



Omicron daily overview: 22 December 2021

Summary

UK total case numbers

	Confirmed Omicron cases	Change from previous report	SGTF cases*	Change from previous report
England	69,147	+13,106	137,148	+19,114
Northern Ireland	2,349 [^]	- [^]	0	+0
Scotland	1,652	+174	27,145	+3,026
Wales	941	+301	1511	+412
Cumulative total	74,089	+13,581	165,804	+22,552

Data up to 6pm 21 December 2021 for England, Scotland and Wales

Data up to 4pm 20 December 2021 for Northern Ireland

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 Appendix 1
[^]Northern Ireland have reported no changes in case numbers, due to data flow complications

Hospitalisations and deaths

	Hospitalisations (Confirmed and SGTF*)	Deaths
England	195	18

Data provided 22 December 2021 for dates up to 21 December 2021**

Notes to table

*SGTF cases in the above table exclude cases confirmed with other variants
Changes in case definition have been applied and are reflected in Appendix 1 of this overview

Data set and definitions as described in Appendix 2. The data is lagged and requires hospital staff to submit emergency care data sets to NHS Digital for analysis and linkage with testing data

Breakdown of England daily cases by region

Region	Confirmed Omicron cases	Change from previous report	SGTF cases*	Change from previous report
East Midlands	7,966	+1,106	9,881	+1,932
East of England	4,422	+670	17,522	+2,725
London	19,068	+2,987	43,003	+4,274
North East	2,432	+357	2,473	+828
North West	7,002	+1,951	19,871	+2,435
South East	14,799	+2,511	16,250	+2,159
South West	5,563	+1,142	5,334	+1,268
West Midlands	4,349	+1,087	10,662	+1,980
Yorkshire and Humber	3,359	+1,234	11,982	+1,485
Unknown	187	+61	170	+28
Total	69,147	+13,106	137,148	+19,114

