



Omicron daily overview: 16 December 2021

Summary

UK total case numbers

	Confirmed Omicron cases	Change from previous report	SGTF cases*	Change from previous report
England	10,740	+1,497	29,037	+9,932
Northern Ireland	210	+59	0	+0
Scotland	663	+102	8,254	+2,560
Wales	95	+33	139	+62
Cumulative total	11,708	+1,691	37,430	+12,554

Data up to 18h00 15 December 2021

Notes to table

* S-gene target failure (SGTF) cases in the above table excludes persons ruled out as other variants

Changes in case definition have been applied and are reflected in the appendix 1

Hospitalisations and deaths

	Hospitalisations		Deaths
	Confirmed	SGTF*	
England	16	4	1

Data up to 19h00 14 December 2021

Notes to table

* SGTF cases in the above table excludes persons ruled out as other variants

Changes in case definition have been applied and are reflected in the appendix 1 of this overview

Definition of hospitalisation is in appendix 2 of this overview

Data lags and quality issues are currently being worked through with UKHSA and NHSE to provide more robust and up to date data on hospitalisations and deaths in patients with confirmed Omicron or SGTF.

Breakdown of England daily cases by region

Region	Confirmed Omicron cases	Change from previous report	SGTF cases*	Change from previous report
East Midlands	1,477	+444	1,794	+921
East of England	986	+67	4,505	+1,273
London	4,096	+382	9,578	+2,511
North East	385	+124	224	+134
North West	411	+46	4,673	+1,844
South East	2,216	+184	3,584	+1,179
South West	814	+187	788	+261
West Midlands	161	+9	2,203	+1,115
Yorkshire and Humber	158	+48	1,658	+700
Unknown	36	+6	30	-6
Total	10,740	+1,497	29,037	+9,932

