



# Omicron daily overview: 23 December 2021

## Summary

### UK total case numbers

	Confirmed Omicron cases	Change from previous report	SGTF cases*	Change from previous report
England	83,526	+14,379	161,047	+23,899
Northern Ireland	3,877	+1,528**	N/A^	N/A^
Scotland	2,326	+674	30,923	+3,778
Wales	1,177	+236	1,813	+302
<b>Cumulative total</b>	<b>90,906</b>	<b>+16,817</b>	<b>193,783</b>	<b>+27,979</b>

Data up to 6pm 22 December 2021 for England

Data up to 5pm 22 December 2021 for Scotland and Wales

Data up to 4pm 22 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

\*\* Difference calculated since last report on 20 Dec 21

^ NI labs do not use SGTF as a proxy for Omicron and therefore will not have any probable cases as per the current case definition to report

## Hospitalisations and deaths

	Hospitalisations (Confirmed and SGTF*)	Deaths
England	300	24

Data provided 23 December 2021 for dates up to 22 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	9,559	+1,593	11,817	+1,936
East of England	5,305	+883	20,141	+2,619
London	22,027	+2,959	41,528	-1,475
North East	3,054	+622	2,976	+503
North West	9,300	+2,298	21,468	+1,597
South East	17,708	+2,909	18,819	+2,569
South West	7,152	+1,589	6,132	+798
West Midlands	5,412	+1,063	12,588	+1,926
Yorkshire and Humber	3,787	+428	12,643	+661
Unknown	222	+35	12,935	+12,765
<b>Total</b>	<b>83,526</b>	<b>+14,379</b>	<b>161,047</b>	<b>+23,899</b>

Data up to 6pm 22 December 2021

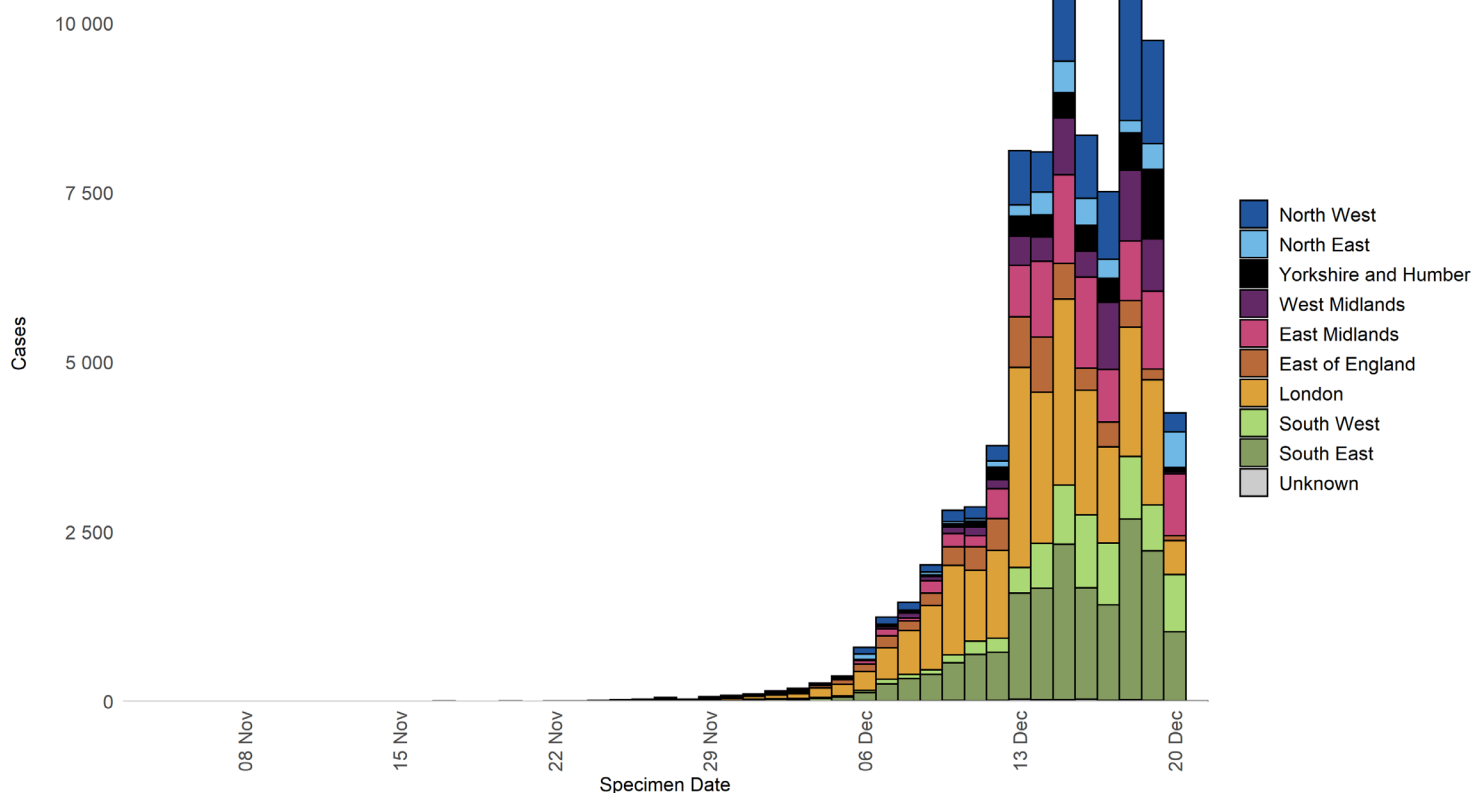
### Notes to table

\*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 22 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 20 and 21 December 2021.