Data up to 6pm 21 December 2021

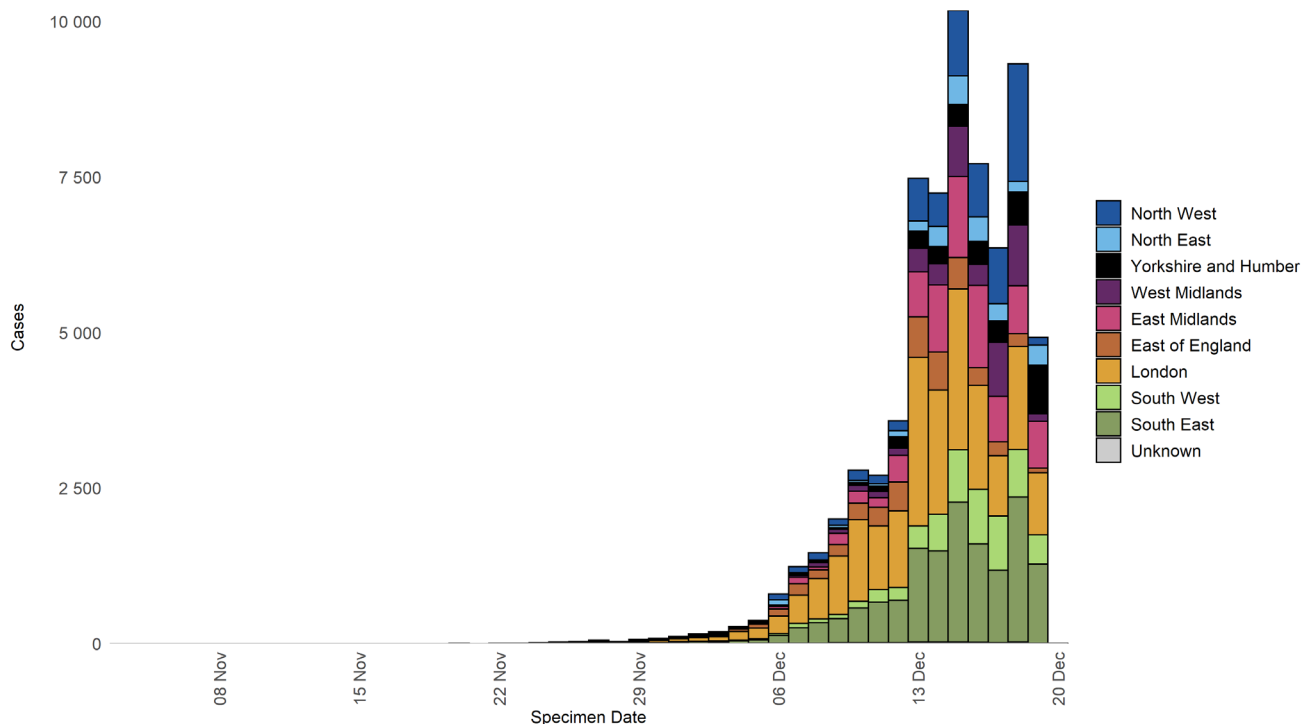
Notes to table

*SGTF cases in the above table exclude cases confirmed with 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 as of 21 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 19 and 20 December 2021.

Region	Total COVID Cases with known S-gene status**	SGTF cases	SGTF %
East Midlands	3,559	2,649	74.4
East of England	3,237	2,591	80
London	3,827	3,452	90.2
North East	2,106	1,196	56.8
North West	4,244	3,293	77.6
South East	2,499	1,909	76.4
South West	1,376	1,007	73.2
West Midlands	2,387	1,722	72.1
Yorkshire and Humber	3,078	2,184	71
England	26,366	20,047	76

SGSS data as of 6pm 21 December 2021.

