Women Have More Adverse Events than Men Do. Why?

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There are consistent sex differences in the absolute number and percentage of Adverse Events (AEs) and Adverse Events of Special Interest (AESI) as reported in two large data sets in the Pfizer (Pfe) Confidential Document Collection released pursuant to a court order. The record release involves a large number of documents released at monthly intervals, some heavily redacted, that flow in a haphazard manner.

Most AEs appear to have been spontaneously reported through a mechanism we are still waiting to learn about which means they were not part of a well-regulated and proactive surveillance program and may underestimate the actual frequency of such events.

Many people having a complication related to Pfizer's Lipid Nanoparticle Messenger Ribonucleic Acid (LNP/mRNA) prodrug, BNT162b2, are not aware of how to report, or are unable to report in cases of a severe complication, or reporting is actively suppressed.

Over-reporting and in some cases questionable relevance of the reporting in some disease categories is a possibility as a review of the entries in Appendix 2.1, the 170-page registry of 4,563,770 Adverse Events logged in by April 15, 2022.

This report will examine primary source documents that collect Adverse Events at two points in time, February 28, 2021 and the first three months following widespread inoculation of BNT162b2 and then a second time ending March 15, 2022.

Sex Differences Example 1: Pfe 5.3.6 Reissue

The first example is from document 5.3.6 Reissue which is a summary of Adverse Events and Adverse Events of Special Interest after injection of BNT162b2, Pfizer's LNP/mRNA offering.

This data set comprises 42,086 subjects from the first three months after the mass inoculation up to 2/28/2021 following the Emergency Use Authorization (EUA) issued by the Food and Drug Administration, December 11, 2020.[1]

Table 1 below is a tally of Adverse Events and Adverse Events of Special Interest by organ system from Document 5.3.6 Reissue although it must be pointed out that some cases were reassigned to organ categories by the author. [2]

For instance, myopericarditis was moved from Pfizer's Autoimmunity assignment to Cardiac on the basis of the organ involved rather than the assumed disease process.[42]

[1] https://www.fda.gov/news-events/press-announcements/fda-takes-key-action-fight-against-covid-19-issuing-emergency-use-authorization-first-covid-19

[2] See Pfizer Document 5.3.6 Reissue: Adverse Events, R. Chandler MD, MBA, DailyClout.io

Table 1: AEs and ASEIs up to 2/28/2021

In every category females substantially outnumber males. Charts 1 and 2 are graphical representations of this data.

Study	Females %	Males %	F	M	N =	Unk	p
Table 1 from 5.3.6	77%	23%	29914	9182	42086	2990	p < 0.001
Table 7 from 5.3.6							
Autoimmune	81%	19%	682	156	838	N/A	p < 0.001
Cardiac	77%	21%	1076	291	1403	36	p < 0.04
Covid-19	66%	34%	1650	844	3067	573	p < 0.001
Dermatologic	94%	6%	17	1	19	1	**See note**
Hematologic	75%	25%	676	222	898	0	**p = 0.385**
Hepatic	61%	37%	43	26	70	0	p =0.019
Musculoskeletal	80%	20%	2760	711	3471	0	p < 0.001
Neurologic	69%	31%	623	283	927	21	p < 0.001
Other (Pyrexia and Herpes)	76%	24%	5969	1860	7829	0	**p = 0.527**
Renal	67%	33%	46	23	69	0	**p = 0.085**
Respiratory	55%	45%	72	58	130	0	p < 0.001
Stroke	67%	33%	182	91	273	0	p = 0.001
Thromboembolic event	62%	38%	89	55	144	0	p < 0.001
Vasculitis	81%	19%	26	6	32	0	**p = 0.549**
Total excl. Unknown	75%	25%	13911	4627	18538		

