Supplemental Table 1. Hazard ratios (HR) and 95% confidence intervals (95% CI) for the association between hysterectomy, oophorectomy and risk of renal cell carcinoma (RCC) by stage or histology type 1

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| --- | --- | --- | --- |
|  | **Localized stage RCC** | **Regional or advanced stage RCC** | **Excluding non-clear cell RCC** |
|  | Cases  | HR (95% CI) | Cases | HR (95% CI) | Cases | HR (95% CI) |
| **Updated hysterectomy 2** |  |  |  |  |  |  |
|  No | 197 | Reference | 85 | Reference  | 261 | Reference |
|  Yes | 224 | 1.33 (1.03 – 1.72) | 78 | 1.01 (0.66 – 1.55) | 274 | 1.23 (0.97 1.54) |
| **Updated age of hysterectomy (years)** |  |  |  |  |  |  |
|  No hysterectomy | 197 | Reference  | 85 | Reference | 261 | Reference |
|  <40 | 78 | 1.44 (1.03 - 2.02) | 22 | 0.93 (0.52 - 1.67) | 94 | 1.32 (0.97 1.78) |
|  40-<50 | 83 | 1.18 (0.86 - 1.64) | 37 | 1.11 (0.66 - 1.84) | 108 | 1.14 (0.85 1.52) |
|  50-<55 |  27 | 1.41 (0.90 - 2.19) | 4 | 0.42 (0.15 - 1.20) | 21 | 0.80 (0.50 1.29) |
| 55 + |  36 | 1.37 (0.95 – 1.98) | 15 | 1.18 (0.66 – 2.11) | 51 | 1.42 (1.03 1.94) |
|  |  |  |  |  |  |  |
| **Hysterectomy at baseline** |  |  |  |  |  |  |
|  No  | 212 | Reference  | 92 | Reference | 283 | Reference |
|  Yes  | 209 | 1.39 (1.05 - 1.83) | 71 | 0.92 (0.58 - 1.46) | 252 | 1.20 (0.93 1.54) |
| **Age of hysterectomy (years) at baseline** |  |  |  |  |  |  |
|  No hysterectomy | 212 | Reference  | 92 | Reference | 283 | Reference |
|  <40 | 78 | 1.48 (1.06 - 2.07) | 22 | 0.89 (0.49 1.60) | 94 | 1.32 (0.97 1.79) |
|  40-<50 | 83 | 1.22 (0.88 - 1.69) | 37 | 1.06 (0.63 1.77) | 108 | 1.14 (0.85 1.52) |
|  50-<55 | 27 | 1.49 (0.95 – 2.33) | 3 | 0.30 (0.09 1.01) | 20 | 0.78 (0.48 1.27) |
| 55 + | 21 | 1.64 (1.01 - 2.66) | 9 | 1.14 (0.54 2.41) | 30 | 1.57 (1.04 2.38) |

1. In the multivariable-adjusted models, we adjusted potential confounders, including age at enrollment (in continuous), race/ethnicity (American Indian or Alaska Native, Asian or Pacific Islander, Black or African-American, Hispanic/Latina, non-Hispanic white, and other), BMI (<25, 25.0 -<30, ≥30 kg/m2), education (high school or less, some college/technical training, college or some post-college, and master or higher), diet quality (in continuous), smoking pack-years (never smoke, smoking <5, 5-<20, ≥ pack-years), alcohol intake ( ≥7 drinks/week, others), physical activity (<5, 5-<10, 10-<20, 20-<30, 30+ Metabolic equivalent (METs)/week), parity (0, 1-2, 3, 4, 5), history of estrogen alone use (yes/no), history of estrogen plus progestin use (yes/no), family history of cancer (yes, no), diabetes (yes, no), hypertension (yes, no), kidney or bladder stones ever (yes, no).

2. Both hysterectomy at baseline and during follow-up were considered. Hysterectomy was analyzed as a time-varying variable. All other exposures were measured at baseline.