

**S1 Table (a). Numbers of patients analysed and (in parentheses) risk per 100,000 people for the whole population during follow up of venous and arterial events and thrombocytopenia (TCP), overall and according to age.**

		Overall				Age, <70				Age, ≥70			
		All	Venous	Arterial	TCP	All	Venous	Arterial	TCP	All	Venous	Arterial	TCP
N		46,162,942	20,903 (45.3)	87,251 (189)	1,926 (4.2)	38,744,171	11,835 (30.5)	38,283 (98.8)	1,167 (3.0)	7,418,771	9,068 (122)	48,968 (660)	759 (10.2)
Sex	Male	22,765,779	10,358 (45.5)	51,851 (228)	986 (4.3)	19,425,454	6,406 (33.0)	26,549 (137)	555 (2.9)	3,340,325	3,952 (118)	25,302 (757)	431 (12.9)
	Female	23,397,163	10,545 (45.1)	35,400 (151)	940 (4.0)	19,318,717	5,429 (28.1)	11,734 (60.7)	612 (3.2)	4,078,446	5,116 (125)	23,666 (580)	328 (8.0)
Age	18 - 29	8,821,973	781 (8.9)	400 (4.5)	143 (1.6)	8,821,973	781 (8.9)	400 (4.5)	143 (1.6)				
	30 - 49	16,131,025	3,544 (22.0)	6,424 (39.8)	338 (2.1)	16,131,025	3,544 (22.0)	6,424 (39.8)	338 (2.1)				
	50 - 69	13,791,173	7,510 (54.5)	31,459 (228)	686 (5.0)	13,791,173	7,510 (54.5)	31,459 (228)	686 (5.0)				
	70 - 79	4,674,973	4,820 (103)	22,249 (476)	418 (8.9)					4,674,973	4,820 (103)	22,249 (476)	418 (8.9)
	80+	2,743,798	4,248 (155)	26,719 (974)	341 (12.4)					2,743,798	4,248 (155)	26,719 (974)	341 (12.4)
Ethnicity	Asian or Asian British	3,718,442	599 (16.1)	5,325 (143)	152 (4.1)	3,467,223	475 (13.7)	3,378 (97.4)	125 (3.6)	251,219	124 (49.4)	1,947 (775)	27 (10.7)
	Black or Black British	1,634,470	654 (40.0)	2,086 (128)	58 (3.5)	1,525,603	513 (33.6)	1,384 (90.7)	45 (2.9)	108,867	141 (130)	702 (645)	13 (11.9)
	Mixed	712,534	182 (25.5)	642 (90.1)	22 (3.1)	682,037	153 (22.4)	426 (62.5)	19 (2.8)	30,497	29 (95.1)	216 (708)	<5 (9.8)
	Other ethnic groups	1,497,133	217 (14.5)	1,072 (71.6)	39 (2.6)	1,427,187	162 (11.4)	678 (47.5)	33 (2.3)	69,946	55 (78.6)	394 (563)	<5 (8.6)
	White	36,446,855	18,995 (52.1)	77,118 (212)	1,643 (4.5)	29,619,868	10,362 (35.0)	31,821 (107)	939 (3.2)	6,826,987	8,633 (126)	45,297 (663)	704 (10.3)
	Unknown or missing	2,153,508	256 (11.9)	1,008 (46.8)	12 (0.6)	2,022,253	170 (8.4)	596 (29.5)	6 (0.3)	131,255	86 (65.5)	412 (314)	<10 (4.6)
Deprivation <sup>1</sup>	1 - 2	9,118,746	4,565 (50.1)	18,830 (206)	365 (4.0)	8,069,275	3,064 (38.0)	10,493 (130)	272 (3.4)	1,049,471	1,501 (143)	8,337 (794)	93 (8.9)
	3 - 4	9,567,633	4,105 (42.9)	17,436 (182)	370 (3.9)	8,273,028	2,454 (29.7)	8,370 (101)	234 (2.8)	1,294,605	1,651 (128)	9,066 (700)	136 (10.5)
	5 - 6	9,355,549	4,091 (43.7)	17,642 (189)	392 (4.2)	7,784,840	2,235 (28.7)	7,263 (93.3)	221 (2.8)	1,570,709	1,856 (118)	10,379 (661)	171 (10.9)
	7 - 8	9,076,313	4,146 (45.7)	16,939 (187)	381 (4.2)	7,362,375	2,128 (28.9)	6,334 (86.0)	221 (3.0)	1,713,938	2,018 (118)	10,605 (619)	160 (9.3)
	9 - 10	8,772,902	3,926 (44.8)	16,024 (183)	406 (4.6)	7,000,538	1,908 (27.3)	5,602 (80.0)	210 (3.0)	1,772,364	2,018 (114)	10,422 (588)	196 (11.1)
Smoking status	Current	7,814,045	3,079 (39.4)	16,115 (206)	260 (3.3)	7,287,225	2,492 (34.2)	11,811 (162)	219 (3.0)	526,820	587 (111)	4,304 (817)	41 (7.8)
	Former	10,623,072	6,930 (65.2)	31,768 (299)	581 (5.5)	7,826,062	3,233 (41.3)	11,703 (150)	277 (3.5)	2,797,010	3,697 (132)	20,065 (717)	304 (10.9)
	Never	25,722,494	10,667 (41.5)	38,701 (150)	1,053 (4.1)	21,674,974	5,929 (27.4)	14,346 (66.2)	643 (3.0)	4,047,520	4,738 (117)	24,355 (602)	410 (10.1)
Medical history	Stroke	727,218	1,020 (140)	21,489 (2,955)	104 (14.3)	286,650	323 (113)	8,147 (2,842)	40 (14.0)	440,568	697 (158)	13,342 (3,028)	64 (14.5)
	Myocardial infarction	1,189,182	1,436 (121)	24,212 (2,036)	158 (13.3)	485,506	436 (89.8)	10,486 (2,160)	46 (9.5)	703,676	1,000 (142)	13,726 (1,951)	112 (15.9)
	DVT or PE	603,351	3,263 (541)	4,050 (671)	142 (23.5)	341,788	1,919 (561)	1,377 (403)	76 (22.2)	261,563	1,344 (514)	2,673 (1,022)	66 (25.2)
	Thrombophilia	44,593	146 (327)	202 (453)	23 (51.6)	38,136	126 (330)	144 (378)	21 (55.1)	6,457	20 (310)	58 (898)	<5 (31.0)
	Coronavirus infection <sup>2</sup>	1,284,984	1,131 (88.0)	4,167 (324)	101 (7.9)	1,124,135	576 (51.2)	1,642 (146)	63 (5.6)	160,849	555 (345)	2,525 (1,570)	38 (23.6)
	Diabetes	4,069,412	3,654 (89.8)	25,595 (629)	423 (10.4)	2,460,649	1,509 (61.3)	9,949 (404)	205 (8.3)	1,608,763	2,145 (133)	15,646 (973)	218 (13.6)
	Depression	9,516,020	6,272 (65.9)	24,146 (254)	500 (5.3)	8,040,590	4,077 (50.7)	12,859 (160)	348 (4.3)	1,475,430	2,195 (149)	11,287 (765)	152 (10.3)
	Obesity	10,918,274	8,873 (81.2)	31,194 (286)	679 (6.2)	8,757,004	5,430 (62.0)	15,848 (181)	411 (4.7)	2,161,270	3,433 (159)	15,346 (710)	268 (12.4)
	Cancer	6,609,691	5,674 (85.8)	17,827 (270)	786 (11.9)	4,854,822	2,583 (53.2)	4,462 (91.9)	412 (8.5)	1,754,869	3,091 (176)	13,365 (762)	374 (21.3)
	COPD	1,582,366	2,497 (158)	12,323 (779)	182 (11.5)	714,880	877 (123)	3,839 (537)	76 (10.6)	867,486	1,620 (187)	8,484 (978)	106 (12.2)
	Liver disease	230,243	284 (123)	1,069 (464)	97 (42.1)	173,423	208 (120)	547 (315)	75 (43.2)	56,820	76 (134)	522 (919)	22 (38.7)
	CKD	2,934,107	4,467 (152)	25,816 (880)	526 (17.9)	978,886	1,179 (120)	5,164 (528)	200 (20.4)	1,955,221	3,288 (168)	20,652 (1,056)	326 (16.7)
	Major surgery <sup>3</sup>	3,995,870	5,407 (135)	24,164 (605)	763 (19.1)	2,773,174	2,735 (98.6)	9,898 (357)	440 (15.9)	1,222,696	2,672 (219)	14,266 (1,167)	323 (26.4)
	Dementia	524,293	1,127 (215)	6,073 (1,158)	45 (8.6)	48,821	81 (166)	415 (850)	10 (20.5)	475,472	1,046 (220)	5,658 (1,190)	35 (7.4)
Medications	Antiplatelet	2,510,382	2,814 (112)	36,415 (1,451)	218 (8.7)	1,000,010	747 (74.7)	15,556 (1,556)	65 (6.5)	1,510,372	2,067 (137)	20,859 (1,381)	153 (10.1)
	BP lowering	8,589,860	7,969 (92.8)	55,462 (646)	777 (9.0)	4,286,561	2,779 (64.8)	20,579 (480)	305 (7.1)	4,303,299	5,190 (121)	34,883 (811)	472 (11.0)
	Lipid lowering	6,808,408	5,796 (85.1)	47,859 (703)	564 (8.3)	3,212,600	1,878 (58.5)	19,543 (608)	194 (6.0)	3,595,808	3,918 (109)	28,316 (787)	370 (10.3)
	Anticoagulant	1,338,585	2,278 (170)	12,758 (953)	205 (15.3)	381,588	1,144 (300)	2,773 (727)	57 (14.9)	956,997	1,134 (118)	9,985 (1043)	148 (15.5)
	Oral contraceptive	622,529	138 (22.2)	42 (6.7)	8 (1.3)	622,529	138 (22.2)	42 (6.7)	8 (1.3)				
	HRT	540,722	213 (39.4)	516 (95.4)	16 (3.0)	501,957	185 (36.9)	368 (73.3)	14 (2.8)	38,765	28 (72.2)	148 (382)	<5 (5.2)
Number of diagnoses	0	36,455,307	12,200 (33.5)	38,617 (106)	980 (2.7)	31,819,272	7,612 (23.9)	18,316 (57.6)	643 (2.0)	4,636,035	4,588 (99.0)	20,301 (438)	337 (7.3)
	1 - 5	9,573,068	8,422 (88.0)	46,012 (481)	925 (9.7)	6,872,479	4,137 (60.2)	19,183 (279)	515 (7.5)	2,700,589	4,285 (159)	26,829 (993)	410 (15.2)
	6+	134,567	281 (209)	2,622 (1948)	21 (15.6)	52,420	86 (164)	784 (1496)	9 (17.2)	82,147	195 (237)	1,838 (2,237)	12 (14.6)
Number of medications	0	22,970,920	3,679 (16.0)	9,629 (41.9)	321 (1.4)	22,122,043	3,143 (14.2)	7,258 (32.8)	290 (1.3)	848,877	536 (63.1)	2,371 (279)	31 (3.7)
	1 - 5	20,875,516	12,872 (61.7)	56,255 (269)	1,210 (5.8)	15,618,756	7,203 (46.1)	25,416 (163)	713 (4.6)	5,256,760	5,669 (108)	30,839 (587)	497 (9.5)
	6+	2,316,506	4,352 (188)	21,367 (922)	395 (17.1)	1,003,372	1,489 (148)	5,609 (559)	164 (16.3)	1,313,134	2,863 (218)	15,758 (1,200)	231 (17.6)

