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Supplementary Materials 1. ICD-10 codes for female reproductive system diseases

Cause	ICD-10 code
Breast cancer	C50-C50.629, C50.8-C50.929
Cervical cancer	C53-C53.9
Uterine cancer	C54-C54.3, C54.8-C54.9
Ovarian cancer	C56-C56.2, C56.9
Uterine fibroids	D25-D26
Polycystic ovarian syndrome	E28.2
Female infertility	N97-N98.9
Endometriosis	N80-N80.9
Genital prolapse	N81-N81.9
Premenstrual syndrome	N85.0-N85.1, N92-N93.9, N94.3, N95.0
Other gynaecologic diseases	
- Menstrual disorders	N91-N95.9
- Other non-menstrual gynaecological disorders	B37.3-B37.49, N61-N64.9, N72, N75-N77.8, N83-N86, N88-N90.9

Supplementary Materials 2. Definition of disease

Uterine fibroids: also called uterine myomas or leiomyomas, are non-cancerous tumours that develop from the muscle tissue of the uterus, regardless of symptoms. When present, symptoms include abdominal/pelvic pain, painful intercourse, infertility, and heavy vaginal bleeding, which can lead to anaemia.

Signs and symptoms of fibroids can be detected by clinical interview and pelvic exam, but the diagnosis should be confirmed by ultrasonography, hysteroscopy, hysterosalpingography, sonohysterography, laparoscopy, or imaging tests such as MRI or CT scan.

For GBD 2021, we use the definition proposed by the American College of Obstetricians and Gynecologists (ACOG) as the reference case definition, that is, cases of uterine fibroids diagnosed by pelvic exam followed by or with ultrasonography, hysteroscopy, hysterosalpingography, sonohysterography, or laparoscopy.¹ We also incorporate studies that ascertained cases by self-report, pelvic exam only, or via diagnostic codes in administrative data, by adjusting data toward our reference case definition, as described below.

Polycystic ovarian syndrome: Polycystic ovarian syndrome (PCOS) is an endocrinopathy characterised by hyperandrogenism, ovulatory dysfunction, and polycystic ovaries which can lead to infrequent menstruation, excess hair growth (hirsutism), acne, obesity, and infertility among women. Women with PCOS often have enlarged ovaries that contain pockets of fluid.

There is no universally accepted definition of PCOS. Expert-generated diagnostic criteria include the National Institutes of Health (NIH) diagnostic, the Rotterdam criteria, and the Androgen Excess Society (AES) definition. All diagnostic approaches require the presence of more than one sign or symptom and recommend that secondary causes (such as congenital adrenal hyperplasia, hyperprolactinemia, and androgen-secreting neoplasms) should first be excluded.

In GBD 2019, we standardised the reference definition of all gynaecological diseases, including PCOS, to the ACOG definitions. According to ACOG, however, PCOS diagnosis can be accomplished using

any of the three diagnostic approaches mentioned previously (NIH, Rotterdam, or AES). As the Rotterdam and AES definitions have been criticised for including more mild phenotypes, we continued using the NIH definition, which noted the disorder as having 1) hyperandrogenism and/or hyperandrogenemia, 2) oligo-ovulation, and 3) exclusion of known disorders, as our reference definition.

Infertility: Infertility encompasses both primary infertility and secondary infertility, which are defined as the inability to conceive a child and have a live birth (primary: first child; secondary: additional children) via vaginal intercourse without using contraceptives.

In GBD, the following case definitions are used for infertility:

- Primary infertility is diagnosed in a couple who have not had a live birth, desire a child, have been in a union for five years or longer, and are not using contraceptives at the time of the survey.
- Secondary infertility is diagnosed in a couple who last had a live birth more than five years ago, desire a child, have been in a union for five years or longer, and are not using contraceptives at the time of the survey.

Endometriosis is a gynaecological condition defined as growth of endometrial tissue outside the uterus regardless of symptoms. Common symptoms include chronic abdominal and pelvic pain, especially before and during a menstrual period and during sexual intercourse. Endometriosis can also lead to infertility. For GBD 2021, we define endometriosis cases according to the ACOG guidelines as cases diagnosed by pelvic exam confirmed by laparoscopy or laparotomy.

Genital prolapse: As defined by ACOG, genital prolapse, also called pelvic organ prolapse, is the clinically relevant descent of one or more of the female pelvic structures, including the uterus, bladder, rectum, small or large bowel, or vagina.¹⁵ Risk of prolapse increases with age and can be exacerbated by vaginal childbirth or physical strain. The ICD-10 code associated with genital prolapse is N81.

In an effort to standardise the case definitions of all gynaecological diseases, in GBD 2019, we started using the ACOG definition of genital prolapse as the reference definition.¹⁴ The ACOG definition states that mild descent of the pelvic organs should not be considered pathological unless women experience symptoms such as pressure with or without a bulge, sexual dysfunction, or if it is disrupting normal lower urinary tract or bowel function.

Premenstrual syndrome (PMS): refers to psychological and physical symptoms that occur during the luteal phase of the menstrual cycle. Symptoms vary in nature and severity, but include tenderness, bloating, irritability, fatigue, abdominal pain, and altered mental states. PMS ceases when a woman is pregnant and when she reaches menopause. Lacking definitive and universally accepted diagnostic criteria for PMS, in GBD 2019, we started using the diagnostic criteria proposed by the American College of Obstetricians and Gynecologists (ACOG) as the reference definition. The ACOG definition of PMS requires at least one emotional or physical symptom to be experienced by women during the five days before menses and remit within four days of onset of menses, with no recurrence at least until day 13 of the cycle, in each of three prior menstrual cycles. Additionally, identifiable dysfunction in social or economic performance and prospective confirmation for two cycles are required.

Other gynecological diseases: Other gynecological diseases encompass all gynaecological disorders

that are not menstruation or bleeding-related and do not fall under the heading of any of the other gynaecological causes in the GBD. Specifically, other gynaecological disorders include breast disorders; inflammatory disease of cervix uteri; diseases of Bartholin's gland; other inflammation of vagina and vulva; vulvovaginal ulceration and inflammation in diseases classified elsewhere; non-inflammatory disorders of ovary, fallopian tube, and broad ligament; other non-inflammatory disorders of the uterus, cervix, vagina, vulva, and perineum; and menopausal and other perimenopausal disorders.

