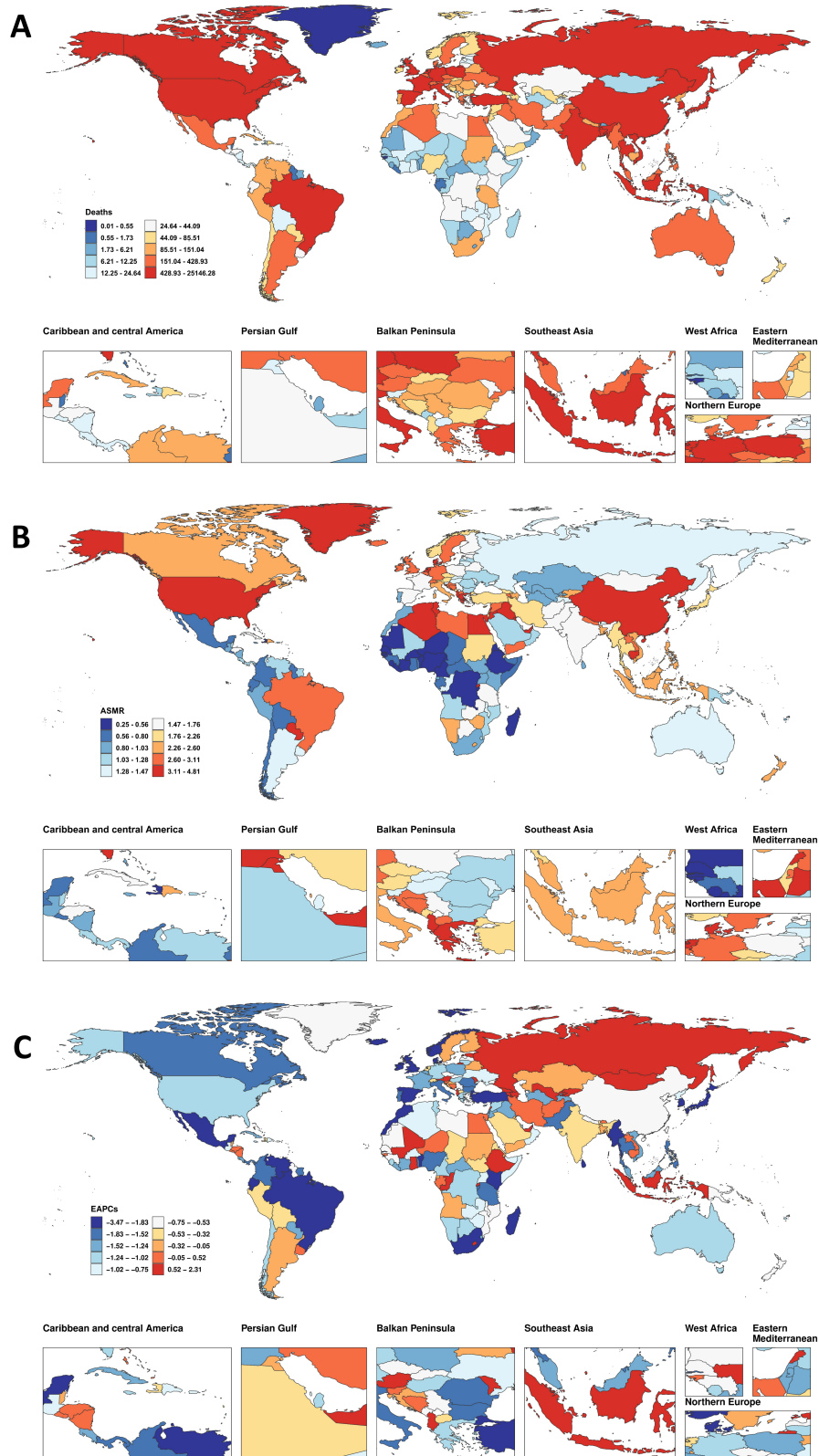
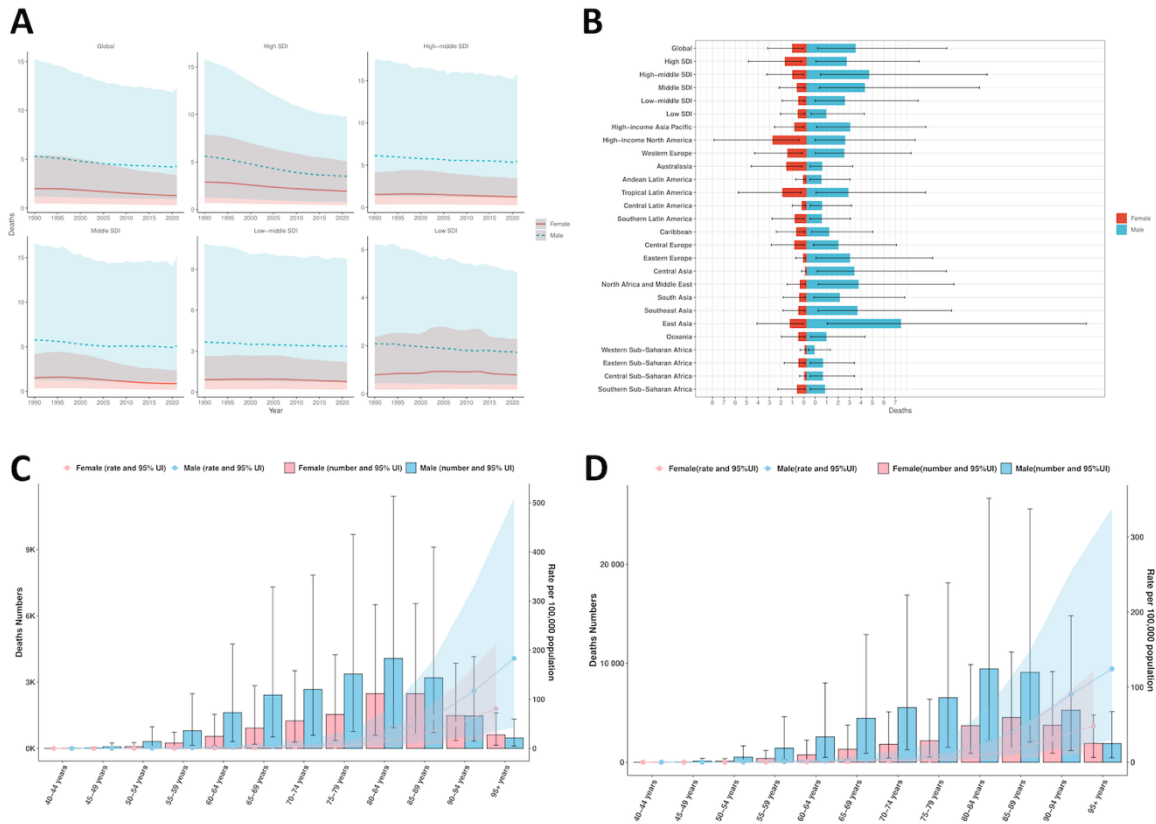


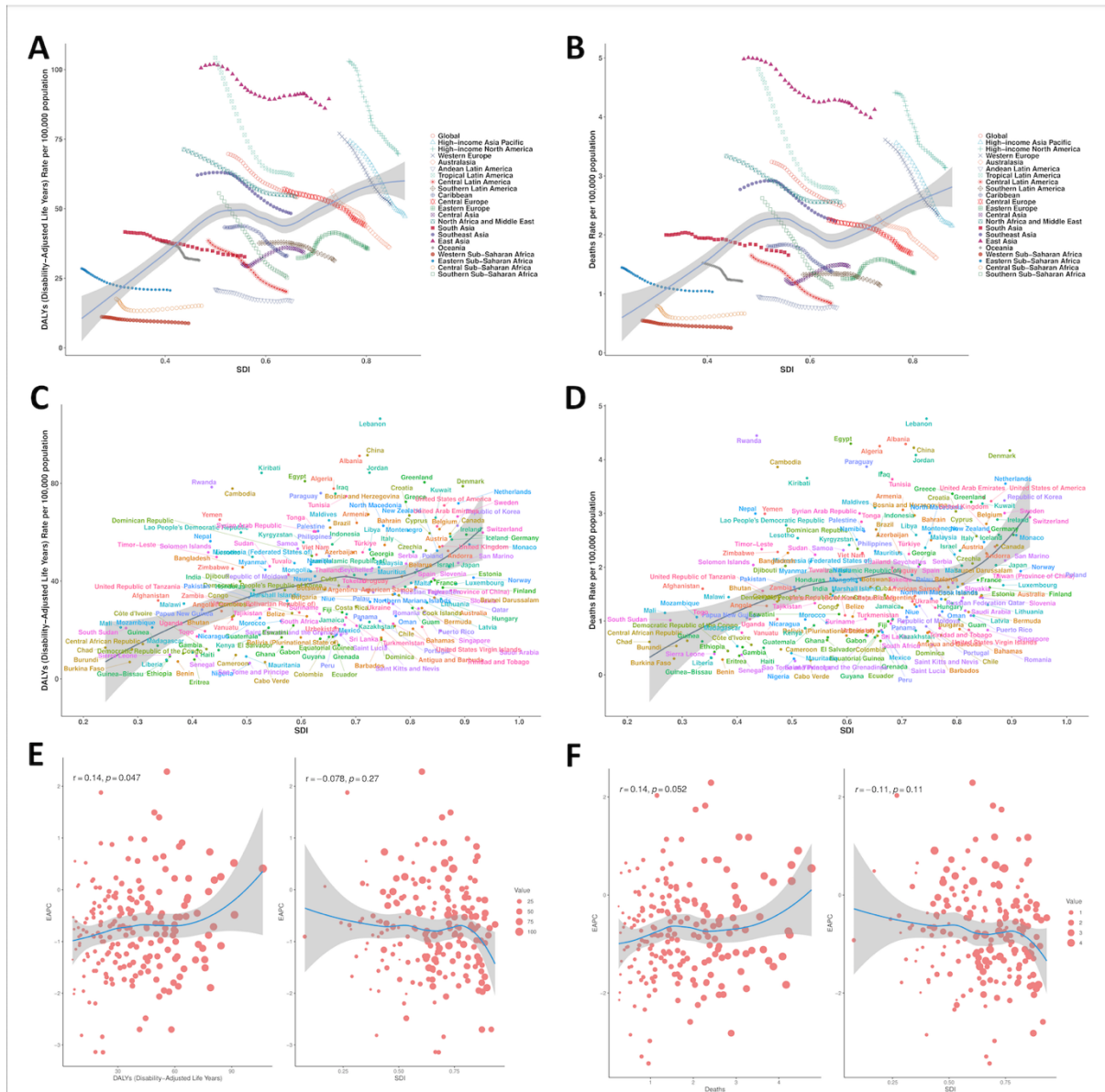
Supplementary file Figure S1. Temporal trends of age-standardised mortality rates (ASMR) (A) and age-standardised disability-adjusted life year rate (ASDR) (B) for dementia attributable to smoking from 1990 to 2021 at the global level and across five sociodemographic index (SDI) regions, based on the Global Burden of Disease (GBD) 2021 study. ASMR (C) and ASDR (D) in 1990 and 2021 at the global level, across five SDI regions and 21 GBD regions. Estimated annual percentage changes (EAPC) in ASMR (E) and ASDR (F) from 1990 to 2021 at the global level and across 21 GBD regions.



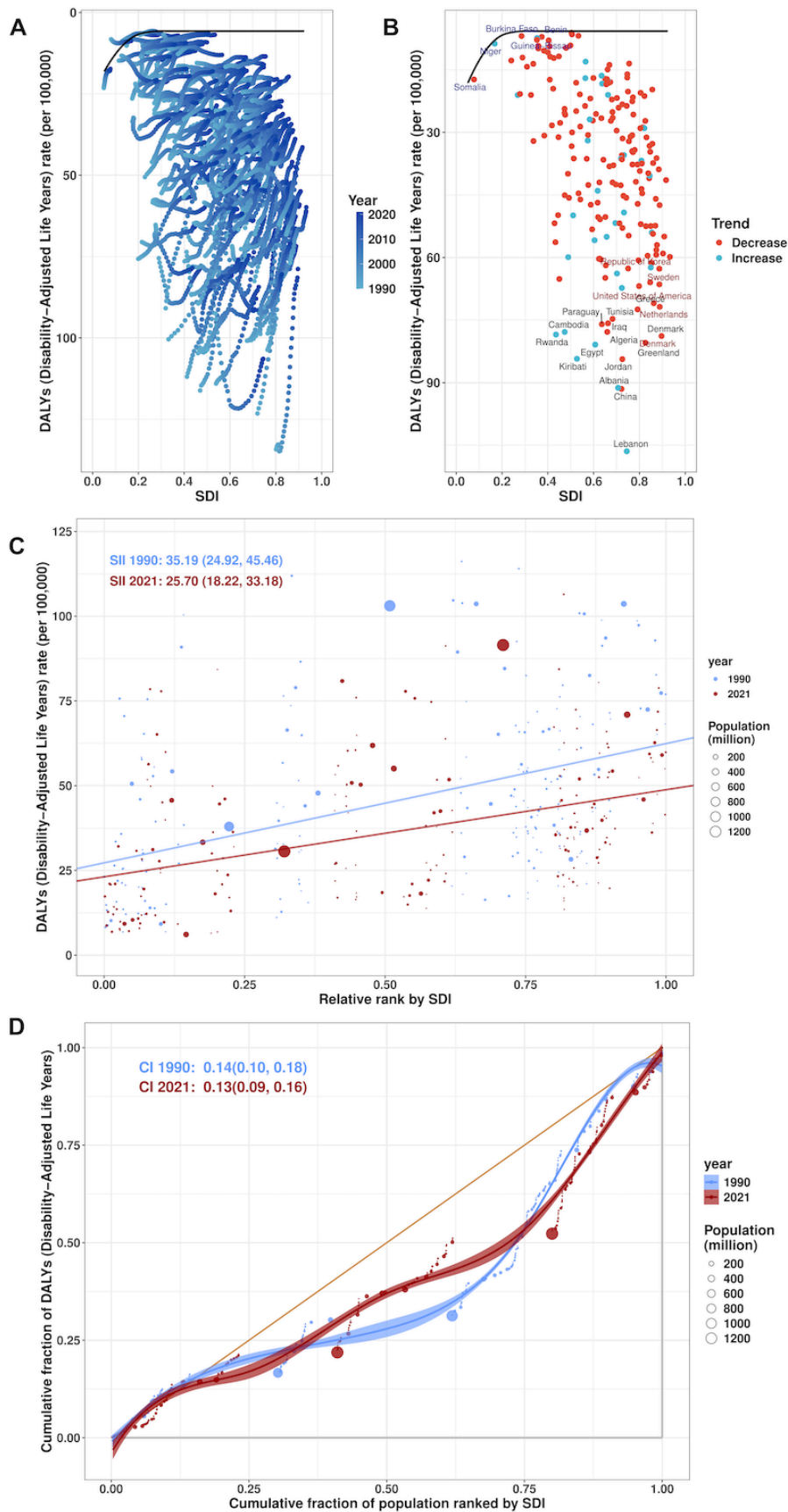
Supplementary file Figure S2. Global map of dementia mortality attributable to smoking in 204 countries and territories, based on the Global Burden of Disease (GBD) 2021 study. (A) Number of deaths in 2021; (B) distribution of age-standardised mortality rates (ASMR) in 2021; (C) estimated annual percentage changes (EAPC) in ASMR from 1990 to 2021.



Supplementary file Figure S3. Temporal trends and distributions of deaths from dementia attributable to smoking, by region, age, and sex, based on the Global Burden of Disease (GBD) 2021 study. (A) Temporal trend of age-standardised mortality rates (ASMR) from 1990 to 2021 at the global level and across 21 GBD regions. (B) Distribution of ASMR by sex across 21 GBD regions in 2021. (C) Deaths and ASMR in 1990 by age group and sex. (D) Deaths and ASMR in 2021 by age group and sex. Error bars represent 95% uncertainty intervals (UIs) for deaths; shading represents 95% UIs for rates.



