

Supplementary Table 5. Incidence of liver cancer in 1990 and 2019 for both sexes and percentage change in age-standardized rates based on location

| Incidence of liver cancer | 1990 | | 2019 | | Percentage change in Age-standardized rates between 1990 and 2019 |
|---------------------------------------|-------------------------------|----------------------|-------------------------------|---------------------|---|
| | Counts (95% UI) | Rate (95% UI) | Counts (95% UI) | Rate (95% UI) | |
| Global | 373,390 (335,890, 415,748) | 9 (8.1, 10) | 534,364 (486,550, 588,639) | 6.5 (5.9, 7.2) | -0.3 (-0.4, -0.2) |
| High SDI | 53,494 (51,832, 54,709) | 5.3 (5.1, 5.4) | 140,145 (125,500, 154,013) | 7.6 (6.9, 8.4) | 0.4 (0.3, 0.6) |
| High-middle SDI | 108,733 (95,240, 123,109) | 9.9 (8.7, 11.2) | 106,792 (94,151, 120,908) | 5.3 (4.7, 6) | -0.5 (-0.6, -0.3) |
| Middle SDI | 166,088 (144,078, 193,619) | 14.7 (12.8, 17) | 185,567 (162,261, 210,710) | 7.3 (6.4, 8.3) | -0.5 (-0.6, -0.4) |
| Low-middle SDI | 34,720 (31,279, 38,612) | 5.4 (4.9, 5.9) | 55,345 (50,136, 61,558) | 4 (3.6, 4.4) | -0.3 (-0.4, -0.1) |
| Low SDI | 10,249 (8,996, 11,593) | 4.1 (3.6, 4.6) | 19,279 (16,951, 21,648) | 3.5 (3.1, 3.9) | -0.1 (-0.3, 0) |
| East Asia | 241,531 (204,188, 284,759) | 25.3 (21.5, 29.7) | 217,171 (181,403, 257,464) | 10.4 (8.8, 12.3) | -0.6 (-0.7, -0.5) |
| China | 236,825 (199,322, 280,116) | 25.7 (21.7, 30.3) | 210,462 (174,832, 251,195) | 10.5 (8.7, 12.4) | -0.6 (-0.7, -0.5) |
| Democratic People's Republic of Korea | 2,589 (1,965, 3,410) | 14.6 (11.3, 19) | 3,353 (2,492, 4,402) | 10.2 (7.7, 13.4) | -0.3 (-0.5, 0) |
| Taiwan (Province of China) | 2,118 (2,030, 2,208) | 12.3 (11.7, 12.8) | 3,356 (2,609, 4,335) | 8.6 (6.7, 11.1) | -0.3 (-0.5, -0.1) |
| Southeast Asia | 17,307 (15,374, 18,982) | 6.4 (5.7, 7.1) | 42,800 (35,218, 52,129) | 7.1 (5.9, 8.6) | 0.1 (-0.1, 0.4) |
| Cambodia | 622 (486, 805) | 10.9 (8.8, 13.1) | 1,144 (887, 1,413) | 9.2 (7.3, 11.3) | -0.2 (-0.4, 0.2) |
| Mauritius | 14 (13, 15) | 1.8 (1.7, 1.9) | 33 (25, 43) | 1.9 (1.5, 2.5) | 0.1 (-0.2, 0.4) |
| Seychelles | 4 (4, 5) | 7.7 (6.7, 8.9) | 6 (5, 7) | 5.6 (4.7, 6.6) | -0.3 (-0.4, -0.1) |
| Indonesia | 2,472 (2,137, 2,837) | 2.4 (2.1, 2.8) | 4,504 (3,796, 5,158) | 2.2 (1.9, 2.5) | -0.1 (-0.3, 0.1) |
| Lao People's Democratic Republic | 220 (150, 300) | 10 (7, 13.5) | 305 (223, 395) | 6.7 (5.1, 8.5) | -0.3 (-0.5, 0) |
| Malaysia | 523 (448, 612) | 5.5 (4.7, 6.4) | 1,641 (1,243, 2,134) | 6.1 (4.6, 7.8) | 0.1 (-0.2, 0.5) |
| Maldives | 6 (4, 9) | 6.8 (4.7, 10.1) | 17 (13, 21) | 5.5 (4.3, 6.7) | -0.2 (-0.5, 0.2) |
| Myanmar | 643 (458, 925) | 2.8 (2, 3.9) | 1,868 (1,543, 2,237) | 4.1 (3.5, 4.9) | 0.5 (0, 1.1) |
| Philippines | 3,167 (2,422, 3,895) | 9.6 (7.3, 11.9) | 5,301 (4,244, 6,574) | 6.4 (5.2, 7.8) | -0.3 (-0.5, 0) |
| Sri Lanka | 222 (194, 254) | 2.1 (1.8, 2.3) | 711 (512, 953) | 2.8 (2.1, 3.7) | 0.4 (-0.1, 0.9) |