Figure S1. Age-specific number of prevalent cases (A) and prevalence (B) of reproductive system diseases in Asia, 2021

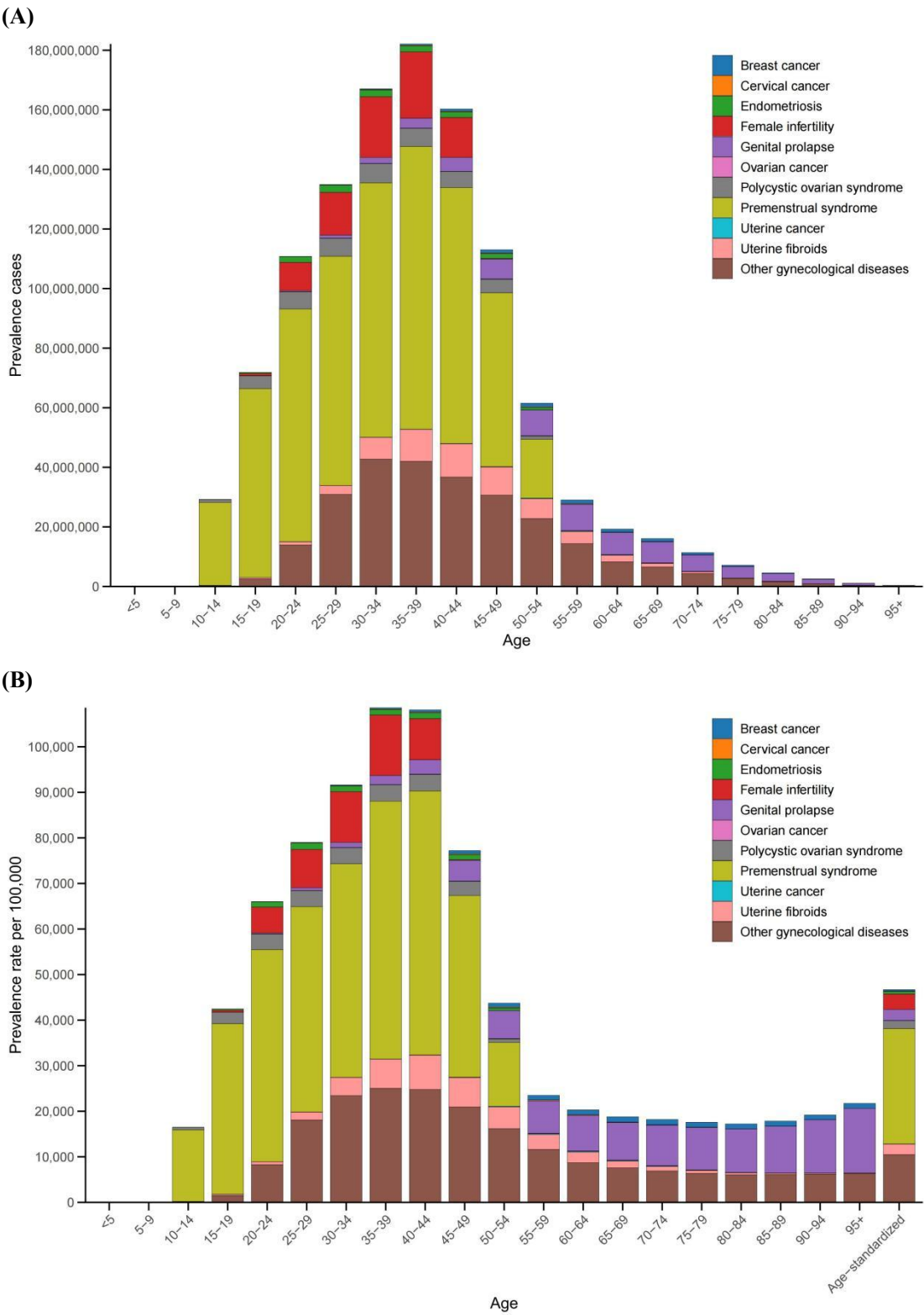


Table S1. SDI Levels of Asian Countries in 2021

Country	SDI	Country	SDI
Central Asia		Bhutan	Low-middle SDI
Tajikistan	Low-middle SDI	India	Low-middle SDI
Turkmenistan	Middle SDI	Nepal	Low SDI
Uzbekistan	Middle SDI	Pakistan	Low-middle SDI
Kazakhstan	High-middle SDI	Maldives	Middle SDI
Kyrgyzstan	Low-middle SDI	Sri Lanka	High-middle SDI
East Asia		Western Asia	
Japan	High SDI	Armenia	High-middle SDI
Mongolia	Middle SDI	Azerbaijan	High-middle SDI
China	High-middle SDI	Georgia	High-middle SDI
North Korea	High SDI	Israel	High SDI
South Korea	High SDI	Afghanistan	Low SDI
South-Eastern Asia		Bahrain	High-middle SDI
Singapore	High SDI	Iraq	Middle SDI
Brunei	High SDI	Jordan	High-middle SDI
Myanmar	Low-middle SDI	Kuwait	High SDI
Philippines	Middle SDI	Lebanon	High-middle SDI
Cambodia	Low-middle SDI	Oman	High-middle SDI
Indonesia	Middle SDI	Palestine	Middle SDI
Malaysia	High-middle SDI	Qatar	High SDI
Thailand	Middle SDI	Saudi Arabia	High SDI
Timor-Leste	Low SDI	United Arab Emirates	High SDI
Viet Nam	Middle SDI	Yemen	Low SDI
Laos	Low-middle SDI	Iran	High-middle SDI
Southern Asia		Syria	Middle SDI
Bangladesh	Low-middle SDI	Turkey	High-middle SDI

SDI, Socio-demographic Index

Table S2. Prevalence and DALYs burden of diseases of the female reproductive system among women in Asia, 2021 (95% UI), by country.