<sup>1</sup> Index of Multiple Deprivation deciles where 10 indicates least deprived and 1 indicates most deprived; <sup>2</sup> After 31/12/2019 and prior to 08/12/2020; <sup>3</sup> In the last year. BP: blood pressure, DCT: deep vein thrombosis; PE: pulmonary embolism; COPD: chronic obstructive respiratory disease; CKD: chronic kidney disease; BP: blood pressure; HRT: hormone replacement therapy; TCP: thrombocytopenia

**S1 Table (b). Numbers and incidence rates pre-, post-first ChAdOx1-S. Incidence rate per 100,000 person years. Disclosure control prevents presentation of n>5**

Outcome	Age	Pre vaccination or unvaccinated		Post vaccination ≤28 days		Post vaccination >28 days	
		N (events)	Incidence rate (95% CI)	N (events)	Incidence rate (95% CI)	N (events)	Incidence rate (95% CI)
All venous	All	14,769	139.8 (137.6–142.1)	2,006	293.6 (281.0–306.7)	995	359.3 (337.6–382.3)
	<70	9,892	103.5 (101.5–105.6)	902	206.8 (193.8–220.8)	234	221.7 (195.0–252.0)
	≥70	4,877	483.8 (470.4–497.5)	1,104	446.6 (421.0–473.7)	761	444.0 (413.5–476.6)
Intracranial venous thrombosis	All	207	1.96 (1.71–2.25)	27	3.95 (2.71–5.76)	9	3.25 (1.69–6.24)
	<70	188	1.97 (1.71–2.27)	22	5.04 (3.32–7.66)	<10	4.74 (1.97–11.38)
	≥70	19	1.88 (1.20–2.95)	5	2.02 (0.84–4.86)	<5	2.33 (0.88–6.21)
Portal vein thrombosis	All	121	1.15 (0.96–1.37)	14	2.05 (1.21–3.46)	9	3.25 (1.69–6.24)
	<70	98	1.03 (0.84–1.25)	9	2.06 (1.07–3.96)	<5	1.89 (0.47–7.57)
	≥70	23	2.28 (1.52–3.43)	5	2.02 (0.84–4.86)	<10	4.08 (1.95–8.56)
Pulmonary embolism	All	8,473	80.2 (78.5–81.9)	1,203	176.0 (166.4–186.3)	587	211.9 (195.4–229.7)
	<70	5,399	56.5 (55.0–58.0)	515	118.1 (108.3–128.7)	134	126.9 (107.2–150.4)
	≥70	3,074	304.9 (294.3–315.9)	688	278.2 (258.2–299.8)	453	264.2 (240.9–289.7)
Deep vein thrombosis	All	5,664	53.6 (52.2–55.0)	739	108.1 (100.6–116.2)	374	135.0 (122.0–149.4)
	<70	3,971	41.6 (40.3–42.9)	345	79.1 (71.2–87.9)	90	85.2 (69.3–104.8)
	≥70	1,693	167.9 (160.1–176.1)	394	159.3 (144.3–175.8)	284	165.6 (147.4–186.0)
Other	All	459	4.35 (3.97–4.76)	51	7.46 (5.67–9.82)	30	10.8 (7.6–15.5)
	<70	359	3.76 (3.39–4.17)	34	7.79 (5.57–10.91)	9	8.52 (4.43–16.38)
	≥70	100	9.92 (8.15–12.06)	17	6.87 (4.27–11.05)	21	12.2 (8.0–18.8)
All arterial	All	57,602	545.6 (541.1–550.0)	8,256	1,210.6 (1184.8–1237.0)	4,634	1,677.8 (1630.2–1726.8)
	<70	31,396	328.7 (325.1–332.4)	2,993	687.3 (663.1–712.4)	755	716.3 (667.0–769.2)
	≥70	26,206	2,603.7 (2572.4–2635.5)	5,263	2,135.3 (2078.3–2193.7)	3,879	2,271.2 (2200.9–2343.8)
Myocardial infarction	All	28,134	266.4 (263.3–269.5)	3,814	558.5 (541.1–576.5)	2,050	740.7 (709.4–773.5)
	<70	17,341	181.5 (178.8–184.2)	1,628	373.5 (355.8–392.1)	363	344.1 (310.4–381.3)
	≥70	10,793	1,071.0 (1051.0–1091.4)	2,186	885.0 (848.6–922.9)	1,687	985.1 (939.2–1033.3)
Ischaemic stroke (ischaemic, unknown, spinal)	All	28,639	271.2 (268.1–274.3)	4,334	634.8 (616.1–654.0)	2,539	917.9 (882.9–954.3)
	<70	13,505	141.4 (139.0–143.8)	1,309	300.3 (284.5–317.0)	377	357.3 (323.0–395.3)
	≥70	15,134	1,502.4 (1478.7–1526.6)	3,025	1,225.4 (1182.5–1269.9)	2,162	1,263.5 (1211.3–1317.9)
Other arterial	All	1,308	12.4 (11.7–13.1)	189	27.6 (24.0–31.9)	98	35.4 (29.0–43.1)
	<70	775	8.11 (7.56–8.70)	82	18.8 (15.1–23.3)	22	20.8 (13.7–31.6)
	≥70	533	52.9 (48.6–57.5)	107	43.3 (35.8–52.3)	76	44.3 (35.4–55.5)
<b>Haematological</b>							
Disseminated intravascular coagulation	All	13	0.12 (0.07–0.21)	<5	0.44 (0.14–1.36)	<5	-
	<70	5	0.05 (0.02–0.13)	<5	0.46 (0.11–1.83)	<5	-
	≥70	8	0.79 (0.40–1.59)	<5	0.40 (0.06–2.87)	<5	-
Thrombotic thrombocytopenic purpura	All	70	0.66 (0.52–0.84)	<5	0.59 (0.22–1.56)	<5	0.72 (0.18–2.89)
	<70	64	0.67 (0.52–0.86)	<5	0.69 (0.22–2.13)	<5	1.89 (0.47–7.57)
	≥70	6	0.59 (0.27–1.32)	<5	0.40 (0.06–2.87)	<5	-
Any thrombocytopenia	All	1,357	12.8 (12.2–13.5)	200	29.3 (25.5–33.6)	89	32.1 (26.1–39.5)
	<70	915	9.58 (8.98–10.22)	124	28.4 (23.8–33.9)	41	38.8 (28.6–52.7)
	≥70	442	43.8 (39.9–48.1)	76	30.7 (24.5–38.5)	48	28.0 (21.1–37.1)
<b>Other</b>							
Haemorrhagic stroke (intracerebral or subarachnoid)	All	3,747	35.5 (34.4–36.6)	487	71.2 (65.2–77.9)	289	104.3 (92.9–117.0)
	<70	2,028	21.2 (20.3–22.2)	157	36.0 (30.8–42.1)	45	42.6 (31.8–57.1)
	≥70	1,719	170.5 (162.6–178.7)	330	133.4 (119.8–148.6)	244	142.2 (125.5–161.3)
Mesenteric thrombosis	All	1,170	11.1 (10.5–11.7)	171	25.0 (21.5–29.1)	109	39.3 (32.6–47.5)
	<70	531	5.56 (5.10–6.05)	56	12.8 (9.9–16.7)	20	18.9 (12.2–29.4)
	≥70	639	63.4 (58.6–68.5)	115	46.5 (38.7–55.8)	89	51.9 (42.1–63.9)
Lower limb fracture	All	18,347	173.7 (171.2–176.3)	2,657	389.0 (374.5–404.0)	1,632	589.7 (561.7–619.0)
	<70	8,732	91.4 (89.5–93.3)	539	123.6 (113.6–134.5)	155	146.8 (125.4–171.9)
	≥70	9,615	954.4 (935.5–973.7)	2,118	857.7 (821.9–895.0)	1,477	862.7 (819.8–907.8)
Death	All	123,580	1,169.9 (1163.4–1176.4)	16,192	2,368.5 (2332.3–2405.2)	11,738	4,235.1 (4159.2–4312.4)
	<70	29,802	311.9 (308.4–315.5)	1,940	444.7 (425.3–464.9)	897	849.5 (795.7–906.9)
	≥70	93,778	9,298.8 (9239.5–9358.5)	14,252	5,761.2 (5667.4–5856.6)	10,841	6,318.9 (6201.1–6439.0)