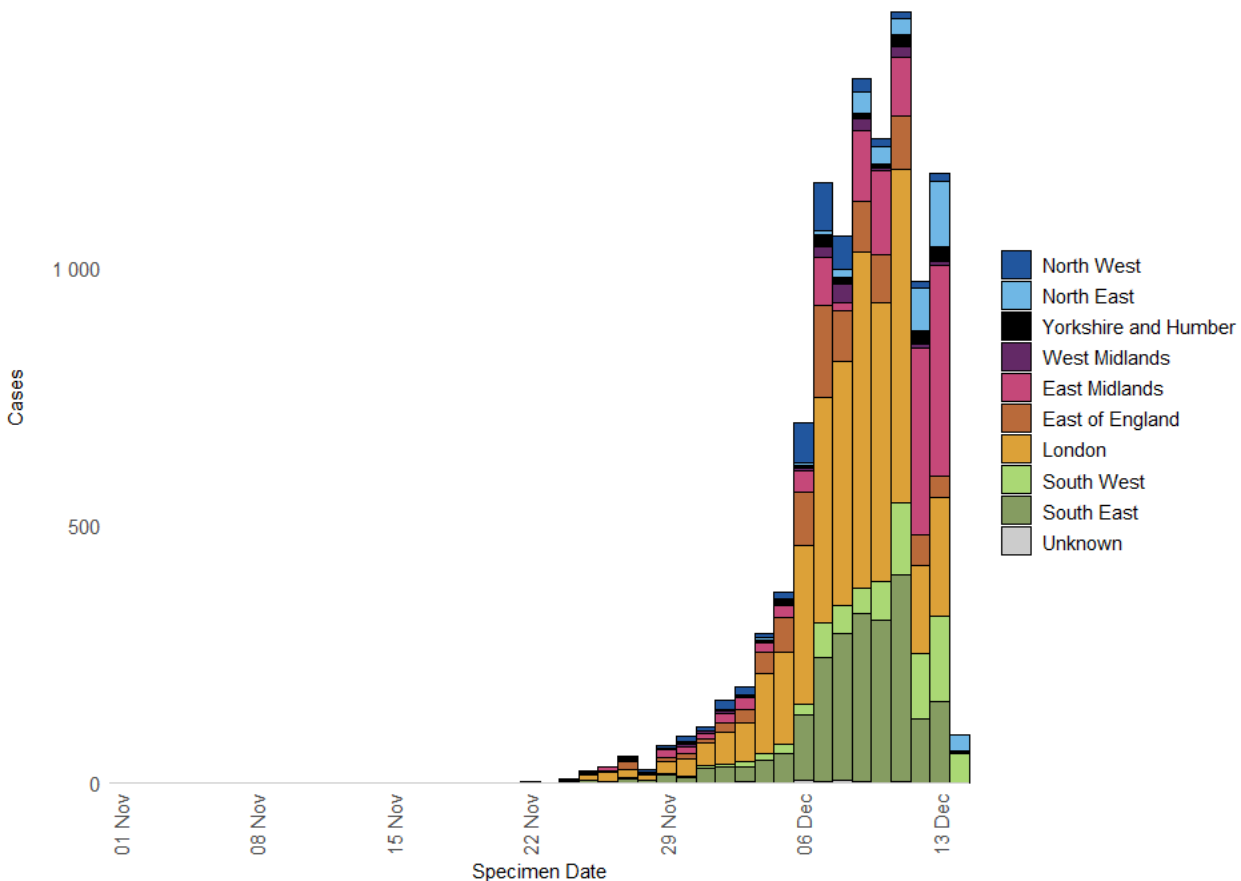
Data up to 18h00 15 December 2021

Notes to table

* SGTF cases in the above table excludes persons ruled out as other variants
Changes in case definition have been applied and are reflected in the appendix 1

Epidemiology curve of confirmed Omicron cases by region

Data up to 18h00 15 December 2021



Samples with S-gene target failure (SGTF)

Number and proportion of SARS-CoV-2 cases with SGTF by region, among those with specimen dates on 13 and 14 December 2021.

Region	Total COVID Cases with known S-gene status**	SGTF cases	SGTF %
East Midlands	3046	1161	38.1
East of England	2868	1376	48
London	3274	2406	73.5
North East	1823	288	15.8
North West	3562	1384	38.9
South East	2955	1197	40.5
South West	844	258	30.6
West Midlands	2495	799	32
Yorkshire and Humber	2495	705	28.3
England	23393	9587	41

SGSS data as of 18h00 15 December 2021.

The SGTF % is plotted below by region ([Figure 1](#)) and nationally ([Figure 2](#)).