Country	Prevalence cases	DALYs	ASPR	ASDR
Afghanistan	5430881 (4919677,5924424)	204757 (129870,312581)	45389 (38308.63,52654.2)	2057.81 (1153.17,3353.65)
Armenia	639536 (576876,700323)	33220 (26838,41023)	38117.61 (30841.33,46014.15)	1581.33 (1193.42,2073.31)
Azerbaijan	2243781 (2033787,2461210)	85722 (61058,116089)	38439.51 (31101.54,46201.35)	1380.57 (930.8,1959.25)
Bahrain	287442 (264716,309878)	12413 (8967,16762)	45380.19 (38148.78,52725.78)	2175 (1412.35,3164.15)
Bangladesh	34671824 (31223551,37816278)	1061811 (740271,1517250)	39093.79 (31707.6,46754.19)	1269.73 (777.28,1961.52)
Bhutan	151953 (136388,166924)	4745 (3228,6875)	38427.14 (31105.14,46164.52)	1309.72 (790.96,2063.33)
Brunei	74787 (65727,85176)	3715 (2767,4825)	30384.46 (23291.04,38434.27)	1589.16 (1082.39,2259.04)
Cambodia	3007088 (2654864,3354449)	142116 (98417,200295)	33723.45 (26087.89,41987.87)	1710.79 (1050.44,2653.51)
China	242063959 (215477005,269995150)	9579169 (6948201,12840963)	33668.27 (26309.02,41496.97)	1068.35 (736.5,1502.32)
North Korea	4906401 (4384493,5435764)	237504 (162096,335016)	34395.98 (26797.57,42533.58)	1447.06 (874.42,2240.63)
Georgia	741141 (680422,800096)	57809 (47416,70051)	25592.03 (21075.33,30432.12)	1457.05 (1135.87,1846.05)
India	299364441 (272531677,324952835)	10376296 (8073490,13280411)	40500.74 (33496.92,47734.74)	1481.68 (1108.12,1968.41)
Indonesia	52212106 (46205017,57916785)	2293053 (1556146,3279162)	34715.42 (27195.27,42632.2)	1533.79 (1002.5,2269.48)
Iran	22565500 (20884007,24003200)	735886 (544631,963833)	47007.06 (39898.29,54176.27)	1501.16 (1051.6,2051.59)
Iraq	8731381 (7987840,9428505)	328080 (230250,452813)	45245.97 (38082.89,52235.94)	1865.27 (1200.06,2714.95)
Israel	2080675 (1912248,2235236)	90751 (72052,114066)	43444.19 (36210.14,51060.23)	1720.11 (1225.23,2349.18)
Japan	21034639 (19056217,22941435)	1008198 (842220,1174739)	34986.26 (28128.96,42382.25)	1094.67 (874.75,1380.27)
Jordan	2569007 (2356535,2769756)	93732 (65904,129141)	44804.12 (37790.5,51917.01)	1801.97 (1147.17,2647.34)
Kazakhstan	3817926 (3478493,4160263)	158925 (123450,200436)	38164.22 (30966.76,45681.01)	1497.07 (1111.48,1971.44)
Kuwait	1296178 (1210024,1386946)	44440 (32338,59536)	44889.49 (37833.92,51938.35)	1604.1 (1093.08,2242.04)
Kyrgyzstan	1316356 (1191239,1433187)	50136 (37698,65431)	38622.03 (31492.69,46079.93)	1541.95 (1093.12,2112.12)
Laos	1274494 (1116163,1422884)	51946 (35735,73824)	33586.95 (26036.82,41810.11)	1602.49 (983.51,2500.9)
Lebanon	1422051 (1318757,1522542)	61997 (45516,81686)	45942.82 (38889.07,53032.84)	1949.47 (1287.41,2784.65)
Malaysia	5702203 (5023526,6354237)	284442 (221781,361724)	34268.12 (26685.1,42458.58)	1805.95 (1208.22,2575.9)
Maldives	77914 (69160,86715)	2078 (1478,2878)	34211.31 (27220.79,41929.73)	989.48 (633.69,1480.34)
Mongolia	649415 (589050,709355)	22117 (15886,29792)	37985.02 (30824.2,45437.2)	1322.97 (872.87,1912.68)

Myanmar	10106023 (8946667,11203422)	470780 (335129,653163)	33395.28 (25710.76,41577.88)	1558.37 (982.97,2381.62)
Nepal	6579870 (5923912,7196205)	198003 (137049,282187)	38433.7 (31253.13,46029.56)	1281.56 (792.25,1992.78)
Oman	842011 (780250,909450)	24894 (17534,34438)	44616.12 (37701.86,51578.73)	1370.73 (877.4,2006.38)
Pakistan	46734130 (42326497,51122148)	1841129 (1280717,2554742)	41900.47 (34456.35,49666.04)	2083.13 (1352.11,3038.41)
Palestine	1054765 (965222,1140848)	39370 (28911,52641)	45734.37 (38553.25,52864.88)	1994.84 (1337.69,2816.78)
Philippines	21313292 (18994602,23520409)	952951 (707152,1261300)	37250.68 (29729.43,45125.77)	1825.17 (1319.27,2460.59)
Qatar	466440 (433904,501239)	17946 (12589,24845)	45050.56 (37851.24,52394.28)	2122.46 (1375.99,3116)
South Korea	7765718 (6831607,8811258)	285021 (208536,369438)	29176.88 (22152.04,37193.55)	828.16 (555.58,1179.9)
Saudi Arabia	8529691 (7895004,9175589)	296159 (206587,413198)	44491.31 (37500.86,51652.08)	1619.2 (1037.8,2384.51)
Singapore	959873 (840553,1085259)	37195 (30869,45138)	30450.41 (23388.07,38345.71)	982.4 (722.69,1314.96)
Sri Lanka	3978990 (3524419,4426486)	145471 (94683,203795)	33549.15 (25916.15,41735.86)	1086.01 (648.24,1677.81)
Syria	3459761 (3175385,3733367)	121710 (85998,167772)	45282.38 (38197.34,52281.66)	1627.39 (1057.62,2368.09)
Tajikistan	1837675 (1644008,2020181)	54140 (35884,78931)	38088.65 (30817.8,45655.61)	1234.41 (757.99,1882.68)
Thailand	12315666 (10944692,13747661)	704498 (502761,937099)	33837.65 (26237.57,42171.94)	1470.54 (945.83,2179.29)
Timor-Leste	214304 (187373,238746)	7277 (4996,10266)	33093.76 (25674.35,41136.79)	1389.51 (848.73,2152.5)
Turkmenistan	958447 (864186,1049060)	38162 (27448,52271)	38000.18 (30884.17,45667.31)	1518.6 (1051.85,2144.68)
Turkey	21025239 (19346110,22543631)	840304 (606006,1122200)	45947.84 (38720.44,53157.97)	1761.49 (1157.9,2530.46)
United Arab Emirates	1519082 (1411338,1623992)	63249 (44501,86984)	45113.51 (37688.1,52641.26)	3027.68 (1949.35,4450.57)
Uzbekistan	6730761 (6074079,7375830)	248507 (188576,322201)	37796.47 (30666.11,45325.52)	1413.05 (994.33,1943.37)
Viet Nam	17727748 (15571272,19826416)	668932 (479079,919752)	33478.74 (25859.18,41807.91)	1177.05 (740.5,1799.86)
Yemen	6675731 (6082929,7216448)	205284 (143472,287356)	45851.33 (38800.24,52753.25)	1574.98 (994.63,2343.77)

DALYs, disability-adjusted life years; UI, uncertainty interval; ASPR, age-standardized prevalence rate; ASDR, age-standardized DALYs rate.