Supplementary Table 5. Continued

| Incidence of liver cancer | 1990 | | 2019 | | Percentage change in Age-standardized rates between 1990 and 2019 |
|----------------------------------|-------------------------|----------------------|----------------------------|----------------------|---|
| | Counts (95% UI) | Rate (95% UI) | Counts (95% UI) | Rate (95% UI) | |
| Thailand | 7,869 (6,830, 9,009) | 20.8 (18.1, 23.7) | 24,828 (18,287, 33,055) | 24.2 (17.9, 32) | 0.2 (-0.2, 0.6) |
| Timor-Leste | 23 (15, 33) | 7.5 (5, 10.4) | 51 (33, 72) | 6.2 (4.2, 8.6) | -0.2 (-0.4, 0.2) |
| Viet Nam | 1,500 (1,119, 1,893) | 3.7 (2.8, 4.6) | 2,335 (1,787, 2,945) | 2.6 (2, 3.3) | -0.3 (-0.5, 0.1) |
| Oceania | 113 (95, 132) | 3.7 (3.1, 4.2) | 234 (195, 278) | 3.3 (2.8, 3.9) | -0.1 (-0.3, 0.1) |
| Fiji | 22 (18, 28) | 5.7 (4.6, 7.1) | 47 (36, 61) | 6 (4.7, 7.6) | 0.1 (-0.2, 0.5) |
| American Samoa | 1 (1, 2) | 5.5 (4.2, 6.7) | 3 (3, 4) | 6.9 (5.7, 8.4) | 0.3 (0, 0.7) |
| Cook Islands | 2 (1, 2) | 13.3 (11, 15.6) | 3 (2, 3) | 11.4 (9.1, 13.9) | -0.1 (-0.3, 0.1) |
| Guam | 3 (3, 4) | 3.8 (3.2, 4.4) | 11 (9, 14) | 5.9 (4.8, 7.2) | 0.6 (0.2, 1) |
| Nauru | 0 (0, 1) | 10.5 (7.6, 13.4) | 0 (0, 1) | 9.2 (6.5, 12.6) | -0.1 (-0.4, 0.2) |
| Niue | 0 (0, 0) | 8.1 (6.4, 10.1) | 0 (0, 0) | 7.4 (5.7, 9.5) | -0.1 (-0.3, 0.3) |
| Northern Mariana Islands | 1 (1, 2) | 6.8 (5.4, 8.4) | 5 (4, 6) | 8 (6.6, 9.7) | 0.2 (-0.1, 0.5) |
| Palau | 1 (1, 1) | 9.6 (6.7, 13.3) | 2 (2, 3) | 10 (7.7, 12.9) | 0 (-0.3, 0.6) |
| Tokelau | 0 (0, 0) | 8.4 (6.2, 11) | 0 (0, 0) | 7.3 (5.3, 9.9) | -0.1 (-0.4, 0.2) |
| Tuvalu | 1 (1, 1) | 10.4 (7.9, 13.5) | 1 (1, 1) | 8.5 (6.2, 11.3) | -0.2 (-0.4, 0.1) |
| Kiribati | 6 (5, 7) | 13.9 (10.8, 17.3) | 9 (7, 12) | 11.7 (9.1, 14.7) | -0.2 (-0.4, 0.2) |
| Marshall Islands | 2 (2, 3) | 11.7 (8.9, 15.3) | 4 (3, 5) | 10.2 (7.4, 13.8) | -0.1 (-0.4, 0.2) |
| Micronesia (Federated States of) | 5 (4, 7) | 11.2 (8.3, 14.5) | 8 (5, 12) | 10.4 (6.9, 14.5) | -0.1 (-0.4, 0.4) |
| Papua New Guinea | 25 (19, 32) | 1.4 (1.1, 1.8) | 65 (50, 85) | 1.5 (1.2, 2) | 0.1 (-0.2, 0.5) |
| Samoa | 6 (4, 7) | 6 (4.8, 7.6) | 8 (6, 10) | 5 (3.8, 6.3) | -0.2 (-0.4, 0.1) |
| Solomon Islands | 11 (8, 14) | 6.7 (5, 8.6) | 19 (15, 24) | 5.4 (4.3, 6.6) | -0.2 (-0.4, 0.1) |
| Tonga | 14 (9, 18) | 23.3 (16.2, 30.1) | 20 (14, 26) | 24.3 (17.7, 31.9) | 0 (-0.3, 0.4) |

Supplementary Table 5. Continued

| Incidence of liver cancer | 1990 | | 2019 | | Percentage change in Age-standardized rates between 1990 and 2019 |
|---------------------------|-------------------------|----------------------|-------------------------|------------------------|---|
| | Counts (95% UI) | Rate (95% UI) | Counts (95% UI) | Rate (95% UI) | |
| Vanuatu | 6 (4, 10) | 9.2 (5.9, 13.8) | 16 (11, 23) | 9.1 (6.2, 12.9) | 0 (-0.3, 0.5) |
| Central Asia | 1,493 (1,329, 1,658) | 3.1 (2.8, 3.5) | 6,109 (5,296, 7,001) | 8.3 (7.2, 9.4) | 1.6 (1.2, 2.1) |
| Armenia | 30 (27, 32) | 1.1 (1, 1.2) | 271 (225, 323) | 6.6 (5.5, 7.8) | 5 (3.9, 6.3) |
| Azerbaijan | 51 (46, 58) | 1 (0.9, 1.1) | 358 (274, 472) | 4.1 (3.1, 5.5) | 3.1 (2.1, 4.8) |
| Georgia | 68 (62, 75) | 1.1 (1, 1.3) | 200 (164, 244) | 3.5 (2.9, 4.3) | 2.1 (1.5, 2.8) |
| Kazakhstan | 450 (419, 482) | 3.5 (3.2, 3.7) | 1,101 (946, 1,272) | 6.3 (5.4, 7.2) | 0.8 (0.6, 1.1) |
| Kyrgyzstan | 40 (36, 45) | 1.3 (1.2, 1.4) | 114 (97, 132) | 2.5 (2.2, 2.9) | 1 (0.7, 1.4) |
| Mongolia | 680 (544, 827) | 64.2 (51.7, 77.5) | 2,311 (1,767, 2,994) | 105.2 (82.6, 131.5) | 0.6 (0.2, 1.2) |
| Tajikistan | 34 (30, 38) | 1 (0.9, 1.2) | 174 (139, 219) | 3.7 (3, 4.7) | 2.6 (1.8, 3.5) |
| Turkmenistan | 25 (23, 29) | 1.2 (1.1, 1.3) | 234 (184, 298) | 5.6 (4.4, 7) | 3.8 (2.7, 5.1) |
| Uzbekistan | 115 (99, 134) | 0.9 (0.8, 1) | 1,346 (1,098, 1,615) | 6.3 (5.3, 7.5) | 6 (4.6, 7.5) |
| Central Europe | 7,699 (7,443, 7,902) | 5.3 (5.1, 5.4) | 6,906 (5,994, 7,986) | 3.3 (2.9, 3.8) | -0.4 (-0.5, -0.3) |
| Albania | 224 (209, 240) | 10.9 (10.1, 11.6) | 281 (205, 376) | 6.6 (4.8, 8.8) | -0.4 (-0.6, -0.2) |
| Bosnia and Herzegovina | 229 (212, 246) | 5.5 (5.1, 5.9) | 452 (359, 570) | 7.5 (6, 9.5) | 0.4 (0.1, 0.7) |
| Bulgaria | 782 (732, 836) | 6.2 (5.8, 6.6) | 614 (489, 758) | 4.5 (3.6, 5.6) | -0.3 (-0.4, -0.1) |
| Croatia | 200 (185, 216) | 3.1 (2.9, 3.4) | 321 (252, 404) | 3.7 (2.9, 4.7) | 0.2 (-0.1, 0.5) |
| Czechia | 596 (566, 624) | 4.3 (4.1, 4.5) | 615 (504, 755) | 3 (2.4, 3.6) | -0.3 (-0.4, -0.1) |
| Hungary | 952 (909, 993) | 6.5 (6.2, 6.7) | 486 (400, 592) | 2.6 (2.1, 3.2) | -0.6 (-0.7, -0.5) |
| North Macedonia | 163 (146, 179) | 8.6 (7.7, 9.5) | 270 (213, 344) | 8.4 (6.6, 10.6) | 0 (-0.3, 0.2) |
| Montenegro | 38 (31, 44) | 6.1 (5, 7) | 58 (47, 72) | 6 (4.8, 7.3) | 0 (-0.2, 0.4) |
| Poland | 3,007 (2,892, 3,101) | 7 (6.7, 7.2) | 1,349 (1,131, 1,599) | 1.9 (1.6, 2.3) | -0.7 (-0.8, -0.7) |