Chart 1: F/M Ratio in 39,096 Subjects

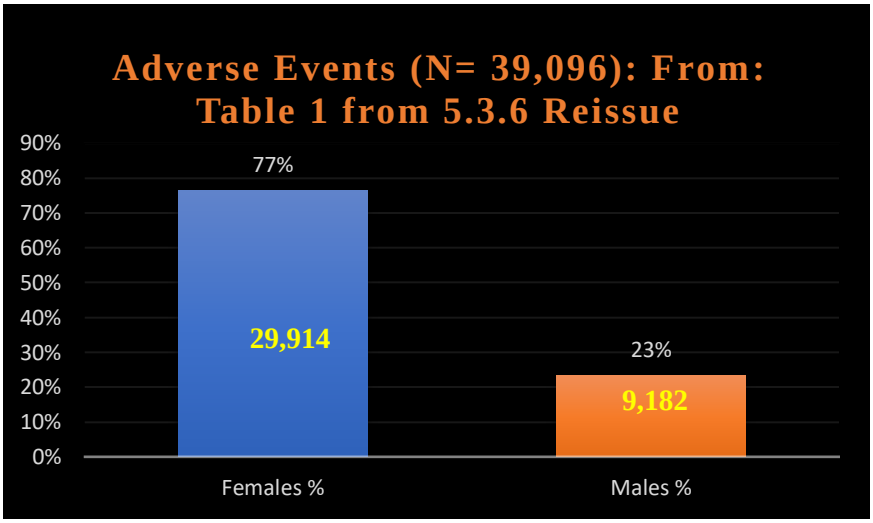
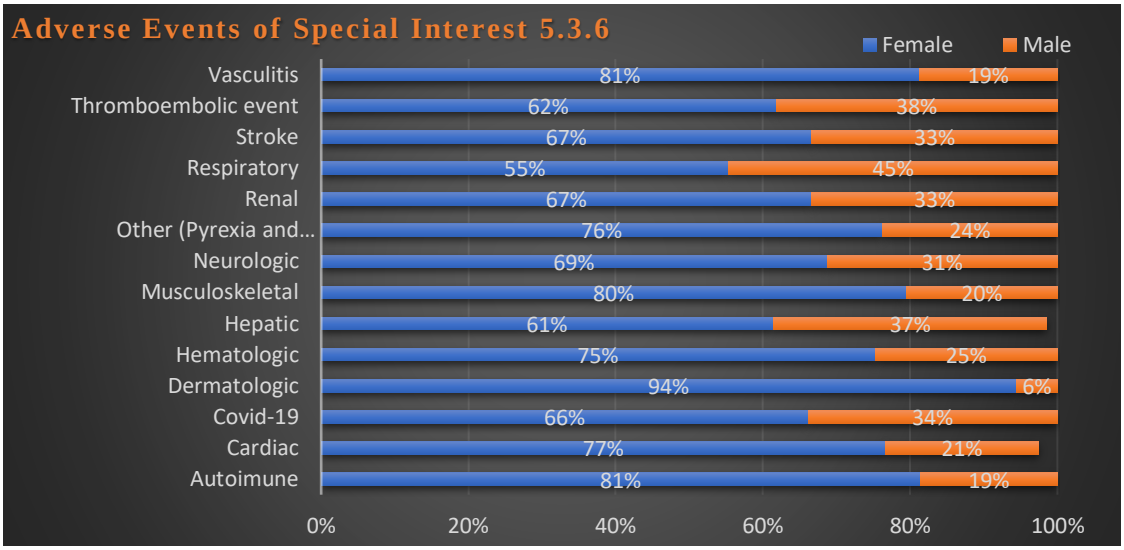


Chart 1 illustrates this finding with 29,914 females with AEs compared with 9,182 for males. (p < 0.001)

This trend follows through Table 7 (AESI), from 5.3.6 Reissue. Chart 2 shows the female to male ratio in percent for each organ system as reported. Note that females substantially outnumber males in all categories and by more than a factor of three overall.

There is no category in which the number of males outnumber females. Statistical significance at $p<0.05$ in comparison of the rates of particular types of AE's in females versus males. Hematologic, Dermatologic, Other (Pyrexia and Herpes), Renal and Vasculitis are exceptions with p values > 0.05. **Note:** Dermatologic was evaluated using Fisher exact test due to small sample size, p = 0.093.

