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Supplementary appendix

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Supplement to: Soboleva K, Shankar NK, Yadavalli M, et al. Geographical distribution of TTS cases following AZD1222 (ChAdOx1 nCoV-19) vaccination. *Lancet Glob Health* 2021; **9**: e33–34.

Supplementary Table: Geographical distribution of vaccine exposure, TTS and anaphylaxis in selected countries, as identified in the AstraZeneca global safety database through August 31, 2021.

Country/Region	Exposure: doses administered, millions*	Reports, N [†]	TTS		Anaphylaxis	
			Reporting rate, per million doses [‡]	Fatality rate, per million doses [§]	Reports, N [†]	Reporting rate, per million doses [‡]
Nordic countries [¶]	2·2	38	17·6	5·6	53	24·6
Germany [#]	12·6	158	12·5	2·0	244	19·3
Australia	9·6	108	11·3	0·6	178	18·6
United Kingdom**	48·7	486	10·0	1·8	1006	20·7
Italy	11·9	68	5·7	1·3	33	2·8
Canada	2·8	15	5·4	1·1	5	1·8
France	7·8	39	5·0	1·2	25	3·2
Spain	9·7	39	4·0	0·8	28	2·9
Brazil ^{††}	81·8	17	0·2	0·1	9	0·1
South Korea ^{‡‡}	20·0	3	0·2	<0·1	22	1·1
Philippines ^{§§}	5·6	1	0·2	0·2	147	26·3

*Exposure data are derived from the numbers of administered doses as recorded by the European Centre for Disease Prevention and Control (in the European Economic Area), the Australian Immunisation Register (in Australia), the UK Department of Business Energy and Industrial Strategy, health-infobase.canada.ca/covid-19/vaccination-coverage/#a6 (in Canada), gov.br (in Brazil), www.fda.gov.ph/list-of-fda-issued-emergency-use-authorization/ (in the Philippines) and Our World in Data (in South Korea).

[†]TTS cases were identified in the AstraZeneca global safety database with searches for events within 21 days of vaccination using standardised MedDRA queries for ‘embolic and thrombotic events’ and ‘haematopoietic thrombocytopenia’ and the high-level term ‘thrombocytopenias’, broadly reflecting the Brighton Collaboration definition of TTS (<https://brightoncollaboration.us/wp-content/uploads/2021/05/TTS-Interim-Case-Definition-v10.16.3-May-23-2021.pdf>). All reported cases were included in the calculation of TTS reporting rates, regardless of classification as definite, probable or possible cases. Reports of anaphylaxis occurring within 2 days of vaccination, and reports of fatalities due to any cause within 21 days of vaccination, were similarly identified in the AstraZeneca global safety database.

[‡]To calculate reporting rates, countries in which vaccine administration is tracked and data made available were identified, and the numbers of reports from the respective countries were divided by number of vaccine doses administered.

[§]To calculate TTS fatality rates, the numbers of reports from the respective countries with a fatal outcome recorded in the AstraZeneca global safety database through August 31, 2021 were divided by number of vaccine doses administered.

[¶]Nordic countries are Denmark, Finland, Iceland, Norway and Sweden. Number of vaccine doses administered was <2 million in each individual country; data were aggregated to provide >2 million administered doses. These countries had reported TTS early on during the global vaccination campaign.

^{††}In Sweden, vaccination with AZD1222 commenced in January–February 2021 and resumed in May 2021; the programme prioritised vaccination of healthcare workers, a population dominated by younger and female individuals. A TTS case definition was issued in May 2021 by the Swedish Society for Thrombosis and Hemostasis & the Swedish Association for Hematology.

^{‡‡}In Germany, vaccination with AZD1222 commenced in December 2020; the initial STIKO recommendation was for AZD1222 to be used in younger people (aged <65 years) due to lack of sufficient clinical trial data in the elderly. AZD1222 was consequently used initially in younger people, especially in healthcare employees (according to national prioritisation), who were primarily younger women. TTS case definition was by an EMA-based guideline from the German Society of Thrombosis and Hemostasis Research, which initially covered only post-AZD1222 cases.

**In the United Kingdom, vaccination with AZD1222 commenced in December 2020; guidelines specified that any person aged <40 years should be offered an alternative to, but could still request, AZD1222. TTS case definition was per MHRA guidelines on possible, probable, and definite criteria for thrombosis with thrombocytopenia; a NICE guideline was available from July 2021.

††In Brazil, vaccination with AZD1222 commenced in January 2021, with no specific guidelines on priority populations. TTS case definition was per the Brighton Collaboration criteria, with anti-PF4 antibodies and D-dimer required for confirmed cases.

‡‡In South Korea, the TTS case definition was per the Korean Centers for Disease Control and Prevention.

§§In the Philippines, vaccination with AZD1222 commenced in March 2021; the early phase of the vaccination program was intended for frontline health workers, a population that includes higher proportions of younger and female individuals. TTS case definition was per the Philippines FDA/EMA criteria from April 2021.

FDA=Food and Drug Administration. EMA=European Medicines Agency. MHRA=Medicines and Healthcare products Regulatory Agency. NICE=National Institute for Health and Care Excellence. PF4=platelet factor 4. STIKO=Standing Committee on Vaccination – Ständigen Impfkommission. TTS=thrombosis with thrombocytopenia syndrome.