Supplementary Table 5. Continued

| Incidence of liver cancer | 1990 | | 2019 | | Percentage change in Age-standardized rates between 1990 and 2019 |
|---------------------------|----------------------------|----------------------|----------------------------|----------------------|---|
| | Counts (95% UI) | Rate (95% UI) | Counts (95% UI) | Rate (95% UI) | |
| Romania | 483 (433, 543) | 1.7 (1.6, 1.9) | 1,064 (865, 1,294) | 3 (2.5, 3.7) | 0.7 (0.4, 1.1) |
| Serbia | 682 (568, 789) | 6 (5, 6.9) | 862 (678, 1,087) | 5.4 (4.3, 6.8) | -0.1 (-0.3, 0.2) |
| Slovakia | 272 (255, 293) | 4.5 (4.3, 4.9) | 311 (242, 395) | 3.4 (2.7, 4.3) | -0.2 (-0.4, 0) |
| Slovenia | 71 (55, 91) | 2.9 (2.2, 3.7) | 223 (171, 286) | 5.3 (4, 6.8) | 0.8 (0.2, 1.6) |
| Eastern Europe | 4,139 (3,971, 4,327) | 1.5 (1.5, 1.6) | 9,407 (8,199, 10,735) | 2.8 (2.5, 3.2) | 0.9 (0.7, 1.1) |
| Belarus | 163 (154, 173) | 1.3 (1.2, 1.4) | 381 (275, 512) | 2.5 (1.8, 3.3) | 0.9 (0.4, 1.6) |
| Estonia | 42 (39, 45) | 2.1 (1.9, 2.2) | 94 (72, 118) | 3.7 (2.8, 4.7) | 0.8 (0.4, 1.3) |
| Latvia | 58 (54, 62) | 1.7 (1.5, 1.8) | 101 (84, 122) | 2.7 (2.2, 3.3) | 0.6 (0.3, 0.9) |
| Lithuania | 74 (69, 79) | 1.7 (1.6, 1.8) | 172 (136, 211) | 3.2 (2.5, 4) | 0.9 (0.5, 1.4) |
| Republic of Moldova | 73 (68, 78) | 1.6 (1.5, 1.8) | 132 (111, 155) | 2.3 (2, 2.7) | 0.4 (0.2, 0.6) |
| Russian Federation | 3,044 (2,910, 3,207) | 1.7 (1.6, 1.8) | 6,598 (5,591, 7,845) | 2.9 (2.5, 3.4) | 0.7 (0.5, 1) |
| Ukraine | 685 (651, 720) | 1 (0.9, 1.1) | 1,930 (1,641, 2,285) | 2.7 (2.3, 3.2) | 1.7 (1.2, 2.2) |
| High-income Asia Pacific | 28,212 (27,268, 29,085) | 13.8 (13.3, 14.2) | 67,946 (58,134, 77,642) | 15.6 (13.5, 17.7) | 0.1 (0, 0.3) |
| Brunei Darussalam | 10 (8, 12) | 9.7 (7.9, 11.5) | 38 (32, 46) | 11.8 (10, 13.8) | 0.2 (0, 0.5) |
| Japan | 24,465 (23,601, 25,148) | 14.2 (13.7, 14.6) | 46,660 (37,995, 55,120) | 12.7 (10.5, 15) | -0.1 (-0.2, 0) |
| Republic of Korea | 3,548 (2,935, 4,339) | 11 (9.2, 13.4) | 20,367 (16,678, 24,504) | 22.8 (18.7, 27.3) | 1.1 (0.6, 1.7) |
| Singapore | 189 (178, 201) | 8.4 (7.9, 9) | 881 (707, 1,110) | 11.5 (9.2, 14.4) | 0.4 (0.1, 0.7) |
| Australasia | 476 (457, 494) | 2 (2, 2.1) | 2,160 (1,752, 2,667) | 4.6 (3.7, 5.7) | 1.2 (0.8, 1.8) |
| Australia | 384 (368, 400) | 2 (1.9, 2.1) | 1,799 (1,388, 2,309) | 4.5 (3.5, 5.8) | 1.3 (0.8, 1.9) |
| New Zealand | 92 (85, 99) | 2.4 (2.2, 2.6) | 361 (297, 437) | 5 (4.1, 6) | 1.1 (0.7, 1.5) |
| Western Europe | 20,184 (19,491, 20,702) | 3.6 (3.4, 3.6) | 45,859 (39,837, 52,739) | 5.3 (4.6, 6.1) | 0.5 (0.3, 0.7) |