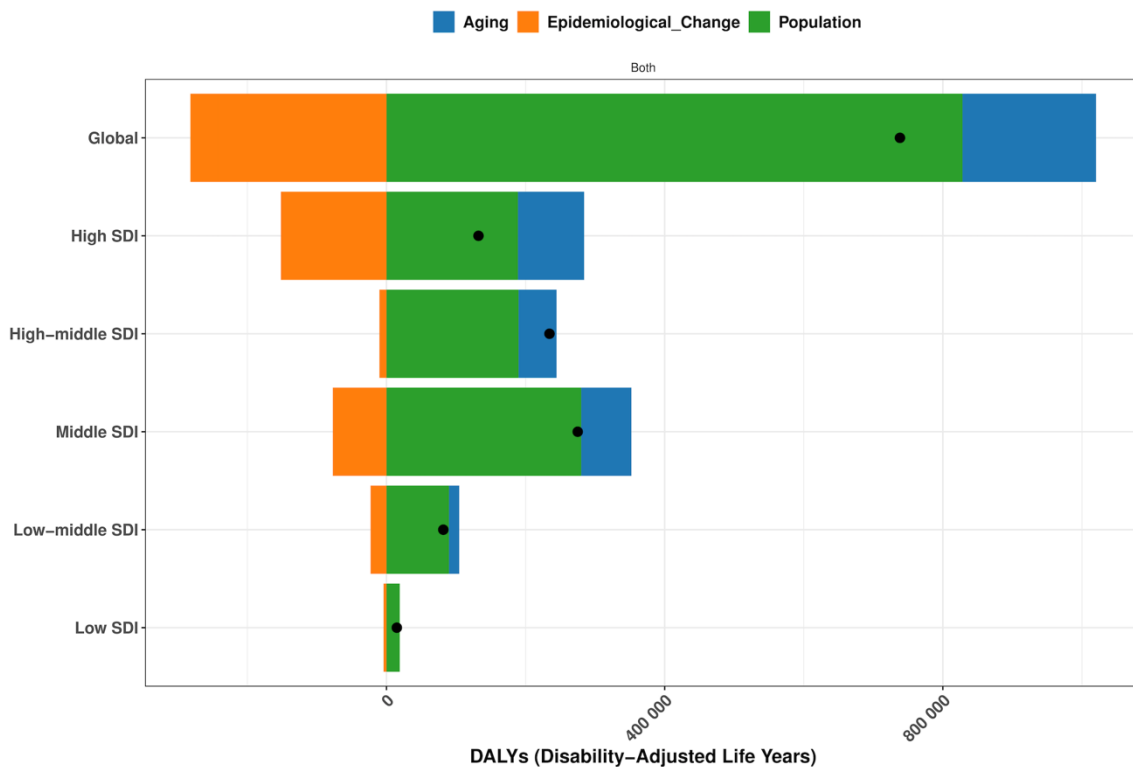
Supplementary file Figure S4. Distribution of age-standardised disability-adjusted life year rates (ASDR) and age-standardised mortality rates (ASMR) for dementia attributable to smoking across sociodemographic index (SDI) levels, based on the Global Burden of Disease (GBD) 2021 study. (A–B) Global and 21 GBD regions from 1990 to 2021; (C–D) 204 countries or territories in 2021. (E–F) Correlation of estimated annual percentage changes (EAPC) with age-standardised rates (ASRs) (left) and SDI (right) in 204 countries and territories in 2021.



Supplementary file Figure S5. Frontier analysis and health inequality assessment of dementia burden attributable to smoking across sociodemographic index (SDI) levels from 1990 to 2021,

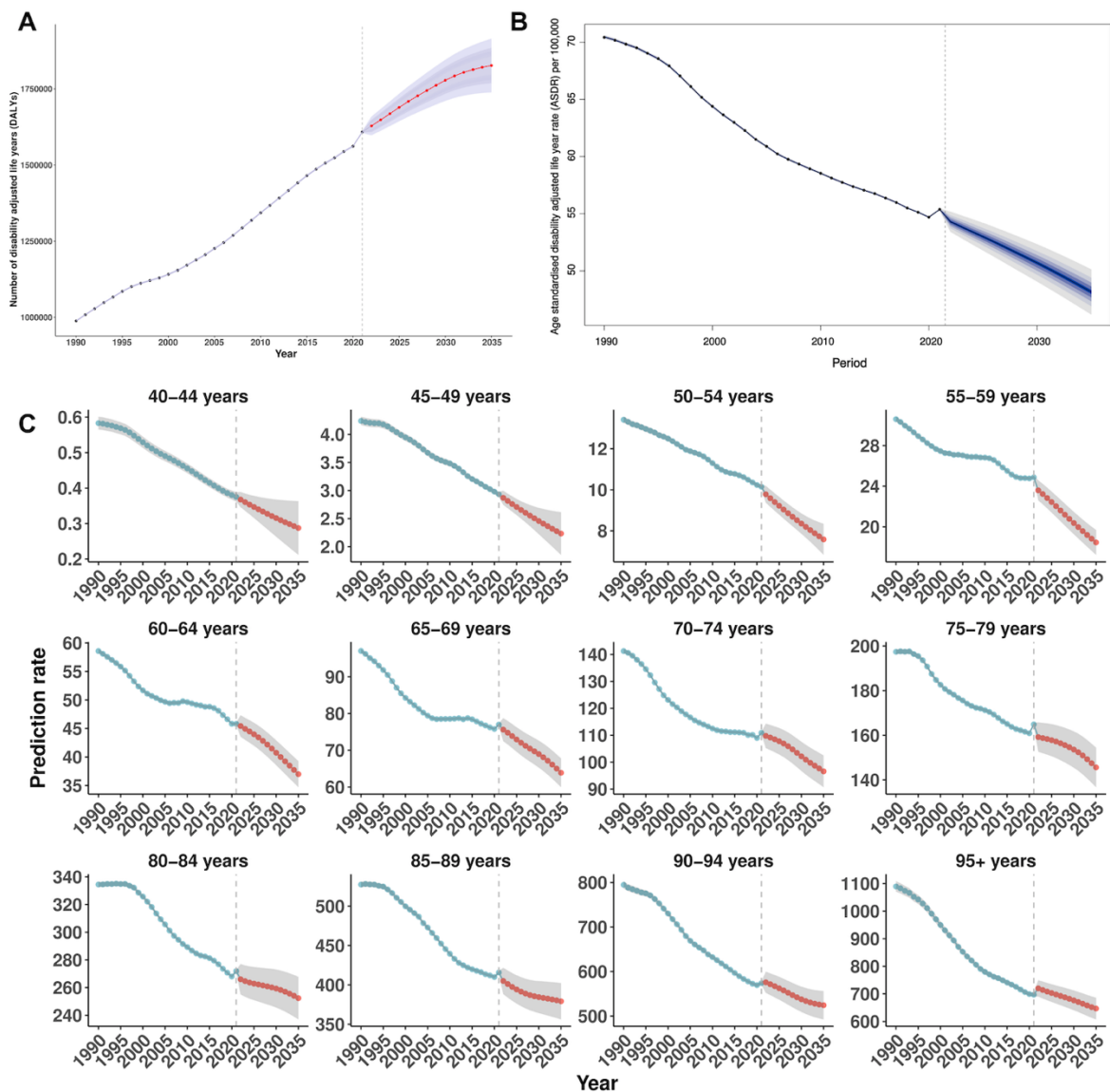
based on the Global Burden of Disease (GBD) 2021 study.

(A) Frontier analysis of age-standardised disability-adjusted life year rate (ASDR) for countries and regions at different development levels from 1990 to 2021, with the efficiency frontier delineated in solid black. Each dot represents a country or region, and the gradient from light to dark blue reflects the combined trajectory of SDI and ASDR over time. (B) Frontier analysis of ASDR for Alzheimer’s disease and other dementias attributable to smoking by 2021 SDI values. The top fifteen countries with the largest effective gaps are marked in black. Examples of frontier countries with low SDI (<0.5) and minimal effective gaps are shown in blue, while countries with high SDI (>0.85) but substantial gaps are highlighted in red. (C) Slope index of inequality (SII) showing the association between SDI and ASDR across 204 countries and territories, with population-weighted data points. (D) Concentration curves illustrating socioeconomic inequality by comparing the distribution of ASDR with the equality line, with concentration index values reflecting the degree of deviation.

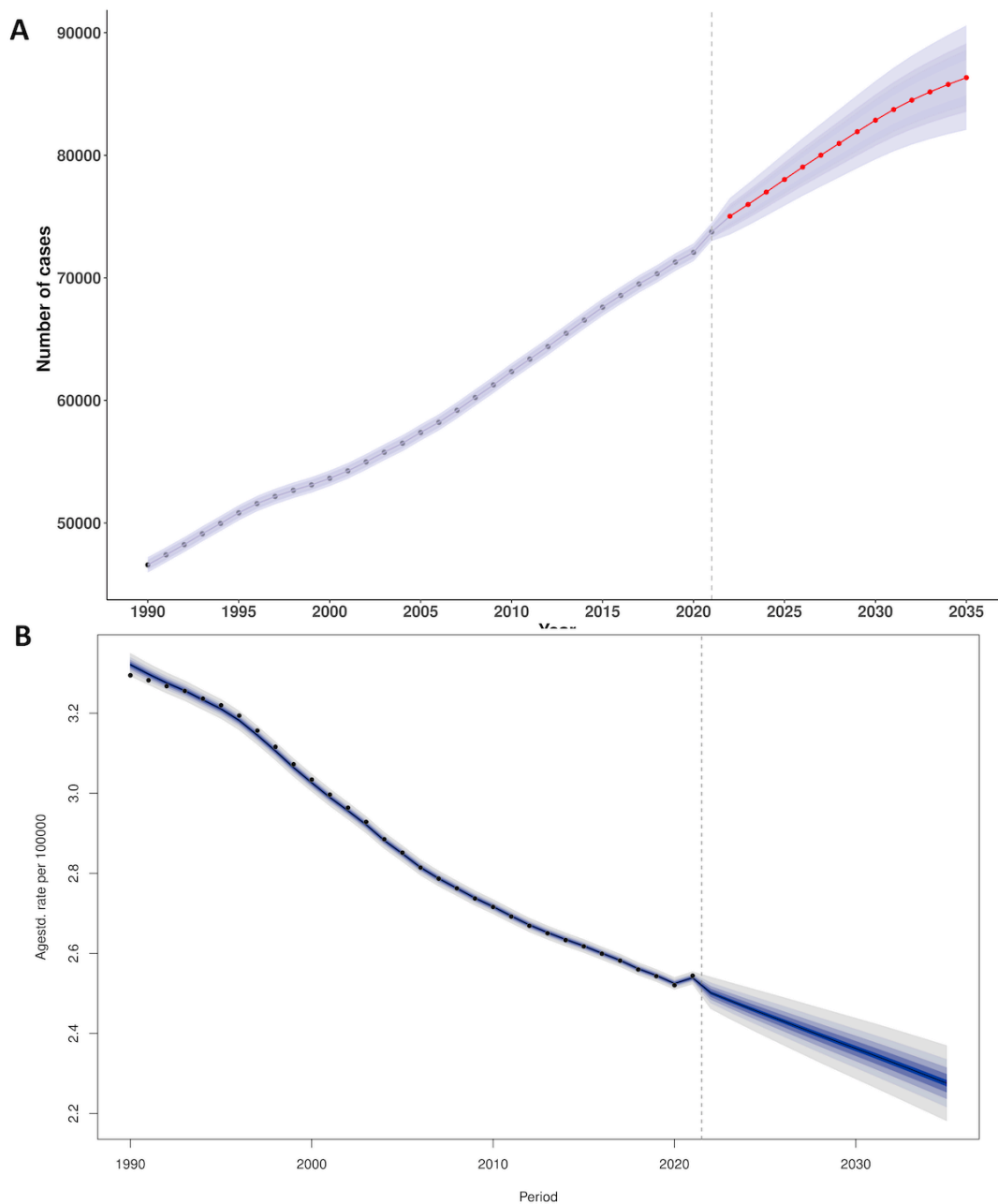


Supplementary file Figure S6. Contributions of population ageing, population growth, and epidemiological changes to the trend in dementia disability-adjusted life years (DALYs) attributable to smoking from 1990 to 2021, based on the Global Burden of Disease (GBD) 2021 study. Black dots represent the total change contributed by all three components. A positive

value for each component indicates an increase in DALYs, whereas a negative value indicates a reduction.



Supplementary file Figure S7. Global trends in dementia burden attributable to smoking from 1990 to 2035 using the Bayesian age–period–cohort (BAPC) model, based on the Global Burden of Disease (GBD) 2021 study: projected disability-adjusted life years (DALYs) (A), age-standardised disability-adjusted life year rate (ASDR) (B), and ASDR by age group among individuals aged 40 years and older (C). The shaded areas represent the 95% confidence intervals (CIs).



Supplementary file Figure S8. Global trends of deaths (A) and age-standardised mortality rates (ASMR) (B) for dementia attributable to smoking from 1990 to 2035 using the Bayesian age–period–cohort (BAPC) model, based on the Global Burden of Disease (GBD) 2021 study. The shaded areas represent the 95% confidence intervals (CIs).

Table S1. Global deaths and disability-adjusted life years (DALYs) for Alzheimer’s disease and other dementias attributable to smoking, 1990–2021, based on the Global Burden of Disease (GBD) 2021 study.

Location	1990		2021	
	Deaths	DALYs	Deaths	DALYs
Global	32165(7167, 90875)	794915(328160, 1832306)	67176(15334, 188054)	1533214(635494, 3540712)
Sex				
Male	20500(4491, 59321)	532606(218597, 1249854)	46755(10329, 134861)	1110023(455152, 2610152)
Female	11665(2688, 31740)	262310(108907, 587292)	20420(4810, 54048)	423191(174998, 938675)
Sociodemographic Index				
Low SDI	560(120, 1649)	15215(6187, 36017)	1216(263, 3650)	30072(11697, 72762)
Low-middle SDI	2734(599, 8145)	71967(29724, 171906)	6466(1418, 18767)	153657(60635, 359920)
Middle SDI	7296(1585, 20848)	195493(79072, 452313)	19215(4233, 56316)	470385(193113, 1110523)
High-middle SDI	7881(1719, 22241)	200798(81328, 463649)	18463(4114, 52435)	435096(178933, 1005900)
High SDI	13666(3109, 37832)	310666(130615, 702662)	21771(5108, 59270)	442915(183731, 995724)
GBD region				
Andean Latin America	53(11, 156)	1262(503, 2977)	141(30, 408)	3188(1275, 7443)
Australasia	173(39, 486)	4412(1851, 9949)	337(78, 938)	7016(2816, 16008)
Caribbean	131(27, 385)	3466(1454, 7889)	258(56, 740)	6059(2530, 13803)
Central Asia	161(35, 469)	4360(1806, 9853)	300(64, 887)	8070(3328, 18795)
Central Europe	947(201, 2744)	26911(11210, 60890)	1350(294, 3798)	33947(14360, 76632)
Central Latin America	337(73, 979)	8966(3848, 20171)	655(144, 1865)	16187(6719, 36591)
Central Sub-Saharan Africa	31(6, 97)	964(372, 2414)	72(15, 213)	2170(782, 5238)
East Asia	8275(1752, 23209)	218922(85070, 511412)	25333(5531, 74332)	611761(248099, 1437419)
Eastern Europe	993(208, 2885)	28706(11945, 65340)	1647(351, 4803)	43178(17488, 99434)
Eastern Sub-Saharan Africa	181(39, 528)	4798(1906, 11467)	340(74, 976)	8554(3275, 20523)
High-income Asia Pacific	1982(444, 5668)	45858(18362, 107246)	4738(1101, 12601)	87434(35167, 194159)
High-income North America	5457(1230, 15094)	125527(52921, 285762)	7774(1778, 21207)	164284(67856, 371859)
North Africa and Middle East	1184(256, 3369)	30637(12599, 69931)	2664(586, 7587)	66397(27256, 152854)
Oceania	9(2, 26)	299(116, 712)	20(4, 59)	661(257, 1567)
South Asia	2128(449, 6485)	55864(22839, 134870)	5664(1225, 16651)	129918(49628, 307774)
Southeast Asia	1510(325, 4342)	40981(17306, 93086)	3542(784, 10170)	89722(36338, 211686)
Southern Latin America	185(39, 536)	5659(2339, 12669)	351(75, 1018)	9343(3772, 21209)

Southern Sub-Saharan Africa	168(37, 483)	4087(1664, 9384)	151(31, 445)	4104(1588, 9706)
Tropical Latin America	1028(224, 2951)	26318(10366, 61161)	2220(509, 6217)	52048(20766, 120267)
Western Europe	7135(1620, 19756)	154412(64716, 350463)	9444(2227, 25151)	184594(76702, 411312)
Western Sub-Saharan Africa	98(20, 281)	2506(972, 5941)	175(37, 527)	4580(1722, 11342)

SDI, Sociodemographic index.

Table 22. Number of disability adjusted life years (DALYs) from working attributable dementia across 204 countries and territories in 2021.