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

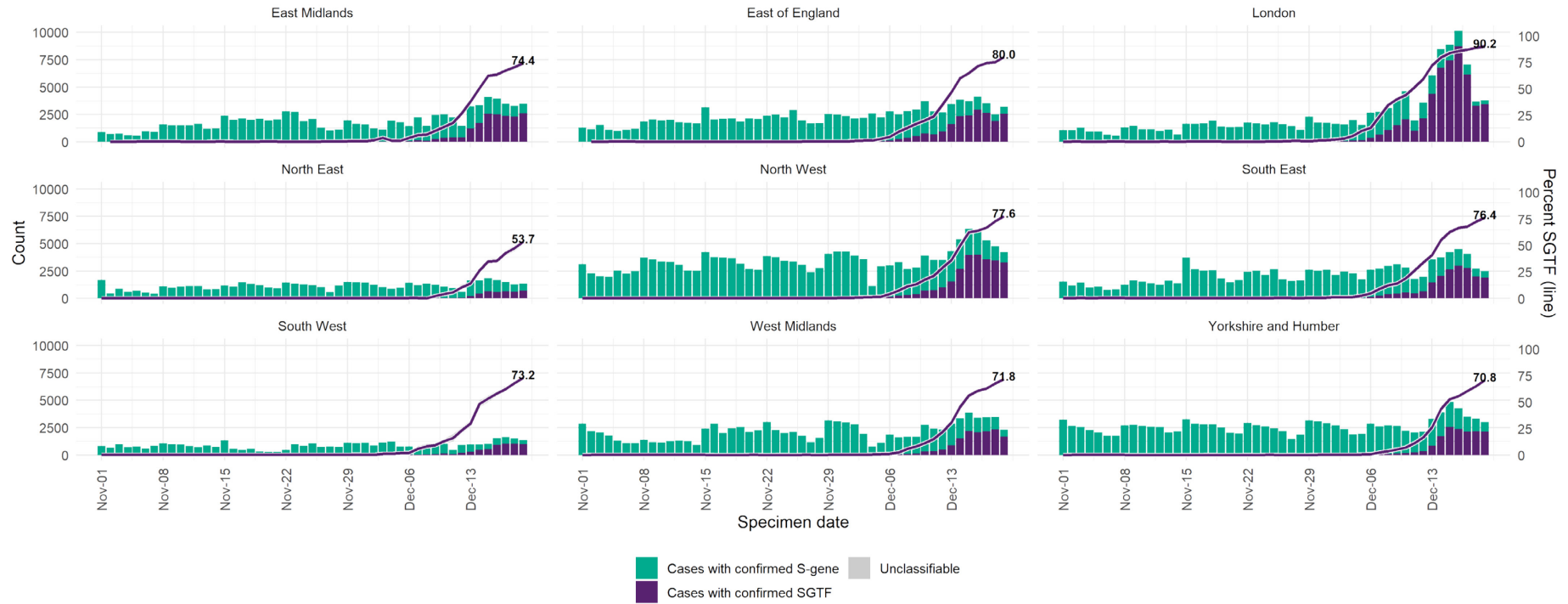
Notes to tables

** 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

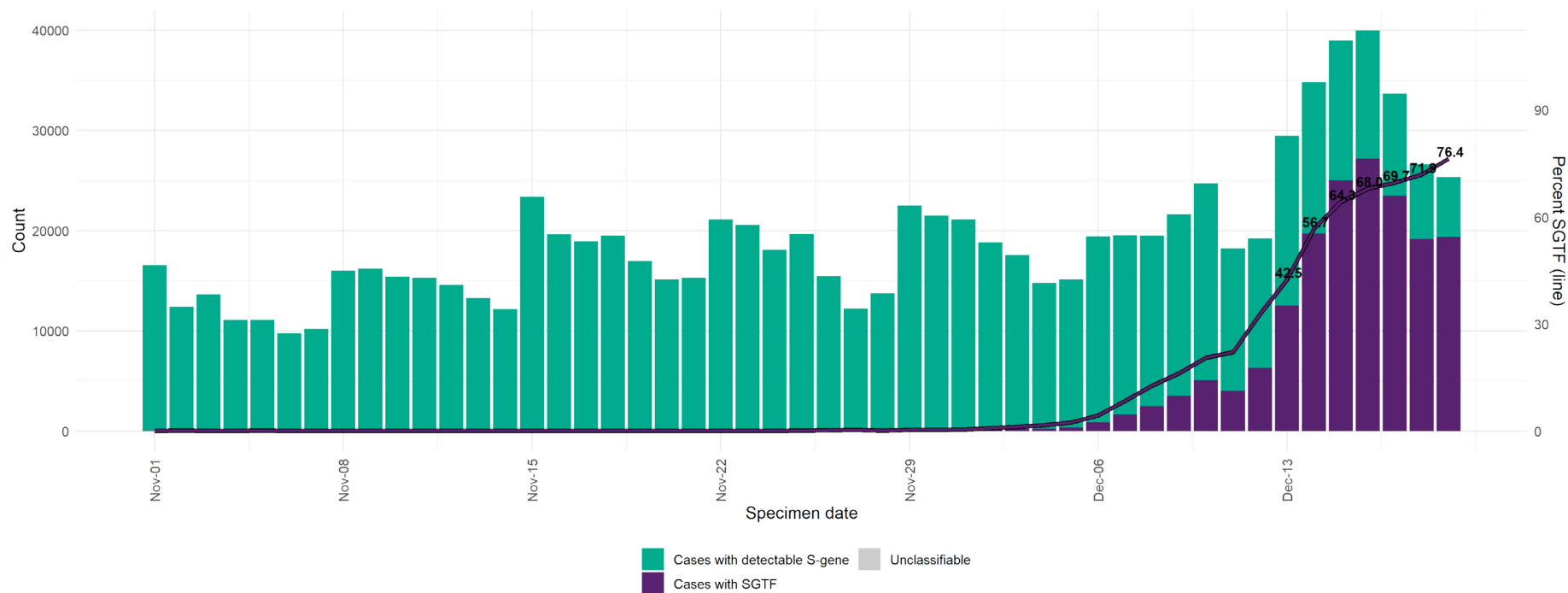
(95% confidence intervals indicated by grey shading).