Supplementary Table 5. Continued

| Incidence of liver cancer | 1990 | | 2019 | | Percentage change in Age-standardized rates between 1990 and 2019 |
|---------------------------|-------------------------|-------------------|--------------------------|-------------------|---|
| | Counts (95% UI) | Rate (95% UI) | Counts (95% UI) | Rate (95% UI) | |
| Andorra | 5 (4, 7) | 9.6 (7.2, 13) | 15 (11, 20) | 11 (8.2, 14.4) | 0.1 (-0.2, 0.7) |
| Monaco | 2 (2, 3) | 3.5 (2.7, 4.3) | 8 (6, 10) | 9 (7.1, 11.3) | 1.6 (0.9, 2.6) |
| San Marino | 1 (1, 1) | 2.2 (1.8, 2.6) | 2 (1, 3) | 3.2 (2.4, 4.3) | 0.5 (0, 1) |
| Austria | 398 (379, 418) | 3.5 (3.3, 3.7) | 939 (753, 1,173) | 5.5 (4.4, 6.9) | 0.6 (0.3, 1) |
| Belgium | 443 (418, 467) | 2.9 (2.7, 3) | 928 (734, 1,171) | 4.3 (3.4, 5.4) | 0.5 (0.2, 0.9) |
| Cyprus | 25 (21, 29) | 3.2 (2.7, 3.6) | 70 (60, 82) | 3.7 (3.2, 4.3) | 0.2 (0, 0.5) |
| Denmark | 191 (180, 201) | 2.4 (2.3, 2.5) | 434 (341, 553) | 4 (3.1, 5.1) | 0.7 (0.3, 1.1) |
| Finland | 236 (221, 251) | 3.3 (3.1, 3.5) | 670 (530, 857) | 5.5 (4.3, 7.1) | 0.7 (0.3, 1.2) |
| France | 3,976 (3,786, 4,159) | 5 (4.7, 5.2) | 8,449 (6,482, 10,932) | 6.7 (5, 8.7) | 0.3 (0, 0.7) |
| Germany | 3,171 (2,931, 3,425) | 2.5 (2.4, 2.7) | 9,300 (7,292, 11,872) | 5.1 (4, 6.4) | 1 (0.5, 1.6) |
| Greece | 346 (324, 368) | 2.3 (2.1, 2.4) | 802 (643, 1,002) | 3.5 (2.8, 4.4) | 0.5 (0.2, 1) |
| Iceland | 6 (5, 6) | 2 (1.9, 2.2) | 19 (16, 22) | 3.5 (3.1, 4) | 0.7 (0.5, 1.1) |
| Ireland | 60 (56, 64) | 1.5 (1.4, 1.6) | 295 (227, 374) | 4 (3.1, 5.1) | 1.7 (1.1, 2.5) |
| Israel | 122 (109, 135) | 2.5 (2.2, 2.7) | 337 (263, 429) | 3 (2.3, 3.8) | 0.2 (-0.1, 0.6) |
| Italy | 5,982 (5,811, 6,130) | 6.8 (6.6, 6.9) | 7,928 (6,450, 9,653) | 6 (4.8, 7.4) | -0.1 (-0.3, 0.1) |
| Luxembourg | 16 (15, 17) | 3 (2.7, 3.2) | 39 (30, 51) | 4 (3.1, 5.3) | 0.4 (0.1, 0.8) |
| Malta | 7 (6, 8) | 1.6 (1.5, 1.8) | 22 (19, 26) | 2.5 (2.1, 3) | 0.6 (0.3, 0.9) |
| Netherlands | 284 (269, 298) | 1.5 (1.4, 1.5) | 1074 (836, 1,350) | 3.3 (2.6, 4.2) | 1.3 (0.8, 1.9) |
| Norway | 105 (100, 110) | 1.6 (1.6, 1.7) | 262 (218, 316) | 2.9 (2.4, 3.5) | 0.8 (0.5, 1.1) |
| Portugal | 255 (241, 269) | 1.9 (1.8, 2) | 1,058 (825, 1,339) | 4.9 (3.8, 6.3) | 1.6 (1, 2.3) |
| Spain | 2,132 (2,023, 2,225) | 3.9 (3.7, 4.1) | 5,411 (4,207, 6,881) | 6 (4.6, 7.7) | 0.5 (0.2, 1) |