Age group	Terrestrial Name	Country Name	2021 DALYs (th)	Number
All ages	Albania	Albania's disease and other demen	706,007503	Number
All ages	Algeria	Albania's disease and other demen	1312,788665	Number
All ages	American Samoa	Albania's disease and other demen	6708,608988	Number
All ages	Andorra	Albania's disease and other demen	5,31229374	Number
All ages	Angola	Albania's disease and other demen	18,48723777	Number
All ages	Antigua and Barbuda	Albania's disease and other demen	808,155909	Number
All ages	Argentina	Albania's disease and other demen	6,74443058	Number
All ages	Armenia	Albania's disease and other demen	6748,989995	Number
All ages	Australia	Albania's disease and other demen	943,733989	Number
All ages	Austria	Albania's disease and other demen	5412,412181	Number
All ages	Azerbaijan	Albania's disease and other demen	3587,930727	Number
All ages	Bahamas	Albania's disease and other demen	1455,348499	Number
All ages	Bahrain	Albania's disease and other demen	24,8504377	Number
All ages	Bangladesh	Albania's disease and other demen	109,1859794	Number
All ages	Barbados	Albania's disease and other demen	17971,45122	Number
All ages	Belarus	Albania's disease and other demen	29,3077895	Number
All ages	Belgium	Albania's disease and other demen	2321,303474	Number
All ages	Belize	Albania's disease and other demen	5306,254645	Number
All ages	Benin	Albania's disease and other demen	21,50416565	Number
All ages	Bermuda	Albania's disease and other demen	106,009084	Number
All ages	Bhutan	Albania's disease and other demen	14,56002094	Number
All ages	Bolivia (Plurinational State of)	Albania's disease and other demen	45,20466445	Number
All ages	Bonaire	Albania's disease and other demen	456,2071981	Number
All ages	Bonaire and Aruba	Albania's disease and other demen	1436,239974	Number
All ages	Bosnia and Herzegovina	Albania's disease and other demen	139,705929	Number
All ages	Brazil	Albania's disease and other demen	5066,68515	Number
All ages	Bruni Darussalam	Albania's disease and other demen	33,2679811	Number
All ages	Bulgaria	Albania's disease and other demen	1645,161391	Number
All ages	Burkina Faso	Albania's disease and other demen	179,972578	Number
All ages	Burundi	Albania's disease and other demen	153,7610051	Number
All ages	Cabo Verde	Albania's disease and other demen	10,0242481	Number
All ages	Cambodia	Albania's disease and other demen	2456,241943	Number
All ages	Cameroon	Albania's disease and other demen	315,128109	Number
All ages	Canada	Albania's disease and other demen	3335,39345	Number
All ages	Central African Republic	Albania's disease and other demen	71,3833808	Number
All ages	Chad	Albania's disease and other demen	1864,276459	Number
All ages	Chile	Albania's disease and other demen	1884,456128	Number
All ages	China	Albania's disease and other demen	60201,01798	Number
All ages	Colombia	Albania's disease and other demen	1052,710504	Number
All ages	Comoros	Albania's disease and other demen	32,215851	Number
All ages	Congo	Albania's disease and other demen	174,364804	Number
All ages	Cook Islands	Albania's disease and other demen	2,99159269	Number
All ages	Costa Rica	Albania's disease and other demen	312,128953	Number
All ages	Croatia	Albania's disease and other demen	2162,68055	Number
All ages	Cuba	Albania's disease and other demen	2621,474041	Number
All ages	Cyprus	Albania's disease and other demen	413,565455	Number
All ages	Czechia	Albania's disease and other demen	3954,226216	Number
All ages	Côte d'Ivoire	Albania's disease and other demen	332,1127184	Number
All ages	Democratic People's Republic of Korea	Albania's disease and other demen	3774,031408	Number
All ages	Democratic Republic of Congo	Albania's disease and other demen	1043,274062	Number
All ages	Denmark	Albania's disease and other demen	3541,378956	Number
All ages	Djibouti	Albania's disease and other demen	35,6892539	Number
All ages	Dominica	Albania's disease and other demen	4,8898121	Number
All ages	Dominican Republic	Albania's disease and other demen	1601,424979	Number
All ages	Ecuador	Albania's disease and other demen	792,5627279	Number
All ages	Egypt	Albania's disease and other demen	1029,33486	Number
All ages	El Salvador	Albania's disease and other demen	103,4700248	Number
All ages	Equatorial Guinea	Albania's disease and other demen	22,0289437	Number
All ages	Eritrea	Albania's disease and other demen	15,6128698	Number
All ages	Estonia	Albania's disease and other demen	384,7772829	Number
All ages	Eswatini	Albania's disease and other demen	75,3022737	Number
All ages	Ethiopia	Albania's disease and other demen	1108,24713	Number
All ages	Fiji	Albania's disease and other demen	64,7652047	Number
All ages	Finland	Albania's disease and other demen	1752,314421	Number
All ages	France	Albania's disease and other demen	21,153,2094	Number
All ages	Gabon	Albania's disease and other demen	48,21789209	Number
All ages	Gambia	Albania's disease and other demen	32,8473204	Number
All ages	Ghana	Albania's disease and other demen	106,2026557	Number
All ages	Germany	Albania's disease and other demen	4446,01215	Number
All ages	Ghana	Albania's disease and other demen	508,198781	Number
All ages	Greece	Albania's disease and other demen	7051,371409	Number
All ages	Greenland	Albania's disease and other demen	16,5195267	Number
All ages	Guatemala	Albania's disease and other demen	4,97822299	Number
All ages	Guam	Albania's disease and other demen	21,51890951	Number
All ages	Guatemala	Albania's disease and other demen	692,5714499	Number
All ages	Guinea	Albania's disease and other demen	212,438323	Number
All ages	Guinea-Bissau	Albania's disease and other demen	14,12186253	Number
All ages	Guyana	Albania's disease and other demen	31,9482726	Number
All ages	Haiti	Albania's disease and other demen	216,170144	Number
All ages	Honduras	Albania's disease and other demen	654,490472	Number
All ages	Hungary	Albania's disease and other demen	252,296474	Number
All ages	Iceland	Albania's disease and other demen	322,1822086	Number
All ages	India	Albania's disease and other demen	9834,85186	Number
All ages	Indonesia	Albania's disease and other demen	2381,87866	Number
All ages	Iran (Islamic Republic of)	Albania's disease and other demen	9751,682428	Number
All ages	Iraq	Albania's disease and other demen	4099,339782	Number
All ages	Ireland	Albania's disease and other demen	1646,971782	Number
All ages	Israel	Albania's disease and other demen	193,08867	Number
All ages	Italy	Albania's disease and other demen	29262,67149	Number
All ages	Jamaica	Albania's disease and other demen	287,2161259	Number
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All ages	Jordan	Albania's disease and other demen	1491,519505	Number
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All ages	Madagascar	Albania's disease and other demen	146,383895	Number
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All ages	Maldives	Albania's disease and other demen	58,2324215	Number
All ages	Mali	Albania's disease and other demen	42,362152	Number
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All ages	Micronesia (Federated States of)	Albania's disease and other demen	10,18132482	Number
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All ages	Montenegro	Albania's disease and other demen	199,205659	Number
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All ages	Nicaragua	Albania's disease and other demen	366,993204	Number
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All ages	North Macedonia	Albania's disease and other demen	607,1801999	Number
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All ages	Norway	Albania's disease and other demen	122,7979196	Number
All ages	Oman	Albania's disease and other demen	10207,761577	Number
All ages	Pakistan	Albania's disease and other demen	1,99011012	Number
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All ages	Palau	Albania's disease and other demen	405,049263	Number
All ages	Palestine	Albania's disease and other demen	135,161248	Number
All ages	Panama	Albania's disease and other demen	1948,799368	Number
All ages	Papua New Guinea	Albania's disease and other demen	1229,208369	Number
All ages	Paraguay	Albania's disease and other demen	1161,02085	Number
All ages	Peru	Albania's disease and other demen	2092,20298	Number
All ages	Philippines	Albania's disease and other demen	748,087778	Number
All ages	Poland	Albania's disease and other demen	78,4705539	Number
All ages	Portugal	Albania's disease and other demen	1964,64115	Number
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All ages	Portugal	Albania's disease and other demen	148705,2123	Number
All ages	Portugal	Albania's disease and other demen	13,7655572	Number
All ages	Portugal	Albania's disease and other demen	709,2748837	Number
All ages	Portugal	Albania's disease and other demen	1571,165887	Number
All ages	Portugal	Albania's disease and other demen	12,1015949	Number
All ages	Portugal	Albania's disease and other demen	2624,212187	Number
All ages	Portugal	Albania's disease and other demen	15210,11425	Number
All ages	Portugal	Albania's disease and other demen	2201,201843	Number
All ages	Portugal	Albania's disease and other demen	45,817208	Number
All ages	Portugal	Albania's disease and other demen	677,719199	Number

Table S2. Age-standardized mortality rates (ASMR) from smoking-attributable dementia across 204 countries and territories in 2021.

age_name	location_name	case_name	mortality_name	2021_ASMR_Rate
All ages	Abkhazistan	Alzheimer's disease and other dementias	Rate	1.600710229
All ages	Albania	Alzheimer's disease and other dementias	Rate	4.20244343
All ages	Algeria	Alzheimer's disease and other dementias	Rate	4.211607611
All ages	American Samoa	Alzheimer's disease and other dementias	Rate	1.463713441
All ages	Andorra	Alzheimer's disease and other dementias	Rate	2.181888045
All ages	Angola	Alzheimer's disease and other dementias	Rate	1.140175322
All ages	Antigua and Barbuda	Alzheimer's disease and other dementias	Rate	0.800704303
All ages	Argentina	Alzheimer's disease and other dementias	Rate	1.108828921
All ages	Armenia	Alzheimer's disease and other dementias	Rate	3.565849977
All ages	Australia	Alzheimer's disease and other dementias	Rate	1.463198413
All ages	Austria	Alzheimer's disease and other dementias	Rate	2.184581772
All ages	Azerbaijan	Alzheimer's disease and other dementias	Rate	2.778328024
All ages	Bahamas	Alzheimer's disease and other dementias	Rate	0.850770794
All ages	Bahrain	Alzheimer's disease and other dementias	Rate	2.50456953
All ages	Bangladesh	Alzheimer's disease and other dementias	Rate	2.367687744
All ages	Barbados	Alzheimer's disease and other dementias	Rate	0.724454428
All ages	Belize	Alzheimer's disease and other dementias	Rate	1.627987476
All ages	Belgium	Alzheimer's disease and other dementias	Rate	2.860765224
All ages	Belize	Alzheimer's disease and other dementias	Rate	1.682449377
All ages	Benin	Alzheimer's disease and other dementias	Rate	0.830039328
All ages	Bermuda	Alzheimer's disease and other dementias	Rate	1.168878489
All ages	Bhutan	Alzheimer's disease and other dementias	Rate	1.362505501
All ages	Bolivia (Plurinational State of)	Alzheimer's disease and other dementias	Rate	0.729917708
All ages	Bosnia and Herzegovina	Alzheimer's disease and other dementias	Rate	2.863679481
All ages	Botswana	Alzheimer's disease and other dementias	Rate	1.632625055
All ages	Brazil	Alzheimer's disease and other dementias	Rate	2.703114025
All ages	Burkina Faso	Alzheimer's disease and other dementias	Rate	1.600262114
All ages	Burundi	Alzheimer's disease and other dementias	Rate	1.105446211
All ages	Burkina Faso	Alzheimer's disease and other dementias	Rate	0.300093321
All ages	Cabo Verde	Alzheimer's disease and other dementias	Rate	0.57732
All ages	Cambodia	Alzheimer's disease and other dementias	Rate	1.864031514
All ages	Cameroon	Alzheimer's disease and other dementias	Rate	0.473097354
All ages	Canada	Alzheimer's disease and other dementias	Rate	2.480876121
All ages	Central African Republic	Alzheimer's disease and other dementias	Rate	0.633470589
All ages	Chad	Alzheimer's disease and other dementias	Rate	0.612922224
All ages	Chile	Alzheimer's disease and other dementias	Rate	0.729139126
All ages	China	Alzheimer's disease and other dementias	Rate	4.226276721
All ages	Colombia	Alzheimer's disease and other dementias	Rate	0.724813608
All ages	Comoros	Alzheimer's disease and other dementias	Rate	1.190416311
All ages	Congo	Alzheimer's disease and other dementias	Rate	1.2913568
All ages	Cook Islands	Alzheimer's disease and other dementias	Rate	1.410927249
All ages	Costa Rica	Alzheimer's disease and other dementias	Rate	1.448584841
All ages	Croatia	Alzheimer's disease and other dementias	Rate	3.038166579
All ages	Cuba	Alzheimer's disease and other dementias	Rate	1.402279769
All ages	Cuba	Alzheimer's disease and other dementias	Rate	2.178226241
All ages	Czechia	Alzheimer's disease and other dementias	Rate	2.071012226
All ages	Cote d'Ivoire	Alzheimer's disease and other dementias	Rate	0.657712108
All ages	Democratic People's Republic of Korea	Alzheimer's disease and other dementias	Rate	1.499118048
All ages	Democratic Republic of Congo	Alzheimer's disease and other dementias	Rate	0.445384419
All ages	Denmark	Alzheimer's disease and other dementias	Rate	4.169113662
All ages	Dominica	Alzheimer's disease and other dementias	Rate	2.025116126
All ages	Dominican Republic	Alzheimer's disease and other dementias	Rate	0.635509311
All ages	Dominican Republic	Alzheimer's disease and other dementias	Rate	2.14247124
All ages	Dominica	Alzheimer's disease and other dementias	Rate	0.630012129
All ages	Egypt	Alzheimer's disease and other dementias	Rate	4.988252965
All ages	El Salvador	Alzheimer's disease and other dementias	Rate	0.645388107
All ages	Equatorial Guinea	Alzheimer's disease and other dementias	Rate	0.806657896
All ages	Eritrea	Alzheimer's disease and other dementias	Rate	0.514237885
All ages	Estonia	Alzheimer's disease and other dementias	Rate	1.477987212
All ages	Eswatini	Alzheimer's disease and other dementias	Rate	1.17771789
All ages	Ethiopia	Alzheimer's disease and other dementias	Rate	0.426212611
All ages	Fiji	Alzheimer's disease and other dementias	Rate	0.937938146
All ages	Finland	Alzheimer's disease and other dementias	Rate	1.611843211
All ages	France	Alzheimer's disease and other dementias	Rate	1.712776882
All ages	Gabon	Alzheimer's disease and other dementias	Rate	1.937880562
All ages	Gambia	Alzheimer's disease and other dementias	Rate	0.514631745
All ages	Ghana	Alzheimer's disease and other dementias	Rate	2.053378796
All ages	Germany	Alzheimer's disease and other dementias	Rate	2.601804211
All ages	Ghana	Alzheimer's disease and other dementias	Rate	0.66664227
All ages	Greece	Alzheimer's disease and other dementias	Rate	3.166117476
All ages	Greenland	Alzheimer's disease and other dementias	Rate	3.114207076
All ages	Guatemala	Alzheimer's disease and other dementias	Rate	0.502014108
All ages	Guam	Alzheimer's disease and other dementias	Rate	1.023414446
All ages	Guatemala	Alzheimer's disease and other dementias	Rate	0.819230734
All ages	Guinea	Alzheimer's disease and other dementias	Rate	0.621818826
All ages	Guinea-Bissau	Alzheimer's disease and other dementias	Rate	1.131330961
All ages	Guyana	Alzheimer's disease and other dementias	Rate	0.697057302
All ages	Haiti	Alzheimer's disease and other dementias	Rate	0.626222247
All ages	Honduras	Alzheimer's disease and other dementias	Rate	1.606627861
All ages	Hungary	Alzheimer's disease and other dementias	Rate	1.3387078
All ages	Iceland	Alzheimer's disease and other dementias	Rate	2.602081421
All ages	India	Alzheimer's disease and other dementias	Rate	1.5383775
All ages	Indonesia	Alzheimer's disease and other dementias	Rate	1.816034026
All ages	Iran (Islamic Republic of)	Alzheimer's disease and other dementias	Rate	1.91372999
All ages	Ireland	Alzheimer's disease and other dementias	Rate	3.7595946
All ages	Ireland	Alzheimer's disease and other dementias	Rate	2.885370919
All ages	Israel	Alzheimer's disease and other dementias	Rate	2.30516599
All ages	Italy	Alzheimer's disease and other dementias	Rate	2.081166131
All ages	Jamaica	Alzheimer's disease and other dementias	Rate	1.039358324
All ages	Japan	Alzheimer's disease and other dementias	Rate	2.688188512
All ages	Jordan	Alzheimer's disease and other dementias	Rate	4.06819727
All ages	Kazakhstan	Alzheimer's disease and other dementias	Rate	0.821737709
All ages	Kenya	Alzheimer's disease and other dementias	Rate	0.86661597
All ages	Kiribati	Alzheimer's disease and other dementias	Rate	3.637902124
All ages	Korea	Alzheimer's disease and other dementias	Rate	3.18212041
All ages	Kyrgyzstan	Alzheimer's disease and other dementias	Rate	2.413654284
All ages	North Macedonia	Alzheimer's disease and other dementias	Rate	1.810814919
All ages	Latvia	Alzheimer's disease and other dementias	Rate	1.09954009
All ages	Lebanon	Alzheimer's disease and other dementias	Rate	4.762160571
All ages	Lesotho	Alzheimer's disease and other dementias	Rate	1.5415326
All ages	Liberia	Alzheimer's disease and other dementias	Rate	2.053378796
All ages	Libya	Alzheimer's disease and other dementias	Rate	2.60747335
All ages	Lithuania	Alzheimer's disease and other dementias	Rate	1.103104094
All ages	Luxembourg	Alzheimer's disease and other dementias	Rate	1.66571971
All ages	Madagascar	Alzheimer's disease and other dementias	Rate	0.511891229
All ages	Malawi	Alzheimer's disease and other dementias	Rate	1.444634402
All ages	Malaysia	Alzheimer's disease and other dementias	Rate	2.361883842
All ages	Maldives	Alzheimer's disease and other dementias	Rate	1.137101508
All ages	Mali	Alzheimer's disease and other dementias	Rate	1.120714248
All ages	Malta	Alzheimer's disease and other dementias	Rate	1.624260681
All ages	Marshall Islands	Alzheimer's disease and other dementias	Rate	1.472889901
All ages	Mauritania	Alzheimer's disease and other dementias	Rate	0.640201844
All ages	Mauritius	Alzheimer's disease and other dementias	Rate	1.664819446
All ages	Mexico	Alzheimer's disease and other dementias	Rate	0.79116067
All ages	Micronesia (Federated States of)	Alzheimer's disease and other dementias	Rate	1.657013931
All ages	Morocco	Alzheimer's disease and other dementias	Rate	2.096510322
All ages	Mongolia	Alzheimer's disease and other dementias	Rate	1.715815432
All ages	Montenegro	Alzheimer's disease and other dementias	Rate	2.188614101
All ages	Morocco	Alzheimer's disease and other dementias	Rate	0.616612006
All ages	Mozambique	Alzheimer's disease and other dementias	Rate	1.071111109
All ages	Myanmar	Alzheimer's disease and other dementias	Rate	2.10661872
All ages	Namibia	Alzheimer's disease and other dementias	Rate	2.111714029
All ages	Nauru	Alzheimer's disease and other dementias	Rate	1.76217811
All ages	Nepal	Alzheimer's disease and other dementias	Rate	0.827212917
All ages	Netherlands	Alzheimer's disease and other dementias	Rate	3.514672912
All ages	New Zealand	Alzheimer's disease and other dementias	Rate	2.469214887
All ages	Nicaragua	Alzheimer's disease and other dementias	Rate	1.029416377
All ages	Niger	Alzheimer's disease and other dementias	Rate	0.50991429
All ages	Nigeria	Alzheimer's disease and other dementias	Rate	0.28861481
All ages	Niue	Alzheimer's disease and other dementias	Rate	1.62784955
All ages	North Macedonia	Alzheimer's disease and other dementias	Rate	2.817819113
All ages	Northern Mariana Islands	Alzheimer's disease and other dementias	Rate	1.679959376
All ages	Norway	Alzheimer's disease and other dementias	Rate	4.176206271
All ages	Oman	Alzheimer's disease and other dementias	Rate	1.17039838
All ages	Pakistan	Alzheimer's disease and other dementias	Rate	1.61117488
All ages	Palaui	Alzheimer's disease and other dementias	Rate	1.45201476
All ages	Pakistan	Alzheimer's disease and other dementias	Rate	2.669911212
All ages	Panama	Alzheimer's disease and other dementias	Rate	1.073020422
All ages	Papua New Guinea	Alzheimer's disease and other dementias	Rate	1.065658385
All ages	Paraguay	Alzheimer's disease and other dementias	Rate	3.87951398
All ages	Peru	Alzheimer's disease and other dementias	Rate	0.824218885
All ages	Philippines	Alzheimer's disease and other dementias	Rate	2.302026104
All ages	Poland	Alzheimer's disease and other dementias	Rate	1.690818093
All ages	Portugal	Alzheimer's disease and other dementias	Rate	0.803516442
All ages	Puerto Rico	Alzheimer's disease and other dementias	Rate	1.91898920
All ages	Qatar	Alzheimer's disease and other dementias	Rate	1.41005007
All ages	Republic of Korea	Alzheimer's disease and other dementias	Rate	3.414701341
All ages	Republic of Moldova	Alzheimer's disease and other dementias	Rate	1.84210406
All ages	Romania	Alzheimer's disease and other dementias	Rate	1.108614165
All ages	Russian Federation	Alzheimer's disease and other dementias	Rate	1.373781648
All ages	Rwanda	Alzheimer's disease and other dementias	Rate	4.474741304
All ages	Saint Kitts and Nevis	Alzheimer's disease and other dementias	Rate	0.559510478
All ages	Saint Lucia	Alzheimer's disease and other dementias	Rate	0.717481581
All ages	Saint Vincent and the Grenadines	Alzheimer's disease and other dementias	Rate	0.723685865
All ages	Samoa	Alzheimer's disease and other dementias	Rate	2.1384798
All ages	Sao Tome and Principe	Alzheimer's disease and other dementias	Rate	2.124901637
All ages	Saudi Arabia	Alzheimer's disease and other dementias	Rate	0.516212187
All ages	Senegal	Alzheimer's disease and other dementias	Rate	0.71948141
All ages	Senegal	Alzheimer's disease and other dementias	Rate	1.70937145
All ages	Serbia	Alzheimer's disease and other dementias	Rate	2.610814885
All ages	Seychelles	Alzheimer's disease and other dementias	Rate	0.18920181
All ages	Singapore	Alzheimer's disease and other dementias	Rate	0.832421536
All ages	Slovakia	Alzheimer's disease and other dementias	Rate	1.423711568
All ages	Slovenia	Alzheimer's disease and other dementias	Rate	1.199170848
All ages	Solomon Islands	Alzheimer's disease and other dementias	Rate	2.0421118
All ages	Somalia	Alzheimer's disease and other dementias	Rate	0.78821293
All ages	South Africa	Alzheimer's disease and other dementias	Rate	0.914213388
All ages	South Sudan	Alzheimer's disease and other dementias	Rate	1.10149199
All ages	Spain	Alzheimer's disease and other dementias	Rate	1.639648079
All ages	Si Lanka	Alzheimer's disease and other dementias	Rate	0.968001474
All ages	Si Lanka	Alzheimer's disease and other dementias	Rate	2.121020014
All ages	Suriname	Alzheimer's disease and other dementias	Rate	1.078980446
All ages	Sweden	Alzheimer's disease and other dementias	Rate	3.006648485
All ages	Switzerland	Alzheimer's disease and other dementias	Rate	2.032710882
All ages	Sri Lanka	Alzheimer's disease and other dementias	Rate	0.906650624
All ages	Taiwan (Province of China)	Alzheimer's disease and other dementias	Rate	1.83808921
All ages	Tajikistan	Alzheimer's disease and other dementias	Rate	1.132301905
All ages	Tanzania	Alzheimer's disease and other dementias	Rate	1.994415079
All ages	Timor-Leste	Alzheimer's disease and other dementias	Rate	2.138814657
All ages	Togo	Alzheimer's disease and other dementias	Rate	0.718218969
All ages	Tokelau	Alzheimer's disease and other dementias	Rate	1.62351438
All ages	Tonga	Alzheimer's disease and other dementias	Rate	1.646014081
All ages	Trinidad and Tobago	Alzheimer's disease and other dementias	Rate	0.87670272
All ages	Turkey	Alzheimer's disease and other dementias	Rate	3.63091801
All ages	Turkey	Alzheimer's disease and other dementias	Rate	2.468097682
All ages	Turkmenistan	Alzheimer's disease and other dementias	Rate	1.612887936
All ages	Tuvalu	Alzheimer's disease and other dementias	Rate	1.78710676
All ages	Uganda	Alzheimer's disease and other dementias	Rate	1.13441482
All ages	Uganda	Alzheimer's disease and other dementias	Rate	1.247917279
All ages	United Arab Emirates	Alzheimer's disease and other dementias	Rate	3.290514341
All ages	United Kingdom	Alzheimer's disease and other dementias	Rate	1.601490129
All ages	United Republic of Tanzania	Alzheimer's disease and other dementias	Rate	1.560110999
All ages	United States of America	Alzheimer's disease and other dementias	Rate	3.129612188
All ages	United States Virgin Islands	Alzheimer's disease and other dementias	Rate	0.834788877
All ages	Uruguay	Alzheimer's disease and other dementias	Rate	1.317210099
All ages	Uzbekistan	Alzheimer's disease and other dementias	Rate	0.810212988
All ages	Vanuatu	Alzheimer's disease and other dementias	Rate	1.034947463
All ages	Venezuela (Bolivarian Republic of)	Alzheimer's disease and other dementias	Rate	1.104810627
All ages	Viet Nam	Alzheimer's disease and other dementias	Rate	2.013110612
All ages	Yemen	Alzheimer's disease and other dementias	Rate	2.993680107
All ages	Zambia	Alzheimer's disease and other dementias	Rate	1.56210076
All ages	Zimbabwe	Alzheimer's disease and other dementias	Rate	2.88442012

