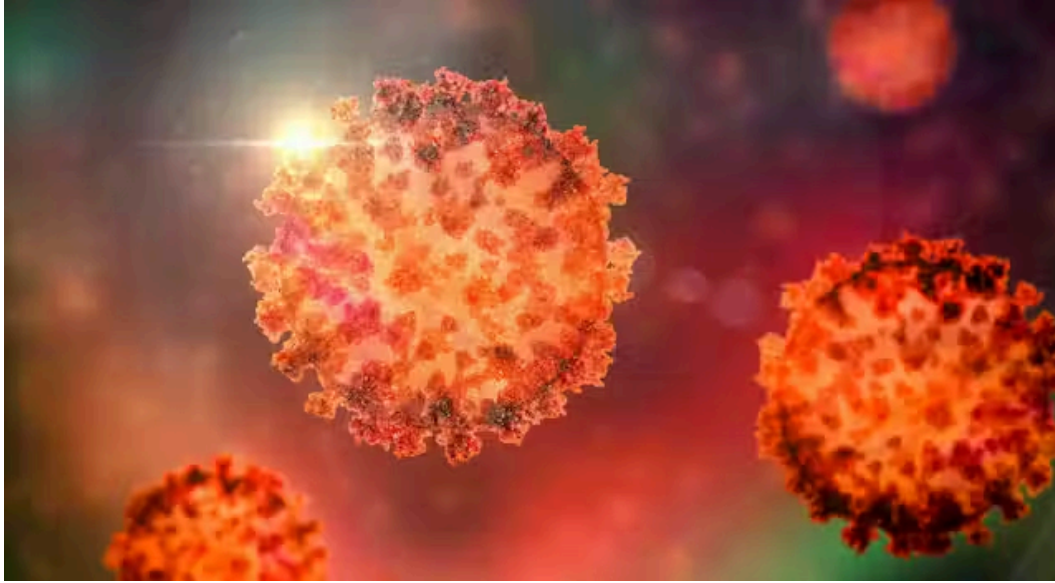


# THE CONVERSATION

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## XEC is now in Australia. Here's what we know about this hybrid COVID variant

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Over the nearly five years since COVID first emerged, you'd be forgiven if you've lost track of the number of new variants we've seen. Some have had a bigger impact than others, but virologists have documented thousands.

The latest variant to make headlines is called XEC. This omicron subvariant has been reported predominantly in the northern hemisphere, but it has now been detected in Australia too.

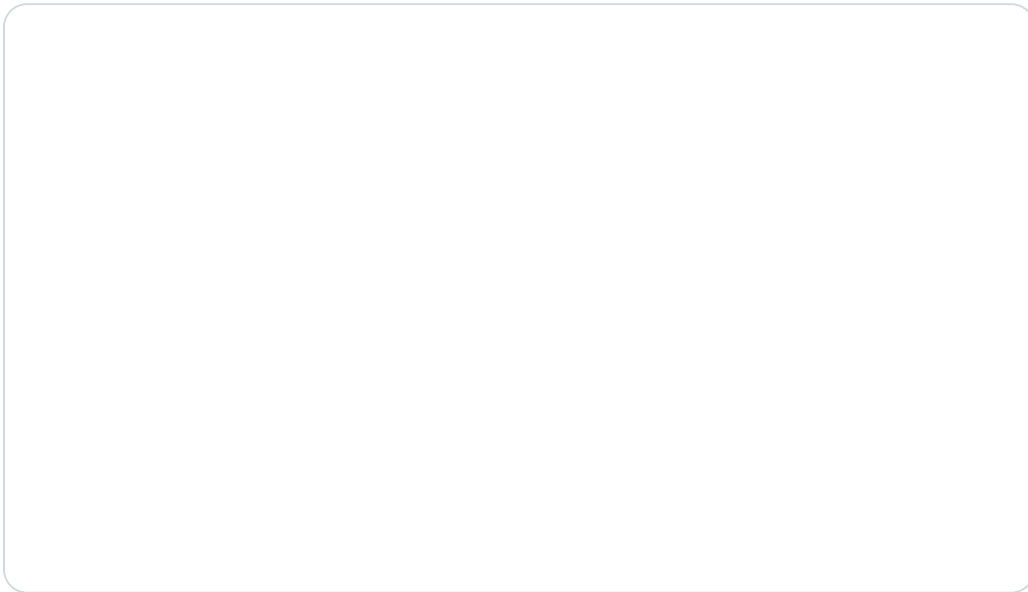
So what do we know about XEC?

**Mike Honey**@Mike\_Honey\_ · [Follow](#)

Here's the latest variant picture for Australia.

DeFLuQE variants (KP.3.1.1 and descendants) are now clearly dominant over the FLuQE variants.

