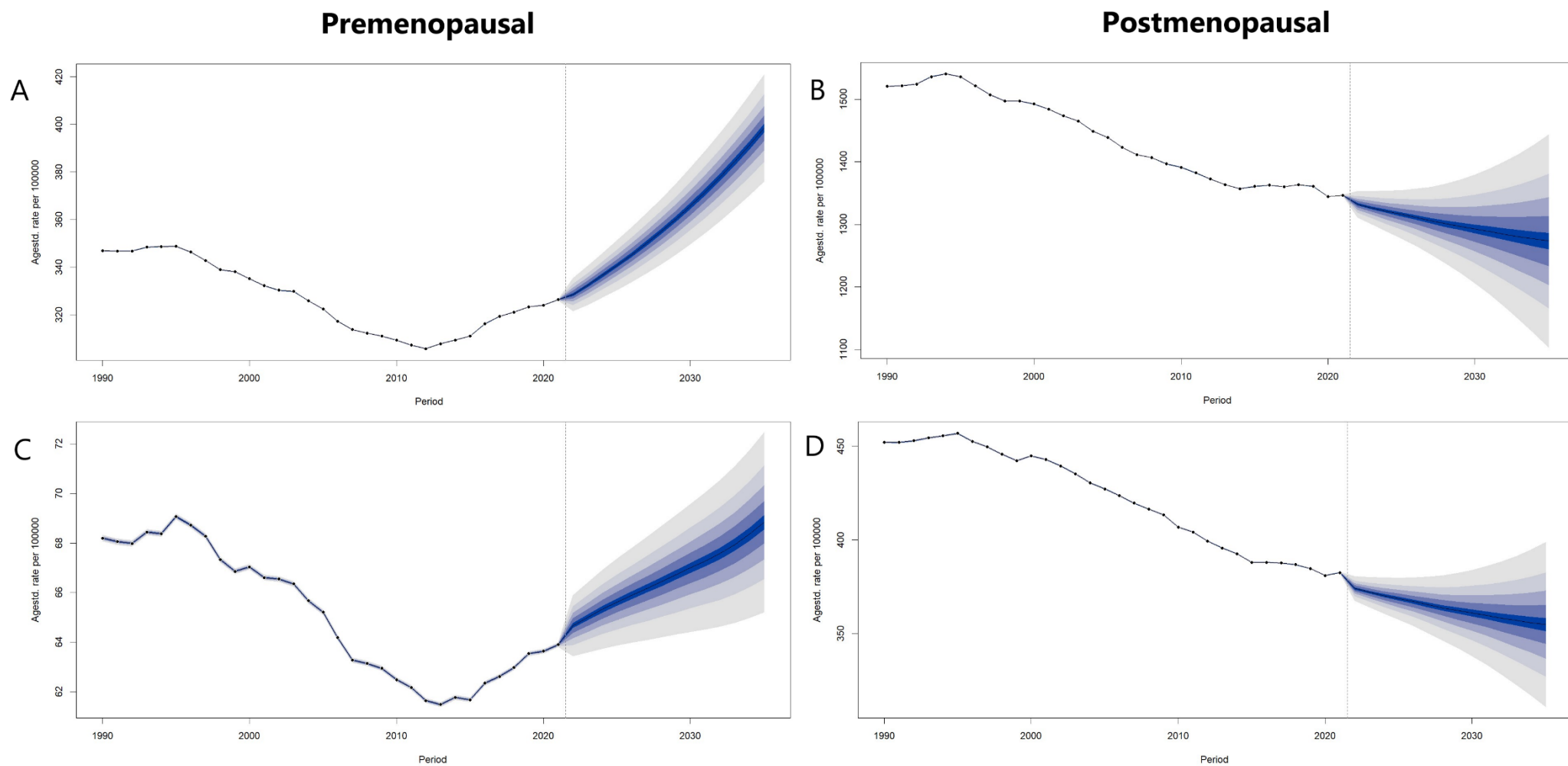
**Supplementary Figure S6.** Estimated age-standardised DALY rates of pre- and post-menopausal estrogen-related cancers for 204 countries and territories versus SDI in 2021. Breast cancer (A, B), ovarian cancer (C, D). DALY, disability-adjusted life years. SDI, socio-demographic index.