Data updated 6pm 21 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 6pm 21 December 2021.



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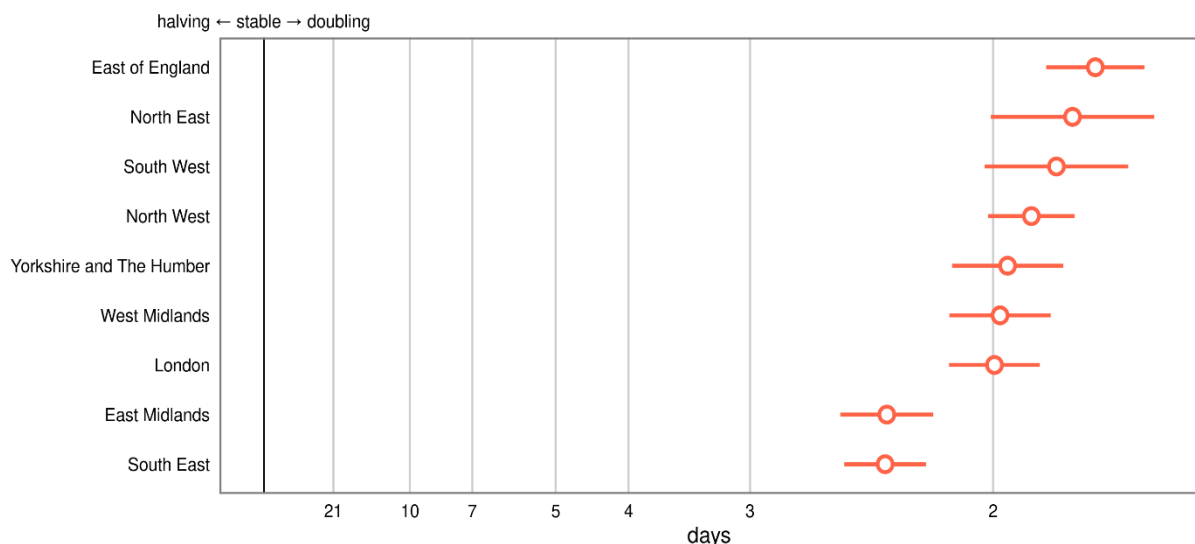
Regional doubling times for the number of tests with SGTF

Region	Doubling Time	Doubling Time Lower CI	Doubling Time Upper CI
East of England	1.75	1.66	1.86
North East	1.8	1.64	2.01
South West	1.84	1.69	2.02
North West	1.9	1.8	2.01
Yorkshire and The Humber	1.96	1.82	2.12
West Midlands	1.98	1.85	2.13
London	2	1.88	2.13
East Midlands	2.34	2.18	2.53
South East	2.35	2.2	2.51

Data up to 6pm 21 December 2021

We are observing doubling time central estimates of less than 2.5 days for every region, though we are now seeing much tighter confidence intervals (CI's). The NHS regions 'North East' and the 'East of England' showing the highest current absolute growth. 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 are based on case definitions agreed on 13 December 2021
(Implemented on data 6pm 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 a type 1 A&E and are admitted or transferred at the end of their emergency care stay, who have a positive SARS-CoV-2 test either:

- within 14 days prior to admission
- within 1 day post admission

Data source: NHS England provide this data from the NHS Digital Emergency Care Data Set (ECDS). This data is subject to delays.

Appendix 3

Methodology for calculating doubling times for Omicron:

The plot was produced fitting a generalised 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 (ie number of days it takes for cases/deaths to halve), represented as negative doubling times.