Table S3. Age-standardized prevalence rates and DALYs rates of female reproductive system diseases across Asia in 1990 and 2021, along with trends of change from 1990 to 2021.

	Age-standardized DALY rate (per 100,000) (95% UI)			Age-standardized prevalence rate (per 100,000) (95% UI)		
	1990	2021	EAPC (%, 95% CI)	1990	2021	EAPC (%, 95% CI)
Central Asia						
DFRS	1732.37 (1313.17,2252.4)	1438.91 (1017.42,1975.55)	-0.48 (-0.54, -0.43)	38162.7 (31088.8,45663.68)	38017.52 (30853.24,45548.72)	0.01 (0, 0.02)
Breast cancer	562.01 (475.09,656.65)	392.93 (303.16,498.22)	-0.96 (-1.07, -0.85)	272.56 (225.5,327.28)	248.07 (198.98,306.86)	-0.11 (-0.2, -0.01)
Cervical cancer	325.38 (270.68,386.74)	223.77 (171.39,287.22)	-0.94 (-1.12, -0.75)	80.2 (60.49,104.35)	74.69 (53.03,102.58)	0.25 (0.07, 0.43)
Ovarian cancer	96.26 (75.17,122.67)	115.07 (87.9,147.39)	0.43 (0.28, 0.58)	17.29 (13.19,22.59)	22.86 (17.03,29.95)	0.78 (0.62, 0.94)
Uterine cancer	93.95 (76.97,113.35)	66.11 (49.52,86.75)	-1.18 (-1.46, -0.89)	59.18 (47.24,73.1)	60.36 (44.49,80.62)	0.19 (-0.18, 0.57)
Gynecological diseases	654.76 (415.26,972.98)	641.02 (405.46,955.97)	-0.03 (-0.04, -0.01)	37733.48 (30742.38,45136.36)	37611.55 (30539.72,45028.73)	0.01 (0, 0.02)
Endometriosis	67.09 (34.07,115.9)	52.04 (26.52,90.4)	-0.5 (-0.69, -0.31)	725.56 (438.36,1121.62)	562.51 (344.37,864.03)	-0.51 (-0.7, -0.33)
Female infertility	7.14 (1.17,21.48)	8.05 (1.01,25.76)	1.46 (1, 1.92)	1291.07 (299.65,3191.1)	1473.48 (257.11,3987.51)	1.55 (1.06, 2.03)
Genital prolapse	6.97 (2.99,14.11)	5.93 (2.62,11.89)	-0.06 (-0.28, 0.17)	2239.69 (1472.9,3267.74)	1886.2 (1234.79,2760.43)	-0.09 (-0.32, 0.14)
Polycystic ovarian syndrome	3.06 (1.22,6.64)	4.14 (1.68,8.91)	1.03 (0.96, 1.1)	348.42 (228.38,514.03)	473.22 (311.69,681.01)	1.05 (0.98, 1.11)
Premenstrual syndrome	199.9 (109.23,330.95)	202.35 (111.04,335.1)	0.02 (0.01, 0.04)	23853.72 (16273.06,32114.27)	24116.81 (16461.64,32590.83)	0.02 (0, 0.03)
Uterine fibroids	5.8 (3.61,8.99)	6.1 (3.97,9.29)	-0.02 (-0.12, 0.08)	4650.56 (3119.8,6671.95)	4897.01 (3300.09,6994.57)	0.17 (0.16, 0.18)
Other gynecological diseases	364.8 (208.89,578.96)	362.41 (206.87,575.62)	-0.02 (-0.02, -0.02)	14245.16 (10243.58,19251.44)	13805.95 (9882.22,18679.11)	-0.11 (-0.13, -0.09)
East Asia						
DFRS	1295.51 (924.85,1774.68)	1070.81 (744.53,1496.27)	-0.82 (-0.92, -0.71)	35191.17 (27941.88,42903.97)	33618.38 (26307.11,41423.61)	-0.28 (-0.34, -0.22)
Breast cancer	294.33 (238.7,359.29)	289.29 (221.48,368.76)	-0.3 (-0.4, -0.2)	214.13 (172.66,264.8)	394.06 (314.06,486.65)	2.18 (2.1, 2.26)
Cervical cancer	212.64 (168.82,265.2)	144.17 (104.31,189.62)	-0.99 (-1.12, -0.86)	49.95 (39.17,62.88)	79.48 (56.76,105.37)	2.11 (1.92, 2.31)
Ovarian cancer	89.53 (67.53,113.87)	75.51 (55.21,99.44)	-0.95 (-1.08, -0.81)	18.01 (12.87,23.27)	20.91 (15.08,27.95)	0.24 (0.16, 0.33)
Uterine cancer	68.61 (46.35,88.88)	39.74 (28.7,54.65)	-2.03 (-2.29, -1.78)	33.4 (22.82,43.34)	48.98 (35,68.06)	1.22 (0.91, 1.54)
Gynecological diseases	630.41 (403.44,947.43)	522.11 (334.83,783.81)	-0.9 (-1.05, -0.74)	34875.68 (27694.36,42509.68)	33074.96 (25886.2,40735.57)	-0.31 (-0.37, -0.24)
Endometriosis	59.26 (30.27,105.19)	39.8 (20.9,67.61)	-1.43 (-1.59, -1.27)	637.69 (366.46,999.98)	426.67 (257.56,648.91)	-1.45 (-1.61, -1.28)
Female infertility	18.51 (3.95,54.76)	19.9 (4.07,59.72)	0.08 (0.02, 0.13)	3550.11 (989.96,8221.89)	3787.04 (1017.68,8886.28)	0.07 (0.02, 0.11)
Genital prolapse	5.54 (2.53,10.95)	4.88 (2.26,9.57)	-0.26 (-0.4, -0.11)	1793.18 (1278.5,2439.8)	1576.83 (1133.66,2133.52)	-0.28 (-0.43, -0.13)