Table S2. Age-standardized DALY rates (ASDR) from smoking-attributable dementia across 204 countries and territories in 2021.

age_name	location_name	country_name	2021_ASDR_Rate
All ages	Albanian	Alzheimer's disease and other dementias	32.0793931
All ages	Albania	Alzheimer's disease and other dementias	91.312806
All ages	Algeria	Alzheimer's disease and other dementias	77.8216238
All ages	American Samoa	Alzheimer's disease and other dementias	36.46671003
All ages	Andorra	Alzheimer's disease and other dementias	52.36888484
All ages	Angola	Alzheimer's disease and other dementias	27.7178132
All ages	Antigua and Barbuda	Alzheimer's disease and other dementias	20.51284869
All ages	Argentina	Alzheimer's disease and other dementias	35.49989881
All ages	Armenia	Alzheimer's disease and other dementias	63.82852468
All ages	Australia	Alzheimer's disease and other dementias	33.2759215
All ages	Austria	Alzheimer's disease and other dementias	53.8095775
All ages	Azerbaijan	Alzheimer's disease and other dementias	51.73221844
All ages	Bahamas	Alzheimer's disease and other dementias	20.49877474
All ages	Bahrain	Alzheimer's disease and other dementias	54.73357477
All ages	Bangladesh	Alzheimer's disease and other dementias	45.6886494
All ages	Barbados	Alzheimer's disease and other dementias	16.4484709
All ages	Belarus	Alzheimer's disease and other dementias	41.8378675
All ages	Belgium	Alzheimer's disease and other dementias	61.7260385
All ages	Belize	Alzheimer's disease and other dementias	25.5829311
All ages	Benin	Alzheimer's disease and other dementias	7.09145639
All ages	Bermuda	Alzheimer's disease and other dementias	28.8855319
All ages	Bhutan	Alzheimer's disease and other dementias	25.35140754
All ages	Bolivia (Plurinational State of)	Alzheimer's disease and other dementias	16.96212036
All ages	Bosnia and Herzegovina	Alzheimer's disease and other dementias	67.2862394
All ages	Botswana	Alzheimer's disease and other dementias	36.5125005
All ages	Brazil	Alzheimer's disease and other dementias	63.86578657
All ages	Burkina Faso	Alzheimer's disease and other dementias	37.4712179
All ages	Burundi	Alzheimer's disease and other dementias	34.4824564
All ages	Burkina Faso	Alzheimer's disease and other dementias	6.83264086
All ages	Burundi	Alzheimer's disease and other dementias	12.65913798
All ages	Cabo Verde	Alzheimer's disease and other dementias	6.83627802
All ages	Cambodia	Alzheimer's disease and other dementias	77.14702867
All ages	Cameroon	Alzheimer's disease and other dementias	9.73751024
All ages	Canada	Alzheimer's disease and other dementias	59.30657015
All ages	Central African Republic	Alzheimer's disease and other dementias	14.26183782
All ages	Chad	Alzheimer's disease and other dementias	12.7626357
All ages	Chile	Alzheimer's disease and other dementias	23.5927938
All ages	China	Alzheimer's disease and other dementias	91.49647848
All ages	Colombia	Alzheimer's disease and other dementias	18.4499884
All ages	Comoros	Alzheimer's disease and other dementias	25.7841531
All ages	Congo	Alzheimer's disease and other dementias	36.38193283
All ages	Cook Islands	Alzheimer's disease and other dementias	34.20911588
All ages	Costa Rica	Alzheimer's disease and other dementias	28.57889528
All ages	Croatia	Alzheimer's disease and other dementias	64.8425493
All ages	Cuba	Alzheimer's disease and other dementias	38.14062973
All ages	Cuba	Alzheimer's disease and other dementias	59.37787808
All ages	Czechia	Alzheimer's disease and other dementias	52.48642125
All ages	Côte d'Ivoire	Alzheimer's disease and other dementias	12.17824376
All ages	Democratic People's Republic of Korea	Alzheimer's disease and other dementias	36.31343161
All ages	Democratic Republic of Congo	Alzheimer's disease and other dementias	58.10964836
All ages	Denmark	Alzheimer's disease and other dementias	78.9394869
All ages	Dominica	Alzheimer's disease and other dementias	39.5135175
All ages	Dominican Republic	Alzheimer's disease and other dementias	16.04149995
All ages	Dominican Republic	Alzheimer's disease and other dementias	50.5097131
All ages	Dominican Republic	Alzheimer's disease and other dementias	14.91181975
All ages	Egypt	Alzheimer's disease and other dementias	80.8698287
All ages	El Salvador	Alzheimer's disease and other dementias	16.99152964
All ages	Equatorial Guinea	Alzheimer's disease and other dementias	17.2145098
All ages	Eritrea	Alzheimer's disease and other dementias	7.89382712
All ages	Estonia	Alzheimer's disease and other dementias	40.9904414
All ages	Ecuador	Alzheimer's disease and other dementias	21.74726722
All ages	Ethiopia	Alzheimer's disease and other dementias	9.24474938
All ages	Fiji	Alzheimer's disease and other dementias	37.2746808
All ages	France	Alzheimer's disease and other dementias	37.34517848
All ages	France	Alzheimer's disease and other dementias	39.78165565
All ages	Gabon	Alzheimer's disease and other dementias	16.40376014
All ages	Gambia	Alzheimer's disease and other dementias	11.8277347
All ages	Ghana	Alzheimer's disease and other dementias	49.2062256
All ages	Germany	Alzheimer's disease and other dementias	59.02841837
All ages	Ghana	Alzheimer's disease and other dementias	10.3287951
All ages	Greenland	Alzheimer's disease and other dementias	72.4297778
All ages	Greenland	Alzheimer's disease and other dementias	80.44404667
All ages	Grenada	Alzheimer's disease and other dementias	13.8211988
All ages	Guam	Alzheimer's disease and other dementias	28.8837555
All ages	Guatemala	Alzheimer's disease and other dementias	20.8893178
All ages	Guinea	Alzheimer's disease and other dementias	13.5599261
All ages	Guinea-Bissau	Alzheimer's disease and other dementias	7.34886671
All ages	Guyana	Alzheimer's disease and other dementias	17.17210662
All ages	Haiti	Alzheimer's disease and other dementias	13.7658974
All ages	Honduras	Alzheimer's disease and other dementias	36.2591421
All ages	Hungary	Alzheimer's disease and other dementias	37.6859033
All ages	Iceland	Alzheimer's disease and other dementias	56.99118409
All ages	India	Alzheimer's disease and other dementias	30.62391277
All ages	Indonesia	Alzheimer's disease and other dementias	55.04045178
All ages	Iran (Islamic Republic of)	Alzheimer's disease and other dementias	42.4978162
All ages	Ireland	Alzheimer's disease and other dementias	75.71318359
All ages	Ireland	Alzheimer's disease and other dementias	58.18993882
All ages	Israel	Alzheimer's disease and other dementias	43.2492014
All ages	Italy	Alzheimer's disease and other dementias	51.99029207
All ages	Jamaica	Alzheimer's disease and other dementias	26.48292184
All ages	Japan	Alzheimer's disease and other dementias	45.0266596
All ages	Jordan	Alzheimer's disease and other dementias	84.3527861
All ages	Kazakhstan	Alzheimer's disease and other dementias	21.56889429
All ages	Kenya	Alzheimer's disease and other dementias	18.0997449
All ages	Kiribati	Alzheimer's disease and other dementias	84.2643178
All ages	Korea	Alzheimer's disease and other dementias	65.1612949
All ages	Kyrgyzstan	Alzheimer's disease and other dementias	55.80691999
All ages	Korea (People's Democratic Republic)	Alzheimer's disease and other dementias	59.08083992
All ages	Latvia	Alzheimer's disease and other dementias	31.20548211
All ages	Lebanon	Alzheimer's disease and other dementias	106.44024824
All ages	Lesotho	Alzheimer's disease and other dementias	49.8917322
All ages	Libya	Alzheimer's disease and other dementias	7.81735992
All ages	Lithuania	Alzheimer's disease and other dementias	52.91100427
All ages	Lithuania	Alzheimer's disease and other dementias	32.7209059
All ages	Luxembourg	Alzheimer's disease and other dementias	38.86217044
All ages	Madagascar	Alzheimer's disease and other dementias	10.3131616
All ages	Malawi	Alzheimer's disease and other dementias	30.7706232
All ages	Malaysia	Alzheimer's disease and other dementias	45.6689263
All ages	Maldives	Alzheimer's disease and other dementias	64.8693795
All ages	Mali	Alzheimer's disease and other dementias	21.0447707
All ages	Malta	Alzheimer's disease and other dementias	39.24846081
All ages	Marshall Islands	Alzheimer's disease and other dementias	31.95347259
All ages	Mauritania	Alzheimer's disease and other dementias	9.51471796
All ages	Mauritius	Alzheimer's disease and other dementias	42.88744778
All ages	Mexico	Alzheimer's disease and other dementias	18.51320891
All ages	Micronesia (Federated States of)	Alzheimer's disease and other dementias	47.31071921
All ages	Morocco	Alzheimer's disease and other dementias	34.97015663
All ages	Mongolia	Alzheimer's disease and other dementias	43.98625551
All ages	Montenegro	Alzheimer's disease and other dementias	60.6629735
All ages	Morocco	Alzheimer's disease and other dementias	23.6447892
All ages	Mozambique	Alzheimer's disease and other dementias	21.02825449
All ages	Myanmar	Alzheimer's disease and other dementias	44.0740426
All ages	Namibia	Alzheimer's disease and other dementias	46.8112546
All ages	Nauru	Alzheimer's disease and other dementias	43.99892029
All ages	Netherlands	Alzheimer's disease and other dementias	56.1298762
All ages	Netherlands	Alzheimer's disease and other dementias	71.4159802
All ages	New Zealand	Alzheimer's disease and other dementias	32.4998194
All ages	Nicaragua	Alzheimer's disease and other dementias	24.8972172
All ages	Niger	Alzheimer's disease and other dementias	8.70211332
All ages	Nigeria	Alzheimer's disease and other dementias	6.50714851
All ages	Niue	Alzheimer's disease and other dementias	31.4654682
All ages	North Macedonia	Alzheimer's disease and other dementias	42.62571027
All ages	Northern Mariana Islands	Alzheimer's disease and other dementias	34.7557218
All ages	Oman	Alzheimer's disease and other dementias	41.45882887
All ages	Oman	Alzheimer's disease and other dementias	25.7187074
All ages	Pakistan	Alzheimer's disease and other dementias	21.58844028
All ages	Palau	Alzheimer's disease and other dementias	31.1338694
All ages	Pakistan	Alzheimer's disease and other dementias	80.4777157
All ages	Pakistan	Alzheimer's disease and other dementias	24.0813491
All ages	Papua New Guinea	Alzheimer's disease and other dementias	28.3131287
All ages	Paraguay	Alzheimer's disease and other dementias	75.88218079
All ages	Peru	Alzheimer's disease and other dementias	17.5800243
All ages	Philippines	Alzheimer's disease and other dementias	50.28621795
All ages	Poland	Alzheimer's disease and other dementias	44.6078793
All ages	Poland	Alzheimer's disease and other dementias	23.4988712
All ages	Puerto Rico	Alzheimer's disease and other dementias	27.4833111
All ages	Qatar	Alzheimer's disease and other dementias	34.66552129
All ages	Republic of Korea	Alzheimer's disease and other dementias	62.17519393
All ages	Republic of Moldova	Alzheimer's disease and other dementias	35.4349809
All ages	Romania	Alzheimer's disease and other dementias	30.67629223
All ages	Russia Federation	Alzheimer's disease and other dementias	36.79594794
All ages	Rwanda	Alzheimer's disease and other dementias	78.46440997
All ages	Saint Kitts and Nevis	Alzheimer's disease and other dementias	13.49218299
All ages	Saint Lucia	Alzheimer's disease and other dementias	17.9789322
All ages	Saint Vincent and the Grenadines	Alzheimer's disease and other dementias	18.3092411
All ages	Samoa	Alzheimer's disease and other dementias	33.24059269
All ages	San Marino	Alzheimer's disease and other dementias	47.4971941
All ages	Sao Tome and Principe	Alzheimer's disease and other dementias	6.49110246
All ages	Saudi Arabia	Alzheimer's disease and other dementias	28.78378496
All ages	Senegal	Alzheimer's disease and other dementias	9.31664379
All ages	Senegal	Alzheimer's disease and other dementias	47.13841294
All ages	Serbia	Alzheimer's disease and other dementias	45.2182521
All ages	Serbia	Alzheimer's disease and other dementias	9.74434829
All ages	Singapore	Alzheimer's disease and other dementias	19.7103106
All ages	Slovakia	Alzheimer's disease and other dementias	37.12054935
All ages	Slovenia	Alzheimer's disease and other dementias	41.0058292
All ages	Solomon Islands	Alzheimer's disease and other dementias	51.77961336
All ages	Somalia	Alzheimer's disease and other dementias	17.31443753
All ages	South Africa	Alzheimer's disease and other dementias	22.11857067
All ages	South Sudan	Alzheimer's disease and other dementias	20.76884298
All ages	Spain	Alzheimer's disease and other dementias	37.69052775
All ages	Si Lanka	Alzheimer's disease and other dementias	21.7409989
All ages	Si Lanka	Alzheimer's disease and other dementias	46.08146132
All ages	Suriname	Alzheimer's disease and other dementias	26.5844633
All ages	Sweden	Alzheimer's disease and other dementias	66.43446106
All ages	Switzerland	Alzheimer's disease and other dementias	59.60832828
All ages	Syrian Arab Republic	Alzheimer's disease and other dementias	60.30951525
All ages	Taiwan (Province of China)	Alzheimer's disease and other dementias	36.36791611
All ages	Tajikistan	Alzheimer's disease and other dementias	28.59489735
All ages	Thailand	Alzheimer's disease and other dementias	42.00117533
All ages	Timor-Leste	Alzheimer's disease and other dementias	49.83564862
All ages	Togo	Alzheimer's disease and other dementias	17.3621803
All ages	Tokelau	Alzheimer's disease and other dementias	37.8844815
All ages	Tonga	Alzheimer's disease and other dementias	60.27132098
All ages	Trinidad and Tobago	Alzheimer's disease and other dementias	22.5923862
All ages	Turkey	Alzheimer's disease and other dementias	74.70821967
All ages	Turkey	Alzheimer's disease and other dementias	51.79645092
All ages	Turkmenistan	Alzheimer's disease and other dementias	25.1165352
All ages	Tuvalu	Alzheimer's disease and other dementias	42.6808937
All ages	Uganda	Alzheimer's disease and other dementias	19.58416135
All ages	Uganda	Alzheimer's disease and other dementias	33.02710025
All ages	United Arab Emirates	Alzheimer's disease and other dementias	62.3920743
All ages	United Kingdom	Alzheimer's disease and other dementias	54.31881256
All ages	United Republic of Tanzania	Alzheimer's disease and other dementias	31.15089058
All ages	United States of America	Alzheimer's disease and other dementias	70.94448374
All ages	United States Virgin Islands	Alzheimer's disease and other dementias	21.2827786
All ages	Uruguay	Alzheimer's disease and other dementias	36.78173129
All ages	Uruguay	Alzheimer's disease and other dementias	21.00051407
All ages	Vanuatu	Alzheimer's disease and other dementias	24.58740501
All ages	Venezuela	Alzheimer's disease and other dementias	27.11405186
All ages	Viet Nam	Alzheimer's disease and other dementias	50.82530016
All ages	Yemen	Alzheimer's disease and other dementias	65.13232161
All ages	Zambia	Alzheimer's disease and other dementias	29.9952573
All ages	Zimbabwe	Alzheimer's disease and other dementias	45.06332734