Supplementary Table 5. Continued

| Incidence of liver cancer | 1990 | | 2019 | | Percentage change in Age-standardized rates between 1990 and 2019 |
|------------------------------|-------------------------|--------------------|----------------------------|-------------------|---|
| | Counts (95% UI) | Rate (95% UI) | Counts (95% UI) | Rate (95% UI) | |
| Sweden | 351 (332, 369) | 2.4 (2.3, 2.5) | 595 (501, 697) | 3 (2.6, 3.6) | 0.3 (0.1, 0.5) |
| Switzerland | 266 (251, 281) | 2.6 (2.5, 2.8) | 959 (738, 1,244) | 5.8 (4.4, 7.6) | 1.2 (0.7, 1.9) |
| United Kingdom | 1,787 (1,722, 1,836) | 2 (2, 2.1) | 6,201 (5,143, 7,417) | 5.1 (4.2, 6.1) | 1.5 (1.1, 2) |
| Southern Latin America | 721 (652, 791) | 1.6 (1.4, 1.7) | 1,939 (1,524, 2,424) | 2.3 (1.8, 2.9) | 0.5 (0.2, 0.9) |
| Argentina | 453 (395, 514) | 1.4 (1.2, 1.6) | 1,105 (867, 1,381) | 2 (1.6, 2.6) | 0.5 (0.1, 0.9) |
| Chile | 215 (201, 231) | 2.1 (2, 2.3) | 714 (554, 899) | 3 (2.3, 3.8) | 0.4 (0.1, 0.8) |
| Uruguay | 53 (47, 60) | 1.4 (1.2, 1.5) | 120 (94, 153) | 2.3 (1.8, 2.9) | 0.7 (0.3, 1.2) |
| High-income North America | 7,533 (7,276, 7,697) | 2.2 (2.1, 2.3) | 31,008 (25,713, 36,961) | 5.2 (4.3, 6.2) | 1.3 (0.9, 1.8) |
| Canada | 657 (628, 682) | 2.1 (2, 2.1) | 3,108 (2,397, 3,997) | 4.7 (3.6, 6.1) | 1.3 (0.8, 2) |
| Greenland | 2 (1, 2) | 4.5 (3.9, 5.2) | 4 (3, 6) | 6.2 (4.9, 7.7) | 0.4 (0, 0.8) |
| United States of America | 6,874 (6,639, 7,029) | 2.2 (2.2, 2.3) | 27,895 (22,785, 33,513) | 5.2 (4.3, 6.3) | 1.4 (0.9, 1.8) |
| Caribbean | 1,563 (1,452, 1,657) | 5.9 (5.5, 6.3) | 1,628 (1,353, 1,938) | 3.2 (2.6, 3.8) | -0.5 (-0.6, -0.4) |
| Antigua and Barbuda | 4 (4, 5) | 7.7 (7, 8.5) | 3 (2, 3) | 2.7 (2.3, 3.1) | -0.7 (-0.7, -0.6) |
| Bermuda | 4 (4, 5) | 7.1 (6.4, 7.8) | 3 (2, 3) | 2.1 (1.7, 2.6) | -0.7 (-0.8, -0.6) |
| Puerto Rico | 241 (225, 254) | 6.6 (6.2, 6.9) | 188 (141, 244) | 2.8 (2.1, 3.6) | -0.6 (-0.7, -0.5) |
| Saint Kitts and Nevis | 5 (4, 5) | 12.7 (11.6, 14) | 2 (2, 3) | 3.7 (3.1, 4.4) | -0.7 (-0.8, -0.6) |
| United States Virgin Islands | 3 (3, 4) | 4.1 (3.4, 4.8) | 5 (4, 5) | 2.5 (2.1, 3) | -0.4 (-0.5, -0.2) |
| Bahamas | 13 (11, 15) | 8.2 (7.2, 9.1) | 12 (10, 15) | 3.1 (2.6, 3.8) | -0.6 (-0.7, -0.5) |
| Barbados | 8 (6, 10) | 2.8 (2, 3.6) | 13 (10, 15) | 2.6 (2.2, 3.1) | -0.1 (-0.3, 0.4) |
| Belize | 6 (5, 6) | 5.9 (5.4, 6.6) | 8 (7, 10) | 3 (2.6, 3.5) | -0.5 (-0.6, -0.4) |
| Cuba | 659 (624, 690) | 6.4 (6, 6.7) | 442 (355, 548) | 2.3 (1.9, 2.9) | -0.6 (-0.7, -0.5) |

Supplementary Table 5. Continued

| Incidence of liver cancer | 1990 | | 2019 | | Percentage change in Age-standardized rates between 1990 and 2019 |
|----------------------------------|-------------------------|---------------------|-------------------------|---------------------|---|
| | Counts (95% UI) | Rate (95% UI) | Counts (95% UI) | Rate (95% UI) | |
| Dominica | 6 (5, 7) | 8.6 (7.5, 9.7) | 3 (2, 4) | 3.2 (2.6, 3.9) | -0.6 (-0.7, -0.5) |
| Dominican Republic | 155 (136, 176) | 3.9 (3.4, 4.5) | 435 (294, 660) | 4.6 (3.2, 7) | 0.2 (-0.2, 0.8) |
| Grenada | 6 (6, 7) | 8.9 (8, 9.9) | 3 (3, 4) | 3 (2.6, 3.4) | -0.7 (-0.7, -0.6) |
| Guyana | 26 (22, 30) | 6.5 (5.6, 7.5) | 19 (15, 24) | 3 (2.4, 3.8) | -0.5 (-0.7, -0.4) |
| Haiti | 220 (137, 300) | 6.7 (4.2, 9.2) | 290 (176, 432) | 4.1 (2.5, 6.3) | -0.4 (-0.6, -0.1) |
| Jamaica | 70 (65, 75) | 3.9 (3.6, 4.2) | 77 (61, 96) | 2.6 (2.1, 3.3) | -0.3 (-0.5, -0.1) |
| Saint Lucia | 5 (5, 6) | 6 (5.5, 6.6) | 5 (4, 6) | 2.2 (1.8, 2.6) | -0.6 (-0.7, -0.6) |
| Saint Vincent and the Grenadines | 5 (5, 6) | 7.2 (6.6, 7.8) | 4 (3, 5) | 3 (2.6, 3.4) | -0.6 (-0.6, -0.5) |
| Suriname | 17 (15, 19) | 6.4 (5.8, 7.2) | 16 (12, 19) | 2.6 (2.1, 3.2) | -0.6 (-0.7, -0.5) |
| Trinidad and Tobago | 57 (53, 60) | 6.7 (6.2, 7.1) | 46 (35, 61) | 2.5 (1.9, 3.3) | -0.6 (-0.7, -0.5) |
| Andean Latin America | 1,036 (910, 1,168) | 4.9 (4.3, 5.5) | 1,735 (1,419, 2,114) | 3.1 (2.5, 3.8) | -0.4 (-0.5, -0.2) |
| Bolivia (Plurinational State of) | 162 (122, 213) | 4.9 (3.7, 6.4) | 399 (296, 520) | 4.6 (3.4, 5.9) | -0.1 (-0.3, 0.3) |
| Ecuador | 155 (139, 172) | 2.8 (2.5, 3.1) | 505 (400, 653) | 3.4 (2.7, 4.4) | 0.2 (-0.1, 0.6) |
| Peru | 719 (619, 829) | 5.8 (5, 6.7) | 831 (618, 1,103) | 2.6 (1.9, 3.5) | -0.6 (-0.7, -0.4) |
| Central Latin America | 2,970 (2,764, 3,123) | 3.5 (3.2, 3.7) | 7,987 (6,880, 9,272) | 3.4 (3, 4) | 0 (-0.1, 0.1) |
| Colombia | 509 (483, 535) | 2.8 (2.7, 3) | 1,318 (1,002, 1,690) | 2.5 (1.9, 3.2) | -0.1 (-0.3, 0.1) |
| Costa Rica | 96 (89, 102) | 5.4 (5, 5.8) | 261 (202, 331) | 5.1 (4, 6.5) | -0.1 (-0.3, 0.2) |
| El Salvador | 103 (95, 111) | 3.4 (3.1, 3.6) | 118 (89, 153) | 2 (1.5, 2.6) | -0.4 (-0.6, -0.2) |
| Guatemala | 344 (305, 388) | 9.3 (8.3, 10.5) | 498 (394, 628) | 4.5 (3.6, 5.6) | -0.5 (-0.6, -0.4) |
| Honduras | 231 (92, 333) | 11.1 (4.2, 16.1) | 879 (408, 1,299) | 14.8 (6.8, 21.7) | 0.3 (0, 1) |
| Mexico | 970 (935, 997) | 2.2 (2.1, 2.3) | 3,973 (3,436, 4,550) | 3.5 (3, 4) | 0.5 (0.3, 0.8) |

