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Covid-19: Kolkata samples with CT less than 30 to be sent for genome-sequencing

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KOLKATA: Laboratories across the city testing Covid-19 samples will start sending all positive samples with a CT value of less than 30 for genome-sequencing to detect the Omicron variant. The move comes after a directive from the state health department and will be applicable to samples collected within the Kolkata Municipal Corporation area. Cycle threshold (CT) value is the number of PCR cycles run on a swab sample to detect viral RNA and it gives an indirect indication of viral load.

The genome-sequencing workload will now be shared by the Council of Scientific and Industrial Research-Indian Institute of Chemical Biology (CSIR-IICB) Kolkata and NIBG, Kalyani.

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The aim is to find out whether Omicron is being community-transmitted.

“This directive is in sync with the Union health ministry’s policy to determine whether there is Omicron community transmission in a few cities nationally, including Kolkata,” said a senior health department official.

“The higher the CT value, the lower is the viral load and vice-versa. We have also started looking out for positive samples from

patients in the KMC area so that these can be sent for genome-sequencing,” said microbiologist Shelly Sharma Ganguly, attached with the laboratory at AMRI Hospital Salt Lake.

Labs to send samples twice a week

Labs will send such positive samples to School of Tropical Medicine twice a week — Tuesdays and Fridays — from where these will be forwarded either to National Institute of Biomedical Genomics (NIBMG) Kalyani or CSIRIICB Kolkata.

“CT value of above 30 implies low viral load. Samples above CT value of 30 are unlikely to have sufficient RNA load for genome-sequencing and also throwing up the possibility of false negative on testing. We have kept five samples segregated for genome-sequencing and these will be sent on Friday,” said microbiologist Bhaskar Narayan Chaudhuri of Peerless Hospital.

So far, the health department had been sending positive samples of only international flyers to NIBMG Kalyani though the CSIR-IICB lab at Sector V is part of INSACOG, and is closer to Kolkata. “As part of INSACOG, with the nodal lab being NIBMG, our lab and the team led by scientists Saikat Chakraborty and Siddik Sarkar are ready for this responsibility,” said CSIR-IICB director Arun Bandyopadhyay.

“It is possible we have more cases of Omicron here, given its higher transmissibility. So, stepping up sequencing is a positive measure. But we must also consider RT-PCR tests targeting the spike gene and sequence positive samples with spike-gene failure,” said immunologist Dipyaman Ganguly, an IICB scientist.

The Salt Lake lab conducts whole genome sequencing but mainly for academic purposes and on samples from collaborating hospitals. This is the first time it has been roped in for scaling up genome-sequencing for surveillance.

Private hospitals are strengthening test protocol. AMRI is sending samples of patients with travel history for sequencing. Peerless will add 50 Covid beds. Woodlands plans a twobed Omicron isolation unit.