Polycystic ovarian syndrome	11.55 (4.99,24.12)	16.57 (7.22,34.66)	1.19 (1.12, 1.26)	1340.67 (923.37,1913.41)	1913.96 (1317.82,2734.65)	1.18 (1.11, 1.25)
Premenstrual syndrome	202.67 (111.13,335.48)	199.63 (109.33,333.58)	-0.16 (-0.23, -0.1)	23975.59 (16260.4,32523.47)	23512.11 (15837.11,32140.18)	-0.18 (-0.25, -0.11)
Uterine fibroids	1.49 (0.85,2.88)	1.93 (0.97,2.9)	1.82 (1.38, 2.27)	1747.38 (1163.62,2520.09)	1706.81 (1181.81,2383.31)	-0.18 (-0.29, -0.06)
Other gynecological diseases	331.4 (189.92,527.66)	239.4 (138.56,377.12)	-1.52 (-1.79, -1.24)	10035.65 (6760.72,13930.62)	7229.85 (5038.74,10004.19)	-1.53 (-1.8, -1.25)
South-Eastern Asia						
DFRS	1502.92 (1003.84,2190.62)	1517.79 (999.48,2226.35)	-0.04 (-0.1, 0.01)	34613.65 (27044.3,42637.03)	34624.97 (27054.33,42694.78)	-0.01 (-0.01, 0)
Breast cancer	451.76 (311,640.65)	584 (396.84,833.47)	0.77 (0.7, 0.85)	174.2 (127.17,235.05)	314.03 (229.2,426.1)	1.99 (1.97, 2.02)
Cervical cancer	369.21 (257.32,516.72)	245.56 (164.84,352.14)	-1.49 (-1.6, -1.38)	75.59 (50.26,109.15)	75.98 (48.51,113.61)	-0.26 (-0.4, -0.13)
Ovarian cancer	92.64 (59.87,154.18)	127.66 (79.97,200.44)	0.96 (0.87, 1.04)	23.88 (14.98,40.98)	43.67 (26.28,69.44)	1.81 (1.66, 1.95)
Uterine cancer	58.46 (34.99,86.5)	60.19 (35.37,90.9)	-0.03 (-0.12, 0.06)	31.61 (18.84,46.66)	47.28 (27.07,72.57)	1.18 (1.13, 1.23)
Gynecological diseases	530.85 (340.66,792.58)	500.39 (322.46,749.4)	-0.22 (-0.25, -0.19)	34308.37 (26833.04,42205.19)	34144.01 (26723.26,42013.06)	-0.02 (-0.03, -0.02)
Endometriosis	78.27 (41.37,132.64)	59.93 (31.25,102.28)	-0.8 (-0.83, -0.76)	843.74 (518.75,1281.61)	643.79 (391.95,977.9)	-0.82 (-0.85, -0.79)
Female infertility	12.34 (2.2,36.63)	16.24 (2.78,48.73)	1.68 (1.33, 2.03)	2228.16 (513.46,5373.59)	2940.07 (665.99,6994.49)	1.7 (1.35, 2.06)
Genital prolapse	6.21 (2.78,12.36)	5.18 (2.37,10.2)	-0.5 (-0.53, -0.46)	1975.68 (1361.66,2776.99)	1599.66 (1097.35,2253.94)	-0.62 (-0.66, -0.59)
Polycystic ovarian syndrome	13.44 (5.75,27.76)	25.09 (10.87,52.5)	2.29 (2.2, 2.39)	1515.87 (1039.54,2180.52)	2845.34 (1961.83,4071.42)	2.33 (2.23, 2.43)
Premenstrual syndrome	220.43 (122.91,360.59)	217.67 (120.41,359.49)	-0.07 (-0.08, -0.06)	26186.89 (18323.56,34558.07)	25801.25 (17803.23,34485.14)	-0.08 (-0.1, -0.07)
Uterine fibroids	1.69 (0.61,3.32)	1.43 (0.55,2.71)	-0.62 (-0.67, -0.57)	1549.18 (1033.51,2223.98)	1649.82 (1107.03,2360.19)	0.18 (0.14, 0.21)
Other gynecological diseases	198.49 (112.35,321.29)	174.86 (101.12,278.33)	-0.55 (-0.65, -0.45)	6027 (3978.02,8635.33)	5339.71 (3625.85,7525.47)	-0.54 (-0.62, -0.45)
Southern Asia						
DFRS	1664.79 (1202.15,2238.01)	1506.85 (1086.81,2060.5)	-0.39 (-0.51, -0.26)	41041.21 (34008.28,48225.68)	40372.57 (33277.52,47719.79)	-0.04 (-0.06, -0.02)
Breast cancer	315.7 (250.71,394.84)	436.43 (336.58,562.2)	0.96 (0.84, 1.08)	105.25 (85.4,129.68)	195.72 (157.78,244.26)	2.03 (1.87, 2.19)
Cervical cancer	546.23 (424.82,677.76)	283.32 (225.41,354.98)	-2.22 (-2.51, -1.93)	77.67 (60.25,96.84)	63.38 (49.57,80.86)	-0.74 (-1.07, -0.42)
Ovarian cancer	79.53 (54.76,110.5)	115.83 (86.25,155.18)	1.09 (1.01, 1.18)	12.49 (8.55,17.56)	22.28 (16.09,30.18)	1.77 (1.69, 1.85)
Uterine cancer	31.76 (21.46,42.89)	32.5 (23.61,46.89)	-0.12 (-0.27, 0.03)	11.78 (7.98,15.73)	19.53 (14.13,27.93)	1.48 (1.27, 1.69)
Gynecological diseases	691.57 (450.4,1012.02)	638.77 (414.97,941.25)	-0.3 (-0.33, -0.27)	40834.01 (33846.09,47965.87)	40071.67 (33039.95,47336.57)	-0.05 (-0.06, -0.03)
Endometriosis	91.11 (48.18,152.38)	54.22 (28.51,91.72)	-1.72 (-1.75, -1.69)	1001.65 (607.8,1513.38)	592.54 (359.51,907.52)	-1.75 (-1.78, -1.71)
Female infertility	12.44 (1.76,37.79)	19.67 (3.89,56.39)	1.84 (1.13, 2.56)	2196.6 (413.34,5621.34)	3511.35 (1002.12,8166.13)	1.95 (1.2, 2.7)
Genital prolapse	19.95 (9.42,39)	11.89 (5.63,23.25)	-1.62 (-1.69, -1.55)	6322.73 (4552.62,8465.24)	3730.11 (2666.25,5042.77)	-1.64 (-1.72, -1.57)
Polycystic ovarian syndrome	5.9 (2.54,12.5)	10.17 (4.35,21.36)	2.03 (1.92, 2.13)	666.82 (467.17,937.89)	1162.03 (807.5,1643.83)	2.08 (1.97, 2.19)
Premenstrual syndrome	220.74 (125.28,356.19)	225.5 (126.62,366.79)	0.07 (0.06, 0.08)	26689.24 (19032.9,34565.77)	27149.36 (19096.96,35655.76)	0.05 (0.04, 0.05)