Region	Total COVID Cases with known S-gene status**	SGTF cases	SGTF %
East Midlands	4,085	3,274	80.1
East of England	3,391	2,814	83
London	6,664	6,012	90.2
North East	2,388	1,496	62.6
North West	5,635	4,691	83.2
South East	3,311	2,654	80.2
South West	1,264	1,009	79.8
West Midlands	2,470	1,930	78.1
Yorkshire and Humber	2,267	1,759	77.6
England	31,512	25,668	81.5

SGSS data as of 6pm 22 December 2021.

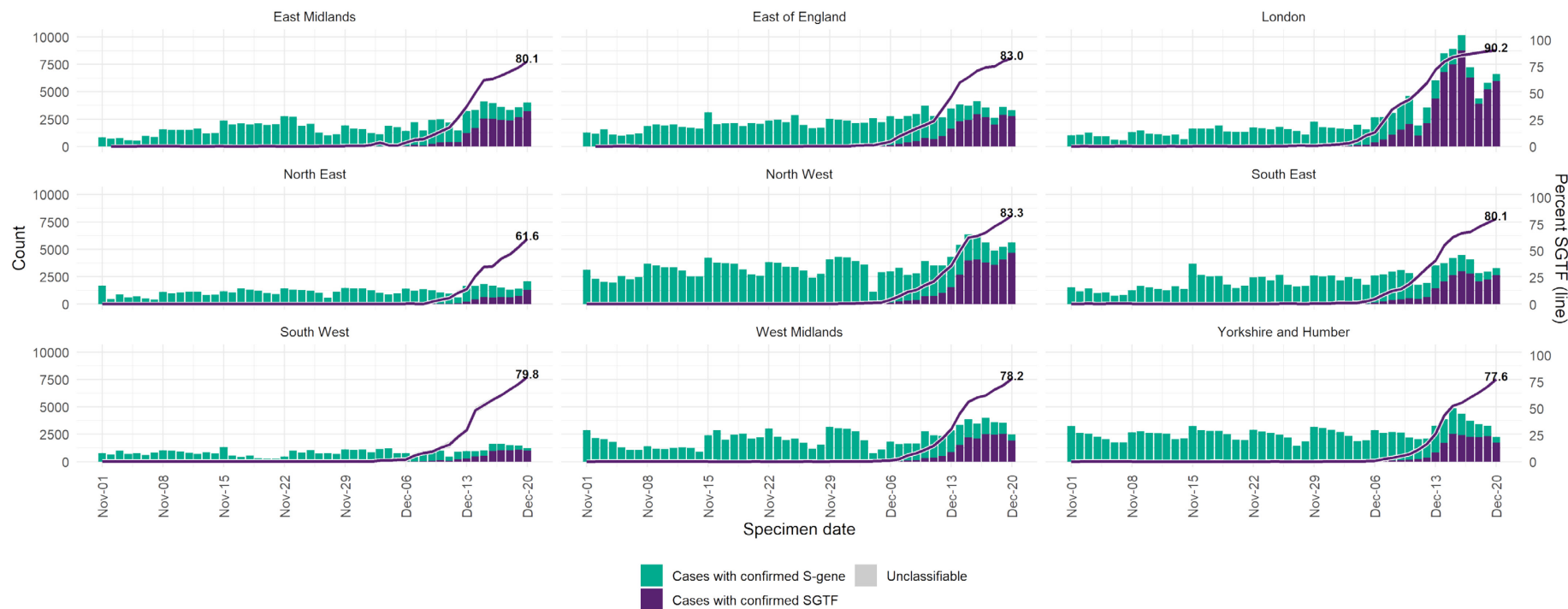
**Notes to tables**

\*\* 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

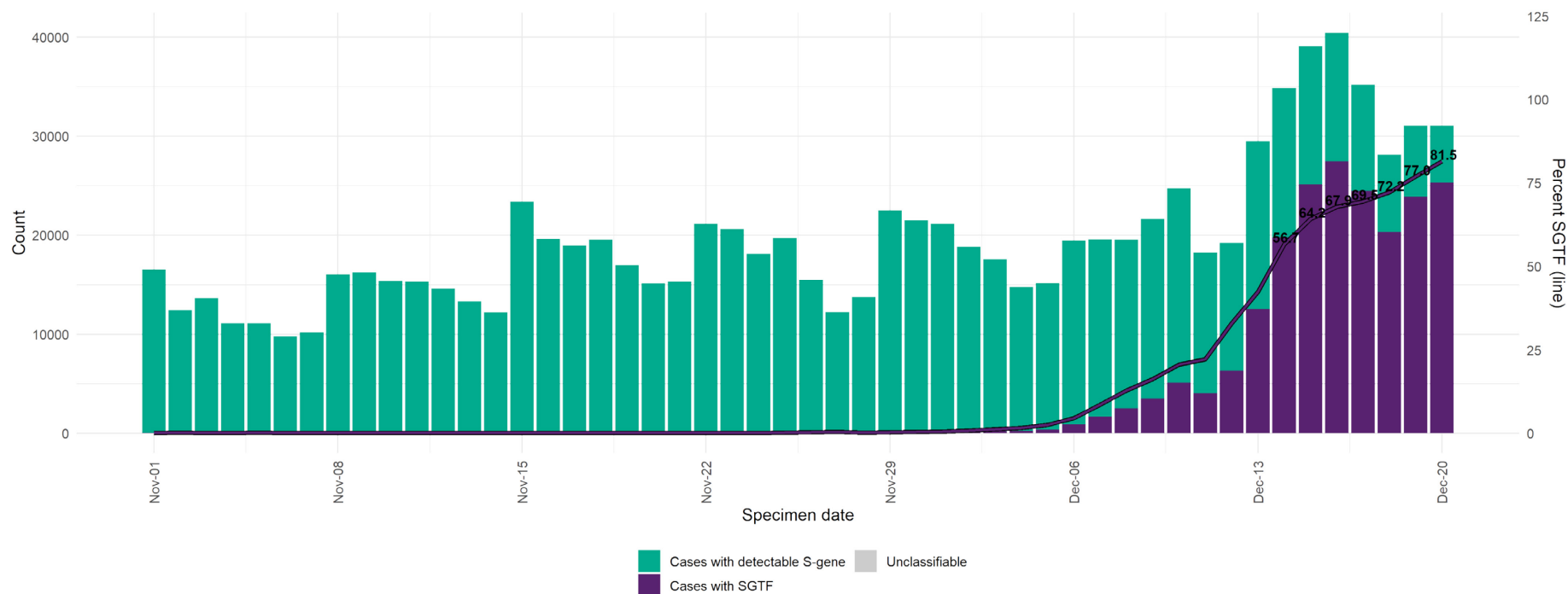
(95% confidence intervals indicated by grey shading).