Chart 2: Organ System Detail



Sex Differences Example 2: Appendix 2.1 [3]https://metatron.substack.com/p/cumulative-number-of-case-reports

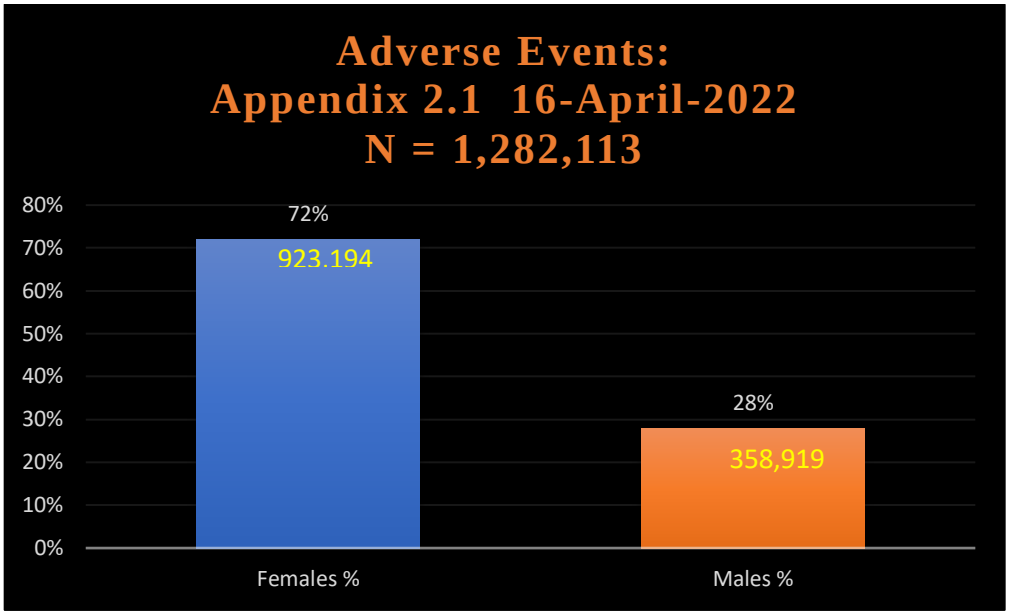
A second large series of Adverse Events associated with Pfizer's BNT162b2 Document trove, Appendix 2.1, recently surfaced after a FOIA request from the Australian Therapeutic Goods Administration and consists of a 170-page document that tallies Adverse Events by diagnosis in 1,348,079 subjects (patients). There were 1,282,113 cases in which the sex was known, 923,194 were women (72% of those with known sex and 68% of total series including unknown sex) and 358,919 were male. Data capture ended 4/15/2022.

The total number of Adverse Events reported in this document is 4,563,770 for an average of 3.4 AEs per case). The disproportionate representation of AEs in females is again strongly present here as in 5.3.6 Reissue.

Table 2: F:M Difference in 1,282,113 Cases of Adverse Events

Study	Females %	Males %	Females	Males	N =
Appendix 2.1 16-April-2022	72%	28%	923194	358919	1282113

Chart 3: F:M Comparison in AEs Subjects



Adverse Events are two and a half times more common in women than men as shown in Chart 3. This is the same pattern we saw in the earlier reporting of a smaller series from Document 5.3.6. $p < 0.001$.
Chart 4 illustrates this same disparity in the specific data referable to female and male reproductive organ and organ function disorders with much higher absolute numbers for women as well as in terms of percent of adverse events.

The difference here is striking with 148,874 women reporting Reproductive System AEs contrasted with only 1,745 males. $p < 0.001$.

Chart 4: Reproductive Organ and Function Sex Differences

Female vs. Male Reproductive Disorders (RDs) After BNT162b2

Total # RDs Females	148,874 of 923,194 AEs	Total # RDs Males	1745 of 358,919 AEs
RDs as a Percent of Female AEs	16%	RDs as a Percent of Male AEs	0.49%