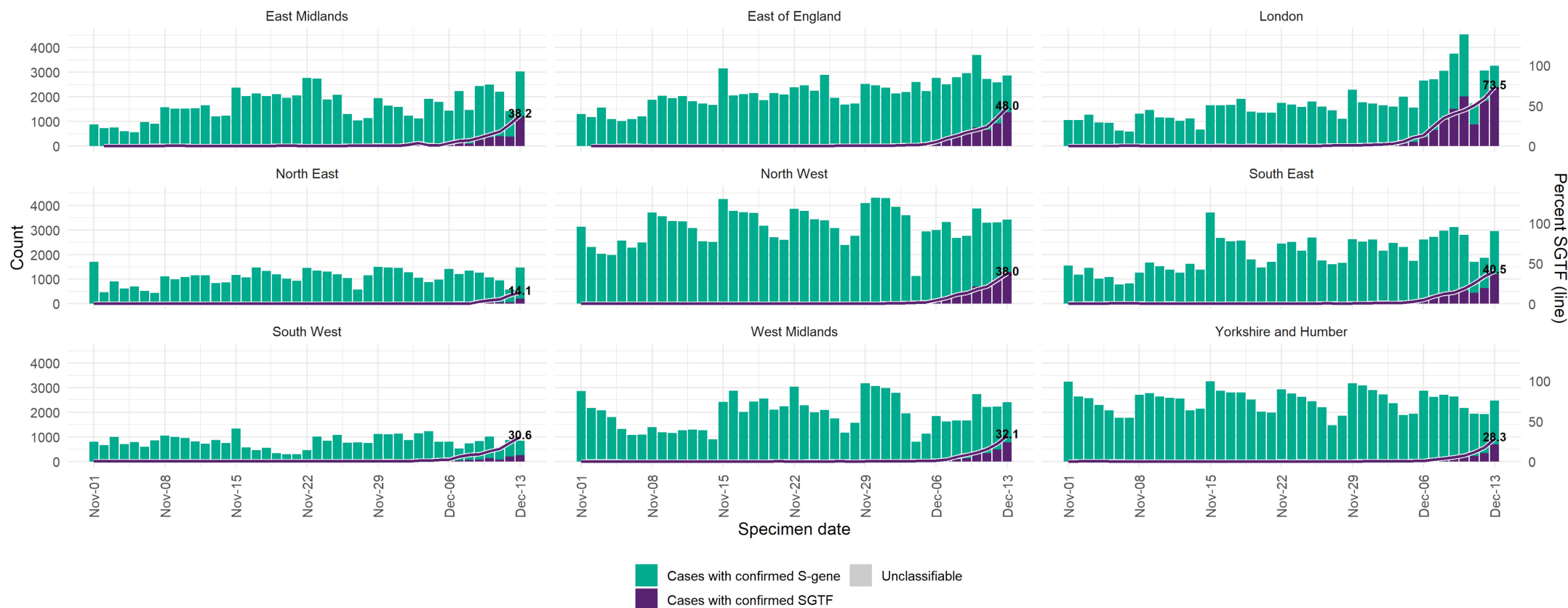
Notes to tables

** Known S-gene status based on those tested by TaqPath laboratories (Alderley Park, Milton Keynes, Glasgow, and Newcastle Lighthouse Laboratories).

Figure 1. COVID-19 cases with detectable S-gene/SGTF and percentage with SGTF among those tested in TaqPath Labs by day, by region

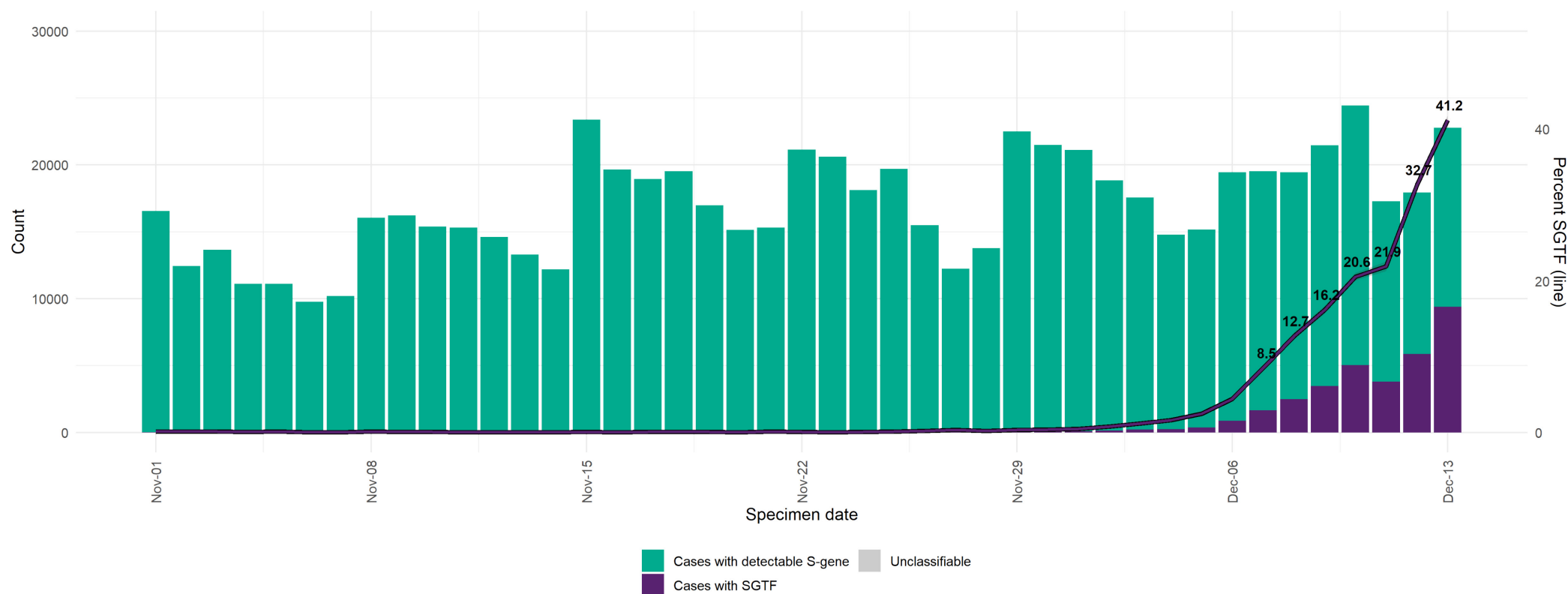
(95% confidence intervals indicated by grey shading).

