**Supplementary Table 1. Sex-specific trends for HCC incidence categorized by tumor stage at diagnosis among different age groups**

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| **Age group, y** | **Cases, *n* = 467,346a** | **Trendsb** | **Sex-specific AAPC difference(95% CI)c** | **Pairwise comparison *p*-values** |
| **Time period** | **APC (95% CI)** | **AAPC (95% CI)** | **Sex-specific AAPC difference** | **Coincidenced** | **Parallelisme** |
| Early stage |
| All ages |
| Women | 53,283 (11.40%) | 2001-2007  | 9.90 (7.89 to 11.96) | 3.68 (2.73 to 4.64) | −0.31(−1.56 to 0.95) | 0.63 | < 0.001 | 0.47 |
| 2007-2018 | 2.90 (2.28 to 3.53) |
| 2018-2020 | −9.29 (−15.63 to −2.47) |
| Men | 144,757 (30.97%) | 2001-2007  | 10.26 (8.51 to 12.05) | 3.37 (2.55 to 4.20) |
| 2007-2018 | 2.84 (2.32 to 3.37) |
| 2018-2020 | −12.37 (−17.69 to −6.71) |
| Aged ≥ 55 years |
| Women | 45,411 (9.72%) | 2001-2007  | 10.28 (7.94 to 12.67) | 4.23 (3.17 to 5.29) | 0.43(−0.94 to 1.79) | 0.54 | < 0.001 | 0.006 |
| 2007-2018 | 3.57 (2.87 to 4.27) |
| 2018-2020 | −8.90 (−15.70 to −1.55) |
| Men | 118,480 (25.35%) | 2001-2007  | 11.35 (9.36 to 13.37) | 4.65 (3.80 to 5.51) |
| 2007-2018 | 4.45 (3.90 to 5.00) |
| 2018-2020 | −12.19 (−17.36 to −6.70) |
| Aged < 55 years |
| Women | 7,146 (1.53%) | 2001-2007 | 9.38 (5.99 to 12.87) | 1.12 (−0.58 to 2.86) | −2.65(−4.89 to −0.40) | 0.02 | < 0.001 | < 0.001 |
| 2007-2017 | −0.17 (−1.57 to 1.25) |
| 2017-2020 | −9.80 (−17.59 to −1.27) |
| Men | 25,262 (5.41%) | 2000-2006 | 11.12 (7.65 to 14.60) | −1.52 (−2.96 to −0.07) |
| 2006-2017 | −3.28 (−4.21 to −2.35) |
| 2007-2020 | −13.98 (−20.80 to −6.57) |
| Late stage |
| All ages |
| Women | 42,339 (9.06%) | 2001-2013 | 3.32 (2.60 to 4.04) | 1.09 (0.47 to 1.71) | 1.05(−0.18 to 2.27) | 0.09 | < 0.001 | 0.003 |
| 2013-2020 | −2.62 (−3.93 to −1.30) |
| Men | 138,601 (29.66%) | 2001-2005  | 6.95 (4.21 to 9.77) | 2.13 (1.08 to 3.20) |
| 2005-2014 | 3.71 (2.99 to 4.44) |
| 2014-2017 | −5.75 (−10.97 to −0.23) |
| 2017-2020 | −0.59 (−3.47 to 2.38) |
| Aged ≥ 55 years |
| Women | 35,222 (7.54%) | 2001-2013 | 3.92 (3.23 to 4.61) | 1.71 (1.14 to 2.28) | 1.37(0.63 to 2.12) | < 0.001 | < 0.001 | < 0.001 |
| 2013-2020 | −1.98 (−3.15 to −0.79) |
| Men | 111,162 (23.79%) | 2001-2013 | 6.01 (5.40 to 6.63) | 3.08 (2.60 to 3.56) |
| 2013-2020 | −1.77 (−2.70 to −0.83) |
| Aged < 55 years |
| Women | 6,328 (1.35%) | 2001-2010 | 2.88 (0.76 to 5.05) | −1.06 (−2.32 to 0.21) | −1.27(−3.61 to 1.07) | 0.28 | < 0.001 | < 0.001 |
| 2010-2020 | −4.48 (−6.24 to −2.68) |
| Men | 26,300 (5.63%) | 2001-2007 | 5.13 (3.08 to 7.23) | −2.33 (−4.28 to −0.34) |
| 2007-2014 | −3.52 (−5.29 to −1.71) |
| 2014-2018 | −11.39 (−17.03 to −5.37) |
| 2018-2020 | −0.68 (−14.90 to 15.92) |

aData are presented as count numbers followed by percentages of the count numbers from the total cases of HCC in the database.

bTime trends were computed using joinpoint regression program (v4.9.0.1, NCI), with 3 maximum joinpoints allowed (4-line segments).

cA negative value indicates a greater AAPC in women compared to men.

dTests whether sex-specific trends were identical. A significant *p*-value indicates that the trends were not identical (i.e. they had different incidence rates and coincidence was rejected).

eTests whether sex-specific trends were parallel. A significant *p*-value indicates that the trends were not parallel (i.e. parallelism was rejected).

HCC: Hepatocellular Carcinoma, APC: Annual Percentage Change, AAPC: Average Annual Percentage Change.