Table S2. Estimated annual percentage change (EAPC) in age-standardized mortality rates (ASMR) from smoking-attributable diseases across 204 countries and territories from 1990 to 2021.

Location name	EAPC(ASMR)	95% CIs
Algeria	0.17255322	0.170(0.8,0.42)
Algeria	0.15355334	0.153(0.2,0.70)
Algeria	-0.81012795	-0.811(0.05,-0.57)
American Samoa	-0.54202086	-0.54(0.0,-0.47)
Andorra	0.20258751	0.202(0.07,-0.98)
Angola	-0.045778016	-0.05(0.28,0.19)
Antigua and Barbuda	0.32887701	0.31(0.18,-0.28)
Argentina	-0.17453844	-0.17(0.30,-0.24)
Armenia	1.15617468	1.18(0.10,-1.17)
Australia	-1.87477319	-1.88(1.32,-1.95)
Austria	0.17063649	0.17(0.28,1.03)
Azerbaijan	1.82280975	1.82(1.1,-1.24)
Bahamas	0.16232688	0.16(0.09,-0.24)
Bahrain	0.89137176	0.89(1.41,-0.78)
Bangladesh	-0.218176874	-0.22(0.38,-0.96)
Barbados	0.278033854	0.27(0.09,-0.46)
Belarus	-0.227288781	-0.23(0.37,-0.99)
Belgium	-1.24743825	-1.25(0.54,-1.96)
Belize	-0.251180908	-0.25(0.34,-1.16)
Benin	-0.991224685	-0.99(1.23,-1.80)
Bermuda	0.30247424	0.30(0.15,-0.14)
Bhutan	0.33529155	0.34(0.30,0.37)
Bolivia (Plurinational State of)	0.45865179	0.42(0.15,-0.28)
Bosnia and Herzegovina	0.18785699	0.19(0.18,0.56)
Botswana	-1.13510386	-1.13(1.15,-1.93)
Brazil	-0.031057004	-0.03(0.22,-1.84)
Brunei Darussalam	1.678107154	1.68(1.16,-1.60)
Bulgaria	-1.52032392	-1.52(1.41,-1.43)
Burkina Faso	-0.76999884	-0.77(1.03,-0.51)
Burundi	1.79824832	1.78(1.15,-1.42)
Cabo Verde	-1.241179317	-1.24(1.42,-1.87)
Cambodia	0.260278337	0.26(0.09,-0.45)
Cameroon	-1.054860518	-1.05(1.12,-0.99)
Canada	1.683378913	1.68(1.12,-1.53)
Central African Republic	-1.31130537	-1.31(1.56,-1.07)
Chad	0.49232137	0.49(0.38,-0.81)
Chile	-1.024832398	-1.02(1.10,-0.94)
China	-0.74905696	-0.74(0.48,-0.65)
Colombia	1.157797885	1.16(1.48,-1.47)
Comoros	0.343514838	0.34(0.38,-0.31)
Congo	0.902020208	0.90(0.81,-1.12)
Cook Islands	0.95702294	0.96(1.00,-0.93)
Costa Rica	1.2813191	1.28(1.00,-1.50)
Croatia	-0.127363127	-0.13(0.29,0.24)
Cuba	1.441488449	1.44(1.57,-1.35)
Cyprus	-1.107427731	-1.11(1.20,-1.02)
Czechia	-0.60548604	-0.60(0.64,-0.57)
Côte d'Ivoire	1.457437054	1.46(1.49,-1.22)
Democratic People's Republic of Korea	-0.892661571	-0.89(0.97,-0.82)
Democratic Republic of the Congo	0.664803803	0.66(1.00,-0.77)
Denmark	-1.83197612	-1.83(0.85,-1.63)
Djibouti	0.00323242	0.01(0.37,-0.65)
Dominica	0.502148182	0.50(0.67,-0.33)
Dominican Republic	-0.84674777	-0.85(1.16,-0.40)
Ecuador	-2.302200713	-2.27(1.25,-1.19)
Egypt	0.28424207	0.28(0.18,0.39)
El Salvador	0.06207577	0.06(0.12,-0.17)
Equatorial Guinea	-1.26293299	-1.26(0.33,-0.20)
Eritrea	-0.36571313	-0.37(0.45,-0.33)
Estonia	0.63279058	0.64(0.38,0.90)
Eswatini	1.24979077	1.24(1.32,-1.17)
Ethiopia	0.652965675	0.65(0.39,0.92)
Fiji	-1.09520626	-1.10(1.27,-0.92)
Finland	0.111166629	0.11(0.14,-0.07)
France	-1.38422003	-1.35(1.44,-1.28)
Gabon	0.012137011	0.01(0.10,-0.13)
Gambia	-1.78389325	-1.78(1.10,-1.68)
Ghana	1.743193158	1.74(1.61,-1.89)
Germany	-1.042219385	-1.04(1.22,-0.86)
Ghana	0.54143974	0.54(0.37,0.81)
Greece	-1.1304062	-1.13(1.19,-1.08)
Greenland	-0.71605077	-0.71(0.76,-0.67)
Grenada	1.471402019	1.48(1.46,-1.29)
Guam	-0.23245473	-0.23(0.29,-0.18)
Guatemala	0.06202048	0.06(0.02,-0.22)
Guinea	0.63247259	0.62(0.67,-0.57)
Guinea-Bissau	0.43209191	0.43(0.17,0.78)
Guyana	0.531028811	0.53(0.61,-0.43)
Haiti	0.44338864	0.44(0.36,-0.38)
Honduras	0.127889665	0.13(0.05,-0.20)
Hungary	-1.196144287	-1.20(1.21,-1.16)
Iceland	0.293390539	0.29(0.12,-0.84)
India	0.461403024	0.46(0.50,-0.34)
Indonesia	0.714817138	0.72(0.45,-0.98)
Iran (Islamic Republic of)	0.209142632	0.21(0.13,-0.29)
Iraq	0.241261274	0.24(0.30,-0.39)
Ireland	-2.818623161	-2.82(0.92,-2.71)
Israel	-1.490189119	-1.50(1.42,-1.17)
Italy	-1.787122101	-1.78(1.16,-1.19)
Jamaica	-1.024785082	-1.02(1.12,-0.93)
Japan	1.832266793	1.83(1.52,-1.75)
Jordan	-1.25149515	-1.25(1.33,-1.13)
Kazakhstan	0.26112145	0.26(0.41,-0.54)
Kempe	-2.38832938	-2.34(2.52,-2.16)
Kuwait	0.338898939	0.34(0.33,0.70)
Kuwait	0.2494046	0.26(0.40,-0.13)
Kyrgyzstan	1.29150553	1.29(1.27,-1.22)
Laos (People's Democratic Republic)	0.521130945	0.52(0.44,-0.69)
Latvia	-0.67523662	-0.68(0.76,-0.59)
Lebanon	0.54384649	0.54(0.42,-0.83)
Lesotho	0.727212456	0.72(0.63,0.83)
Liberia	1.195103094	1.19(1.15,-1.17)
Lithuania	-0.597451325	-0.60(0.69,-0.51)
Luxembourg	-1.153797921	-1.15(1.21,-1.10)
Luxembourg	-0.300516844	-0.30(0.42,-0.18)
Madagascar	-2.3544679	-2.35(3.25,-2.47)
Madagascar	0.71486039	0.71(0.76,-0.66)
Malaysia	-1.33420547	-1.33(1.46,-1.21)
Maldives	1.56203015	1.56(1.62,-1.50)
Mali	2.031404161	2.03(1.88,-1.18)
Mali	0.807303138	0.81(1.10,-1.68)
Marshall Islands	0.17108285	0.17(0.15,-0.19)
Mauritania	0.158109999	0.16(0.18,-0.81)
Mexico	-0.118741269	-0.12(0.54,-0.30)
Mexico	-1.295734311	-1.30(0.31,-1.38)
Moldova	0.47520634	0.48(0.41,-0.44)
Monaco	0.51528287	0.51(0.53,-0.48)
Mongolia	1.113890511	1.13(0.14,-1.13)
Montenegro	0.53847075	0.54(0.71,-0.34)
Morocco	2.05618623	2.06(2.16,-1.97)
Mozambique	-0.67011315	-0.67(0.80,-0.55)
Myanmar	-2.44232174	-2.44(2.36,-2.13)
Namibia	-1.200797197	-1.21(1.16,-1.05)
Nauru	-1.18496542	-1.18(1.13,-1.14)
Nepal	0.664587781	0.66(0.76,-0.57)
Netherlands	-0.44444465	-0.44(0.58,-0.31)
New Zealand	0.616308576	0.62(0.51,-0.54)
Nicaragua	0.005156379	0.00(0.19,-0.19)
Niger	0.480515466	0.48(0.39,-0.69)
Nigeria	-1.6214631	-1.62(1.66,-1.58)
Niue	-0.1220367	-0.12(0.16,-0.28)
North Macedonia	0.452208125	0.46(0.44,-0.77)
Northern Mariana Islands	-0.824145991	-0.82(0.87,-0.78)
Norway	0.268377121	0.26(0.26,-2.12)
Oman	0.83424814	0.83(0.96,-0.73)
Pakistan	0.61441238	0.61(0.77,-1.46)
Palau	-0.38041465	-0.38(0.42,-0.34)
Pakistan	-1.28073294	-1.28(1.41,-1.15)
Panama	-1.748467904	-1.77(1.91,-1.63)
Papua New Guinea	-0.64634614	-0.65(0.72,-0.57)
Paraguay	-1.460291666	-1.46(1.54,-1.38)
Peru	-0.313384863	-0.32(0.47,-0.15)
Philippines	1.79379816	1.79(1.62,-1.67)
Poland	-1.42550045	-1.43(1.50,-1.35)
Portugal	1.305144001	1.30(1.31,-1.69)
Puerto Rico	-0.808045117	-0.81(0.87,-0.75)
Qatar	-1.57142316	-1.56(1.16,-1.02)
Republic of Korea	1.937764188	1.91(1.59,-1.83)
Republic of Moldova	0.53948701	0.54(0.40,-0.63)
Romania	0.66629717	0.66(1.46,-1.47)
Russian Federation	1.13757208	1.14(0.75,-1.53)
Rwanda	0.90587497	0.91(0.81,-1.00)
Saint Kitts and Nevis	0.662737995	0.67(0.74,-0.59)
Saint Lucia	1.10618916	1.11(1.15,-0.98)
Saint Vincent and the Grenadines	0.06153712	0.06(0.00,0.13)
Samoa	0.365886214	0.37(0.41,-0.80)
San Marino	0.85279898	0.86(0.92,-0.80)
Sao Tome and Principe	-0.23137406	-0.23(0.71,0.13)
Saudi Arabia	0.324848484	0.32(0.15,-0.30)
Senegal	0.650299182	0.66(0.81,-0.50)
Senegal	0.54046077	0.55(0.51,-0.19)
Senegal	0.81382031	0.82(0.91,-0.72)
Senegal	1.11712468	1.12(1.20,-1.04)
Singapore	-1.675893698	-1.68(1.79,-1.56)
Slovakia	-0.68784235	-0.69(0.68,-0.54)
Slovakia	0.02416271	0.02(0.10,-0.16)
Solomon Islands	-0.17974522	-0.18(0.36,-0.00)
Somalia	0.92252949	0.92(0.96,-0.85)
South Africa	1.43664408	1.44(1.55,-1.32)
South Sudan	0.42002604	0.42(0.49,-0.38)
Spain	-1.15246384	-1.16(1.19,-1.11)
Sri Lanka	-2.97174785	-2.98(3.28,-2.68)
Sudan	-0.28535483	-0.29(0.31,-0.26)
Suriname	-1.09991717	-1.10(1.48,-1.52)
Sweden	-0.197504386	-0.20(0.25,-0.50)
Switzerland	-0.465993956	-0.47(0.53,-0.40)
Syrian Arab Republic	-1.17528975	-1.17(1.27,-1.08)
Taiwan (Province of China)	-1.36051671	-1.36(1.40,-1.19)
Tajikistan	-1.35541401	-1.35(1.31,-1.44)
Thailand	-1.73710304	-1.74(1.87,-1.61)
Timor-Leste	-0.40589806	-0.41(0.52,-0.30)
Togo	-1.736072115	-1.74(1.88,-1.60)
Togo	-0.9164674	-0.92(0.98,-0.85)
Togo	0.7789432	0.78(0.84,-0.68)
Trinidad and Tobago	-0.94024533	-0.95(1.00,-0.89)
Tunisia	-1.16071835	-1.16(1.20,-1.03)
Turkey	-2.09937228	-2.10(2.40,-1.79)
Turkmenistan	1.282346046	1.28(1.40,-1.50)
Tuvalu	-0.086871619	-0.09(0.13,-0.24)
Uganda	-0.82103899	-0.82(1.07,-0.57)
Ukraine	-0.81103886	-0.81(1.05,-0.57)
United Arab Emirates	1.1767442	1.18(0.91,-1.16)
United Kingdom	1.86429773	1.86(1.98,-1.75)
United States of America	-1.62043889	-1.62(1.75,-1.49)
United States of America	-1.197044339	-1.20(1.21,-1.13)
United States Virgin Islands	-0.52075826	-0.52(0.61,-0.43)
Uruguay	0.278913895	0.28(0.13,-0.31)
Uzbekistan	0.714816408	0.71(0.51,-0.92)
Venezuela (Bolivarian Republic of)	-1.20732804	-1.21(1.31,-1.10)
Viet Nam	1.84877175	1.84(1.99,-1.89)
Viet Nam	-1.374870213	-1.37(1.50,-1.16)
Yemen	0.047744674	0.05(0.08,-0.02)
Zambia	-0.796509771	-0.80(0.87,-0.72)
Zimbabwe	-0.74588623	-0.75(0.85,-0.64)

Table S2. Estimated annual percentage change (EAPC) in age-standardized DALY rates (ASDR) from smoking attributable dementia across 204 countries and territories from 1990 to 2021.