Data updated 18h00 15 December 2021.



A detectable S gene is a proxy for Delta since April 2021. SGTF was a surveillance proxy for VOC-20DEC-01 however has largely consisted of Delta since August 2021. Local trends in these data may be affected by decisions to direct the processing of samples via a TaqPath laboratory. Only tests carried out with the TaqPath PCR assay and with confirmed SGTF or S gene results included, from Newcastle, Alderley Park, Milton Keynes and Glasgow Lighthouse Labs. SGTF refers to non-detectable S gene and ≤ 30 CT values for N and ORF1ab genes. Detectable S-gene refers to ≤ 30 CT values for S, N, and ORF1ab genes. Produced by Outbreak Surveillance Team, UKHSA.

Figure 2. Number of COVID-19 cases with S-gene positive/SGTF by day, among those tested in TaqPath labs (95% confidence intervals indicated by grey shading).
Data updated 18h00 15 December 2021.



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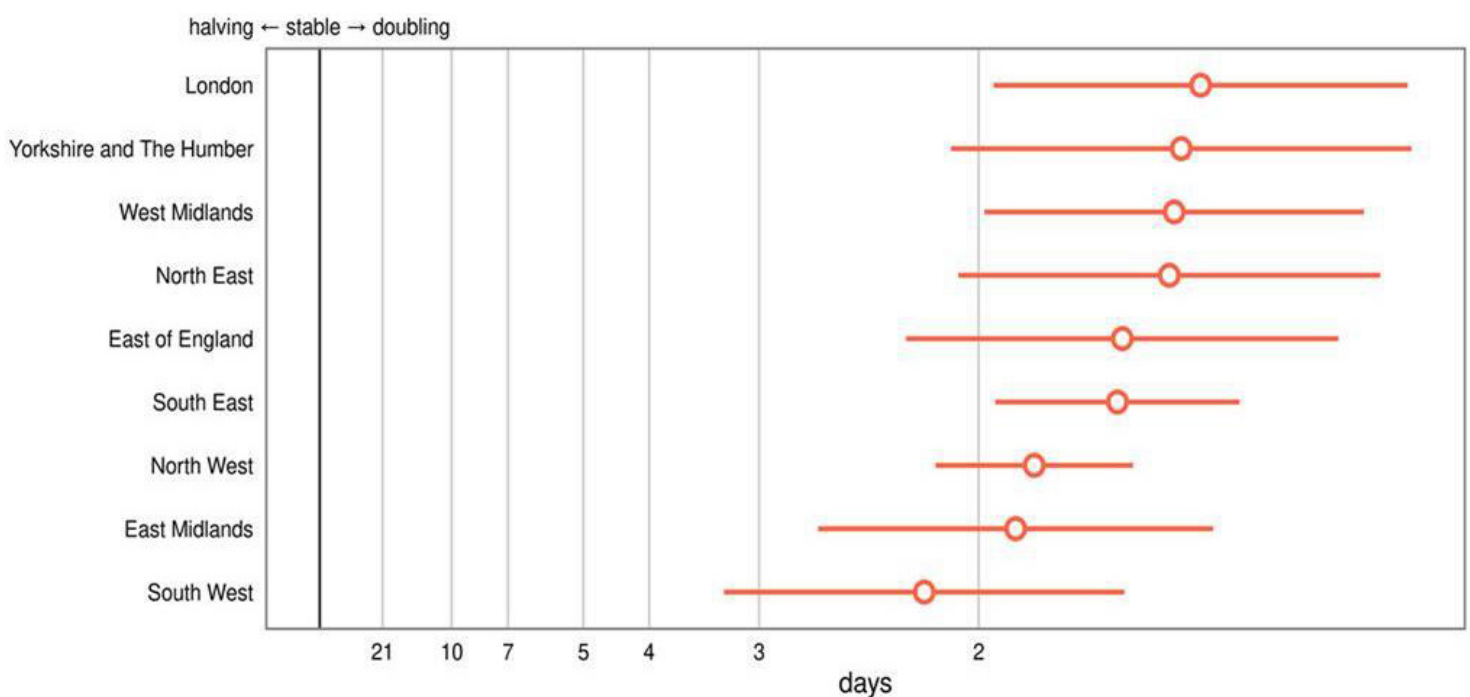
Regional doubling times for the number of test with SGTF