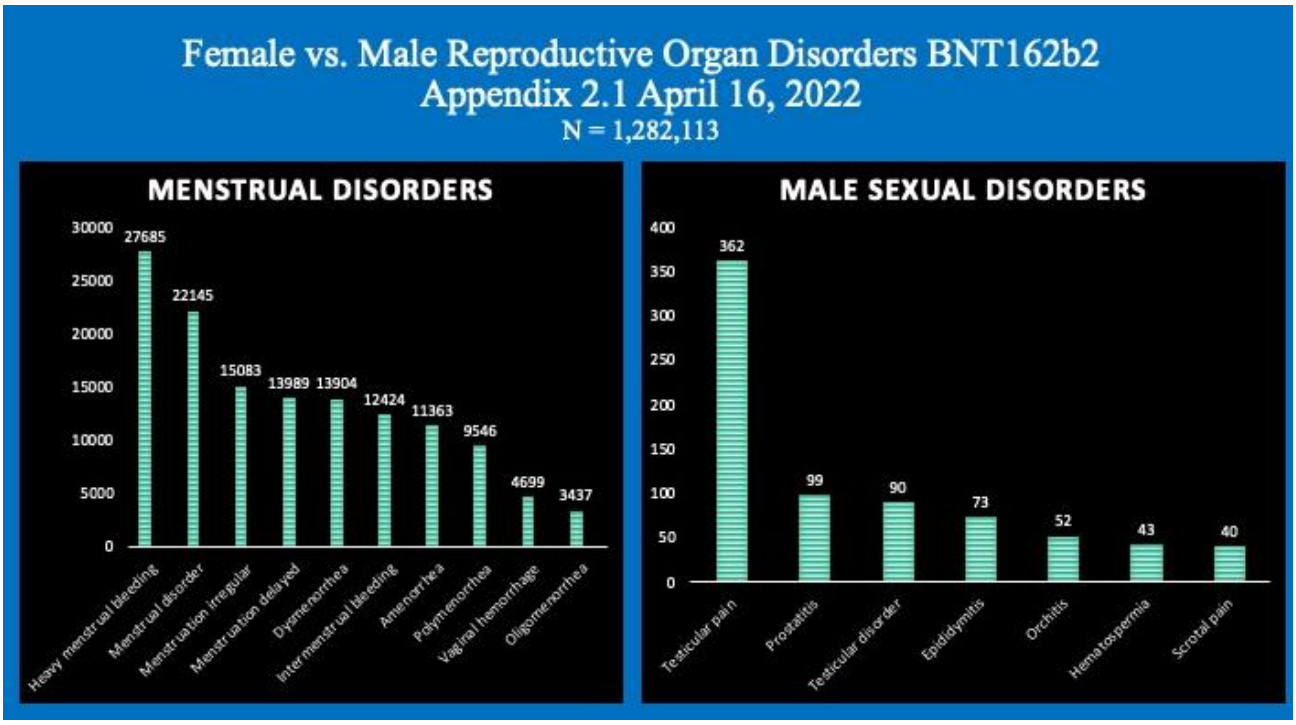
AEs = Adverse Events

As seen in Chart 5, below left, females appear to have fewer diagnostic categories than males but only because there are so many for women that a charting of them is too busy if all are plotted.

For comparison of the sexes see Appendix 2 (females) and 3 (males) that list the reported reproductive organ and organ function disorders by sex following injection of BNT162b2. This tally lists diagnoses with reporting frequency of ten or more.

Shown in Chart 5 below are the numbers of the just the top ten **menstrual** dysfunctions contrasted with a much smaller number of reproductive issues in men.

Chart 5: Menstrual Disorders compared with Male Reproductive Disorders



Why do Women Have So Many More Adverse Events than Males?

There is no immediate answer to the question as to why females report more Adverse Events and Adverse Events of Special Interest than do males but the signal here is strong.

Is there some distortion in the reporting mechanism that might explain such a wide difference? Perhaps. Is there some kind of systematic reporting bias? We can only speculate at present.

Alternatively, are there true sex differences in reaction to Pfizer's LNP/mRNA injections? Are women more prone to having complications after receiving Pfizer's BNT162b2? Perhaps. Is there something about the LNP/mRNA concentration in ovaries that leads to production of more mRNA transcribed Spike or Spike related proteins that have been shown to be toxic in multiple studies. (See robert.chandler@substack.com, Spike References)