Supplementary Table 5. Continued

| Incidence of liver cancer | 1990 | | 2019 | | Percentage change in Age-standardized rates between 1990 and 2019 |
|------------------------------------|---------------------------|----------------------|----------------------------|----------------------|---|
| | Counts (95% UI) | Rate (95% UI) | Counts (95% UI) | Rate (95% UI) | |
| Nicaragua | 50 (44, 56) | 3 (2.6, 3.5) | 165 (133, 202) | 3.8 (3.1, 4.6) | 0.2 (0, 0.6) |
| Panama | 50 (46, 54) | 3.3 (3, 3.5) | 121 (92, 155) | 2.9 (2.2, 3.8) | -0.1 (-0.3, 0.2) |
| Venezuela (Bolivarian Republic of) | 617 (588, 646) | 6.4 (6, 6.7) | 654 (502, 855) | 2.3 (1.8, 3) | -0.6 (-0.7, -0.5) |
| Tropical Latin America | 1,846 (1,774, 1,903) | 2 (1.9, 2) | 5,667 (5,335, 5,956) | 2.4 (2.2, 2.5) | 0.2 (0.1, 0.3) |
| Brazil | 1,794 (1,726, 1,850) | 2 (1.9, 2) | 5,555 (5,239, 5,841) | 2.4 (2.2, 2.5) | 0.2 (0.1, 0.3) |
| Paraguay | 52 (45, 60) | 2.3 (2, 2.7) | 112 (84, 146) | 2.1 (1.5, 2.7) | -0.1 (-0.4, 0.2) |
| North Africa and Middle East | 10,734 (9,445, 11,997) | 6.1 (5.3, 6.8) | 27,546 (22,113, 33,841) | 6.3 (5.1, 7.7) | 0 (-0.2, 0.4) |
| Algeria | 207 (168, 256) | 1.7 (1.4, 2.1) | 720 (562, 908) | 2.2 (1.7, 2.8) | 0.3 (0, 0.7) |
| Afghanistan | 843 (646, 1,082) | 11.5 (8.9, 14.5) | 1,408 (1,057, 1,848) | 9.8 (7.6, 12.4) | -0.1 (-0.4, 0.2) |
| Sudan | 330 (195, 495) | 3.5 (2.1, 5.4) | 674 (393, 1,048) | 3.7 (2.2, 5.8) | 0 (-0.3, 0.5) |
| Bahrain | 9 (7, 11) | 5.6 (4.7, 6.6) | 44 (34, 57) | 5.5 (4.4, 6.9) | 0 (-0.3, 0.3) |
| Egypt | 5,143 (4,090, 6,179) | 16.7 (13.1, 20.2) | 13,841 (9,844, 19,064) | 20.9 (15.1, 28.5) | 0.2 (-0.2, 0.9) |
| Iran (Islamic Republic of) | 1,068 (881, 1,245) | 4.3 (3.5, 5.1) | 2,722 (2,475, 2,991) | 3.9 (3.5, 4.3) | -0.1 (-0.3, 0.2) |
| Iraq | 353 (273, 439) | 4.4 (3.4, 5.4) | 1,407 (1,069, 1,783) | 6.1 (4.7, 7.6) | 0.4 (0, 1) |
| Jordan | 40 (32, 49) | 3 (2.4, 3.8) | 154 (124, 191) | 2.5 (2, 3) | -0.2 (-0.4, 0.1) |
| Kuwait | 18 (16, 20) | 2.8 (2.5, 3.1) | 66 (52, 82) | 2.7 (2.2, 3.4) | 0 (-0.2, 0.2) |
| Lebanon | 79 (64, 97) | 3.4 (2.8, 4.2) | 192 (143, 266) | 3.7 (2.7, 5.1) | 0.1 (-0.3, 0.6) |
| Libya | 100 (76, 130) | 5.2 (3.9, 6.7) | 271 (200, 374) | 5.2 (3.9, 7.1) | 0 (-0.3, 0.5) |
| Morocco | 249 (183, 307) | 1.9 (1.4, 2.4) | 632 (481, 778) | 2.2 (1.6, 2.6) | 0.1 (-0.2, 0.5) |
| Palestine | 72 (53, 96) | 8.4 (6.3, 11.1) | 149 (125, 180) | 6.6 (5.5, 7.9) | -0.2 (-0.5, 0.1) |
| Oman | 31 (22, 41) | 4.2 (2.9, 5.7) | 98 (79, 122) | 5.3 (4.5, 6.3) | 0.2 (-0.1, 0.9) |

