**Supplementary Table 2. The top three and the bottom three regions of larynx cancer incidence, death, or DALY.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Measure** | **Sex** | **Top three regions** | **Bottom three regions**  |
| **Cases of 2017**  |
| Incidence |
|  | Both  | South Asia(50557.41） | East Asia(41889.88） | Western Europe(25274.97） | Oceania(141.06) | Andean Latin America(482.58) | Central Sub-Saharan Africa(820.44) |
|  | Female | South Asia(11433.28)  | East Asia(6649.06) | High-income North America(2900.87) | Oceania(32.02） | Central Sub-Saharan Africa(118.47） | Andean Latin America(123.35) |
|  | Male | South Asia(39124.13) | East Asia(35240.82) | Western Europe(22666.98) | Oceania(109.04) | Andean Latin America(359.24) | Central Sub-Saharan Africa(701.97) |
| Death |  |  |  |  |  |  |  |
|  | Both  | South Asia(44258.09) | East Asia(20430.02) | Western Europe(9257.59) | Oceania(119.50) | Australasia(293.03) | Andean Latin America(397.62) |
|  | Female | South Asia(9643.47） | East Asia(3487.65） | Southeast Asia(1190.91） | Oceania(27.41) | Australasia(39.27) | Andean Latin America(93.44） |
|  | Male | South Asia(34614.63) | East Asia(16942.37) | Western Europe(8203.244) | Oceania(92.09) | Australasia(253.76) | Andean Latin America(304.17) |
| DALY  |
|  | Both  | South Asia(1236890.09) | East Asia(489640.67) | Southeast Asia(209250.40) | Oceania(3738.75) | Australasia(6296.69) | Andean Latin America(8723.46) |
|  | Female | South Asia(278933.69) | East Asia(74904.32) | Southeast Asia(30280.71) | Australasia(853.71) | Oceania(896.55) | Andean Latin America(2197.35) |
|  | Male | South Asia(957956.40) | East Asia(414736.35) | Western Europe(183088.29) | Oceania(2842.2) | Australasia(5442.99) | Andean Latin America(6526.1) |
| **ASR of 2017 (per 100,000 people)** |
| ASIR |
|  | Both  | Caribbean(4.64）  | Central Europe(4.39) | Eastern Europe(3.67） | Andean Latin America(0.90) | Western Sub-Saharan Africa (1.33) | Eastern Sub-Saharan Africa(1.38) |
|  | Female | South Asia(1.58) | Caribbean(1.16） | High-income North America(0.93） | Western Sub-Saharan Africa(0.20) | High-income Asia Pacific(0.34） | Eastern Europe(0.39） |
|  | Male | Central Europe(8.55) | Caribbean(8.53) | Eastern Europe(8.37) | Andean Latin America(1.39) | Eastern Sub-Saharan Africa(2.41) | Western Sub-Saharan Africa(2.55) |
| ASDR |
|  | Both  | South Asia(3.22) | Caribbean(3.02) | Central Europe(2.44) | High-income Asia Pacific(0.36) | Australasia(0.60) | Andean Latin America(0.75) |
|  | Female | South Asia(1.37） | Oceania(0.82） | Caribbean(0.72） | High-income Asia Pacific(0.07) | Australasia(0.15) | Eastern Europe(0.16） |
|  | Male | Caribbean(5.63) | South Asia(5.14) | Central Europe(4.96) | High-income Asia Pacific(0.75) | Australasia(1.12) | Andean Latin America(1.20) |
| Age Standardized DALY Rate |
|  | Both  | South Asia(83.63) | Caribbean(71.27) | Central Europe(65.76) | High-income Asia Pacific(7.98) | Australasia(14.02) | Andean Latin America(15.97) |
|  | Female | South Asia(37.01) | Oceania(22.34) | Central Asia(16.66) | High-income Asia Pacific(1.80) | Australasia(3.75) | Western Sub-Saharan Africa(4.53) |
|  | Male | Caribbean(131.40) | South Asia(130.91) | Eastern Europe(129.15) | High-income Asia Pacific(15.19) | Andean Latin America(24.73) | Australasia(25.18) |