**S1 Table (c). Numbers and incidence rates pre-, post-first BNT162b2. Incidence rate per 100,000 person years. Disclosure control prevents presentation of n>5**

Outcome	Age	Pre vaccination or unvaccinated		Post vaccination ≤28 days		Post vaccination >28 days	
	Age	N (events)	Incidence rate (95% CI)	N (events)	Incidence rate (95% CI)	N (events)	Incidence rate (95% CI)
All venous	All	14,769	139.8 (137.6–142.1)	1,546	240.8 (229.1–253.1)	1,587	277.1 (263.8–291.0)
	<70	9,892	103.5 (101.5–105.6)	548	149.0 (137.0–162.0)	259	106.3 (94.1–120.0)
	≥70	4,877	483.8 (470.4–497.5)	998	364.1 (342.2–387.5)	1,328	403.6 (382.5–425.9)
Intracranial venous thrombosis	All	207	1.96 (1.71–2.25)	13	2.02 (1.18–3.49)	6	1.05 (0.47–2.33)
	<70	188	1.97 (1.71–2.27)	5	1.36 (0.57–3.26)	<5	1.23 (0.40–3.82)
	≥70	19	1.88 (1.20–2.95)	8	2.92 (1.46–5.83)	<5	0.91 (0.29–2.83)
Portal vein thrombosis	All	121	1.15 (0.96–1.37)	5	0.78 (0.32–1.87)	12	2.09 (1.19–3.69)
	<70	98	1.03 (0.84–1.25)	<5	0.54 (0.14–2.17)	6	2.46 (1.11–5.48)
	≥70	23	2.28 (1.52–3.43)	<5	1.09 (0.35–3.39)	6	1.82 (0.82–4.06)
Pulmonary embolism	All	8,473	80.2 (78.5–81.9)	928	144.5 (135.5–154.1)	955	166.7 (156.5–177.6)
	<70	5,399	56.5 (55.0–58.0)	306	83.2 (74.3–93.0)	141	57.8 (49.0–68.2)
	≥70	3,074	304.9 (294.3–315.9)	622	226.9 (209.8–245.5)	814	247.3 (230.9–264.9)
Deep vein thrombosis	All	5,664	53.6 (52.2–55.0)	555	86.4 (79.5–93.9)	590	103.0 (95.0–111.6)
	<70	3,971	41.6 (40.3–42.9)	213	57.9 (50.6–66.2)	103	42.3 (34.8–51.3)
	≥70	1,693	167.9 (160.1–176.1)	342	124.8 (112.2–138.7)	487	147.9 (135.4–161.7)
Other	All	459	4.35 (3.97–4.76)	55	8.56 (6.58–11.15)	39	6.81 (4.97–9.31)
	<70	359	3.76 (3.39–4.17)	28	7.61 (5.25–11.02)	13	5.33 (3.10–9.18)
	≥70	100	9.92 (8.15–12.06)	27	9.85 (6.75–14.36)	26	7.90 (5.38–11.60)
All arterial	All	57,602	545.6 (541.1–550.0)	7,960	1,241.8 (1214.9–1269.4)	8,799	1,539.7 (1507.8–1572.2)
	<70	31,396	328.7 (325.1–332.4)	2,263	615.8 (591.0–641.7)	876	359.6 (336.6–384.2)
	≥70	26,206	2,603.7 (2572.4–2635.5)	5,697	2,082.9 (2029.5–2137.7)	7,923	2,416.4 (2363.8–2470.2)
Myocardial infarction	All	28,134	266.4 (263.3–269.5)	3,722	580.1 (561.8–599.0)	4,023	702.9 (681.5–724.9)
	<70	17,341	181.5 (178.8–184.2)	1,285	349.5 (330.9–369.1)	489	200.7 (183.6–219.3)
	≥70	10,793	1,071.0 (1051.0–1091.4)	2,437	889.8 (855.1–925.8)	3,534	1,075.2 (1040.3–1111.2)
Ischaemic stroke (ischaemic, unknown, spinal)	All	28,639	271.2 (268.1–274.3)	4,143	645.7 (626.4–665.7)	4,702	821.8 (798.6–845.6)
	<70	13,505	141.4 (139.0–143.8)	949	258.0 (242.1–275.0)	369	151.4 (136.7–167.7)
	≥70	15,134	1,502.4 (1478.7–1526.6)	3,194	1,166.5 (1126.7–1207.7)	4,333	1,319.1 (1280.4–1359.0)
Other arterial	All	1,308	12.4 (11.7–13.1)	156	24.3 (20.8–28.4)	167	29.1 (25.0–33.9)
	<70	775	8.11 (7.56–8.70)	46	12.5 (9.4–16.7)	26	10.7 (7.3–15.7)
	≥70	533	52.9 (48.6–57.5)	110	40.1 (33.3–48.4)	141	42.8 (36.3–50.5)
<b>Haematological</b>							
Disseminated intravascular coagulation	All	13	0.12 (0.07–0.21)	<5	0.31 (0.08–1.25)	<5	0.35 (0.09–1.40)
	<70	5	0.05 (0.02–0.13)	<5	0.27 (0.04–1.93)	<5	-
	≥70	8	0.79 (0.40–1.59)	<5	0.36 (0.05–2.59)	<5	0.61 (0.15–2.43)
Thrombotic thrombocytopenic purpura	All	70	0.66 (0.52–0.84)	<5	0.62 (0.23–1.66)	<5	0.35 (0.09–1.40)
	<70	64	0.67 (0.52–0.86)	<5	0.82 (0.26–2.53)	<5	0.82 (0.21–3.28)
	≥70	6	0.59 (0.27–1.32)	<5	0.36 (0.05–2.59)	<5	-
Any thrombocytopenia	All	1,357	12.8 (12.2–13.5)	136	21.2 (17.9–25.1)	144	25.1 (21.3–29.6)
	<70	915	9.58 (8.98–10.22)	55	14.9 (11.5–19.5)	32	13.1 (9.3–18.6)
	≥70	442	43.8 (39.9–48.1)	81	29.5 (23.8–36.7)	112	34.0 (28.3–40.9)
<b>Other</b>							
Haemorrhagic stroke (intracerebral or subarachnoid)	All	3,747	35.5 (34.4–36.6)	440	68.5 (62.4–75.2)	579	101.0 (93.1–109.6)
	<70	2,028	21.2 (20.3–22.2)	93	25.3 (20.6–31.0)	55	22.6 (17.3–29.4)
	≥70	1,719	170.5 (162.6–178.7)	347	126.6 (113.9–140.6)	524	159.2 (146.1–173.4)
Mesenteric thrombosis	All	1,170	11.1 (10.5–11.7)	161	25.1 (21.5–29.3)	217	37.9 (33.2–43.3)
	<70	531	5.56 (5.10–6.05)	28	7.61 (5.25–11.02)	18	7.38 (4.65–11.72)
	≥70	639	63.4 (58.6–68.5)	133	48.5 (40.9–57.5)	199	60.4 (52.6–69.5)
Lower limb fracture	All	18,347	173.7 (171.2–176.3)	2,573	400.8 (385.6–416.6)	3,176	554.7 (535.8–574.4)
	<70	8732	91.4 (89.5–93.3)	443	120.4 (109.7–132.1)	228	93.5 (82.2–106.5)
	≥70	9615	954.4 (935.5–973.7)	2,130	777.3 (745.0–811.0)	2,948	896.6 (864.9–929.6)
Death	All	123,580	1,169.9 (1163.4–1176.4)	9,117	1,419.6 (1390.8–1449.0)	13,935	2,431.7 (2391.7–2472.4)
	<70	29,802	311.9 (308.4–315.5)	775	210.6 (196.3–225.9)	531	217.8 (200.0–237.1)
	≥70	93,778	9,298.8 (9239.5–9358.5)	8,342	3,042.5 (2977.9–3108.5)	13,404	4,071.0 (4002.7–4140.5)

S1 Table (d): Hazard ratios (95% CIs) for thrombotic and other outcomes 1-28 and >28 days post-vaccination with ChAdOx1-S vaccine, compared with pre-vaccination rates. All analyses were stratified on geographical region.