Uterine fibroids	6.46 (3.18,10.86)	5.41 (3.21,8.61)	-0.58 (-0.65, -0.52)	2728.81 (1818.56,3898.17)	3360.04 (2243.58,4787.47)	0.88 (0.77, 0.99)
Other gynecological diseases	334.96 (198,523.93)	311.92 (183.8,487.44)	-0.32 (-0.38, -0.26)	13199.05 (9404.43,17908.66)	12478.86 (8894.92,16986.26)	-0.24 (-0.28, -0.2)
Western Asia						
DFRS	1714.95 (1152.61,2452.33)	1712.18 (1136.74,2449.24)	0.07 (0.01, 0.12)	45209.49 (38190.01,52342.12)	45349.9 (38254.58,52474.19)	0 (-0.01, 0.01)
Breast cancer	340.38 (254.93,449.36)	417.98 (299.46,570.95)	1.01 (0.83, 1.18)	245.4 (188.75,317.56)	511.62 (385.26,673.48)	2.89 (2.66, 3.13)
Cervical cancer	144.32 (98.33,208.15)	70.11 (45.8,102.32)	-2.42 (-2.52, -2.33)	27.03 (17.89,39.82)	18.64 (11.55,28.64)	-1.17 (-1.29, -1.06)
Ovarian cancer	89.62 (56.74,143.2)	101.02 (64.56,145.49)	0.47 (0.39, 0.55)	16.5 (10.15,26.87)	22.73 (13.99,33.75)	1.13 (1.05, 1.22)
Uterine cancer	59 (39.16,86.07)	47.26 (28.85,70.5)	-0.65 (-0.88, -0.41)	44.91 (29.49,66.13)	69.43 (41.32,105.68)	1.58 (1.38, 1.79)
Gynecological diseases	1081.63 (703.45,1565.55)	1075.81 (698.08,1559.98)	-0.03 (-0.05, -0.01)	44875.65 (37943.74,51891.74)	44727.48 (37802.46,51632.64)	-0.03 (-0.03, -0.02)
Endometriosis	87.74 (44.84,150.79)	60.47 (30.76,103.83)	-1.29 (-1.37, -1.21)	960.26 (572.32,1479.78)	662.95 (399.13,1021.97)	-1.29 (-1.38, -1.21)
Female infertility	8.16 (1.38,23.6)	10.11 (1.53,30.12)	0.24 (-0.21, 0.69)	1396.12 (316.05,3317.6)	1775.12 (365.82,4393.88)	0.29 (-0.16, 0.75)
Genital prolapse	13.11 (5.81,26.38)	10.55 (4.63,21.24)	-0.67 (-0.76, -0.58)	4226.53 (2891.45,5903.93)	3430.74 (2342.4,4802.33)	-0.64 (-0.72, -0.56)
Polycystic ovarian syndrome	13.1 (5.66,27.46)	17.7 (7.65,37.32)	1.21 (1.07, 1.35)	1454.72 (987,2103.33)	1994.38 (1355.46,2874.03)	1.24 (1.12, 1.37)
Premenstrual syndrome	187.64 (102.56,309.91)	189.89 (103.62,313.87)	0 (-0.02, 0.02)	22586.81 (15331.2,30589.46)	22933.09 (15516.68,31241.94)	0 (-0.02, 0.02)
Uterine fibroids	2.11 (0.93,4.07)	1.51 (0.71,2.82)	-1.22 (-1.28, -1.15)	1767.27 (1179.17,2542.34)	1644.47 (1098.56,2354.22)	-0.38 (-0.44, -0.31)
Other gynecological diseases	769.78 (474.61,1142.04)	785.58 (485.3,1161.26)	0.07 (0.05, 0.08)	29274.93 (22109.1,37189.2)	29474.88 (22258.43,37367.45)	0.02 (0, 0.03)

DALYs, disability-adjusted life year; DFRS, Diseases of the female reproductive system; DALY, disability-adjusted life year; UI, uncertainty interval; CI, confidence interval; EAPC, estimated annual

Table S4.Number of prevalent cases and disability-adjusted life years of female reproductive system diseases across Asia in 1990 and 2021, , along with trends of change from 1990 to 2021.