Location name	EAPC (ASDR)	95% CI
Algeria	0.12320665	0.1210, 0.1403
Algeria	0.15480762	0.1209, 0.209
Algeria	0.87450445	0.881, 0.87
American Samoa	-0.30100334	0.46(0.24, -0.40)
Andorra	0.985307168	0.981, 0.994
Angola	-0.12039859	-0.13(0.15, 0.20)
Antigua and Barbuda	0.318074622	0.31(0.16, 0.48)
Argentina	-0.37133148	0.37(0.49, -0.26)
Armenia	0.00320321	0.003, 0.154
Australia	-1.48637089	1.48(1.58, -1.39)
Australia	0.64474076	0.64(0.7, 0.62)
Azerbaijan	1.39923928	1.40(1.17, 1.63)
Bahamas	0.04035164	0.04(0.2, 0.20)
Bahrain	0.86573544	0.86(0.92, -0.80)
Bangladesh	-0.26443897	0.26(0.44, -0.09)
Barbados	0.86031946	0.86(1.01, -0.57)
Belarus	0.01562812	0.02(0.10, 0.13)
Belgium	-1.2893921	1.29(1.42, -1.51)
Belize	-0.345043686	0.35(0.44, -0.35)
Belize	-1.92044826	1.92(2.11, -1.75)
Bermuda	0.22979478	0.23(0.26, 0.20)
Bhutan	-0.03212293	0.03(0.05, -0.02)
Bolivia (Plurinational State of)	0.462934555	0.46(0.49, 0.43)
Bosnia and Herzegovina	0.14849578	0.15(0.15, 0.59)
Botswana	-1.08744885	1.08(1.08, -0.88)
Brazil	-1.867691671	1.87(1.06, -1.87)
Brazil	-1.75892847	1.76(1.48, -1.88)
Bulgaria	-1.402841	1.41(1.12, -1.43)
Burkina Faso	-0.767963035	0.76(1.02, -0.51)
Burundi	1.67539656	1.68(2.07, -1.28)
Cabo Verde	2.012744231	2.01(2.24, -1.78)
Cambodia	0.003734895	0.004(0.03, 0.17)
Cameroon	-1.076546426	1.08(1.13, -1.02)
Canada	-1.79545046	1.80(1.10, -1.70)
Central African Republic	-1.29048345	1.29(1.51, -1.03)
Chad	0.63734223	0.64(0.71, -0.57)
Chile	-1.003304432	1.00(1.08, -0.93)
China	-0.44842864	0.45(0.58, -0.39)
Colombia	-1.56751288	1.57(1.48, -1.40)
Comoros	0.70296359	0.70(0.74, -0.46)
Congo	0.87345037	0.88(0.93, -1.1)
Cook Islands	-0.87803951	0.88(0.93, -0.83)
Costa Rica	-1.24893462	1.25(1.43, -1.07)
Croatia	-0.146067821	0.15(0.30, 0.01)
Cuba	-1.40235718	1.40(1.54, -1.27)
Cyprus	0.77055849	0.77(0.81, -0.73)
Czechia	-0.518607507	0.52(0.54, -0.50)
Cote d'Ivoire	-1.36293313	1.36(1.50, -1.13)
Democratic People's Republic of Korea	-0.735124021	0.74(0.79, -0.68)
Democratic Republic of the Congo	0.87514852	0.88(1.05, -0.60)
Denmark	-1.893350297	1.89(1.06, -1.72)
Djibouti	0.24818227	0.25(0.31, -0.48)
Dominica	-0.41884968	0.42(0.61, -0.23)
Dominican Republic	-0.86070549	0.86(1.09, -0.63)
Ecuador	-1.27927008	1.28(2.27, -2.09)
Egypt	1.18337621	1.19(0.20, 0.28)
El Salvador	0.20057506	0.20(0.22, 0.18)
Equatorial Guinea	-0.37672518	0.38(0.44, -0.31)
Eritrea	0.31448451	0.31(0.35, -0.47)
Estonia	0.55437965	0.55(0.31, 0.80)
Eswatini	-1.35902654	1.36(1.44, -1.28)
Ethiopia	0.095708817	0.10(0.13, 0.33)
Fiji	-1.05587609	1.06(1.20, -0.91)
Finland	-0.181782451	0.18(0.27, -0.09)
France	-1.10544889	1.11(1.14, -1.07)
Gabon	0.11089701	0.11(0.13, 0.13)
Gambia	-1.96011577	1.96(2.08, -1.84)
Ghana	1.49303146	1.49(1.53, -1.63)
Germany	-0.884337047	0.88(1.02, -0.74)
Ghana	0.51989107	0.52(0.33, 0.80)
Greece	-1.05078375	1.05(1.10, -1.02)
Greenland	-0.71899126	0.72(0.74, -0.69)
Grenada	-1.23975174	1.24(1.38, -1.40)
Guam	0.06449763	0.06(0.10, -0.03)
Guatemala	-0.8054431	0.81(0.81, -0.78)
Guinea	-0.57069185	0.56(0.61, -0.51)
Guinea-Bissau	0.51819951	0.52(0.58, 0.46)
Guyana	-0.53807122	0.54(0.62, -0.45)
Haiti	-0.77440707	0.77(0.90, -0.65)
Honduras	-0.14646025	0.14(0.21, -0.13)
Hungary	-1.00728784	1.01(0.99, -1.03)
Iceland	-0.97086675	0.97(0.95, -0.89)
India	-0.79552631	0.76(0.83, -0.69)
Indonesia	0.39748682	0.40(0.20, 0.60)
Iran (Islamic Republic of)	0.03641512	0.04(0.03, 0.10)
Iraq	-1.36881215	1.37(1.30, -1.11)
Ireland	-2.70184895	2.70(2.80, -2.60)
Israel	-1.48380893	1.48(1.51, -1.39)
Italy	-1.47006164	1.48(1.51, -1.44)
Jamaica	-1.12103974	1.12(1.21, -1.03)
Japan	-1.151809516	1.16(1.24, -1.07)
Jordan	-1.08239948	1.08(1.18, -0.98)
Kazakhstan	0.20346613	0.20(0.15, -0.50)
Kenya	-1.19677165	1.20(2.37, -2.02)
Kiribati	0.25188886	0.25(0.03, 0.50)
Kuwait	-0.51460089	0.51(0.59, -0.44)
Kyrgyzstan	-1.28433136	1.28(2.02, 0.50)
Laos (People's Democratic Republic)	0.21818435	0.22(0.27, 0.16)
Latvia	-0.35088968	0.35(0.43, -0.27)
Lebanon	0.40775643	0.41(0.23, 0.60)
Lesotho	0.60734608	0.61(0.53, 0.69)
Liberia	-1.14971052	1.15(1.21, -1.09)
Lithuania	-0.647942934	0.65(0.73, -0.57)
Lithuania	-0.69911238	0.70(0.72, -0.67)
Luxembourg	-0.500712007	0.51(0.49, -0.43)
Madagascar	-2.81610212	2.82(3.10, -2.44)
Malawi	-0.65333178	0.65(0.64, -0.47)
Malaysia	-1.38016148	1.38(1.51, -1.25)
Maldives	-1.520198801	1.53(1.43, -1.43)
Maldives	1.8784563	1.88(1.74, 0.21)
Maldives	-1.66523188	1.67(1.75, -1.58)
Marshall Islands	0.11377652	0.11(0.10, 0.13)
Mauritania	-0.71883001	0.72(0.76, -0.68)
Mauritius	-0.11889737	0.12(0.32, 0.23)
Mexico	-1.138739259	1.14(1.32, -0.95)
Micronesia (Federated States of)	0.37138212	0.37(0.40, -0.14)
Morocco	-0.74295332	0.74(0.77, -0.73)
Mongolia	0.79349514	0.79(0.81, 0.80)
Montenegro	-0.52784547	0.53(0.75, -0.31)
Morocco	-1.78159367	1.78(1.91, -1.67)
Mozambique	-0.62177049	0.62(0.74, -0.50)
Myanmar	-2.48317139	2.48(2.42, -2.37)
Namibia	-1.28059177	1.29(1.41, -1.40)
Nauru	-0.95471066	0.95(1.00, -0.93)
Nepal	-1.161360108	1.16(1.24, -1.07)
Netherlands	-0.453741695	0.45(0.50, -0.32)
New Zealand	-0.97031699	0.98(0.97, -0.88)
Nicaragua	-0.12897842	0.13(0.10, 0.04)
Niger	0.06166511	0.06(0.07, 0.06)
Nigeria	-1.350616799	1.35(1.43, -1.27)
Niue	-0.38429325	0.38(0.40, -0.34)
North Macedonia	-0.52789811	0.53(0.64, -0.42)
Northern Mariana Islands	-0.740246281	0.74(0.79, -0.69)
Norway	-0.600296483	0.60(0.62, -0.45)
Oman	-0.91746586	0.92(1.03, -0.80)
Pakistan	-1.73473147	1.73(1.87, -1.60)
Pakistan	-0.451393264	0.45(0.50, -0.40)
Pakistan	-1.00071393	1.00(1.12, -0.90)
Panama	-1.68042718	1.69(1.62, -1.54)
Papua New Guinea	-0.61206158	0.61(0.68, -0.54)
Paraguay	-1.50829865	1.51(1.58, -1.44)
Peru	-0.255449024	0.26(0.41, -0.11)
Philippines	-1.738031887	1.74(1.81, -1.63)
Poland	-1.31506016	1.32(1.34, -1.29)
Portugal	-1.63054515	1.63(1.71, -1.55)
Puerto Rico	-0.66475646	0.66(0.71, -0.62)
Qatar	-1.74883089	0.74(0.80, -0.67)
Republic of Korea	-1.68212000	1.68(1.76, -1.60)
Republic of Moldova	0.59805063	0.60(0.53, 0.68)
Romania	-0.28613613	0.28(1.43, -1.14)
Russian Federation	0.98838232	0.99(0.81, 1.35)
Rwanda	0.79310849	0.79(0.84, 0.82)
Saint Kitts and Nevis	-0.81298394	0.81(0.91, -0.72)
Saint Lucia	-1.18193037	1.18(1.25, -1.04)
Saint Vincent and the Grenadines	0.04189912	0.04(0.00, 0.09)
Samoa	-0.45174712	0.45(0.46, -0.39)
San Marino	-0.08046628	0.08(0.08, -0.08)
San Tomé and Príncipe	-0.53023184	0.53(0.61, -0.25)
Saudi Arabia	-0.152128149	0.15(0.16, -0.12)
Senegal	-0.909716022	0.91(0.95, -0.77)
Senegal	-0.35574742	0.36(0.67, -0.09)
Senegal	-0.74873588	0.75(0.81, -0.64)
Sierra Leone	-1.01447148	1.01(1.10, -0.97)
Singapore	-1.421125	1.42(1.52, -1.32)
Slovakia	-0.4034422	0.41(0.37, -0.24)
Slovenia	0.17736616	0.17(0.02, 0.30)
Solomon Islands	-0.041590797	0.04(0.24, 0.16)
Somalia	0.00626409	0.01(0.00, -0.81)
South Africa	-1.1414129	1.14(1.28, -1.01)
South Sudan	-0.68405054	0.68(0.76, -0.61)
Spain	-1.858703764	1.86(1.88, -1.83)
Sri Lanka	-2.84160775	2.84(3.13, -2.56)
Sudan	-0.43414528	0.43(0.48, -0.39)
Suriname	-1.72442284	1.73(1.90, -1.56)
Sweden	-0.69164135	0.69(0.65, -0.09)
Switzerland	-0.671769409	0.67(0.73, -0.61)
Syrian Arab Republic	-1.33244838	1.33(1.41, -1.24)
Taiwan (Province of China)	-1.45734172	1.46(1.54, -1.38)
Tajikistan	-1.40393802	1.40(1.56, -1.17)
Thailand	-1.60499357	1.60(1.69, -1.52)
Timor-Leste	-0.644008275	0.65(0.70, -0.57)
Togo	-1.5684282	1.57(1.72, -1.42)
Togo	-0.8747472	0.88(0.88, -0.72)
Tonga	-0.79736865	0.80(0.88, -0.72)
Trinidad and Tobago	-1.000193936	1.00(1.05, -0.95)
Tunisia	-1.133701477	1.13(1.13, -1.09)
Turkey	-0.06278863	0.06(2.27, -1.86)
Turkmenistan	-1.212350402	1.21(1.32, -1.10)
Tuvalu	-0.15096674	0.15(0.19, -0.11)
Uganda	-0.83276974	0.83(0.90, -0.61)
Ukraine	-0.71452473	0.71(0.97, -0.45)
United Arab Emirates	0.83083075	0.84(0.70, 0.97)
United Kingdom	-0.84731638	0.85(0.86, -1.84)
United States of America	-1.53047604	1.53(1.63, -1.39)
United States of America	-1.395238667	1.39(1.45, -1.39)
United States Virgin Islands	-0.44605787	0.45(0.50, -0.39)
Uruguay	0.027191885	0.03(0.11, 0.07)
Uzbekistan	0.89749612	0.90(0.62, 1.18)
Venezuela (Bolivarian Republic of)	-1.24836615	1.25(1.37, -1.12)
Venezuela (Bolivarian Republic of)	-1.82236504	1.82(1.88, -1.77)
Viet Nam	-1.28723897	1.29(1.46, -1.12)
Yemen	-0.30509376	0.31(0.34, -0.27)
Zambia	-1.04047163	1.05(1.10, -0.99)
Zimbabwe	-0.71412136	0.72(0.87, -0.57)

Table 12. Number of deaths from smoking-attributable dementia across 204 countries and territories in 2021.

