



Figure S1 Cubic spline graph of the adjusted HR (represented by solid line) and 95% CI (represented by the dotted lines) for the association between menstrual and reproductive factors and adenocarcinoma risk. (A) Age at menarche, reference: 14 years old; (B) age at first live birth, reference: 25 years old; (C) duration of breastfeeding, reference: 12 months; (D) Age at menopause, reference: 50 years old; (E) reproductive period, reference: 35 years. Knots: 5th, 50th, 95th of the distribution. Analyses are adjusted for age at enrollment (continuous), education (low, medium, or high), BMI (underweight, normal, overweight or obese), smoking status (current, former or never-smoker), exposures to environmental tobacco smoke (yes or no), exposure to cooking smoke (none, little, some, or much), occupational exposures (yes or no), history of chronic respiratory disease (yes or no) and family history of lung cancer (yes or no).

Table S1 Characteristics and main findings of existed studies on the associations between menstrual, reproductive factors and lung cancer risk

Author	Study name	Country	Premenopausal Status	Number of participants	Never-smokers	Lung cancer cases	Years at enrollment	Median follow-up years	Main findings
Gallagher <i>et al.</i> 2013	Cohort Study of Shanghai female textile workers	Shanghai, China	Both pre and postmenopausal	267,400	N.A.	824	1989-1991	9.3	Increased lung cancer risk: surgical menopause. Decreased lung cancer risk: parity.
Weiss <i>et al.</i> 2008	Shanghai Women's Health Study	Shanghai, China	Both pre and postmenopausal	71,314	71,314	220	1996-2000	4.1	Decreased lung cancer risk: later age at menopause, longer reproductive period, higher parity, intrauterine device use.
Tan <i>et al.</i> 2015	The Singapore Breast Cancer Screening Project	Singapore	Postmenopausal	28,222	26,473	311	1994.10-1997.02	15.8	Decreased lung cancer risk: higher parity.
Seow <i>et al.</i> 2009	The Singapore Chinese Health Study	Singapore	Postmenopausal	35,298	N.A.	298	1993.04-1998.12	9.6	Decreased lung cancer risk: higher parity.
Jeon <i>et al.</i> 2020	The Korean National Health Insurance System based	Korea	Postmenopausal	4,775,398	4,335,259	16,556	2009-2014	4.4	Nonsignificant associations.
Wilunda <i>et al.</i> 2021	The Japan Public Health Center-based Prospective Study	Japan	Both pre and postmenopausal	42,615	42,615	400	1990-1994	21	Increased lung cancer risk (adenocarcinoma specific): longer fertility span, late age at menopause, natural menopause, or surgical menopause. Decreased lung cancer risk: breastfeeding.
Lui <i>et al.</i> 2005	The Japan Public Health Center-based Prospective Study	Japan	Both pre and postmenopausal	44,677	44,677	153	1990-1994	8-12	Increased lung cancer risk: early age at menarche and late age at menopause.
Schwartz <i>et al.</i> 2015	The Women's Health Initiative studies	U.S.	Postmenopausal	160,855	81,031	2,467	1993.10-1998.12	14	Decreased lung cancer risk: later age at menopause, higher parity.
Brinton <i>et al.</i> 2011	The NIH-AARP Diet and Health Study	U.S.	Postmenopausal	185,017	84,262	3,512	1995-1996	5.7	Increased risk: early age at ovarian cessation. Decreased lung cancer risk: later age at menarche.
Baik <i>et al.</i> 2010	The Nurses' Health Study	U.S.	Postmenopausal	107,171	48,227	1,729	1984	22	Increased lung cancer risk: earlier age at menopause, exogenous hormone use, age at first birth (among never smokers). Decreased lung cancer risk: parity (among never smokers).
Kabat <i>et al.</i> 2007	Canadian National Breast Screening Study	Canada	Postmenopausal	89,812	45,065	750	1980-1985	16.4	Increased lung cancer risk: higher parity. Decreased lung cancer risk: later age at first live birth.