Outcome	Age	Sex	1-28 days post-vaccination			>28 days post vaccination		
			Unadjusted <sup>1</sup>	Age and sex adjusted <sup>2</sup>	Fully adjusted <sup>3</sup>	Unadjusted <sup>1</sup>	Age and sex adjusted <sup>2</sup>	Fully adjusted <sup>3</sup>
All venous events	<70	Overall	2.33 (2.16–2.51)	1.32 (1.22–1.43)	0.97 (0.90–1.05)	2.74 (2.39–3.14)	1.60 (1.38–1.84)	0.94 (0.81–1.08)
		Men	2.68 (2.41–2.97)	1.33 (1.19–1.49)	1.04 (0.93–1.16)	3.13 (2.54–3.84)	1.52 (1.23–1.89)	0.97 (0.78–1.20)
		Women	2.08 (1.87–2.31)	1.31 (1.17–1.47)	0.96 (0.85–1.07)	2.56 (2.13–3.07)	1.67 (1.38–2.02)	1.02 (0.84–1.23)
	≥70	Overall	0.65 (0.59–0.72)	0.64 (0.59–0.70)	0.58 (0.53–0.63)	0.67 (0.59–0.76)	0.58 (0.52–0.65)	0.49 (0.44–0.55)
		Men	0.65 (0.56–0.76)	0.65 (0.56–0.74)	0.59 (0.51–0.68)	0.70 (0.58–0.84)	0.63 (0.53–0.75)	0.55 (0.46–0.65)
		Women	0.65 (0.58–0.74)	0.64 (0.56–0.71)	0.57 (0.50–0.64)	0.64 (0.54–0.76)	0.54 (0.47–0.64)	0.45 (0.39–0.53)
Intracranial venous thrombosis	<70	Overall	2.81 (1.70–4.64)	2.99 (1.75–5.09)	2.27 (1.33–3.88)	2.37 (0.91–6.12)	2.47 (0.95–6.42)	1.72 (0.66–4.49)
		Men	2.72 (1.15–6.39)	2.58 (0.99–6.74)	2.06 (0.79–5.37)	3.43 (0.74–15.87)	3.37 (0.71–15.90)	2.40 (0.53–10.86)
		Women	2.69 (1.45–5.00)	3.27 (1.74–6.17)	2.24 (1.17–4.31)	1.75 (0.52–5.93)	2.14 (0.63–7.22)	1.47 (0.43–5.04)
	≥70	Overall	0.62 (0.17–2.23)	0.65 (0.19–2.21)	0.67 (0.20–2.18)	1.35 (0.13–13.46)	1.13 (0.14–9.20)	1.11 (0.14–9.02)
		Men	10.8 (3.3–35.8)	8.99 (2.75–29.42)	10.1 (2.7–38.5)	-	-	-
		Women	0.27 (0.05–1.42)	0.29 (0.06–1.43)	0.28 (0.06–1.34)	0.87 (0.10–7.32)	0.82 (0.11–6.24)	0.76 (0.10–5.70)
Portal vein thrombosis	<70	Overall	2.49 (1.20–5.14)	1.56 (0.72–3.40)	1.00 (0.24–4.15)	2.76 (0.73–10.51)	1.99 (0.53–7.52)	1.00 (0.06–18.18)
		Men	3.38 (1.40–8.17)	1.95 (0.76–5.02)	1.22 (0.48–3.08)	3.55 (0.52–24.13)	2.16 (0.32–14.52)	0.98 (0.14–6.75)
		Women	1.74 (0.48–6.26)	1.06 (0.28–4.07)	0.72 (0.18–2.86)	2.39 (0.37–15.53)	1.57 (0.24–10.12)	0.86 (0.12–6.28)
	≥70	Overall	0.66 (0.11–4.06)	0.67 (0.10–4.24)	0.61 (0.10–3.71)	2.72 (0.49–15.02)	3.00 (0.48–18.99)	2.61 (0.41–16.52)
		Men	0.43 (0.09–2.09)	0.42 (0.08–2.15)	0.37 (0.07–1.90)	8.60 (2.33–31.70)	7.99 (1.93–33.03)	7.99 (2.03–31.38)
		Women	0.92 (0.06–13.23)	0.92 (0.06–13.99)	0.82 (0.06–11.05)	0.87 (0.12–6.02)	0.95 (0.12–7.39)	0.86 (0.11–6.92)
Pulmonary embolism	<70	Overall	2.54 (2.30–2.80)	1.28 (1.15–1.43)	0.95 (0.85–1.05)	3.12 (2.61–3.73)	1.63 (1.34–1.96)	0.95 (0.79–1.15)
		Men	2.83 (2.46–3.24)	1.27 (1.09–1.48)	1.01 (0.87–1.17)	3.32 (2.52–4.38)	1.43 (1.07–1.91)	0.92 (0.69–1.23)
		Women	2.35 (2.04–2.70)	1.30 (1.12–1.52)	0.95 (0.82–1.10)	3.09 (2.44–3.92)	1.81 (1.41–2.32)	1.09 (0.85–1.41)
	≥70	Overall	0.62 (0.55–0.70)	0.60 (0.54–0.68)	0.54 (0.48–0.61)	0.61 (0.52–0.72)	0.54 (0.46–0.62)	0.45 (0.39–0.53)
		Men	0.63 (0.52–0.75)	0.62 (0.52–0.74)	0.57 (0.47–0.67)	0.63 (0.50–0.79)	0.57 (0.46–0.70)	0.49 (0.40–0.62)
		Women	0.61 (0.52–0.72)	0.59 (0.51–0.69)	0.53 (0.45–0.61)	0.60 (0.48–0.75)	0.51 (0.42–0.63)	0.43 (0.35–0.53)
Deep vein thrombosis	<70	Overall	2.08 (1.85–2.34)	1.34 (1.18–1.52)	0.99 (0.87–1.12)	2.37 (1.90–2.96)	1.58 (1.25–1.99)	0.97 (0.77–1.22)
		Men	2.61 (2.22–3.07)	1.48 (1.25–1.76)	1.15 (0.97–1.36)	2.85 (2.04–3.98)	1.62 (1.14–2.29)	1.06 (0.75–1.50)
		Women	1.67 (1.40–2.00)	1.21 (1.00–1.46)	0.90 (0.75–1.09)	2.12 (1.57–2.86)	1.57 (1.15–2.13)	1.02 (0.75–1.40)
	≥70	Overall	0.73 (0.62–0.86)	0.71 (0.61–0.83)	0.63 (0.54–0.74)	0.71 (0.57–0.88)	0.62 (0.51–0.75)	0.51 (0.42–0.62)
		Men	0.72 (0.56–0.94)	0.71 (0.55–0.91)	0.63 (0.49–0.81)	0.77 (0.56–1.06)	0.70 (0.51–0.95)	0.58 (0.42–0.79)
		Women	0.73 (0.59–0.90)	0.72 (0.59–0.87)	0.64 (0.53–0.77)	0.67 (0.51–0.88)	0.57 (0.45–0.73)	0.47 (0.37–0.60)
Other	<70	Overall	2.48 (1.70–3.62)	1.60 (1.06–2.40)	1.02 (0.69–1.52)	3.04 (1.54–6.00)	2.04 (1.01–4.09)	0.94 (0.47–1.91)
		Men	2.61 (1.51–4.53)	1.45 (0.79–2.64)	1.02 (0.57–1.83)	3.17 (1.13–8.90)	1.74 (0.60–5.05)	0.89 (0.31–2.58)
		Women	2.38 (1.42–4.00)	1.74 (1.01–2.98)	1.12 (0.65–1.91)	3.15 (1.29–7.73)	2.40 (0.97–5.96)	1.26 (0.50–3.17)
	≥70	Overall	0.46 (0.21–1.01)	0.46 (0.21–0.99)	0.43 (0.20–0.92)	1.13 (0.50–2.54)	1.03 (0.48–2.21)	0.93 (0.42–2.03)
		Men	0.38 (0.11–1.30)	0.39 (0.12–1.31)	0.33 (0.10–1.08)	1.10 (0.36–3.39)	1.02 (0.34–3.04)	0.79 (0.26–2.36)
		Women	0.52 (0.19–1.44)	0.51 (0.20–1.36)	0.50 (0.19–1.32)	1.16 (0.37–3.63)	1.03 (0.36–2.98)	0.98 (0.33–2.94)
All arterial events	<70	Overall	3.02 (2.90–3.14)	1.25 (1.20–1.31)	0.90 (0.86–0.95)	3.55 (3.29–3.83)	1.57 (1.45–1.70)	0.91 (0.84–1.00)
		Men	3.42 (3.26–3.60)	1.26 (1.20–1.34)	0.91 (0.86–0.96)	4.70 (4.27–5.17)	1.66 (1.50–1.84)	0.96 (0.86–1.07)
		Women	2.96 (2.76–3.18)	1.24 (1.14–1.34)	0.93 (0.86–1.00)	3.30 (2.90–3.75)	1.43 (1.25–1.64)	0.88 (0.77–1.02)
	≥70	Overall	0.89 (0.85–0.93)	0.84 (0.80–0.87)	0.76 (0.73–0.79)	1.03 (0.97–1.10)	0.83 (0.78–0.87)	0.72 (0.68–0.77)
		Men	0.90 (0.85–0.96)	0.87 (0.82–0.92)	0.78 (0.74–0.83)	1.06 (0.97–1.16)	0.89 (0.82–0.96)	0.78 (0.71–0.85)
		Women	0.88 (0.82–0.94)	0.80 (0.76–0.85)	0.73 (0.69–0.78)	1.02 (0.93–1.12)	0.77 (0.71–0.83)	0.68 (0.62–0.74)
Myocardial infarction	<70	Overall	2.85 (2.70–3.01)	1.24 (1.17–1.32)	0.88 (0.83–0.94)	2.93 (2.63–3.26)	1.40 (1.24–1.56)	0.83 (0.73–0.93)
		Men	3.23 (3.02–3.44)	1.25 (1.17–1.35)	0.89 (0.83–0.95)	3.52 (3.08–4.03)	1.33 (1.15–1.53)	0.78 (0.68–0.90)
		Women	2.93 (2.63–3.26)	1.22 (1.09–1.38)	0.92 (0.82–1.04)	3.56 (2.95–4.29)	1.58 (1.29–1.92)	1.01 (0.82–1.24)
	≥70	Overall	0.86 (0.80–0.92)	0.83 (0.78–0.88)	0.76 (0.71–0.81)	0.97 (0.89–1.07)	0.83 (0.76–0.90)	0.74 (0.68–0.81)
		Men	0.88 (0.80–0.96)	0.85 (0.78–0.93)	0.77 (0.71–0.84)	0.96 (0.84–1.09)	0.84 (0.74–0.94)	0.73 (0.64–0.82)
		Women	0.85 (0.76–0.94)	0.80 (0.72–0.88)	0.76 (0.69–0.84)	1.03 (0.90–1.19)	0.82 (0.72–0.93)	0.78 (0.68–0.88)