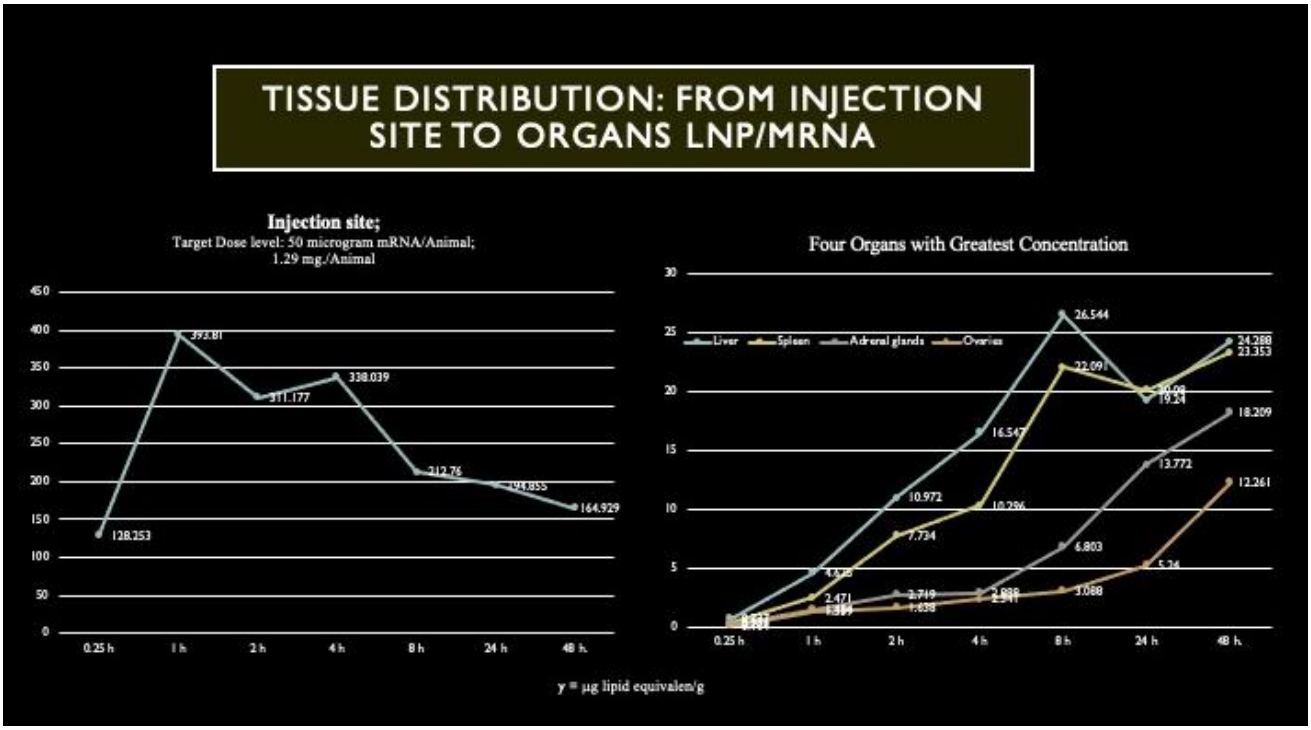
We have seen from the Pre-clinical animal studies, Chart 6 following, that ovaries are one of the top four organs as far as concentration of LNP/mRNA is concerned. But, unfortunately, this

study in Wistar Han Rats only ran for two days and no longer-term studies were performed. Furthermore, the ovaries like liver, spleen and adrenal glands had LNP/mRNA concentrations that were steeply rising at the time of animal sacrifice.

Had autopsies had been performed in a systematic manner following widespread human inoculation in individuals dying in the weeks following injection of BNT162b2 we might have the answer by now and would certainly know more about gross and microscopic changes occurring in organs following the injection. Spike and related protein levels in the various organ systems would be of great interest.

Chart 6 illustrates deposition of LNP/mRNA at the injection site, left chart, followed by rapid dissemination throughout the body with concentration in four organs, liver, spleen, adrenal glands and ovaries, right chart.

Chart 6: Distribution of LNP/mRNA in Wistar Han Rats.

