Tabla S1. Number of deaths, age-standardized mortality rates per 100,000 person-years by liver cancer in the 25 Peruvian regions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Regions** | **Men** | **Women** | **M:F Ratio (2003)** | **M:F Ratio (2017)** |
| **2003** | **2017** | **2003** | **2017** |
| **Deaths** | **ASMR** | **Deaths** | **ASMR** | **Deaths** | **ASMR** | **Deaths** | **ASMR** |
|  |  |  |  |  |  |  |  |  |  |  |
| Amazonas | 15 | 10.86 | 18 | 11.03 | 9 | 8.01 | 21 | 13.45 | 1.4 | 0.8 |
| Ancash | 14 | 3.08 | 29 | 5.52 | 22 | 4.66 | 46 | 8.15 | 0.7 | 0.7 |
| Apurimac | 28 | 16.08 | 24 | 13.46 | 18 | 9.90 | 20 | 9.92 | 1.6 | 1.4 |
| Arequipa | 37 | 8.07 | 32 | 5.23 | 45 | 9.03 | 30 | 4.34 | 0.9 | 1.2 |
| Ayacucho | 27 | 12.26 | 32 | 12.70 | 31 | 12.14 | 35 | 12.68 | 1.0 | 1.0 |
| Cajamarca | 48 | 10.81 | 39 | 6.39 | 24 | 4.67 | 57 | 8.77 | 2.3 | 0.7 |
| Callao | 20 | 5.94 | 25 | 5.18 | 18 | 4.96 | 25 | 4.45 | 1.2 | 1.2 |
| Cusco | 27 | 5.23 | 72 | 12.31 | 64 | 12.64 | 62 | 9.85 | 0.4 | 1.2 |
| Huancavelica | 21 | 15.28 | 5 | 3.23 | 19 | 11.60 | 24 | 13.90 | 1.3 | 0.2 |
| Huanuco | 26 | 9.42 | 32 | 9.90 | 18 | 6.22 | 57 | 15.65 | 1.5 | 0.6 |
| Ica | 14 | 5.15 | 23 | 6.02 | 25 | 8.24 | 25 | 6.22 | 0.6 | 1.0 |
| Junin | 49 | 9.20 | 35 | 6.34 | 28 | 5.82 | 27 | 4.44 | 1.6 | 1.4 |
| La Libertad | 65 | 10.76 | 46 | 5.65 | 58 | 8.75 | 76 | 8.37 | 1.2 | 0.7 |
| Lambayeque | 24 | 5.64 | 40 | 6.94 | 31 | 6.31 | 47 | 7.15 | 0.9 | 1.0 |
| Lima | 210 | 6.32 | 265 | 5.80 | 216 | 5.65 | 261 | 4.78 | 1.1 | 1.2 |
| Loreto | 0 | 0.00 | 23 | 5.97 | 27 | 11.12 | 10 | 3.00 | 0.0 | 2.0 |
| Madre de Dios | 2 | 2.83 | 1 | 2.57 | 0 | 0.00 | 6 | 18.99 | NA | 0.1 |
| Moquegua | 5 | 6.01 | 2 | 2.23 | 9 | 14.13 | 7 | 8.04 | 0.4 | 0.3 |
| Pasco | 11 | 10.25 | 12 | 11.80 | 6 | 5.98 | 12 | 10.85 | 1.7 | 1.1 |
| Piura | 34 | 5.84 | 43 | 5.42 | 23 | 3.90 | 64 | 7.74 | 1.5 | 0.7 |
| Puno | 29 | 6.22 | 31 | 5.43 | 37 | 6.62 | 90 | 13.61 | 0.9 | 0.4 |
| San Martin | 9 | 3.04 | 31 | 8.91 | 20 | 9.24 | 27 | 9.62 | 0.3 | 0.9 |
| Tacna | 11 | 8.25 | 7 | 4.59 | 23 | 25.28 | 21 | 14.07 | 0.3 | 0.3 |
| Tumbes | 5 | 8.33 | 0 | 0.00 | 2 | 3.21 | 6 | 7.53 | 2.6 | 0.0 |
| Ucayali | 23 | 16.58 | 6 | 3.03 | 6 | 4.27 | 12 | 5.91 | 3.9 | 0.5 |