Outcome	Age	Sex	1-28 days post-vaccination			>28 days post vaccination		
			Unadjusted <sup>1</sup>	Age and sex adjusted <sup>2</sup>	Fully adjusted <sup>3</sup>	Unadjusted <sup>1</sup>	Age and sex adjusted <sup>2</sup>	Fully adjusted <sup>3</sup>
Ischaemic stroke <sup>4</sup>	<70	Overall	3.21 (3.02–3.41)	1.25 (1.17–1.34)	0.90 (0.84–0.96)	4.36 (3.91–4.86)	1.76 (1.56–1.98)	0.94 (0.84–1.07)
		Men	3.73 (3.44–4.05)	1.28 (1.17–1.40)	0.91 (0.83–0.99)	6.58 (5.73–7.57)	2.14 (1.84–2.49)	1.12 (0.96–1.31)
		Women	2.91 (2.64–3.20)	1.21 (1.09–1.35)	0.90 (0.81–1.00)	3.10 (2.59–3.71)	1.32 (1.09–1.59)	0.77 (0.63–0.94)
	≥70	Overall	0.92 (0.87–0.98)	0.85 (0.81–0.90)	0.77 (0.73–0.82)	1.08 (0.99–1.18)	0.83 (0.77–0.90)	0.72 (0.67–0.78)
		Men	0.94 (0.85–1.03)	0.89 (0.82–0.96)	0.81 (0.74–0.88)	1.14 (1.01–1.30)	0.93 (0.83–1.04)	0.82 (0.73–0.92)
		Women	0.92 (0.84–1.00)	0.82 (0.77–0.89)	0.75 (0.69–0.80)	1.04 (0.92–1.17)	0.76 (0.68–0.84)	0.66 (0.59–0.73)
Other arterial	<70	Overall	3.18 (2.48–4.07)	1.24 (0.93–1.64)	0.82 (0.63–1.07)	4.20 (2.62–6.73)	1.68 (0.99–2.86)	0.77 (0.46–1.30)
		Men	3.17 (2.29–4.40)	1.05 (0.73–1.51)	0.75 (0.53–1.07)	5.56 (3.07–10.06)	1.66 (0.86–3.20)	0.89 (0.47–1.69)
		Women	3.67 (2.51–5.37)	1.59 (1.03–2.46)	1.04 (0.68–1.59)	3.60 (1.64–7.91)	1.74 (0.73–4.18)	0.83 (0.35–2.01)
	≥70	Overall	0.44 (0.33–0.59)	0.45 (0.34–0.59)	0.41 (0.31–0.53)	0.55 (0.38–0.79)	0.49 (0.35–0.70)	0.44 (0.31–0.63)
		Men	0.46 (0.31–0.67)	0.45 (0.31–0.66)	0.42 (0.29–0.61)	0.61 (0.35–1.05)	0.56 (0.33–0.95)	0.51 (0.30–0.87)
		Women	0.43 (0.28–0.66)	0.44 (0.30–0.67)	0.39 (0.26–0.59)	0.51 (0.30–0.86)	0.44 (0.27–0.71)	0.38 (0.23–0.62)
<b>Haematological events</b>								
Any thrombocytopenia	<70	Overall	4.85 (3.87–6.07)	3.00 (2.34–3.85)	1.71 (1.35–2.16)	7.48 (5.31–10.53)	4.68 (3.24–6.77)	1.69 (1.16–2.46)
		Men	6.47 (4.62–9.06)	3.52 (2.42–5.13)	1.85 (1.30–2.63)	13.2 (8.1–21.4)	6.84 (3.99–11.73)	2.02 (1.18–3.44)
		Women	3.81 (2.80–5.17)	2.65 (1.89–3.71)	1.95 (1.40–2.72)	4.59 (2.78–7.58)	3.34 (1.98–5.64)	2.08 (1.22–3.54)
	≥70	Overall	0.92 (0.65–1.29)	0.87 (0.63–1.22)	0.79 (0.56–1.10)	1.14 (0.66–1.95)	0.99 (0.59–1.65)	0.84 (0.50–1.41)
		Men	0.84 (0.53–1.32)	0.79 (0.50–1.22)	0.68 (0.43–1.06)	1.37 (0.64–2.91)	1.17 (0.57–2.38)	0.92 (0.45–1.90)
		Women	1.04 (0.62–1.75)	0.99 (0.61–1.63)	0.93 (0.56–1.54)	1.02 (0.46–2.24)	0.88 (0.42–1.85)	0.80 (0.38–1.70)
<b>Other events</b>								
Haemorrhagic stroke <sup>5</sup>	<70	Overall	2.25 (1.88–2.69)	1.05 (0.86–1.27)	1.00 (0.73–1.37)	2.87 (2.10–3.92)	1.39 (1.00–1.93)	1.00 (0.51–1.95)
		Men	2.68 (2.11–3.41)	1.15 (0.89–1.49)	1.01 (0.78–1.30)	2.86 (1.74–4.71)	1.21 (0.72–2.04)	0.87 (0.52–1.46)
		Women	1.93 (1.48–2.52)	0.93 (0.70–1.24)	0.87 (0.66–1.16)	2.94 (1.95–4.42)	1.47 (0.95–2.27)	1.23 (0.80–1.91)
	≥70	Overall	0.83 (0.69–1.00)	0.78 (0.66–0.92)	0.73 (0.62–0.87)	1.09 (0.84–1.40)	0.84 (0.67–1.04)	0.76 (0.61–0.95)
		Men	0.86 (0.65–1.14)	0.82 (0.64–1.05)	0.79 (0.62–1.01)	1.34 (0.93–1.94)	1.03 (0.75–1.43)	0.97 (0.70–1.34)
		Women	0.81 (0.63–1.03)	0.75 (0.60–0.94)	0.70 (0.56–0.87)	0.92 (0.65–1.30)	0.71 (0.52–0.96)	0.64 (0.47–0.86)
Mesenteric thrombosis	<70	Overall	3.25 (2.42–4.37)	1.24 (0.89–1.73)	0.84 (0.61–1.16)	5.47 (3.33–8.99)	2.16 (1.24–3.77)	1.04 (0.60–1.80)
		Men	2.87 (1.72–4.77)	0.98 (0.57–1.71)	0.72 (0.43–1.22)	4.34 (1.59–11.83)	1.42 (0.48–4.25)	0.75 (0.26–2.17)
		Women	3.39 (2.36–4.87)	1.43 (0.94–2.17)	1.01 (0.67–1.52)	5.66 (3.21–9.99)	2.59 (1.36–4.94)	1.40 (0.73–2.69)
	≥70	Overall	0.66 (0.49–0.89)	0.60 (0.46–0.79)	0.53 (0.41–0.70)	0.95 (0.64–1.43)	0.74 (0.52–1.05)	0.62 (0.43–0.89)
		Men	0.65 (0.39–1.09)	0.61 (0.38–0.98)	0.52 (0.32–0.83)	0.81 (0.44–1.49)	0.69 (0.40–1.18)	0.54 (0.31–0.94)
		Women	0.66 (0.46–0.95)	0.60 (0.44–0.84)	0.55 (0.40–0.77)	1.00 (0.60–1.68)	0.76 (0.48–1.20)	0.67 (0.42–1.08)
Lower limb fracture	<70	Overall	1.71 (1.55–1.87)	1.01 (0.91–1.11)	0.85 (0.77–0.93)	2.26 (1.91–2.67)	1.35 (1.13–1.60)	0.98 (0.83–1.17)
		Men	1.35 (1.15–1.58)	0.98 (0.83–1.16)	0.86 (0.73–1.02)	2.22 (1.67–2.93)	1.60 (1.20–2.14)	1.24 (0.93–1.66)
		Women	1.91 (1.70–2.15)	1.03 (0.91–1.16)	0.88 (0.78–0.99)	2.21 (1.80–2.72)	1.25 (1.01–1.55)	0.95 (0.77–1.18)
	≥70	Overall	1.11 (1.02–1.21)	0.94 (0.88–1.01)	0.83 (0.78–0.89)	1.56 (1.39–1.76)	0.95 (0.87–1.04)	0.78 (0.71–0.85)
		Men	1.06 (0.90–1.24)	0.94 (0.83–1.08)	0.84 (0.73–0.95)	1.50 (1.19–1.89)	0.97 (0.81–1.17)	0.81 (0.67–0.97)
		Women	1.11 (1.01–1.22)	0.95 (0.88–1.03)	0.84 (0.77–0.91)	1.51 (1.32–1.73)	0.95 (0.85–1.06)	0.78 (0.70–0.87)
Death	<70	Overall	1.96 (1.87–2.06)	0.60 (0.57–0.63)	0.37 (0.35–0.39)	4.51 (4.20–4.85)	1.41 (1.30–1.53)	0.51 (0.47–0.56)
		Men	2.35 (2.20–2.51)	0.63 (0.58–0.67)	0.44 (0.41–0.47)	6.47 (5.87–7.13)	1.57 (1.40–1.75)	0.75 (0.67–0.85)
		Women	1.69 (1.56–1.82)	0.56 (0.52–0.61)	0.36 (0.33–0.39)	3.48 (3.13–3.89)	1.21 (1.07–1.37)	0.50 (0.44–0.57)
	≥70	Overall	0.35 (0.34–0.36)	0.34 (0.33–0.35)	0.28 (0.28–0.29)	0.49 (0.47–0.51)	0.38 (0.37–0.39)	0.27 (0.26–0.28)
		Men	0.31 (0.30–0.32)	0.32 (0.31–0.33)	0.26 (0.25–0.27)	0.44 (0.42–0.47)	0.37 (0.35–0.38)	0.26 (0.24–0.27)
		Women	0.39 (0.37–0.40)	0.36 (0.35–0.37)	0.30 (0.29–0.31)	0.54 (0.51–0.56)	0.39 (0.38–0.41)	0.29 (0.27–0.30)