age_group	location_name	case_name	metric_name	2021_Death_Rate
All ages	Afghanistan	Alzheimer's disease and other dementias	Number	28,781,648.99
All ages	Albania	Alzheimer's disease and other dementias	Number	57,462,178.83
All ages	Algeria	Alzheimer's disease and other dementias	Number	298,494,028.08
All ages	American Samoa	Alzheimer's disease and other dementias	Number	0,179,916.06
All ages	Andorra	Alzheimer's disease and other dementias	Number	1,430,905.06
All ages	Angola	Alzheimer's disease and other dementias	Number	27,352,994.90
All ages	Antigua and Barbuda	Alzheimer's disease and other dementias	Number	0,540,208.82
All ages	Argentina	Alzheimer's disease and other dementias	Number	255,417,181.81
All ages	Armenia	Alzheimer's disease and other dementias	Number	44,087,984.83
All ages	Australia	Alzheimer's disease and other dementias	Number	188,870,254.24
All ages	Austria	Alzheimer's disease and other dementias	Number	168,750,279.79
All ages	Azerbaijan	Alzheimer's disease and other dementias	Number	52,759,954.84
All ages	Bahamas	Alzheimer's disease and other dementias	Number	0,91,029,854.54
All ages	Bahrain	Alzheimer's disease and other dementias	Number	3,21,107,906.93
All ages	Bangladesh	Alzheimer's disease and other dementias	Number	781,124,132.86
All ages	Barbados	Alzheimer's disease and other dementias	Number	1,38,379,243.43
All ages	Belarus	Alzheimer's disease and other dementias	Number	90,988,929.29
All ages	Belgium	Alzheimer's disease and other dementias	Number	286,474,753.33
All ages	Belize	Alzheimer's disease and other dementias	Number	0,88,262,815.15
All ages	Benin	Alzheimer's disease and other dementias	Number	6,52,827,777.77
All ages	Bermuda	Alzheimer's disease and other dementias	Number	0,65,521,703.70
All ages	Bhutan	Alzheimer's disease and other dementias	Number	2,27,523,769.69
All ages	Bolivia (Plurinational State of)	Alzheimer's disease and other dementias	Number	16,50,731,879.79
All ages	Bosnia and Herzegovina	Alzheimer's disease and other dementias	Number	62,507,392.92
All ages	Botswana	Alzheimer's disease and other dementias	Number	5,06,605,762.68
All ages	Brazil	Alzheimer's disease and other dementias	Number	215,2,528,886.86
All ages	Brunei Darussalam	Alzheimer's disease and other dementias	Number	1,18,859,892.92
All ages	Bulgaria	Alzheimer's disease and other dementias	Number	54,448,708.70
All ages	Burkina Faso	Alzheimer's disease and other dementias	Number	6,32,495,948.94
All ages	Burundi	Alzheimer's disease and other dementias	Number	5,28,596,474.74
All ages	Cabo Verde	Alzheimer's disease and other dementias	Number	0,81,888,764.64
All ages	Cambodia	Alzheimer's disease and other dementias	Number	96,484,848.48
All ages	Cameroon	Alzheimer's disease and other dementias	Number	11,54,683,605.05
All ages	Canada	Alzheimer's disease and other dementias	Number	162,584,844.44
All ages	Central African Republic	Alzheimer's disease and other dementias	Number	2,23,773,763.63
All ages	Chad	Alzheimer's disease and other dementias	Number	7,02,842,746.46
All ages	Chile	Alzheimer's disease and other dementias	Number	65,319,321.32
All ages	China	Alzheimer's disease and other dementias	Number	2487,320,037.03
All ages	Colombia	Alzheimer's disease and other dementias	Number	142,716,661.66
All ages	Comoros	Alzheimer's disease and other dementias	Number	1,45,771,164.64
All ages	Congo	Alzheimer's disease and other dementias	Number	6,32,844,236.36
All ages	Cook Islands	Alzheimer's disease and other dementias	Number	0,11,677,717.17
All ages	Costa Rica	Alzheimer's disease and other dementias	Number	23,337,213.13
All ages	Croatia	Alzheimer's disease and other dementias	Number	101,987,956.56
All ages	Cuba	Alzheimer's disease and other dementias	Number	106,723,132.32
All ages	Cyprus	Alzheimer's disease and other dementias	Number	17,481,266.66
All ages	Czechia	Alzheimer's disease and other dementias	Number	163,413,146.46
All ages	Cote d'Ivoire	Alzheimer's disease and other dementias	Number	12,52,839,872.87
All ages	Democratic Republic of the Congo	Alzheimer's disease and other dementias	Number	139,873,606.06
All ages	Democratic Republic of the Congo	Alzheimer's disease and other dementias	Number	35,200,815.15
All ages	Dominica	Alzheimer's disease and other dementias	Number	197,429,606.06
All ages	Djibouti	Alzheimer's disease and other dementias	Number	2,00,537,711.11
All ages	Dominica	Alzheimer's disease and other dementias	Number	6,53,931,446.46
All ages	Dominican Republic	Alzheimer's disease and other dementias	Number	73,467,336.36
All ages	Dominican Republic	Alzheimer's disease and other dementias	Number	31,24,474,245.45
All ages	Ecuador	Alzheimer's disease and other dementias	Number	395,404,067.67
All ages	Egypt	Alzheimer's disease and other dementias	Number	14,10,862,862.86
All ages	Equatorial Guinea	Alzheimer's disease and other dementias	Number	0,80,033,093.93
All ages	Eritrea	Alzheimer's disease and other dementias	Number	1,78,288,544.44
All ages	Estonia	Alzheimer's disease and other dementias	Number	15,376,027.27
All ages	Eswatini	Alzheimer's disease and other dementias	Number	0,98,568,822.82
All ages	Ethiopia	Alzheimer's disease and other dementias	Number	45,204,789.89
All ages	Fiji	Alzheimer's disease and other dementias	Number	1,87,799,869.86
All ages	Finland	Alzheimer's disease and other dementias	Number	85,579,884.84
All ages	France	Alzheimer's disease and other dementias	Number	110,94,804.80
All ages	Gabon	Alzheimer's disease and other dementias	Number	1,75,566,915.15
All ages	Gambia	Alzheimer's disease and other dementias	Number	1,20,795,795.79
All ages	Georgia	Alzheimer's disease and other dementias	Number	47,05,502,665.65
All ages	Germany	Alzheimer's disease and other dementias	Number	219,399,806.06
All ages	Ghana	Alzheimer's disease and other dementias	Number	20,887,757.75
All ages	Greece	Alzheimer's disease and other dementias	Number	382,788.88
All ages	Greenland	Alzheimer's disease and other dementias	Number	0,52,116,885.85
All ages	Grenada	Alzheimer's disease and other dementias	Number	0,15,845,894.94
All ages	Guam	Alzheimer's disease and other dementias	Number	0,79,809,999.99
All ages	Guatemala	Alzheimer's disease and other dementias	Number	27,94,867,676.76
All ages	Guinea	Alzheimer's disease and other dementias	Number	0,36,529,862.62
All ages	Guinea-Bissau	Alzheimer's disease and other dementias	Number	0,45,273,867.67
All ages	Guyana	Alzheimer's disease and other dementias	Number	1,10,47,642.42
All ages	Haiti	Alzheimer's disease and other dementias	Number	7,33,725,463.63
All ages	Honduras	Alzheimer's disease and other dementias	Number	24,833,766.67
All ages	Hungary	Alzheimer's disease and other dementias	Number	95,430,927.27
All ages	Iceland	Alzheimer's disease and other dementias	Number	6,100,039.39
All ages	India	Alzheimer's disease and other dementias	Number	432,841,898.89
All ages	Indonesia	Alzheimer's disease and other dementias	Number	155,866,838.38
All ages	Iran (Islamic Republic of)	Alzheimer's disease and other dementias	Number	399,849,626.26
All ages	Iraq	Alzheimer's disease and other dementias	Number	176,308,603.03
All ages	Israel	Alzheimer's disease and other dementias	Number	83,970,759.75
All ages	Italy	Alzheimer's disease and other dementias	Number	95,946,727.27
All ages	Jamaica	Alzheimer's disease and other dementias	Number	149,653,323.23
All ages	Japan	Alzheimer's disease and other dementias	Number	27,210,097.97
All ages	Japan	Alzheimer's disease and other dementias	Number	272,888,844.44
All ages	Jordan	Alzheimer's disease and other dementias	Number	56,518,558.58
All ages	Kazakhstan	Alzheimer's disease and other dementias	Number	39,272,816.16
All ages	Kazakhstan	Alzheimer's disease and other dementias	Number	39,21,381,733.33
All ages	Kiribati	Alzheimer's disease and other dementias	Number	0,49,939,257.25
All ages	Kuwait	Alzheimer's disease and other dementias	Number	20,94,964,974.74
All ages	Kyrgyzstan	Alzheimer's disease and other dementias	Number	28,385,105.05
All ages	Laos	Alzheimer's disease and other dementias	Number	26,482,252.25
All ages	Laos (People's Democratic Republic)	Alzheimer's disease and other dementias	Number	16,882,771.71
All ages	Latvia	Alzheimer's disease and other dementias	Number	108,257,399.99
All ages	Lebanon	Alzheimer's disease and other dementias	Number	4,82,740,999.99
All ages	Lesotho	Alzheimer's disease and other dementias	Number	1,53,746,119.19
All ages	Libya	Alzheimer's disease and other dementias	Number	22,284,409.09
All ages	Lithuania	Alzheimer's disease and other dementias	Number	30,406,079.79
All ages	Luxembourg	Alzheimer's disease and other dementias	Number	6,71,047,139.39
All ages	Madagascar	Alzheimer's disease and other dementias	Number	1,64,265,571.57
All ages	Malawi	Alzheimer's disease and other dementias	Number	21,443,767.67
All ages	Malaysia	Alzheimer's disease and other dementias	Number	156,383,071.71
All ages	Maldives	Alzheimer's disease and other dementias	Number	2,52,261,882.88
All ages	Mali	Alzheimer's disease and other dementias	Number	17,389,108.08
All ages	Malta	Alzheimer's disease and other dementias	Number	6,28,787,875.75
All ages	Marshall Islands	Alzheimer's disease and other dementias	Number	0,08,405,779.79
All ages	Mauritania	Alzheimer's disease and other dementias	Number	2,14,451,327.27
All ages	Mauritius	Alzheimer's disease and other dementias	Number	10,381,009.09
All ages	Mexico	Alzheimer's disease and other dementias	Number	287,234,605.05
All ages	Micronesia (Federated States of)	Alzheimer's disease and other dementias	Number	0,31,175,141.41
All ages	Moldova	Alzheimer's disease and other dementias	Number	1,11,009,936.36
All ages	Mongolia	Alzheimer's disease and other dementias	Number	8,741,614.14
All ages	Montenegro	Alzheimer's disease and other dementias	Number	6,65,448,523.23
All ages	Morocco	Alzheimer's disease and other dementias	Number	89,163,025.25
All ages	Mozambique	Alzheimer's disease and other dementias	Number	21,734,104.04
All ages	Myanmar	Alzheimer's disease and other dementias	Number	238,853,992.99
All ages	Namibia	Alzheimer's disease and other dementias	Number	63,171,724.24
All ages	Nauru	Alzheimer's disease and other dementias	Number	0,05,999,848.84
All ages	Nepal	Alzheimer's disease and other dementias	Number	149,563,838.38
All ages	Netherlands	Alzheimer's disease and other dementias	Number	486,233,993.93
All ages	New Zealand	Alzheimer's disease and other dementias	Number	78,391,652.52
All ages	Nicaragua	Alzheimer's disease and other dementias	Number	14,105,292.92
All ages	Niger	Alzheimer's disease and other dementias	Number	6,07,638,883.88
All ages	Nigeria	Alzheimer's disease and other dementias	Number	58,421,613.13
All ages	Niue	Alzheimer's disease and other dementias	Number	0,00,860,282.82
All ages	North Macedonia	Alzheimer's disease and other dementias	Number	26,15,605,536.36
All ages	North Macedonia	Alzheimer's disease and other dementias	Number	0,18,611,887.87
All ages	Northern Mariana Islands	Alzheimer's disease and other dementias	Number	79,15,682,607.07
All ages	Norway	Alzheimer's disease and other dementias	Number	4,23,900,345.45
All ages	Oman	Alzheimer's disease and other dementias	Number	409,169,871.71
All ages	Pakistan	Alzheimer's disease and other dementias	Number	6,65,495,877.77
All ages	Pakistan	Alzheimer's disease and other dementias	Number	14,733,884.84
All ages	Pakistan	Alzheimer's disease and other dementias	Number	15,889,504.04
All ages	Papua New Guinea	Alzheimer's disease and other dementias	Number	11,382,263.63
All ages	Paraguay	Alzheimer's disease and other dementias	Number	67,17,799,144.44
All ages	Peru	Alzheimer's disease and other dementias	Number	92,147,746.46
All ages	Philippines	Alzheimer's disease and other dementias	Number	428,924,244.44
All ages	Poland	Alzheimer's disease and other dementias	Number	446,224,453.53
All ages	Portugal	Alzheimer's disease and other dementias	Number	90,282,916.16
All ages	Portugal	Alzheimer's disease and other dementias	Number	34,807,168.68
All ages	Qatar	Alzheimer's disease and other dementias	Number	1,98,914,275.75
All ages	Republic of Korea	Alzheimer's disease and other dementias	Number	985,230,845.45
All ages	Republic of Moldova	Alzheimer's disease and other dementias	Number	26,586,029.29
All ages	Romania	Alzheimer's disease and other dementias	Number	151,038,208.20
All ages	Russian Federation	Alzheimer's disease and other dementias	Number	113,131,424.24
All ages	Rwanda	Alzheimer's disease and other dementias	Number	47,836,113.13
All ages	Saint Kitts and Nevis	Alzheimer's disease and other dementias	Number	0,08,783,259.25
All ages	Saint Lucia	Alzheimer's disease and other dementias	Number	0,05,282,327.27
All ages	Saint Vincent and the Grenadines	Alzheimer's disease and other dementias	Number	0,31,309,105.05
All ages	Samoa	Alzheimer's disease and other dementias	Number	0,80,807,173.73
All ages	Sao Marino	Alzheimer's disease and other dementias	Number	0,73,988,584.84
All ages	Sao Tome and Principe	Alzheimer's disease and other dementias	Number	0,07,530,241.41
All ages	Saudi Arabia	Alzheimer's disease and other dementias	Number	39,486,949.49
All ages	Senegal	Alzheimer's disease and other dementias	Number	7,83,977,146.46
All ages	Senegal	Alzheimer's disease and other dementias	Number	99,747,876.76
All ages	Senegal	Alzheimer's disease and other dementias	Number	0,82,181,518.51
All ages	Senegal	Alzheimer's disease and other dementias	Number	1,495,950,777.77
All ages	Singapore	Alzheimer's disease and other dementias	Number	23,216,194.94
All ages	Slovakia	Alzheimer's disease and other dementias	Number	46,384,813.13
All ages	Slovenia	Alzheimer's disease and other dementias	Number	24,637,103.03
All ages	Solomon Islands	Alzheimer's disease and other dementias	Number	1,514,849.49
All ages	Somalia	Alzheimer's disease and other dementias	Number	7,430,095.95
All ages	South Africa	Alzheimer's disease and other dementias	Number	109,023,127.27
All ages	South Sudan	Alzheimer's disease and other dementias	Number	7,324,768.68
All ages	Spain	Alzheimer's disease and other dementias	Number	695,791,907.90
All ages	Sri Lanka	Alzheimer's disease and other dementias	Number	70,930,949.49
All ages	Sudan	Alzheimer's disease and other dementias	Number	94,018,489.89
All ages	Suriname	Alzheimer's disease and other dementias	Number	1,97,988,878.78
All ages	Sweden	Alzheimer's disease and other dementias	Number	281,014,001.01
All ages	Switzerland	Alzheimer's disease and other dementias	Number	236,953,296.29
All ages	Syrian Arab Republic	Alzheimer's disease and other dementias	Number	73,289,473.73
All ages	Taiwan (Province of China)	Alzheimer's disease and other dementias	Number	296,235,173.73
All ages	Tajikistan	Alzheimer's disease and other dementias	Number	15,996,167.67
All ages	Tajikistan	Alzheimer's disease and other dementias	Number	741,070,768.68
All ages	Tanzania	Alzheimer's disease and other dementias	Number	4,24,371,309.09
All ages	Togo	Alzheimer's disease and other dementias	Number	5,803,468.18
All ages	Tokelau	Alzheimer's disease and other dementias	Number	0,00,784,972.97
All ages	Tonga	Alzheimer's disease and other dementias	Number	0,05,629,767.67
All ages	Trinidad and Tobago	Alzheimer's disease and other dementias	Number	51,708,897.89
All ages	Tunisia	Alzheimer's disease and other dementias	Number	132,406,787.87
All ages	Turkey	Alzheimer's disease and other dementias	Number	602,745,821.82
All ages	Turkmenistan	Alzheimer's disease and other dementias	Number	10,306,486.86
All ages	Turkey	Alzheimer's disease and other dementias	Number	0,04,652,796.79
All ages	Uganda	Alzheimer's disease and other dementias	Number	28,899,463.63
All ages	Ukraine	Alzheimer's disease and other dementias	Number	335,545,164.64
All ages	United Arab Emirates	Alzheimer's disease and other dementias	Number	0,33,840,773.73
All ages	United Kingdom	Alzheimer's disease and other dementias	Number	1425,151,384.84
All ages	United Republic of Tanzania	Alzheimer's disease and other dementias	Number	86,16,923,752.52
All ages	United States of America	Alzheimer's disease and other dementias	Number	7091,079,926.92
All ages	United States Virgin Islands	Alzheimer's disease and other dementias	Number	0,51,008,685.85
All ages	Uruguay	Alzheimer's disease and other dementias	Number	30,041,861.86
All ages	Uzbekistan	Alzheimer's disease and other dementias	Number	52,39,935,374.74
All ages	Vanuatu	Alzheimer's disease and other dementias	Number	0,17,847,188.88
All ages	Venezuela (Bolivarian Republic of)	Alzheimer's disease and other dementias	Number	102,770,207.07
All ages	Viet Nam	Alzheimer's disease and other dementias	Number	602,203,848.48
All ages	Yemen	Alzheimer's disease and other dementias	Number	85,50,942,766.66
All ages	Zambia	Alzheimer's disease and other dementias	Number	18,02,246,346.34
All ages	Zimbabwe	Alzheimer's disease and other dementias	Number	25,000,447.47

Table S3. Frontier analysis results for age-standardized DALY rates (ASDR) attributable to smoking-related dementia across 204 countries and territories in 2021.