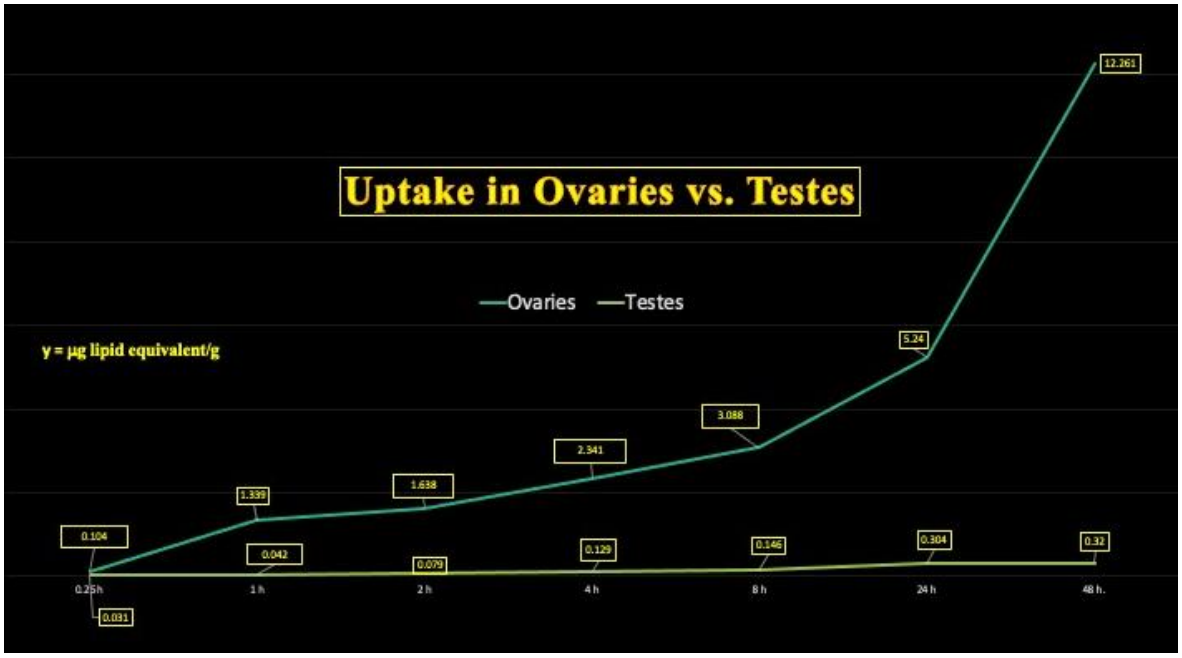


LNP/mRNA concentrates in ovaries as shown in Chart 6 showing data from Pre-Clinical studies performed in Wistar Han Rats. Note: the x axis is nonlinear in Charts 6 and 7. Interpret the data accordingly.

Caution is needed here as animal studies may be misleading. There is such a thing as species specific reactions and humans may have different findings.

Chart 7 illustrates the disparity between ovaries and testes with respect to LNP/BNT162b2 uptake and concentration showing more than 38 times more concentration in ovaries than testes as shown in these animal studies.

Chart 7: Tissue Concentration of LNP/mRNA Ovaries vs. Testes



Why do ovaries concentrate lipid nanoparticles and mRNA contained therein so much more effectively than testes?

And does this account for the large disparity in the incidence of Adverse Events and Adverse Events of Special Interest following injection of BNT162b2 in women as opposed to men?

Or, are these differences in AEs overall and with respect to the dysfunction in the Reproductive Systems specifically a result of some methodological quirk?

We cannot definitively answer this question at present. For now, we must interpret these data as showing women are at increased risk for Adverse Events from Pfizer's LNP/mRNA product than are men both in terms of many or all organ systems but especially with respect to reproductive organ systems and their functions.

Assuming this differential is caused by disproportionate impact of BNT162b2 on women and their reproductive systems and organs the implications could be profound.

Appendix 1: Female Reproductive AEs Following Inoculation with BNT162b2

148,874 reproductive organ AEs occurred in women which represents ~16% of the total number of Adverse Events in women. The list below gives the diagnoses reported 10 or more times.

Total AEs N =	**923194**
Heavy menstrual bleeding	27685
Menstrual disorder	22145
Menstruation irregular	15083
Menstruation delayed	13989
Dysmenorrhea	13904
Intermenstrual bleeding	12424
Amenorrhea	11363
Polymenorrhea	9546
Breast pain	4800
Vaginal hemorrhage	4699
Oligomenorrhea	3437
Hypomenorrhea	2643
Postmenopausal hemorrhage	2456
Abortion spontaneous	1809
Breast swelling	1339
Menstrual discomfort	1199
Premenstrual syndrome	998
Breast tenderness	792
Menometrorrhagia	632
Adnexa uteri pain	609
Premenstrual pain	585
Breast enlargement	483
Vaginal discharge	480
Breast discomfort	443
Mastitis	392
Ovulation pain	347
Endometriosis	337
Menstrual cycle management	308
Anovulatory cycle	273
Uterine pain	270
Abnormal withdrawal bleeding	265
Uterine hemorrhage	231
Vulvovaginal pain	191
Ovulation delayed	181
Premature baby	181
Vulvovaginal mycotic infection	173
Breast cancer	147
Fetal death	147
Fetal growth restriction	124
Vulvovaginal candidiasis	122