| **Increase in the number of cases/years from1990 to 2017 (-fold)** |
| Incidence |
|  | Both  | East Asia(190.73%)  | Tropical Latin America (140.92%) | Oceania(134.75%) | Eastern Europe(-6.88%) | Western Europe(-3.93 %) | Central Asia (14.80 %) |
|  | Female | Tropical Latin America(142.30%) | Oceania (132.68%) | East Asia (112.13%) | Eastern Europe(-2.71 %) | Eastern Sub-Saharan Africa(12.87 %) | High-income Asia Pacific(13.31 %) |
|  | Male | East Asia(212.59%) | Southeast Asia(140.75% ) | Tropical Latin America(140.71%) | Western Europe(-7.64%)  | Eastern Europe(-7.13%) | Central Asia(1.89%) |
| Death |
|  | Both  | Oceania(129.38%) | Tropical Latin America(105.86%) | Caribbean(88.62%) | Western Europe(-28.18%) | Eastern Europe(-26.63%) | Central Europe(-6.10%) |
|  | Female | Oceania(125.09%) | Tropical Latin America(102.42%) | Western Sub-Saharan Africa(68.73%) | High-income Asia Pacific (-29.86%) | Eastern Europe(-29.01%) | Western Europe(-1.91%) |
|  | Male | Oceania(130.69%) | Tropical Latin America(106.37%) | Caribbean(96.32%) | Western Europe(-30.57%) | Eastern Europe(-26.50%) | Central Asia(-9.00%) |
| DALY |
|  | Both  | Oceania(126.74%) | Tropical Latin America(92.62%) | Caribbean(89.97%) | Western Europe(-36.72%) | Eastern Europe(-32.03%) | High-income Asia Pacific(-22.42%) |
|  | Female | Oceania(124.81 %) | Tropical Latin America(84.17%) | Western Sub-Saharan Africa(71.99%) | High-income Asia Pacific(-42.42%) | Eastern Europe(-26.36%) | Western Europe(-4.73%) |
|  | Male | Oceania(127.36%) | Caribbean(99.78%) | Tropical Latin America(93.82%) | Western Europe(-39.23%) | Eastern Europe(-32.27%) | Southern Latin America(-19.27%) |
| **EAPC** |
| Incidence |
|  | Both  | East Asia(1.01) | Caribbean (0.56) | Oceania (0.42) | Andean Latin America(-2.21) | Central Latin America(-1.88) | Southern Latin America(-1.83) |
|  | Female | Central Asia(0.92) | Central Europe(0.70) | Oceania(0.48) | Central Latin America(-3.19) | Eastern Sub-Saharan Africa(-2.74) | Andean Latin America(-2.37) |
|  | Male | East Asia(1.18) | Caribbean(0.79) | Oceania(0.42) | Andean Latin America(-2.16) | Western Europe(-2.13) | Southern Latin America(-2.02) |
| Death |
|  | Both  | Oceania(0.37) | Caribbean(-0.16) | Western Sub-Saharan Africa(-0.36) | High-income Asia Pacific(-3.85) | Western Europe(-2.98) | Australasia(-2.94) |
|  | Female | Oceania(0.38) | Central Asia(0.09) | Southern Latin America(-0.60) | High-income Asia Pacific(-5.11) | Central Latin America(-3.92) | Andean Latin America(-3.13) |
|  | Male | Oceania(0.39) | Caribbean(0.08) | Western Sub-Saharan Africa(-0.15) | High-income Asia Pacific(-3.74) | Western Europe(-3.32) | Australasia(-3.14) |
| DALY |
|  | Both  | Oceania(0.30) | Caribbean(0.02) | Western Sub-Saharan Africa(-0.60) | High-income Asia Pacific(-3.97) | Western Europe(-3.27) | Australasia(-3.18) |
|  | Female | Oceania(0.33) | Central Asia(0.19) | Southern Latin America(-0.60) | High-income Asia Pacific(-4.51) | Central Latin America(-4.02) | Andean Latin America(-3.34) |
|  | Male | Oceania(0.30) | Caribbean (0.27) | Western Sub-Saharan Africa(-0.28) | High-income Asia Pacific(-4.01) | Western Europe(-3.58) | Australasia(-3.34) |

**Abbreviations:** ASDR, age standardized death rate; ASIR, age standardized incidence rate; DALY, disability adjusted life-year