Location name	ID	year	ASDR	ASDR rank	effective difference rank	O
Somalia	007688109	2021	17,3415732	17,3415732	0	12,0899989
Niger	014607274	2021	8,2012123	7,4812163	1	6,2026269
Chad	020404029	2021	12,702635	61,4254611	1	15,3300242
Mali	020637991	2021	21,0447920	5,74777654	1	15,0702212
South Sudan	027817125	2021	20,7664749	7,02649756	1	15,0702212
Burkina Faso	028518402	2021	6,82924085	5,7121655	1	1,18048586
Burundi	028937455	2021	12,0237070	5,7121655	1	6,14045052
Central African Republic	030916769	2021	14,26185762	5,71110611	1	8,55071511
Mozambique	031646514	2021	21,0282444	5,71110611	1	15,31839624
Guinea	031640293	2021	15,5592261	5,714826309	1	7,84439971
Algeria	031709998	2021	32,0797931	5,71481358	1	26,3615561
Libya	032444452	2021	18,753991	5,71251086	1	2,35549504
Guinea-Bissau	033109921	2021	7,36608671	5,71263205	1	1,63303526
Sierra Leone	033660881	2021	9,87446828	5,71263205	1	4,19877507
Ethiopia	033882326	2021	9,24477838	5,71007134	1	3,53472064
Democratic Republic of the Congo	0338179849	2021	10,10404836	5,71174237	1	4,69924059
Mali	036554934	2021	30,7798252	5,71481358	1	25,0510503
Madagascar	040549434	2021	10,8115414	5,71151526	1	5,10010503
Eritrea	040818943	2021	7,9388271	5,71152608	1	2,22287103
Senegal	040849193	2021	9,85564749	5,71154434	1	3,65450945
Togo	040833895	2021	17,3628835	5,71153757	1	11,6514464
Gambia	040971416	2021	11,8373247	5,71202823	1	6,11433042
Papua New Guinea	041779743	2021	28,3151287	5,71268075	1	22,6052329
Uganda	042130511	2021	15,5181235	5,71214717	1	11,8080641
Cote d'Ivoire	042594883	2021	12,1782476	5,71143915	1	6,46709943
Rapport Islands	044780816	2021	55,7786138	5,71080885	1	46,0095047
Rwanda	044858706	2021	78,4654897	5,71249852	1	72,7470912
Timor-Leste	045174635	2021	56,3787352	5,71338119	1	48,2282828
United Republic of Tanzania	045658273	2021	31,5008953	5,71571609	1	25,4531891
Yemen	046072826	2021	15,7008087	5,71081911	1	6,02050476
Nepal	046193715	2021	65,1327918	5,71161538	1	59,4204796
Angola	046173449	2021	27,7173932	5,71099963	1	22,0283337
Bhutan	047306278	2021	25,8514074	5,71207739	1	19,63913021
Vanuatu	047100706	2021	24,3887601	5,71201581	1	18,4644081
Cambodia	0471821491	2021	17,4852386	5,71072813	1	12,18819051
Zimbabwe	047181946	2021	45,0652738	5,71064059	1	39,3478564
Comoros	047197688	2021	25,7843333	5,71097884	1	20,0717441
Cameroon	047499223	2021	9,37915424	5,71088833	1	4,02138032
Djibouti	047598171	2021	20,3615333	5,71083758	1	14,2303718
Laos People's Democratic Republic	048918091	2021	59,9068932	5,71514139	1	54,1892518
Bangladesh	049242825	2021	45,688984	5,71719134	1	39,370552
Mauritania	04989451	2021	9,15547796	5,71284665	1	3,44242832
Nigeria	050139033	2021	6,1074845	5,71404407	1	0,93410354
Pakistan	050420889	2021	31,3184651	5,71508296	1	27,6034797
Sao Tome and Principe	050541747	2021	6,89120245	5,71744611	1	0,77658825
Zambia	050548554	2021	29,0992527	5,71460519	1	24,8466451
Lesotho	051039066	2021	49,8217222	5,71593572	1	44,1701865
Honduras	051037148	2021	35,298421	5,71063343	1	30,5451871
Kenya	051768077	2021	18,6971749	5,71537747	1	12,3188715
North Macedonia	052398472	2021	24,8972177	5,71537747	1	18,5013169
Kiribati	052718583	2021	84,3641738	5,71263936	1	78,5513144
Costa Rica	053153439	2021	6,83627802	5,71703094	1	1,1977687
Myanmar	053390084	2021	44,6076426	5,71100911	1	38,8598837
Guatemala	053997424	2021	20,88992183	5,71252738	1	15,7026909
Tajikistan	054151187	2021	28,5980785	5,7142547	1	22,8814548
Sudan	054194935	2021	46,0834032	5,71508071	1	40,3681161
Morocco	054599501	2021	23,6647993	5,71268999	1	17,96237061
El Salvador	054797188	2021	16,9121264	5,71376476	1	11,3779317
Ghana	054948939	2021	13,0181051	5,71013246	1	7,12274897
Democratic People's Republic of Korea	054984644	2021	14,3343363	5,71005211	1	10,8221241
Maldives Islands	05491126	2021	31,8537259	5,71573949	1	26,2820864
India	054902449	2021	30,2381272	5,71469697	1	24,9054776
Turkey	054926239	2021	42,0808987	5,71403487	1	36,84084
Congo	054950736	2021	46,087882	5,71574651	1	41,2730378
Eswatini	054959713	2021	21,8726222	5,71311391	1	16,1590983
Micronesia (Federated States of)	054954967	2021	47,1057192	5,7131889	1	41,5384802
Samoa	054939769	2021	53,2405920	5,71525899	1	47,5234342
Venezuela (Bolivarian Republic of)	055013039	2021	27,1540310	5,71646648	1	21,4394849
Bolivia (Plurinational State of)	055007799	2021	16,8621208	5,71179569	1	11,2651807
Kyrgyzstan	056039738	2021	55,8601399	5,71124652	1	50,1497347
Egypt	056072094	2021	80,896281	5,71180428	1	70,1514548
Belize	056102902	2021	25,282931	5,71181375	1	19,8713774
Namibia	056176473	2021	48,8145548	5,71400054	1	41,2730378
Mongolia	056176166	2021	41,9865551	5,71160211	1	38,2780993
Dominican Republic	056189911	2021	39,297121	5,71082037	1	34,5494061
Syrian Arab Republic	062304075	2021	60,8091525	5,71281345	1	54,967018
Nauru	062517814	2021	41,9989209	5,71287888	1	36,2871422
Tonga	062514693	2021	60,7110209	5,72970045	1	54,5484429
Viet Nam	062793121	2021	50,8259036	5,71540703	1	45,1104966
Pakistan	063116465	2021	60,472715	5,71484011	1	54,7687059
Suriname	063166579	2021	26,5864363	5,71570599	1	20,8707073
Paraguay	063449339	2021	45,4037614	5,71263135	1	39,8491369
Paraguay	063178099	2021	79,0821007	5,71184641	1	70,2701436
San Vincent and the Grenadines	063179943	2021	26,8972142	5,7132856	1	19,2094466
Botswana	064271629	2021	36,5621601	5,71232034	1	30,8479971
Guyana	065023135	2021	17,172062	5,71407075	1	11,4574052
Maldives	065086627	2021	44,6076426	5,71141412	1	38,8598837
Philippines	065121929	2021	50,2867295	5,71212058	1	44,5745288
Brazil	065134487	2021	50,8657861	5,71527959	1	46,1454283
Colombia	065144913	2021	18,4509884	5,71193466	1	12,7542057
Indonesia	065159810	2021	23,0442793	5,71089909	1	18,2838963
Equatorial Guinea	065787456	2021	17,1245068	5,71585051	1	11,4985902
Algeria	065910004	2021	77,8282589	5,71266254	1	70,1154661
Ecuador	066101703	2021	14,3183737	5,71005175	1	9,2044956
Peru	066205407	2021	17,5800243	5,71583077	1	11,8684066
Uzbekistan	066212494	2021	21,0005497	5,71494817	1	15,2875666
Iraq	066262631	2021	75,7138893	5,71712488	1	70,0585922
Mexico	066457336	2021	18,5335012	5,71263135	1	14,4434774
Cuba	066780864	2021	38,1406337	5,71395153	1	32,4757201
Guatemala	066999328	2021	13,8221998	5,71190189	1	8,10479656
Saint Lucia	067159975	2021	17,9269322	5,71355943	1	12,1161328
Fiji	067305531	2021	27,2374660	5,71478511	1	21,3284256
South Africa	067302098	2021	22,1182767	5,71140156	1	16,4054921
Turkmenistan	068126076	2021	25,1165352	5,71938558	1	19,4006796
Tunisia	068242126	2021	74,7081792	5,71242218	1	69,8932744
Thailand	068254793	2021	42,0117531	5,71184847	1	36,2892948
Yemenia	068326564	2021	26,4832184	5,71330469	1	20,7650317
Tokelau	068445621	2021	37,8843815	5,71214746	1	32,1720273
Azerbaijan	068451274	2021	51,7573454	5,71171032	1	46,0237482
Sri Lanka (Democratic Republic of)	069270798	2021	42,4879162	5,71075754	1	36,7719486
Costa Rica	070134047	2021	20,7908958	5,71640217	1	15,0516554
Sri Lanka	070134091	2021	21,7409861	5,71182118	1	19,0294627
Armenia	070183194	2021	63,8282468	5,71372888	1	58,114802
Albania	070484791	2021	61,2831801	5,71022208	1	54,9711585
Paraguay	070884428	2021	24,0837443	5,71720033	1	18,3720326
Turkey	071203743	2021	51,7964501	5,71263135	1	46,0847905
Mauritius	071264646	2021	42,6474274	5,71144372	1	36,9740041
Uruguay	071282445	2021	36,7787129	5,7112886	1	30,5870888
China	072162976	2021	95,4664748	5,71121859	1	81,7831662
Bosnia and Herzegovina	072177993	2021	67,2862394	5,71473808	1	61,5726059
Argentina	072112073	2021	31,4998981	5,7119884	1	29,7890941
American Samoa	072172333	2021	36,4667303	5,7187907	1	30,7512906
Kazakhstan	072154495	2021	31,2684643	5,71068184	1	25,5128448
Jordan	072197027	2021	84,3562781	5,71136827	1	78,6441178
Uyghur	072173799	2021	51,0512627	5,71277941	1	47,1837883
Niue	072622025	2021	31,4646642	5,71868227	1	25,7508919
Myanmar	073015075	2021	45,2132322	5,71489538	1	39,4975568
Republic of Moldova	073224875	2021	15,4544801	5,71068306	1	9,7284297
Georgia	073247504	2021	49,206225	5,71064013	1	43,4915545
Malaysia	073242828	2021	45,6505621	5,71124611	1	39,8477122
Portugal	074415181	2021	23,4968817	5,71598384	1	17,9190953
Labrador	074474631	2021	106,446282	5,71633861	1	100,2341418
Barbados	074674764	2021	18,4844767	5,71245906	1	11,3303939
Antigua and Barbuda	074697185	2021	16,0449995	5,71219714	1	10,2092018
Antigua and Barbuda	074988887	2021	20,2138480	5,71219677	1	14,5011838
North Macedonia	075029709	2021	62,6757207	5,71403117	1	56,9158895
Bahrain	075041024	2021	54,7527477	5,71113845	1	49,0444043
Poland	075404911	2021	19,1338094	5,71515326	1	14,6175407
Saint Kitts and Nevis	075489705	2021	11,4921829	5,71272918	1	7,79838074
Ukraine	076077913	2021	31,2702525	5,71650757	1	25,1094949
Russia	076100939	2021	34,4834544	5,71532038	1	28,7688314
Romania	076493364	2021				

Supplementary Methods

This supplementary section provides additional methodological details to support the analyses described in the main text, including definitions of key epidemiological indicators and further information on data processing and statistical procedures.

1 Sociodemographic Index (SDI)

The SDI is a composite index used to evaluate the level of development across countries and regions. It is derived from the geometric mean of three metrics: total fertility rate, average educational attainment, and per capita income¹. SDI values range from 0 to 1, with higher values reflecting greater socioeconomic development. Based on these thresholds, the Global Burden of Disease (GBD) framework classifies 204 countries and territories into five development levels: low SDI (0-0.4658), low-middle SDI (0.4658-0.6188), middle SDI (0.6188-0.7120), high-middle SDI (0.7120-0.8103), and high SDI (0.8103-1.0000). This stratification systematically captures disparities in socioeconomic conditions that influence health outcomes across populations.

2 Disability-adjusted life years (DALYs)

DALYs are a widely used indicator of overall disease burden or injury, calculated by combining years of life lost (YLLs) and years lived with disability (YLDs), thereby offering more comprehensive measure of health damages than any single metric.

3 Age-standardised rates (ASRs)

ASR was calculated using the formula below:

$$ASR = \frac{\sum_{i=1}^n a_i w_i}{\sum_{i=1}^n w_i}$$

Here, n denotes the aggregate number of age groups; i indicates the current age group's index; a_i shows the indicator value for that age group, w_i reflects the number of individuals in age group i under the standard population structure.

4 The estimated annual percentage change (EAPC)

To quantify the long-term trends in ASMR and ASDR attributable to smoking-related dementia, the estimated annual percentage change (EAPC) was calculated using linear regression. The regression model was specified as $\ln(y) = \alpha + \beta X + \varepsilon$, where $\ln(y)$ represents the natural logarithm of the ASR, α is the intercept, β is the slope, X denotes the calendar year, and ε is the error term. EAPC and its 95% confidence interval (CI) were computed as $100 \times [\exp(\beta) - 1]$, indicating the annual percentage change. If both the EAPC value and the lower bound of its 95% CI were above 0, the ASR was considered to be increasing; if both were below 0, it was considered to be decreasing; otherwise, the ASR was considered stable. The 95% CI for EAPC was obtained from the linear regression model. We applied Spearman rank correlation to examine the relationships between ASRs and SDI, and between EAPC and both ASRs and SDI. The Spearman rank correlation coefficient (R) ranges from -1 to 1 . Values approaching either end of this range indicate stronger associations, whereas those near zero suggest weak or no correlation.

4 Frontier analysis

Frontier methods was used to investigate the relative efficiency of countries and territories in achieving health outcomes, with a focus on the relationship between SDI

and health performance². This analysis defined the efficiency gap as the difference between the observed health burden in each country and the theoretical minimum burden at its corresponding SDI level, thereby quantifying relative efficiency. A standardised efficiency score was calculated to evaluate how closely each country approached the frontier line. Scores closer to 1 represented higher relative efficiency. To further examine the influence of development level and regional context on efficiency variation, stratified comparisons were conducted by SDI quintile and geographic region. Frontier analysis provides a comprehensive assessment of national and regional health performance, helping to identify potential areas for improvement and inform more targeted health intervention strategies.

5 Health inequality analysis

To characterise the distribution of the smoking-attributable burden of AD and other dementias across SDI regions, we conducted a health inequality analysis using the slope index of inequality (SII) and the concentration index³. The SII based on regression analysis to quantify absolute inequality in health outcomes across the socioeconomic gradient, exemplified by the SDI. In contrast, the concentration index assesses the extent to which health outcomes are concentrated across the entire socioeconomic distribution, reflecting the degree of inequality in health resource allocation. The concentration index values closer to zero suggest more equitable distribution.

6 Decomposition analysis

The Das Gupta decomposition method was applied to identify the structural drivers

underlying differences in overall disease burden⁴. Unlike conventional regression models that estimate associations between variables, this method decomposes changes in dementia-related deaths and DALYs during 1990–2021 into three distinct contributors: population ageing, population growth, and age-specific rates. It offers a clearer understanding of the mechanisms contributing to trends in the burden of AD and other dementias.

7 Bayesian age-period-cohort (BAPC) analysis

Additionally, we adopted the BAPC model to estimate disease burden in 2035, implemented with the BAPC package in R and based on observed data from 1990 to 2021. By capturing the relationships among age, period, and cohort effects, it supports more accurate modelling of temporal trends and facilitates projections over the medium and long term. To account for randomness in future incidence, the model automatically incorporates Poisson noise during prediction⁵.

References

- 1 Institute for Health Metrics and Evaluation. Global burden of disease study 2021 (GBD 2021): socio-demographic index (SDI) 1950–2021. 2024 [cited 2025 May 17]. Available from: <https://ghdx.healthdata.org/record/global-burden-disease-study-2021-gbd-2021-socio-demographic-index-sdi-1950%E2%80%932021>.
- 2 Bai Z, Han J, An J, Wang H, Du X, Yang Z, et al. The global, regional, and national patterns of change in the burden of congenital birth defects, 1990–2021: an analysis of the Global Burden of Disease Study 2021 and forecast to 2040. *EClinicalMedicine* 2024;77:102873. <https://doi.org/10.1016/j.eclinm.2024.102873>.
- 3 World Health Organization. Handbook on health inequality monitoring with a special focus on low- and middle-income countries. 2013 [cited 2025 May 18]. Available from: <https://www.who.int/publications/i/item/9789241548632>.
- 4 Gupta PD. Standardization and decomposition of rates from cross-classified data. *Genus* 1994;50:171–96.
- 5 Riebler A, Held L. Projecting the future burden of cancer: Bayesian age-period-cohort analysis with integrated nested Laplace approximations. *Biom J* 2017;59:531–49. <https://doi.org/10.1002/bimj.201500263>.