Supplementary Table 5. Continued

| Incidence of liver cancer | 1990 | | 2019 | | Percentage change in Age-standardized rates between 1990 and 2019 |
|----------------------------------|----------------------------|--------------------|----------------------------|----------------------|---|
| | Counts (95% UI) | Rate (95% UI) | Counts (95% UI) | Rate (95% UI) | |
| Qatar | 15 (11, 19) | 16.1 (12.1, 21) | 108 (76, 147) | 17.4 (12.8, 22.9) | 0.1 (-0.2, 0.5) |
| Saudi Arabia | 291 (212, 373) | 5 (3.7, 6.4) | 855 (645, 1,124) | 5.3 (4.2, 6.7) | 0.1 (-0.3, 0.6) |
| Syrian Arab Republic | 259 (196, 326) | 4.9 (3.6, 6.2) | 535 (400, 711) | 4.5 (3.4, 5.9) | -0.1 (-0.4, 0.4) |
| Tunisia | 94 (73, 121) | 1.9 (1.5, 2.4) | 240 (170, 336) | 1.9 (1.4, 2.7) | 0 (-0.3, 0.6) |
| Turkey | 1,349 (1,080, 1,640) | 3.7 (3, 4.5) | 2,768 (2,204, 3,413) | 3.2 (2.6, 4) | -0.1 (-0.4, 0.2) |
| United Arab Emirates | 21 (11, 37) | 4.3 (2.1, 8.1) | 219 (93, 496) | 4.7 (2, 10.8) | 0.1 (-0.4, 0.7) |
| Yemen | 156 (98, 229) | 3.2 (2, 4.7) | 416 (301, 569) | 3.2 (2.3, 4.3) | 0 (-0.3, 0.4) |
| South Asia | 15,679 (13,213, 18,045) | 2.7 (2.2, 3.1) | 37,733 (32,783, 43,281) | 2.7 (2.3, 3.1) | 0 (-0.2, 0.2) |
| Bangladesh | 1,742 (1,384, 2,138) | 3.1 (2.6, 3.8) | 3,405 (2,661, 4,240) | 2.6 (2, 3.2) | -0.2 (-0.4, 0.1) |
| Bhutan | 6 (4, 9) | 2.2 (1.5, 3.2) | 17 (12, 24) | 3 (2.1, 4.3) | 0.4 (0, 1) |
| India | 11,777 (9,852, 13,689) | 2.5 (2.1, 3) | 29,968 (25,244, 35,612) | 2.6 (2.2, 3.1) | 0 (-0.2, 0.3) |
| Nepal | 179 (137, 232) | 1.8 (1.4, 2.3) | 460 (331, 662) | 2.1 (1.5, 3.1) | 0.2 (-0.2, 0.6) |
| Pakistan | 1,976 (1,345, 2,622) | 3.3 (2.2, 4.4) | 3,884 (3,101, 4,736) | 3.3 (2.6, 4) | 0 (-0.3, 0.5) |
| Central Sub-Saharan Africa | 687 (563, 827) | 2.6 (2.2, 3.1) | 1,364 (1,080, 1,715) | 2.3 (1.8, 2.9) | -0.1 (-0.3, 0.2) |
| Angola | 112 (84, 147) | 2.5 (1.9, 3.3) | 294 (226, 377) | 2.4 (1.9, 3) | -0.1 (-0.3, 0.3) |
| Central African Republic | 47 (32, 65) | 3.5 (2.5, 4.9) | 74 (46, 111) | 3.2 (2.1, 4.7) | -0.1 (-0.3, 0.2) |
| Congo | 46 (34, 63) | 4 (3, 5.4) | 77 (55, 107) | 2.9 (2.1, 3.9) | -0.3 (-0.5, 0) |
| Democratic Republic of the Congo | 456 (367, 564) | 2.5 (2, 3) | 870 (659, 1,142) | 2.1 (1.6, 2.8) | -0.1 (-0.4, 0.2) |
| Equatorial Guinea | 7 (5, 9) | 3 (2.3, 4) | 16 (9, 24) | 3.2 (1.9, 4.6) | 0 (-0.4, 0.7) |
| Gabon | 20 (14, 25) | 3.3 (2.5, 4.3) | 34 (23, 49) | 3.3 (2.2, 4.7) | 0 (-0.4, 0.5) |
| Eastern Sub-Saharan Africa | 2,444 (1,992, 3,027) | 2.9 (2.4, 3.7) | 5,439 (4,462, 6,714) | 3.1 (2.6, 3.8) | 0.1 (-0.1, 0.3) |

Supplementary Table 5. Continued

| Incidence of liver cancer | 1990 | | 2019 | | Percentage change in Age-standardized rates between 1990 and 2019 |
|-----------------------------|-------------------------|--------------------|-------------------------|-------------------|---|
| | Counts (95% UI) | Rate (95% UI) | Counts (95% UI) | Rate (95% UI) | |
| Burundi | 94 (68, 124) | 3.7 (2.7, 4.8) | 141 (97, 221) | 2.9 (2, 4.5) | -0.2 (-0.5, 0.2) |
| South Sudan | 78 (49, 141) | 3 (1.9, 5.5) | 110 (65, 192) | 2.7 (1.6, 4.8) | -0.1 (-0.3, 0.2) |
| Comoros | 7 (4, 12) | 3.1 (1.7, 5.2) | 14 (9, 21) | 2.8 (1.9, 4.3) | -0.1 (-0.4, 0.6) |
| Djibouti | 5 (3, 9) | 3.1 (2.1, 5.4) | 20 (12, 34) | 3.2 (2.1, 5.2) | 0 (-0.3, 0.4) |
| Eritrea | 35 (24, 54) | 3.2 (2.2, 4.9) | 87 (60, 128) | 3.1 (2.2, 4.4) | 0 (-0.3, 0.4) |
| Ethiopia | 642 (446, 926) | 2.9 (2.1, 4) | 1155 (930, 1,476) | 2.7 (2.2, 3.5) | -0.1 (-0.4, 0.4) |
| Kenya | 219 (151, 384) | 2.5 (1.7, 4.4) | 663 (432, 982) | 2.9 (1.9, 4.3) | 0.2 (-0.1, 0.4) |
| Madagascar | 164 (118, 274) | 2.9 (2, 5) | 285 (193, 430) | 2.4 (1.7, 3.7) | -0.2 (-0.4, 0.2) |
| Malawi | 160 (119, 222) | 3.2 (2.5, 4.6) | 241 (187, 303) | 2.8 (2.2, 3.5) | -0.1 (-0.4, 0.2) |
| Mozambique | 133 (94, 214) | 2.1 (1.5, 3.4) | 441 (303, 585) | 3.7 (2.5, 4.8) | 0.7 (-0.2, 1.8) |
| Rwanda | 158 (114, 220) | 5 (3.7, 6.8) | 279 (212, 369) | 4.4 (3.5, 5.7) | -0.1 (-0.4, 0.3) |
| Somalia | 98 (59, 170) | 3.5 (2.2, 6.1) | 240 (150, 425) | 3.3 (2.1, 5.9) | -0.1 (-0.3, 0.4) |
| United Republic of Tanzania | 255 (203, 314) | 2 (1.7, 2.5) | 600 (464, 765) | 2.2 (1.8, 2.8) | 0.1 (-0.1, 0.4) |
| Uganda | 318 (255, 388) | 4.5 (3.6, 5.4) | 963 (744, 1217) | 6.1 (4.8, 7.5) | 0.4 (0, 0.8) |
| Zambia | 76 (56, 108) | 2.4 (1.8, 3.4) | 195 (149, 247) | 2.7 (2.1, 3.4) | 0.2 (-0.3, 0.7) |
| Southern Sub-Saharan Africa | 1,908 (1,345, 3,153) | 6.5 (4.5, 10.7) | 4,016 (3,581, 4,521) | 6.8 (6.1, 7.6) | 0 (-0.4, 0.6) |
| Botswana | 6 (3, 13) | 1 (0.5, 2.2) | 22 (15, 31) | 1.5 (1.1, 2) | 0.5 (-0.3, 2.2) |
| Lesotho | 52 (32, 110) | 5.1 (3.2, 10.6) | 195 (78, 309) | 14.4 (6, 22.7) | 1.8 (-0.3, 5) |
| Namibia | 14 (8, 25) | 1.9 (1.2, 3.3) | 48 (36, 63) | 3.3 (2.5, 4.2) | 0.8 (0, 2.1) |
| South Africa | 1,306 (866, 2,211) | 5.8 (3.8, 9.8) | 2,600 (2,291, 2,946) | 5.6 (4.9, 6.3) | 0 (-0.5, 0.6) |
| Eswatini | 18 (11, 35) | 5.6 (3.7, 10.8) | 119 (34, 220) | 18.4 (5.6, 33) | 2.3 (-0.4, 6.7) |