Breast cyst	115
Genital hemorrhage	115
Breast edema	113
Abnormal uterine bleeding	100
Pelvic venous thrombosis	98
Labor pain	95
Uterine leiomyoma	91
Polycystic ovaries	82
Breast discharge	71
Vulvovaginal pruritis	71
Breast disorder	68
Uterine contracture during pregnancy	68
Ectopic pregnancy	67
Premature labor	64
Morning sickness	62
Vaginal infection	60
Vulvovaginal discomfort	59
Abortion	58
Premature menopause	58
Vulval ulceration	56
Stillbirth	56
Vulvovaginal dryness	54
Coital bleeding	46
Ovarian cyst rupture	44
Premature delivery	44
Endometrial thickening	42
Genital burning syndrome	42
Adenomyosis	41
Breast abscess	41
Fetal heart rate abnormal	41
Menarche	40
Premenstrual headache	40
Uterine contractions abnormal	40
Breast induration	39
Premature rupture of membranes	37
Uterine polyp	37
Vulvovaginal swelling	37
Abortion induced	36
Uterine inflammation	36
Vulval hemorrhage	34
Pelvic inflammatory disease	33
Pregnancy	32
Pelvic discomfort	30
Premature menarche	27
Premature ovulation	27
Breast hematoma	26

Infertility female	26
Postpartum hemorrhage	26
Uterine disorder	26
Pelvic hemorrhage	25
Noninfective oophoritis	23
Vaginal ulceration	23
Dyspareunia	22
Ovarian disorder	22
Unintended pregnancy	22
Vaginal order	22
Vulvovaginal inflammation	21
Breast cancer	20
Breast disorder female	20
Hemorrhagic ovarian cyst	20
Placental disorder	20
Gestational diabetes	19
Abortion early	19
Endometrial disorder	18
Nipple inflammation	18
Endometrial hyperplasia	18
Ovarian hemorrhage	17
Ovarian failure	16
Vulvovaginal erythema	16
Ovarian vein thrombosis	15
Polymenorrhagia	15
Threatened labor	14
Fibrocystic breast disease	13
Ovarian enlargement	13
Uterine enlargement	13
Cervix hemorrhage uterine	12
Breast atrophy	11
Breast hemorrhage	11
Breast neoplasm	11
Caesarean section	11
Cervical dysplasia	11
Pelvic girdle pain	11
Vaginal disorder	11
Vulval disorder	11
Bartholin's cyst	10
Decidual cyst	10
Fetal cardiac disorder	10
Fetal growth abnormality	10
Fetal vascular malperfusion	10
Vaginal cyst	10
Small for dates baby	10
Vaginal cyst	10

Appendix 2: Male Reproductive Disorders Following Inoculation with BNT162b2

1,745 reproductive organ AEs were reported in men which represents 0.49% of the total number of Adverse Events in men. AEs list occurred 10 or more times.

Males	
Total AEs =	**358919**
Testicular pain	362
Prostatitis	99
Testicular disorder	90
Epididymitis	73
Orchitis	52
Hematospermia	43
Scrotal pain	40
Penile pain	31
Penis disorder	31
Benign prostatic hypertrophy	26
Penile swelling	25
Scrotal swelling	24
Erection increased	23
Testicular disorder	22
Orchitis noninfective	20
Ejaculation disorder	18
Ejaculation failure	18
Prostatomegaly	18
Priapism	17
Testes discomfort	16
Spontaneous penile erection	15
Penile edema	13
Prostatic disorder	13
Penile hemorrhage	11
Penile erythema	10
Penile vein thrombosis	10
Scrotal erythema	10

Revisions this version:

1. P values were given in column 7, Table 1 and in the text. The Appendix 1 with these calculations was removed for readability.
2. In some cases, p values were very low and rather than give 0 values as returned by the software, the value is represented as $p < 0.001$.
3. Caution Note regarding non-linearity of the x axis in Charts 6 and 7 was added.
4. Clarification added to the first two paragraphs on page 3: a. "*number of cases* for males outnumber females" was added and b.