<sup>1</sup>Stratified by region

<sup>2</sup>Adjusted for age, age<sup>2</sup>, sex and stratified by region

<sup>3</sup>Adjusted for age, age<sup>2</sup>, sex, ethnicity, deprivation, smoking, previous diagnosis of cancer, number of unique diseases in the last year, surgery in the last year, obesity, liver disease; additionally for women aged <70, history of depression and total number of types of medication (by BNF chapters); additionally for men aged <70, history of SARS-CoV2 infection and thrombocytopenia; and additionally for men and women aged ≥70, chronic kidney disease and dementia. Venous events adjusted for: anticoagulant medication, combined oral contraceptive medication, hormone replacement therapy medication, history of PE or DVT, and history of coronavirus infection. Arterial thromboses adjusted for: diabetes, hypertension, smoking, antiplatelet medication, blood pressure lowering medication, lipid lowering medication, anticoagulant medication, history of stroke, and history of MI. All analyses stratified by region.

<sup>4</sup>Ischaemic stroke: including ischaemic stroke, stroke of uncertain cause, and spinal stroke

<sup>5</sup>Haemorrhagic stroke: including intracranial hemorrhage and subarachnoid hemorrhage

S1 Table (e): Hazard ratios (95% CIs) for thrombotic and other outcomes 1-28 and >28 days post-vaccination, compared with pre-vaccination rates. All analyses were stratified on geographical region BNT162b2 vaccine