Supplementary Table 5. Continued

| Incidence of liver cancer | 1990 | | 2019 | | Percentage change in Age-standardized rates between 1990 and 2019 |
|----------------------------|-------------------------|----------------------|--------------------------|----------------------|---|
| | Counts (95% UI) | Rate (95% UI) | Counts (95% UI) | Rate (95% UI) | |
| Zimbabwe | 512 (397, 796) | 11.8 (9.2, 17.9) | 1,032 (760, 1,405) | 13.6 (10.3, 18.1) | 0.2 (-0.2, 0.6) |
| Western Sub-Saharan Africa | 5,114 (4,328, 5,960) | 5.4 (4.6, 6.3) | 9,709 (8,164, 11,417) | 4.9 (4.2, 5.7) | -0.1 (-0.3, 0.1) |
| Benin | 138 (111, 175) | 6.5 (5.2, 8.4) | 249 (182, 337) | 4.8 (3.6, 6.4) | -0.3 (-0.5, 0) |
| Burkina Faso | 143 (112, 179) | 3 (2.4, 3.6) | 233 (174, 302) | 2.2 (1.7, 2.7) | -0.3 (-0.5, 0) |
| Cameroon | 30 (21, 45) | 0.6 (0.4, 1) | 85 (60, 116) | 0.7 (0.5, 0.9) | 0 (-0.3, 0.5) |
| Cabo Verde | 3 (2, 3) | 1.1 (0.9, 1.3) | 50 (41, 61) | 11.6 (9.5, 13.9) | 9.6 (7.4, 12.5) |
| Chad | 182 (141, 234) | 6.2 (4.8, 7.9) | 317 (237, 412) | 5.3 (4, 6.8) | -0.1 (-0.3, 0.1) |
| Cote d'Ivoire | 331 (247, 426) | 7.5 (5.7, 9.4) | 534 (384, 738) | 4.7 (3.5, 6.4) | -0.4 (-0.5, -0.2) |
| Gambia | 121 (89, 162) | 29.7 (22.3, 39) | 409 (292, 541) | 38.2 (27.5, 49.7) | 0.3 (-0.1, 0.9) |
| Ghana | 393 (299, 526) | 5.8 (4.5, 7.7) | 980 (725, 1,260) | 5.7 (4.3, 7.2) | 0 (-0.4, 0.4) |
| Guinea | 1,032 (859, 1,243) | 29.9 (24.9, 35.8) | 1,881 (1,308, 2,447) | 32.2 (22.3, 41.9) | 0.1 (-0.3, 0.5) |
| Guinea-Bissau | 35 (25, 51) | 8.1 (5.9, 11.3) | 48 (34, 66) | 6.1 (4.4, 8.3) | -0.2 (-0.5, 0.1) |
| Liberia | 78 (61, 101) | 6.8 (5.4, 8.8) | 107 (75, 154) | 4.9 (3.6, 7.2) | -0.3 (-0.5, 0) |
| Mali | 696 (571, 838) | 15.1 (12.4, 18.2) | 1,358 (997, 1,803) | 14.5 (10.7, 19) | 0 (-0.3, 0.3) |
| Mauritania | 72 (58, 88) | 6.9 (5.6, 8.4) | 86 (63, 114) | 4.1 (3, 5.3) | -0.4 (-0.6, -0.2) |
| Niger | 20 (16, 25) | 0.7 (0.5, 0.8) | 51 (37, 68) | 0.6 (0.5, 0.8) | -0.1 (-0.3, 0.2) |
| Nigeria | 1,559 (1,184, 1,976) | 3.3 (2.5, 4.2) | 2,786 (2,157, 3,527) | 3.3 (2.6, 4) | 0 (-0.3, 0.4) |
| Sao Tome and Principe | 2 (1, 2) | 2.4 (1.9, 3) | 3 (2, 4) | 2.6 (1.8, 3.5) | 0.1 (-0.3, 0.5) |
| Senegal | 77 (61, 92) | 2.2 (1.8, 2.7) | 163 (120, 208) | 2.1 (1.5, 2.6) | -0.1 (-0.3, 0.3) |
| Sierra Leone | 116 (87, 150) | 5.8 (4.4, 7.5) | 176 (130, 235) | 4.6 (3.5, 6) | -0.2 (-0.4, 0.1) |
| Togo | 87 (68, 110) | 6.4 (5.1, 8.1) | 192 (144, 252) | 4.9 (3.8, 6.4) | -0.2 (-0.4, 0.1) |

UI, uncertainty interval; SDI, sociodemographic index.