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Omicron : What we know and what we don't

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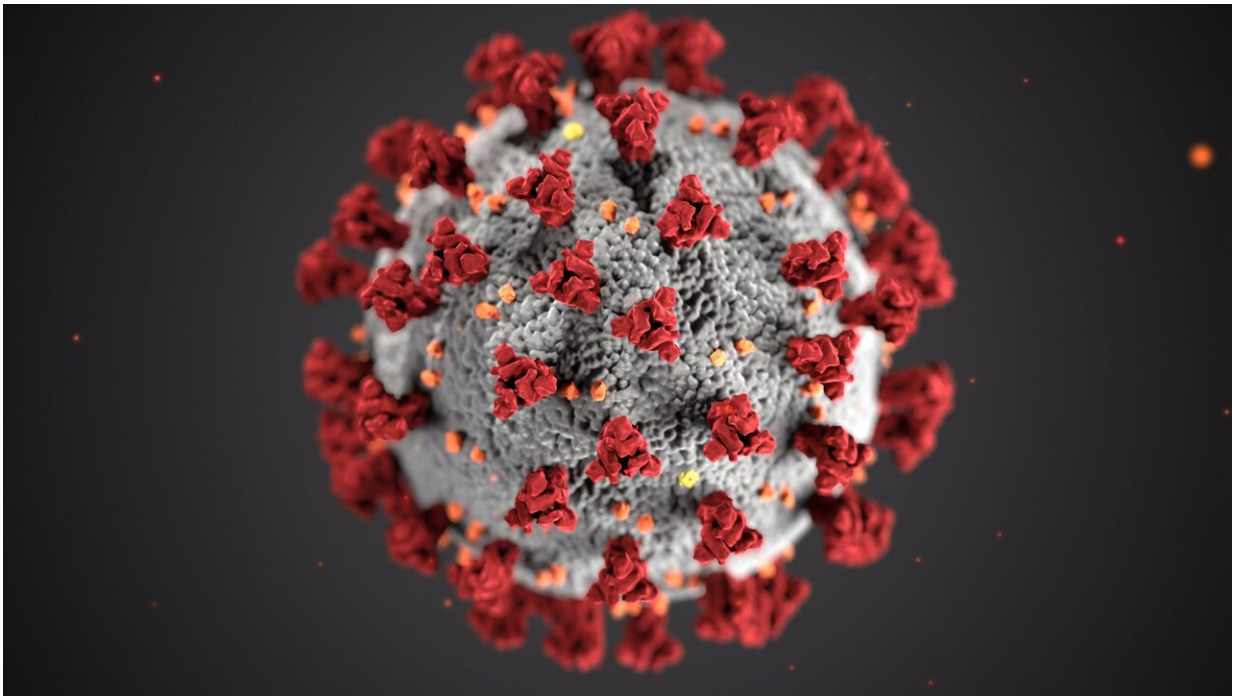

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Omicron is a variant of COVID-19 first sequenced in South Africa with cases now present in over 20 countries and on all continents.

It was named only a week ago and it will take time to understand its impact on the pandemic.

Here is a summary of what we know and what questions surround the

new version of the virus.

Where did it come from?

We don't know. South African epidemiologist Salim Abdool Karim says it was detected first in Botswana and then in South Africa where the announcement of the new variant was made on November 25.

On Tuesday Dutch authorities announced that six days before that on November 19 an individual had tested positive for what also turned out to be the Omicron variant.

However, the World Health Organization (WHO) said "the first known laboratory-confirmed case was identified from a specimen collected on 9 November 2021", without specifying where.

"It has probably been circulating in South Africa for longer than we thought—since early October," Jean-Francois Delfraissy, president of the French government's scientific advisory board told AFP.

Why is it "of concern"?

The day after South Africa's announcement the WHO named the new variant after a Greek letter, like previous versions, and classified it a variant "of concern".

The classification is based on Omicron's genetic characteristics and also how it seems to have behaved in the population so far.

Omicron's unique genetic structure translates to multiple changes to the spike protein that might make it more contagious and harder to control via current vaccines—but these possibilities are so far theoretical.

Meanwhile, cases in the Gauteng province of South Africa, which includes Johannesburg, have gone up rapidly with many identified as Omicron.

Researchers across the world are looking into how contagious Omicron is, the severity of disease it causes, and whether it is more resistant to vaccines.

The WHO has said the process will likely take weeks.

Will it replace Delta?

The Delta variant is currently the form of COVID that is the most sequenced across the globe.

Naturally-competing variants that evolved after Delta (like lesser-known Mu and Lambda) have not managed to overtake it in the population—but the spread of Omicron in Gauteng suggests it could.

On Thursday the European Centre for Disease Control (ECDC) said that if the pattern in South Africa is reproduced in Europe, Omicron could make up the majority of COVID cases within a few months.

However, Delta was never very present in South Africa, so a comparison with Europe is hard to draw at this stage.

Writing in British daily The Guardian, US expert Eric Topol said it is not clear whether Omicron's spread is because of "high transmission, like Delta, or immune evasion".

Immune evasion is when a virus can infect a person who has already gained immunity either from previous infection or from vaccination.

Is it more dangerous?

On Sunday, a South African doctor said she had treated about 30 cases of Omicron and had only encountered "mild symptoms" in these patients.

The scientific community warned against drawing conclusions based on this testimony since the patients were mostly young and therefor less at risk of serious COVID.

So far, all cases detected in Europe are "either asymptomatic or with mild symptoms", according to the EDCD.

This does not mean that Omicron will not cause serious COVID—but it does leave the door open to a rare optimistic hypothesis.

"If Omicron is very contagious but doesn't cause severe COVID (and doesn't fill hospital beds), it could confer group immunity and contribute to making SARS-CoV-2 into a benign seasonal virus, which would help end the crisis," French virologist Bruno Canard tweeted.

He added, however, that such a scenario would be a "stroke of luck".

What about vaccines ?

Again, it is too early to say whether vaccines will be less effective against transmission or severe disease from Omicron than against other variants.

"We have to see whether the antibodies produced by current vaccines still work and to what extent—whether they still prevent severe illness," said Enouf.

While waiting for real-world data, scientists are trying to answer this question through lab tests.

But even if vaccines are less effective against Omicron it doesn't mean they will be totally ineffective.

In addition to the antibody response that could be weakened by mutations in Omicron, the body has secondary T-cell responses that can protect against severe illness.

"We think that the cell response will be partly effective against Omicron," said Delfraissy.

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