	Disability-Adjusted Life Years (95% UI)			Prevalence cases (95% UI)		
	1990	2021	EAPC (%, 95% CI)	1990	2021	EAPC (%, 95% CI)
Central Asia						
DFRS	355574 (286445,441047)	549871 (413056,719270)	1.62 (1.55, 1.68)	8767568 (7870544,9655099)	14661166 (13252006,16038521)	1.77 (1.72, 1.82)
Breast cancer	107537 (95321,120295)	147295 (117919,181573)	1.3 (1.21, 1.4)	51771 (46082,57553)	90855 (76330,107487)	2.1 (1.89, 2.32)
Cervical cancer	63059 (57096,69387)	84866 (68893,103574)	1.31 (1.16, 1.47)	16236 (14252,18370)	29429 (23516,36115)	2.45 (2.26, 2.63)
Ovarian cancer	18666 (15321,22862)	42742 (33552,53540)	2.67 (2.48, 2.86)	3492 (2857,4309)	8726 (6816,10943)	3 (2.8, 3.2)
Uterine cancer	18026 (15261,21018)	23927 (18797,30013)	0.9 (0.51, 1.29)	11418 (9661,13373)	22680 (17843,28335)	2.5 (1.96, 3.04)
Gynecological diseases	148286 (103446,207485)	251042 (173895,350571)	1.84 (1.8, 1.88)	8684651 (7797692,9561493)	14509475 (13127502,15855641)	1.77 (1.71, 1.82)
Endometriosis	16422 (9184,25790)	20529 (11981,32374)	1.25 (1.03, 1.47)	177203 (120821,251629)	221914 (152963,309594)	1.25 (1.03, 1.46)
Female infertility	1823 (583,4512)	3252 (974,8362)	3.01 (2.56, 3.47)	327712 (164336,595491)	597139 (250009,1182623)	3.11 (2.64, 3.58)
Genital prolapse	1311 (600,2494)	2072 (974,3977)	2.12 (1.68, 2.57)	421147 (311651,557756)	657725 (489164,886775)	2.09 (1.64, 2.54)
Polycystic ovarian syndrome	758 (316,1637)	1602 (681,3451)	2.59 (2.53, 2.65)	85780 (57717,126102)	183280 (123694,260740)	2.63 (2.57, 2.69)
Premenstrual syndrome	48282 (29412,74451)	78231 (47111,119310)	1.59 (1.48, 1.7)	5745693 (4715771,6797869)	9330450 (7578584,11109798)	1.59 (1.48, 1.7)
Uterine fibroids	1149 (791,1629)	2385 (1703,3307)	2.27 (2.18, 2.36)	917567 (696159,1192577)	1915042 (1432400,2475675)	2.47 (2.44, 2.51)
Other gynecological diseases	78542 (53262,112043)	142969 (95435,204100)	2.05 (2, 2.1)	3035018 (2544834,3607871)	5420564 (4541806,6425273)	1.97 (1.94, 2.01)
East Asia						
DFRS	8392032 (6226833,11058838)	11132009 (8176939,14749947)	0.76 (0.63, 0.9)	249351278 (222018697,277100905)	276420133 (246338372,307892962)	0.28 (0.15, 0.41)
Breast cancer	1777675 (1460998,2142992)	3514814 (2758300,4391710)	2.06 (1.95, 2.17)	1241448 (1063364,1451498)	4909179 (4075897,5873496)	4.79 (4.7, 4.89)
Cervical cancer	1289085 (1046522,1579283)	1729724 (1269832,2228393)	1.29 (1.15, 1.44)	317819 (260894,384927)	859384 (629694,1114369)	3.93 (3.69, 4.18)
Ovarian cancer	536892 (414580,673090)	932514 (695590,1195688)	1.49 (1.38, 1.59)	114095 (83090,143921)	232669 (173904,298413)	2.2 (2.11, 2.29)

Uterine cancer	404194 (276591,505908)	503357 (381395,666354)	0.49 (0.23, 0.75)	200370 (141886,250179)	610456 (459730,824943)	3.75 (3.4, 4.1)
Gynecological diseases	4384186 (3028143,6157566)	4451600 (3071823,6267803)	-0.19 (-0.41, 0.03)	247477546 (220469462,274870380)	269808443 (240999146,299781740)	0.23 (0.09, 0.36)
Endometriosis	425933 (238153,690283)	328056 (193155,516198)	-0.87 (-1.01, -0.73)	4576321 (3026149,6446903)	3527521 (2542716,4672148)	-0.88 (-1.02, -0.74)
Female infertility	134696 (43763,350483)	158429 (51488,413167)	0.35 (0.08, 0.61)	25776228 (13560660,45629903)	30295389 (14832471,54600115)	0.35 (0.09, 0.61)
Genital prolapse	30946 (14980,58810)	65205 (31569,123731)	2.65 (2.46, 2.83)	9978747 (8242578,12033058)	21129766 (17388153,25262658)	2.65 (2.46, 2.83)
Polycystic ovarian syndrome	84630 (36922,173510)	122114 (54114,250670)	1.33 (1.12, 1.54)	9794148 (6941090,13725681)	14200385 (10047821,20048745)	1.35 (1.14, 1.56)
Premenstrual syndrome	1490399 (908004,2296551)	1477928 (889561,2255936)	-0.02 (-0.15, 0.11)	176049621 (143497477,209715302)	174749990 (140490957,212329147)	-0.02 (-0.15, 0.11)
Uterine fibroids	9428 (5814,16576)	21360 (11190,29968)	3.72 (3.22, 4.22)	11470781 (8571243,15239375)	16703978 (12830545,21469530)	1.18 (0.95, 1.41)
Other gynecological diseases	2208154 (1470119,3193499)	2278508 (1540286,3273134)	-0.37 (-0.71, -0.03)	67152121 (54470252,81992550)	68212361 (56938913,81540492)	-0.42 (-0.75, -0.08)
South-Eastern Asia						
DFRS	2683971 (1950241,3679840)	5616903 (3974833,7746548)	2.35 (2.27, 2.43)	75957636 (66751277,84597467)	124907585 (110550458,138755442)	1.58 (1.5, 1.66)
Breast cancer	716164 (536172,947203)	2184048 (1581924,2956627)	3.64 (3.55, 3.73)	263511 (211288,330725)	1160750 (906755,1485130)	4.97 (4.92, 5.01)
Cervical cancer	601367 (466586,757048)	915934 (676299,1206510)	1.2 (1.08, 1.32)	133839 (102275,170051)	289089 (213037,383314)	2.24 (2.08, 2.41)
Ovarian cancer	147350 (103776,235162)	472946 (317527,700523)	3.78 (3.7, 3.86)	43705 (30173,71484)	162292 (105075,238493)	4.17 (3.98, 4.35)
Uterine cancer	86483 (55644,116126)	221541 (140009,306477)	2.97 (2.9, 3.04)	48675 (31262,65477)	179475 (112112,250842)	4.23 (4.16, 4.29)
Gynecological diseases	1132607 (788063,1624302)	1822433 (1259075,2576411)	1.49 (1.4, 1.59)	75467906 (66376279,83959730)	123115979 (109213477,136397662)	1.55 (1.47, 1.64)
Endometriosis	174928 (100767,271093)	220302 (129567,344307)	0.79 (0.71, 0.88)	1882226 (1319888,2608329)	2367610 (1668633,3237496)	0.78 (0.69, 0.87)