XEC.\* is now visible and starting to grow.



11:05 PM · Sep 28, 2024



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## Is COVID still a thing?

People are now testing for COVID less and reporting it less. Enthusiasm to [track the virus](#) is generally waning.

Nonetheless, Australia is still collecting and reporting [COVID data](#). Although the number of cases is likely to be much higher than the number documented (around [275,000 so far this year](#)), we can still get some idea of when we're seeing significant waves, compared to periods of lower activity.

Australia saw its last COVID peak in [June 2024](#). Since then cases have been on the decline.

But SARS-CoV-2, the virus that causes COVID, is definitely still around.

## Which variants are circulating now?

The main [COVID variants](#) circulating currently around the world include BA.2.86, JN.1, KP.2, KP.3 and XEC. These are all descendants of omicron.

The XEC variant was first detected [in Italy](#) in May 2024. The World Health Organization (WHO) designated it as a variant “[under monitoring](#)” in September.

Since its detection, [XEC has spread](#) to more than 27 countries across Europe, North America and Asia. As of mid-September, the highest numbers of cases have been identified in countries including the United States, Germany, France, the United Kingdom and Denmark.

XEC is currently making up around [20% of cases in Germany](#), [12% in the UK](#) and [around 6% in the US](#).



A woman wearing a mask in a supermarket.

The virus behind COVID continues to evolve. Photo by Centre for Ageing Better/Pexels

Although XEC remains a minority variant globally, it appears to have a growth advantage over other circulating variants. We don't know why yet, but reports suggest it may be able to [spread more easily](#) than other variants.

For this reason, it's predicted XEC could become the [dominant variant](#) worldwide in the coming months.

## How about in Australia?

The most recent [Australian Respiratory Surveillance Report](#) noted there has been an increasing proportion of XEC sequenced recently.

In Australia, 329 SARS-CoV-2 sequences collected from August 26 to September 22 have been uploaded to [AusTrakka](#), Australia's national genomics surveillance platform for COVID.

The [majority of sequences](#) (301 out of 329, or 91.5%) were sub-lineages of JN.1, including KP.2 (17 out of 301) and KP.3 (236 out of 301). The remaining 8.5% (28 out of 329) were recombinants consisting of one or more omicron sub-lineages, including XEC.

Estimates based on data from GISAID, an international repository of viral sequences, suggests XEC is making up [around 5% of cases](#) in Australia, or 16 of 314 samples sequenced.

Queensland reported the highest rates in the past 30 days (8%, or eight of 96 sequences), followed by South Australia (5%, or five out of 93), Victoria (5%, or one of 20) and New South Wales (3%, or two of 71). WA recorded zero sequences out of 34. No data were available for other states and territories.

## What do we know about XEC? What is a recombinant?

The XEC variant is believed to be a recombinant descendant of two previously identified omicron subvariants, KS.1.1 and KP.3.3. Recombinant variants form when two different variants infect a host at the same time, which allows the viruses to switch genetic information. This leads to the emergence of a new variant with characteristics from both “parent” lineages.

KS.1.1 is one of the group commonly known as “FLiRT” variants, while, KP.3.3 is one of the “FLuQE” variants. Both of these variant groups have contributed to recent surges in COVID infections around the world.

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The WHO’s naming conventions for new COVID variants often use a combination of letters to denote new variants, particularly those that arise from recombination events among existing lineages. The “X” typically indicates a recombinant variant (as with XBB, for example), while the letters following it identify specific lineages.

We know very little so far about XEC's characteristics specifically, and how it differs from other variants. But there's no evidence to suggest symptoms will be more severe than with earlier versions of the virus.

What we do know is what mutations this variant has. In the S gene that encodes for the spike protein we can find a T22N mutation (inherited from KS.1.1) as well as Q493E (from KP.3.3) and other [mutations](#) known to the [omicron lineage](#).

### **Will vaccines still work well against XEC?**

The most recent [surveillance data](#) doesn't show any significant increase in COVID hospitalisations. This suggests the current vaccines still provide effective protection against severe outcomes from circulating variants.

As the virus continues to mutate, vaccine companies will [continue to update their vaccines](#). Both Pfizer and Moderna have updated vaccines to target the JN.1 variant, which is a parent strain of the FLiRT variants and therefore should protect against XEC.

However, Australia is [still waiting](#) to hear which vaccines may become available to the public and when.

In the meantime, omicron-based vaccines such as the the current XBB.1.5 spikevax (Moderna) or COMIRNATY (Pfizer) are still likely to provide good protection from XEC.

It's hard to predict how XEC will behave in Australia as we head into summer. We'll need more research to understand more about this variant as it spreads. But given XEC was first detected in Europe during the northern hemisphere's summer months, this suggests XEC might be well suited to spreading in warmer weather.