Region	Doubling Time	Doubling Time Lower CI	Doubling Time Upper CI
East Midlands	1.89	2.64	1.48
East of England	1.64	2.25	1.29
London	1.5	1.96	1.21
North East	1.55	2.06	1.24
North West	1.84	2.14	1.62
South East	1.65	1.95	1.43
South West	2.18	3.26	1.64
West Midlands	1.54	1.98	1.26
Yorkshire and Humber	1.53	2.09	1.21

Data up to 18h00 15 December 2021

We are observing doubling time central estimates of less than 2 days for every region except the South West. This may be related to poor PCR gene target reporting coverage in this region. This data is plotted in figure 3 below. Methodology for this is included in appendix 3

Figure 3. Most recent regional doubling times for the number of tests with SGTF



APPENDIX 1

Counts below are based on case definitions agreed on 13 December 2021
(Implemented on data 18h00 14 December 2021):

- **confirmed case:** Omicron (B.1.1.529) by sequencing or genotyping (i) 417N and 681R failure; ii) 69-70 deletion plus 417N; iii) 69-70 deletion plus 501Y; iv) Q493R, vi) other relevant genotyping results)
- **probable case:** COVID-19 PCR positive and i) SGTF^{^^} or ii) 69-70 deletion with specimen dates from 1 December^{**}
- **possible case:** COVID-19 PCR positive and SGTF^{^^} with specimen dates from November 1 up to and including November 30^{*}

^{^^}S-gene target failure (SGTF): A positive SARS-CoV-2 PCR test carried out on the TaqPath assay with undetectable S-gene and CT values ≤ 30 for both N and Orf1ab gene targets. Currently reported into SGSS by Milton Keynes, Alderley Park, Glasgow, and Newcastle lighthouse laboratories.

^{*}Excludes those confirmed as non-Omicron variant.

APPENDIX 2

Definitions of hospitalisation

Cases with presentation to emergency care and are admitted or transferred at the end of their emergency care stay, who have a positive SARS-CoV-2 test either:

- within 28 days before presentation to emergency care
- on admission
- during their admission in hospital

Data source: NHS Digital Emergency Care Data Set (ECDS), linked to EpiCell cases Line List and OST Omicron Line List – Due to this linkage process there is a delay in reporting hospitalisation data

APPENDIX 3

Methodology for calculating doubling times for Omicron:

The plot was produced fitting a GAM (generalized additive model) with a Negative Binomial error structure to positivity within the sample of tests that detect SGTF from NPEx. The dashed lines represent uncertainty (95% CI), which grows as we approach the plot edges because the number of data points used for the estimation becomes smaller. Note that, if an epidemic trend changes from growth to decay, the growth rates change from positive to negative, while the doubling times become longer and longer, cross infinity when the trend is temporarily flat, and turn into halving times (number of days it takes for cases/deaths to halve), represented as negative doubling times.