Female infertility	27548 (8635,70644)	59577 (18617,146081)	3.22 (2.96, 3.49)	4943617 (2317511,9206508)	10802342 (4981980,20035062)	3.27 (3, 3.55)
Genital prolapse	8637 (4160,16274)	18278 (8973,34152)	2.57 (2.53, 2.61)	2729075 (2174519,3367323)	5665310 (4507228,6981576)	2.48 (2.45, 2.5)
Polycystic ovarian syndrome	31499 (13763,64504)	90076 (39839,186216)	3.68 (3.51, 3.85)	3532316 (2476116,5013062)	10232764 (7185443,14491573)	3.74 (3.56, 3.91)
Premenstrual syndrome	510355 (309864,788352)	781759 (472359,1195383)	1.32 (1.21, 1.42)	60474803 (50391560,70402556)	92751401 (76356035,109396978)	1.31 (1.21, 1.42)
Uterine fibroids	2945 (1343,5045)	5314 (2489,8923)	1.87 (1.78, 1.96)	2961431 (2248108,3846606)	6223499 (4753157,8092915)	2.39 (2.28, 2.51)
Other gynecological diseases	376695 (251975,542724)	647127 (439686,917438)	1.6 (1.46, 1.74)	11551412 (9314500,14190980)	19743851 (16232829,23894185)	1.59 (1.46, 1.72)
Southern Asia						
DFRS	6691346 (5105707,8672022)	13629534 (10330916,17848137)	2.32 (2.22, 2.43)	194828977 (176639732,212012795)	391559122 (355735603,425767590)	2.34 (2.31, 2.37)
Breast cancer	1127860 (942978,1348675)	3764296 (3040395,4643131)	3.96 (3.84, 4.08)	353754 (304813,409011)	1668708 (1397400,1991202)	5.21 (5.04, 5.39)
Cervical cancer	1979758 (1617790,2347863)	2447602 (2028230,2925093)	0.63 (0.34, 0.93)	309181 (255315,364270)	578256 (475397,698849)	2.02 (1.72, 2.32)
Ovarian cancer	269263 (191139,358733)	974160 (758192,1259687)	4.19 (4.11, 4.27)	47659 (33875,64352)	198393 (149324,255901)	4.66 (4.59, 4.73)
Uterine cancer	96932 (69958,124493)	262309 (201922,370484)	3.13 (2.98, 3.29)	38367 (27701,48682)	162368 (124252,225204)	4.66 (4.42, 4.9)
Gynecological diseases	3217533 (2283842,4492257)	6181167 (4302177,8649742)	2.15 (2.11, 2.18)	194080016 (176018028,211126481)	388951397 (353589230,422596433)	2.33 (2.3, 2.36)
Endometriosis	454753 (261009,701180)	543209 (313975,835182)	0.57 (0.53, 0.61)	4987959 (3391678,6943569)	5931757 (4112731,8255915)	0.55 (0.51, 0.59)
Female infertility	64125 (19591,155206)	200525 (67529,494224)	4.12 (3.45, 4.79)	11194694 (5352351,20111024)	35748034 (18801350,62618876)	4.26 (3.55, 4.97)
Genital prolapse	68499 (34416,132321)	100286 (50888,191896)	1.27 (1.21, 1.34)	21769207 (18114623,26068486)	31579426 (26230096,38073367)	1.25 (1.18, 1.31)
Polycystic ovarian syndrome	30927 (13561,65495)	102174 (44709,214575)	4.25 (4.13, 4.36)	3471272 (2468468,4856354)	11659255 (8195537,16374629)	4.32 (4.2, 4.44)

Premenstrual syndrome	1149061 (705050,1750757)	2255213 (1377173,3447910)	2.25 (2.19, 2.31)	138504822 (116434988,159272372)	271331312 (225726757,315676050)	2.24 (2.18, 2.29)
Uterine fibroids	26153 (14636,39549)	49457 (33035,72071)	2.13 (2.05, 2.21)	11404580 (8505440,15142200)	31244517 (23232617,41521880)	3.58 (3.45, 3.7)
Other gynecological diseases	1424014 (967180,2038761)	2930302 (1986913,4181481)	2.33 (2.28, 2.39)	57295606 (46885862,69283393)	118134086 (97055496,141337704)	2.37 (2.32, 2.41)
Western Asia						
DFRS	1371324 (1001271,1857488)	3357722 (2410439,4547015)	3.07 (3.01, 3.13)	40711781 (37147085,44276353)	91580292 (84235030,98386680)	2.69 (2.61, 2.77)
Breast cancer	231356 (187363,283085)	762848 (590785,976002)	4.35 (4.14, 4.55)	159555 (134580,188537)	910750 (749292,1106198)	6.33 (6.06, 6.6)
Cervical cancer	101304 (77542,133580)	128590 (92332,169703)	0.69 (0.58, 0.8)	20985 (16385,27102)	37420 (27352,49917)	1.97 (1.85, 2.09)
Ovarian cancer	60247 (42309,90862)	176677 (122276,237239)	3.66 (3.55, 3.76)	12260 (8368,19071)	42445 (28638,57756)	4.24 (4.14, 4.34)
Uterine cancer	37410 (27335,49289)	78720 (52017,107627)	2.48 (2.2, 2.77)	29524 (21577,38568)	120069 (78570,162943)	4.81 (4.53, 5.09)
Gynecological diseases	941006 (666722,1300672)	2210887 (1553028,3056443)	2.87 (2.81, 2.93)	40489457 (36966176,44003074)	90469608 (83351178,97009866)	2.67 (2.59, 2.75)
Endometriosis	85446 (48802,133800)	125237 (71937,194385)	1.24 (1.18, 1.31)	932488 (628648,1317171)	1373722 (939856,1919089)	1.25 (1.19, 1.31)
Female infertility	8145 (2554,20004)	21466 (6472,55316)	2.82 (2.47, 3.16)	1375640 (656336,2414232)	3784596 (1778281,6734636)	2.93 (2.57, 3.28)
Genital prolapse	8602 (4068,16896)	19154 (9022,37695)	2.73 (2.65, 2.8)	2762487 (2120655,3481586)	6209050 (4737684,7867021)	2.76 (2.68, 2.83)
Polycystic ovarian syndrome	13583 (5993,28388)	36443 (16143,76489)	3.51 (3.25, 3.77)	1497346 (1027976,2146320)	4113258 (2831232,5864292)	3.58 (3.33, 3.82)
Premenstrual syndrome	187183 (113948,287440)	394666 (240647,597743)	2.42 (2.3, 2.54)	22435728 (18352356,26548293)	47706230 (38523314,57469332)	2.44 (2.33, 2.56)
Uterine fibroids	1599 (873,2664)	2987 (1777,4868)	1.97 (1.93, 2.02)	1401453 (1055047,1843734)	3377773 (2511182,4452441)	2.81 (2.75, 2.86)
Other gynecological diseases	636449 (435893,891922)	1610933 (1097855,2257826)	3.15 (3.1, 3.2)	24340571 (20698005,28341040)	60453490 (51427491,69800205)	3.07 (2.99, 3.14)

DFRS, Diseases of the female reproductive system; UI, uncertainty interval; CI, confidence interval; EAPC, estimated annual percentage change.