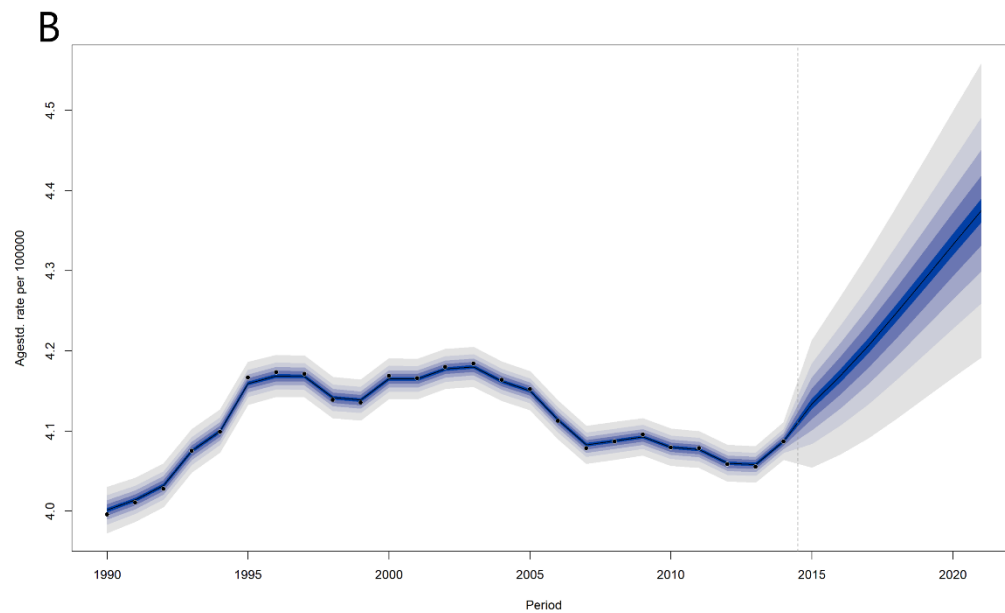
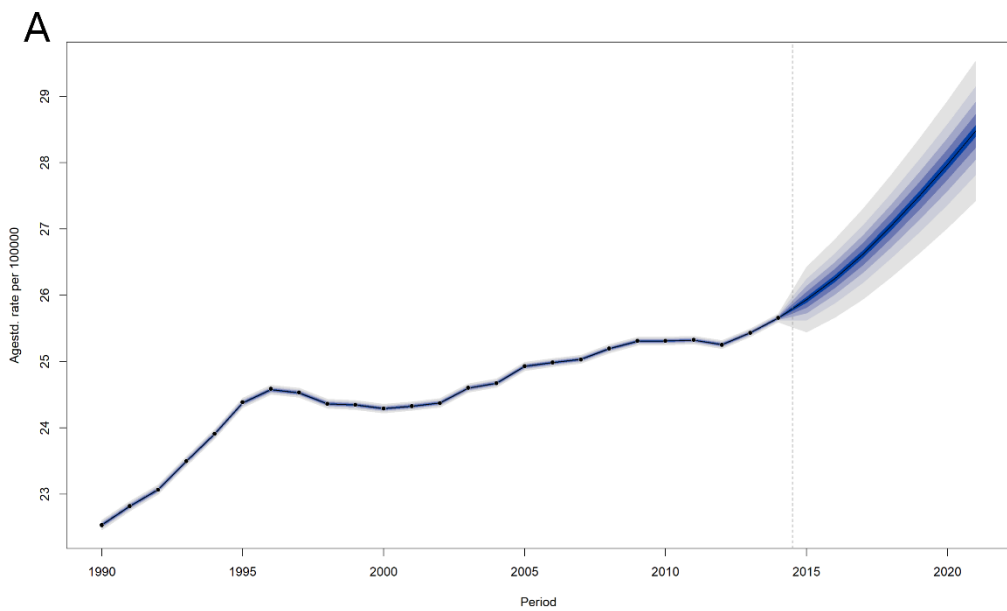
**Supplementary Figure S7.** Developments in ASMR for estrogen-related cancers in pre- and post-menopausal women: actual figures from 1990 to 2021 and projected statistics for 2021 to 2035. Breast cancer (A, B), ovarian cancer (C, D). ASMR, age-standardized mortality rate.



**Supplementary Figure S8.** Developments in age-standardised DALY rates for estrogen-related cancers in pre- and post-menopausal women: actual figures from 1990 to 2021 and projected statistics for 2021 to 2035. Breast cancer (A, B), ovarian cancer (C, D). DALY, disability-adjusted life year.



**Supplementary Figure S9.** Developments in ASIR for estrogen-related cancers in premenopausal women: actual figures from 1990 to 2014 and projected statistics for 2015 to 2021. Breast cancer (A), ovarian cancer (B). ASIR, age-standardized incidence rate.



**Supplementary Figure S10.** Global number and incidence (A, B), death (C, D) and DALY (E, F) rates of estrogen-related cancers in women by age. Error bars indicate the 95 % uncertainty intervals (95 % UI) for incidence (A, B), death (C, D) and DALY (E, F). Breast cancer (A, C, E), ovarian cancer (B, D, F). DALY, disability-adjusted life year.