ASMR: age-standardized mortality rate; NA: Not applicable

Table S2. Joinpoint analysis for liver cancer in Peruvian regions between 2003 and 2017.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Regions** | Men |  | Women |  |
| **Years** | **APC** | **Years** | **APC** | **AAPC** | **Years** | **APC** | **Years** | **APC** | **AAPC** |
| Amazonas | 2003-2017 | NA |  |  | NA | 2003-2017 | NA |  |  | NA |
| Ancash | 2003-2011 | 12.5\* (5.8, 19.6)  | 2011-2017 | −10.5\* (−18.6, −1.6) | 2.0 (−2.7, 6.9) | 2003-2017 | −0.3 (−3.7, 3.3) |  |  | −0.3 (−3.7, 3.3) |
| Apurimac | 2003-2017 | −1.7(−5.3, 2.0) |  |  | −1.7(−5.3, 2.0) | 2003-2017 | 0.5(−3.6, 4.7) |  |  | 0.5(−3.6, 4.7) |
| Arequipa | 2003-2017 | −2.3(−5.1, 0.5) |  |  | −2.3(−5.1, 0.5) | 2003-2017 | −3.8\*(−6.2,−1.3) |  |  | −3.8\*(−6.2,−1.3) |
| Ayacucho | 2003-2017 | 1.5(−1.9, 5.0) |  |  | 1.5(−1.9, 5.0) | 2003-2017 | 0.6(−2.9, 4.3) |  |  | 0.6(−2.9, 4.3) |
| Cajamarca | 2003-2017 | −3.0\*(−5.9,−0.1) |  |  | −3.0\*(−5.9,−0.1) | 2003-2017 | 0.9(−4.0, 6.1) |  |  | 0.9(−4.0, 6.1) |
| Callao | 2003-2017 | −0.7(−3.4, 2.1) |  |  | −0.7(−3.4, 2.1) | 2003-2017 | −1.5(−4.5, 1.6) |  |  | −1.5(−4.5, 1.6) |
| Cusco | 2003-2017 | −1.4(−5.9, 3.2) |  |  | −1.4(−5.9, 3.2) | 2003-2017 | −3.5\*(−6.3, −0.7) |  |  | −3.5\*(−6.3, −0.7) |
| Huancavelica | 2003-2017 | −2.7(−9.8,5.0) |  |  | −2.7(−9.8,5.0) | 2003-2017 | −2.6(−9.1, 4.4) |  |  | −2.6(−9.1, 4.4) |
| Huanuco | 2003-2017 | −0.9(−3.7,2.0) |  |  | −0.9(−3.7,2.0) | 2003-2017 | 1.4(−2.3,5.3) |  |  | 1.4(−2.3,5.3) |
| Ica | 2003-2017 | 1.1(−1.1,3.4) |  |  | 1.1(−1.1,3.4) | 2003-2017 | −1.4(−3.9,1.2) |  |  | −1.4(−3.9,1.2) |
| Junin | 2003-2017 | −3.0\*(−5.7,−0.2) |  |  | −3.0\*(−5.7,−0.2) | 2003-2012 | 6.0(−1.1,13.6) | 2012-2017 | −15.4(−28.6,0.3) | −12.2(−8.4,4.5) |
| La Libertad | 2003-2017 | −1.4(−3.6,0.9) |  |  | −1.4(−3.6,0.9) | 2003-2017 | −2.1\*(−3.9,−0.3) |  |  | −2.1\*(−3.9,−0.3) |
| Lambayeque | 2003-2007 | 14.5\*(1.3,29.5) | 2007-2017 | −1.5(−4.5,1.5) | 2.8(−0.8,6.6) | 2003-2017 | −0.9(−3.9,2.2) |  |  | −0.9(−3.9,2.2) |
| Lima | 2003-2017 | −1.2(−3.0,0.5) |  |  | −1.2(−3.0,0.5) | 2003-2017 | −2.5\*(−4.4,−0.6) |  |  | −2.5\*(−4.4,−0.6) |
| Loreto | 2003-2017 | NA |  |  | NA | 2003-2017 | −0.6(−7.3,6.6) |  |  | −0.6(−7.3,6.6) |
| Madre de Dios | 2003-2017 | NA |  |  | NA | 2003-2017 | NA |  |  | NA |
| Moquegua | 2003-2017 | NA |  |  | NA | 2003-2017 | −6.0\*(−10.2,−1.5) |  |  | −6.0\*(−10.2,−1.5) |
| Pasco | 2003-2017 | NA |  |  | NA | 2003-2017 | 0.8(−3.4,5.2) |  |  | 0.8(−3.4,5.2) |
| Piura | 2003-2017 | −0.1(−3.7,3.6) |  |  | −0.1(−3.7,3.6) | 2003-2017 | 0(−3.8,3.8) |  |  | 0(−3.8,3.8) |
| Puno | 2003-2017 | 0.5(−3.3,4.4) |  |  | 0.5(−3.3,4.4) | 2003-2017 | 2.0(−1.0,5.1) |  |  | 2.0(−1.0,5.1) |
| San Martin | 2003-2017 | −4.2(−14.3,7.1) |  |  | −4.2(−14.3,7.1) | 2003-2017 | −2.9(−8.0,2.5) |  |  | −2.9(−8.0,2.5) |
| Tacna | 2003-2007 | −2.6(−7.0,2.0) |  |  | −2.6(−7.0,2.0) | 2003-2017 | −3.8(−8.2,1.0) |  |  | −3.8(−8.2,1.0) |
| Tumbes | 2003-2017 | NA |  |  | NA | 2003-2017 | NA |  |  | NA |
| Ucayali | 2003-2017 | −12.2\*(−15.9,−7.9) |  |  | −12.2\*(−15.9,−7.9) | 2003-2017 | NA |  |  | NA |

\* p value: <0.05

NA: Not applicable