Outcome	Age	Sex	1-28 days post-vaccination			>28 days post vaccination		
			Unadjusted <sup>1</sup>	Age sex adjusted <sup>2</sup>	Fully adjusted <sup>3</sup>	Unadjusted <sup>1</sup>	Age sex adjusted <sup>2</sup>	Fully adjusted <sup>3</sup>
All venous events	<70	Overall	1.47 (1.35–1.61)	1.01 (0.93–1.11)	0.81 (0.74–0.88)	1.14 (1.01–1.29)	0.88 (0.77–1.00)	0.73 (0.64–0.83)
		Men	1.98 (1.75–2.23)	1.15 (1.01–1.30)	0.92 (0.81–1.05)	1.56 (1.28–1.89)	1.02 (0.83–1.25)	0.83 (0.68–1.02)
		Women	1.20 (1.06–1.37)	0.91 (0.80–1.03)	0.74 (0.65–0.84)	1.01 (0.86–1.20)	0.81 (0.69–0.96)	0.70 (0.59–0.83)
	≥70	Overall	0.65 (0.60–0.71)	0.56 (0.52–0.61)	0.57 (0.53–0.62)	0.68 (0.62–0.75)	0.50 (0.46–0.55)	0.50 (0.45–0.55)
		Men	0.67 (0.59–0.76)	0.59 (0.52–0.66)	0.60 (0.53–0.67)	0.75 (0.65–0.87)	0.59 (0.51–0.68)	0.58 (0.50–0.67)
		Women	0.64 (0.58–0.72)	0.54 (0.49–0.60)	0.56 (0.50–0.63)	0.63 (0.56–0.72)	0.45 (0.40–0.51)	0.45 (0.40–0.52)
Intracranial venous thrombosis	<70	Overall	0.76 (0.31–1.85)	0.72 (0.29–1.78)	0.59 (0.24–1.45)	0.65 (0.20–2.13)	0.59 (0.18–1.93)	0.51 (0.16–1.68)
		Men	1.60 (0.50–5.16)	1.39 (0.43–4.49)	1.09 (0.33–3.61)	1.04 (0.14–7.77)	0.92 (0.12–7.05)	0.74 (0.10–5.62)
		Women	0.39 (0.10–1.60)	0.44 (0.11–1.78)	0.37 (0.09–1.52)	0.48 (0.11–2.07)	0.51 (0.12–2.20)	0.45 (0.10–1.95)
	≥70	Overall	1.65 (0.64–4.29)	1.25 (0.48–3.26)	1.43 (0.55–3.75)	1.13 (0.13–9.75)	0.71 (0.08–6.56)	0.88 (0.10–7.52)
		Men	-	-	-	-	-	-
		Women	2.01 (0.69–5.88)	1.45 (0.49–4.26)	1.57 (0.54–4.54)	1.26 (0.13–11.94)	0.73 (0.07–7.29)	0.82 (0.09–7.61)
Portal vein thrombosis	<70	Overall	0.58 (0.15–2.30)	0.44 (0.11–1.72)	0.29 (0.07–1.17)	3.06 (1.29–7.24)	2.84 (1.19–6.74)	2.19 (0.89–5.37)
		Men	1.28 (0.33–4.95)	0.81 (0.21–3.09)	0.51 (0.13–2.04)	-	-	-
		Women	-	-	-	5.30 (1.98–14.22)	4.28 (1.55–11.78)	3.95 (1.39–11.20)
	≥70	Overall	0.49 (0.10–2.28)	0.43 (0.10–1.87)	0.42 (0.09–1.91)	0.67 (0.23–1.97)	0.54 (0.19–1.56)	0.48 (0.17–1.38)
		Men	0.85 (0.17–4.38)	0.55 (0.11–2.66)	0.49 (0.10–2.46)	1.26 (0.36–4.41)	0.70 (0.23–2.17)	0.48 (0.17–1.38)
		Women	0.22 (0.01–3.38)	0.24 (0.01–3.80)	0.26 (0.02–4.47)	0.37 (0.09–1.52)	0.44 (0.10–2.01)	0.46 (0.11–2.04)
Pulmonary embolism	<70	Overall	1.52 (1.36–1.71)	0.99 (0.87–1.11)	0.78 (0.69–0.88)	1.20 (1.02–1.43)	0.89 (0.75–1.06)	0.71 (0.60–0.85)
		Men	1.93 (1.63–2.28)	1.05 (0.88–1.25)	0.85 (0.71–1.01)	1.56 (1.19–2.05)	0.97 (0.74–1.29)	0.77 (0.58–1.03)
		Women	1.32 (1.13–1.56)	0.94 (0.79–1.10)	0.75 (0.64–0.89)	1.10 (0.88–1.37)	0.84 (0.67–1.05)	0.71 (0.57–0.89)
	≥70	Overall	0.61 (0.55–0.68)	0.53 (0.48–0.59)	0.54 (0.49–0.60)	0.61 (0.54–0.69)	0.45 (0.40–0.51)	0.45 (0.39–0.50)
		Men	0.64 (0.55–0.75)	0.56 (0.48–0.65)	0.57 (0.49–0.66)	0.65 (0.54–0.77)	0.50 (0.42–0.59)	0.49 (0.41–0.59)
		Women	0.59 (0.52–0.68)	0.51 (0.44–0.58)	0.52 (0.45–0.60)	0.58 (0.49–0.68)	0.42 (0.36–0.49)	0.42 (0.36–0.49)
Deep vein thrombosis	<70	Overall	1.38 (1.21–1.59)	1.03 (0.89–1.18)	0.82 (0.71–0.95)	1.05 (0.86–1.28)	0.85 (0.69–1.04)	0.73 (0.59–0.89)
		Men	1.93 (1.60–2.33)	1.23 (1.01–1.49)	0.99 (0.81–1.20)	1.55 (1.15–2.10)	1.10 (0.81–1.48)	0.94 (0.69–1.28)
		Women	1.08 (0.88–1.33)	0.87 (0.71–1.08)	0.72 (0.58–0.89)	0.88 (0.67–1.15)	0.74 (0.56–0.97)	0.65 (0.50–0.86)
	≥70	Overall	0.69 (0.60–0.79)	0.58 (0.51–0.67)	0.61 (0.53–0.70)	0.81 (0.69–0.96)	0.59 (0.50–0.70)	0.61 (0.52–0.73)
		Men	0.66 (0.53–0.82)	0.59 (0.48–0.73)	0.61 (0.49–0.76)	0.95 (0.74–1.23)	0.78 (0.60–1.01)	0.80 (0.61–1.05)
		Women	0.71 (0.59–0.85)	0.59 (0.49–0.70)	0.62 (0.52–0.74)	0.72 (0.58–0.90)	0.49 (0.40–0.61)	0.52 (0.41–0.64)
Other	<70	Overall	2.16 (1.47–3.19)	1.60 (1.07–2.37)	1.18 (0.79–1.77)	1.64 (0.93–2.90)	1.34 (0.75–2.40)	1.03 (0.57–1.87)
		Men	3.25 (1.93–5.50)	2.03 (1.16–3.54)	1.46 (0.83–2.57)	2.14 (0.86–5.34)	1.51 (0.59–3.86)	1.03 (0.39–2.70)
		Women	1.48 (0.82–2.65)	1.20 (0.67–2.16)	0.98 (0.54–1.77)	1.55 (0.75–3.21)	1.31 (0.63–2.74)	1.21 (0.57–2.55)
	≥70	Overall	1.13 (0.66–1.94)	0.97 (0.58–1.64)	1.01 (0.60–1.72)	0.86 (0.39–1.88)	0.66 (0.31–1.41)	0.67 (0.30–1.47)
		Men	1.50 (0.77–2.95)	1.25 (0.65–2.42)	1.27 (0.64–2.49)	1.51 (0.50–4.51)	1.09 (0.36–3.34)	1.07 (0.33–3.44)
		Women	0.79 (0.31–2.04)	0.72 (0.30–1.75)	0.75 (0.30–1.85)	0.42 (0.17–1.06)	0.36 (0.15–0.88)	0.36 (0.14–0.91)
All arterial events	<70	Overall	2.21 (2.12–2.31)	1.31 (1.25–1.37)	0.94 (0.90–0.99)	1.45 (1.35–1.55)	1.08 (1.01–1.16)	0.88 (0.82–0.95)
		Men	3.06 (2.90–3.22)	1.44 (1.36–1.52)	0.99 (0.93–1.05)	2.17 (1.99–2.38)	1.19 (1.08–1.31)	0.91 (0.82–1.00)
		Women	1.85 (1.71–1.99)	1.11 (1.02–1.20)	0.92 (0.84–0.99)	1.44 (1.30–1.60)	0.96 (0.86–1.07)	0.91 (0.81–1.02)
	≥70	Overall	0.90 (0.87–0.93)	0.69 (0.66–0.71)	0.72 (0.70–0.75)	1.15 (1.10–1.20)	0.69 (0.66–0.72)	0.71 (0.68–0.74)
		Men	0.96 (0.91–1.00)	0.75 (0.71–0.78)	0.77 (0.73–0.81)	1.17 (1.11–1.25)	0.74 (0.70–0.79)	0.74 (0.70–0.79)
		Women	0.84 (0.80–0.89)	0.63 (0.60–0.66)	0.68 (0.65–0.71)	1.13 (1.06–1.20)	0.64 (0.61–0.68)	0.68 (0.64–0.73)
Myocardial infarction	<70	Overall	2.24 (2.12–2.37)	1.39 (1.30–1.47)	0.94 (0.88–1.00)	1.42 (1.29–1.55)	1.14 (1.04–1.26)	0.88 (0.80–0.97)
		Men	3.07 (2.87–3.28)	1.51 (1.40–1.62)	0.97 (0.90–1.05)	1.98 (1.76–2.23)	1.13 (1.00–1.28)	0.81 (0.71–0.93)
		Women	1.94 (1.74–2.17)	1.15 (1.03–1.30)	0.94 (0.83–1.06)	1.78 (1.54–2.05)	1.18 (1.02–1.37)	1.11 (0.95–1.30)
	≥70	Overall	0.93 (0.88–0.98)	0.74 (0.71–0.78)	0.74 (0.70–0.78)	1.19 (1.12–1.27)	0.78 (0.73–0.83)	0.75 (0.70–0.80)
		Men	0.99 (0.92–1.06)	0.81 (0.76–0.86)	0.79 (0.73–0.84)	1.20 (1.10–1.31)	0.82 (0.76–0.89)	0.76 (0.70–0.83)
		Women	0.85 (0.78–0.92)	0.66 (0.61–0.72)	0.69 (0.63–0.74)	1.20 (1.08–1.33)	0.74 (0.67–0.81)	0.74 (0.67–0.82)