Data updated 6pm 22 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  $\leq 30$  CT values for N and ORF1ab genes. Detectable S-gene refers to  $\leq 30$  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 22 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.

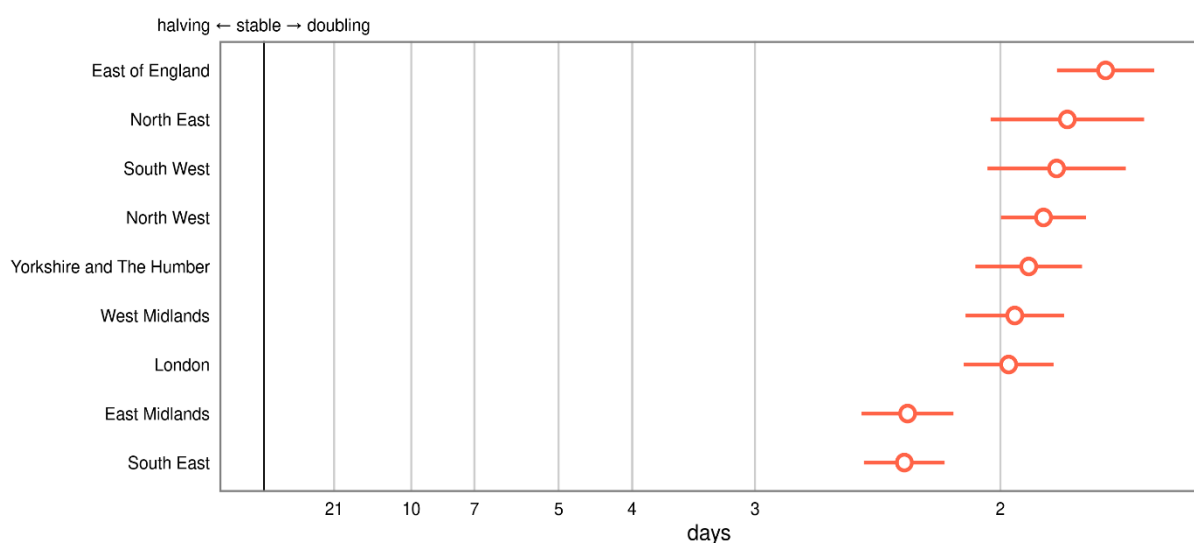
## Regional doubling times for the number of tests with SGTF

Region	Doubling Time	Doubling Time Lower CI	Doubling Time Upper CI
East of England	1.75	1.65	1.86
North East	1.83	1.67	2.03
South West	1.86	1.71	2.04
North West	1.89	1.79	2
Yorkshire and The Humber	1.93	1.8	2.07
West Midlands	1.96	1.84	2.1
London	1.98	1.87	2.11
East Midlands	2.29	2.14	2.46
South East	2.3	2.16	2.45

Data up to 6pm 22 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  $\leq 30$  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.