Outcome	Age	Sex	1-28 days post-vaccination			>28 days post vaccination		
			Unadjusted <sup>1</sup>	Age sex adjusted <sup>2</sup>	Fully adjusted <sup>3</sup>	Unadjusted <sup>1</sup>	Age sex adjusted <sup>2</sup>	Fully adjusted <sup>3</sup>
Ischaemic stroke <sup>4</sup>	<70	Overall	2.18 (2.05–2.33)	1.23 (1.14–1.31)	0.90 (0.83–0.97)	1.46 (1.32–1.62)	1.00 (0.89–1.11)	0.80 (0.72–0.90)
		Men	3.05 (2.80–3.32)	1.38 (1.26–1.51)	0.95 (0.86–1.05)	2.40 (2.08–2.77)	1.26 (1.09–1.46)	0.91 (0.78–1.07)
		Women	1.76 (1.59–1.96)	1.05 (0.94–1.17)	0.85 (0.76–0.95)	1.18 (1.01–1.38)	0.77 (0.66–0.90)	0.73 (0.61–0.86)
	≥70	Overall	0.88 (0.84–0.93)	0.65 (0.63–0.68)	0.71 (0.68–0.75)	1.13 (1.06–1.19)	0.64 (0.60–0.67)	0.69 (0.66–0.73)
		Men	0.94 (0.88–1.00)	0.71 (0.66–0.75)	0.77 (0.72–0.82)	1.17 (1.07–1.27)	0.69 (0.64–0.75)	0.75 (0.69–0.81)
		Women	0.84 (0.78–0.89)	0.61 (0.58–0.65)	0.68 (0.63–0.72)	1.09 (1.01–1.19)	0.60 (0.56–0.65)	0.66 (0.61–0.71)
Other arterial	<70	Overall	1.72 (1.28–2.31)	0.95 (0.70–1.30)	0.69 (0.50–0.94)	1.63 (1.10–2.43)	1.13 (0.74–1.72)	0.85 (0.55–1.32)
		Men	2.31 (1.58–3.37)	0.99 (0.66–1.49)	0.71 (0.47–1.07)	3.22 (2.02–5.13)	1.56 (0.95–2.58)	1.16 (0.69–1.96)
		Women	1.46 (0.90–2.37)	0.88 (0.54–1.45)	0.69 (0.42–1.15)	0.93 (0.43–1.99)	0.65 (0.30–1.43)	0.59 (0.26–1.33)
	≥70	Overall	0.59 (0.46–0.76)	0.51 (0.40–0.65)	0.52 (0.41–0.67)	0.64 (0.47–0.85)	0.47 (0.35–0.62)	0.46 (0.34–0.62)
		Men	0.49 (0.35–0.69)	0.46 (0.32–0.65)	0.47 (0.33–0.66)	0.52 (0.37–0.74)	0.46 (0.32–0.66)	0.44 (0.31–0.64)
		Women	0.74 (0.51–1.08)	0.59 (0.41–0.84)	0.60 (0.42–0.85)	0.83 (0.50–1.37)	0.50 (0.31–0.79)	0.49 (0.30–0.78)
<b>Haematological events</b>								
Any thrombocytopenia	<70	Overall	2.10 (1.60–2.77)	1.48 (1.11–1.97)	1.00 (0.75–1.34)	2.03 (1.42–2.92)	1.54 (1.07–2.23)	0.97 (0.66–1.41)
		Men	3.31 (2.23–4.91)	2.07 (1.35–3.16)	1.19 (0.78–1.83)	2.95 (1.61–5.42)	2.02 (1.08–3.79)	0.93 (0.49–1.78)
		Women	1.50 (1.01–2.22)	1.17 (0.78–1.74)	0.97 (0.65–1.46)	1.58 (1.00–2.50)	1.32 (0.83–2.08)	1.14 (0.72–1.80)
	≥70	Overall	0.85 (0.64–1.13)	0.72 (0.54–0.95)	0.68 (0.51–0.90)	1.22 (0.87–1.71)	0.90 (0.64–1.25)	0.79 (0.56–1.12)
		Men	0.87 (0.61–1.26)	0.73 (0.51–1.05)	0.68 (0.47–0.97)	1.55 (1.03–2.32)	1.12 (0.75–1.67)	0.95 (0.62–1.46)
		Women	0.82 (0.53–1.29)	0.71 (0.46–1.09)	0.68 (0.44–1.07)	0.84 (0.48–1.48)	0.63 (0.36–1.09)	0.57 (0.32–1.02)
<b>Other events</b>								
Haemorrhagic stroke <sup>5</sup>	<70	Overall	1.39 (1.13–1.71)	0.83 (0.67–1.03)	0.77 (0.62–0.96)	1.31 (1.00–1.73)	0.90 (0.68–1.19)	0.86 (0.65–1.15)
		Men	1.65 (1.22–2.23)	0.86 (0.63–1.18)	0.77 (0.57–1.05)	1.43 (0.89–2.29)	0.86 (0.53–1.40)	0.77 (0.47–1.25)
		Women	1.28 (0.95–1.72)	0.80 (0.59–1.08)	0.78 (0.58–1.05)	1.34 (0.95–1.88)	0.89 (0.62–1.26)	0.92 (0.65–1.31)
	≥70	Overall	0.80 (0.69–0.91)	0.59 (0.52–0.68)	0.65 (0.57–0.74)	1.28 (1.09–1.50)	0.72 (0.62–0.84)	0.80 (0.68–0.94)
		Men	0.82 (0.67–1.01)	0.59 (0.48–0.71)	0.64 (0.52–0.78)	1.45 (1.14–1.83)	0.78 (0.62–0.98)	0.86 (0.68–1.09)
		Women	0.78 (0.65–0.94)	0.60 (0.50–0.72)	0.66 (0.55–0.79)	1.16 (0.93–1.44)	0.68 (0.56–0.84)	0.76 (0.61–0.93)
Mesenteric thrombosis	<70	Overall	1.61 (1.10–2.36)	0.84 (0.56–1.26)	0.65 (0.43–0.97)	1.77 (1.11–2.84)	1.08 (0.66–1.75)	0.83 (0.50–1.37)
		Men	2.91 (1.78–4.75)	1.29 (0.77–2.17)	0.97 (0.57–1.64)	2.21 (0.99–4.94)	1.15 (0.50–2.62)	0.82 (0.35–1.91)
		Women	0.91 (0.49–1.67)	0.55 (0.29–1.03)	0.45 (0.23–0.86)	1.61 (0.90–2.88)	1.09 (0.60–1.98)	0.94 (0.50–1.75)
	≥70	Overall	0.72 (0.57–0.90)	0.54 (0.43–0.67)	0.54 (0.44–0.68)	1.06 (0.81–1.37)	0.61 (0.48–0.78)	0.59 (0.45–0.76)
		Men	0.57 (0.37–0.86)	0.41 (0.27–0.61)	0.42 (0.28–0.62)	0.82 (0.53–1.29)	0.44 (0.29–0.66)	0.42 (0.27–0.65)
		Women	0.80 (0.61–1.04)	0.61 (0.47–0.80)	0.62 (0.48–0.81)	1.18 (0.86–1.63)	0.72 (0.53–0.98)	0.70 (0.51–0.96)
Lower limb fracture	<70	Overall	1.44 (1.31–1.59)	1.03 (0.93–1.14)	0.93 (0.84–1.02)	1.24 (1.08–1.42)	0.95 (0.83–1.09)	0.89 (0.78–1.03)
		Men	1.19 (0.99–1.42)	0.94 (0.78–1.12)	0.85 (0.71–1.02)	0.99 (0.74–1.31)	0.83 (0.62–1.11)	0.80 (0.60–1.07)
		Women	1.49 (1.33–1.67)	1.08 (0.96–1.21)	0.98 (0.87–1.10)	1.27 (1.09–1.48)	1.00 (0.85–1.17)	0.94 (0.80–1.11)
	≥70	Overall	0.99 (0.93–1.05)	0.65 (0.62–0.69)	0.69 (0.66–0.73)	1.48 (1.38–1.59)	0.67 (0.63–0.72)	0.71 (0.66–0.76)
		Men	0.95 (0.85–1.06)	0.58 (0.52–0.64)	0.63 (0.57–0.70)	1.60 (1.40–1.83)	0.65 (0.57–0.73)	0.69 (0.61–0.79)
		Women	1.00 (0.93–1.07)	0.68 (0.64–0.73)	0.72 (0.67–0.77)	1.42 (1.30–1.55)	0.68 (0.63–0.73)	0.71 (0.65–0.77)
Death	<70	Overall	0.74 (0.69–0.79)	0.35 (0.32–0.37)	0.24 (0.22–0.26)	0.91 (0.84–1.00)	0.52 (0.48–0.57)	0.33 (0.30–0.37)
		Men	1.06 (0.97–1.17)	0.39 (0.36–0.43)	0.28 (0.25–0.31)	1.62 (1.44–1.82)	0.69 (0.61–0.79)	0.44 (0.39–0.51)
		Women	0.56 (0.50–0.63)	0.29 (0.26–0.33)	0.22 (0.19–0.25)	0.66 (0.58–0.75)	0.38 (0.34–0.44)	0.28 (0.25–0.33)
	≥70	Overall	0.22 (0.22–0.23)	0.16 (0.16–0.16)	0.19 (0.19–0.20)	0.30 (0.29–0.31)	0.16 (0.16–0.16)	0.19 (0.18–0.19)
		Men	0.23 (0.22–0.24)	0.16 (0.15–0.16)	0.19 (0.18–0.20)	0.33 (0.32–0.34)	0.16 (0.15–0.17)	0.19 (0.18–0.19)
		Women	0.21 (0.20–0.22)	0.16 (0.16–0.17)	0.20 (0.19–0.20)	0.27 (0.26–0.28)	0.16 (0.15–0.17)	0.19 (0.18–0.19)

<sup>1</sup>Stratified by region

<sup>2</sup>Adjusted for age, age<sup>2</sup>, sex and stratified by region

<sup>3</sup>Adjusted for age, age<sup>2</sup>, sex, ethnicity, deprivation, smoking, previous diagnosis of cancer, number of unique diseases in the last year, surgery in the last year, obesity, liver disease; additionally for women aged <70, history of depression and total number of types of medication (by BNF chapters); additionally for men aged <70, history of SARS-CoV2 infection and thrombocytopenia; and additionally for men and women aged ≥70, chronic kidney disease and dementia. Venous events adjusted for: anticoagulant medication, combined oral contraceptive medication, hormone replacement therapy medication, history of PE or DVT, and history of coronavirus infection. Arterial thromboses adjusted for: diabetes, hypertension, smoking, antiplatelet medication, blood pressure lowering medication, lipid lowering medication, anticoagulant medication, history of stroke, and history of MI. All analyses stratified by region.

<sup>4</sup>Ischaemic stroke: including ischaemic stroke, stroke of uncertain cause, and spinal stroke

<sup>5</sup>Haemorrhagic stroke: including intracranial hemorrhage and subarachnoid hemorrhage