

New technology at the Institute of Forensic Sciences is key in the management of cases of deaths from COVID-19

The institution has been able to accelerate the analysis of deaths caused by the virus with virtual tests and autopsies

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By [Marga Parés Arroyo](#)



The Institute of Forensic Sciences has also conducted 19,889 tests of the virus on first responders in the country, detecting, to date, 1,442 positive cases in this population. (File)

The uptick in COVID-19 infections and deaths in recent weeks caused an exponential increase in cases of this type examined at the Institute of Forensic Sciences (ICF), which detects the virus in bodies through its own laboratory that uses the ID NOW test [of the Abbott company](#).

"There was an increase in the month of August. We made 15 certified here (for COVID-19), with autopsy and examination, an increase compared to previous months, June and July, when one or two deaths were made (from this virus)," Dr. María Conte Miller, executive director of the ICF, told **El Nuevo Día**.

"(The rise in deaths from COVID-19) is a reflection of what is being seen outside (on the street)," the pathologist added.

Since June of last year, the ICF has detected 367 positive tests to COVID-19, out of a universe of 5,229 that have been administered. The test, through which results are obtained in about 15 minutes, is performed on all the corpses that are transferred to the institution dedicated to forensic scientific examination and analysis.

However, only in 121 cases of those 367 did COVID-19 rank as the cause of death. Many of these autopsies were performed on people who died at home without receiving medical assistance or shortly after arriving at a hospital without being tested for the virus.

According to an analysis by biostatistician Rafael Irizarry, a member of the Scientific Coalition of Puerto Rico, from April 1 to September 2, 748 deaths from COVID-19 have been recorded in Puerto Rico. Data from the Department of Health indicate that, in August, 273 deaths from the virus were reported on the island, eight times more than the fatalities in July.

Conte Miller said that, at the ICF, diagnoses of the virus are made based on the molecular test (PCR). "All the corpses with an autopsy, we do the test," he said.

At the discretion of the pathologists who work in the institution, he added, tests for the post-mortem virus are performed on the corpses of people who died from other causes, such as accidents or a criminal event, but who also presented suspicious signs of this disease.

He recalled that, in May, the ICF acquired a machine to perform autopsies. The new technology, known as Forensic PACS (GE Lightspeed 16 Slice), allows the execution of virtual autopsies with results in a few minutes thanks to radiological images that allow an immediate reading.

In addition to avoiding the direct exposure of ICF personnel to cases of this virus in the performance of conventional autopsies, having quick results through virtual autopsies allows alerting the families of deceased by [COVID-19](#) about the cause of death so that they take the necessary measures and avoid continuing transmission, said the pathologist.

"We're connected to (the Department of) Health, and all positive cases come to them automatically," Conte Miller said, noting that this allows cases to be followed up with contact tracing.

On virtual autopsies, Conte Miller stressed that they do not require the body to be taken out of the plastic bag in which it is transported. A CT scan scans the body. Covid-19 cases, many times, are unmistakable because of the evident deterioration in the lungs, he said.

"We continue with our normal operation, except for (the new machine of) the CT Scan and the mandatory tests (of COVID-19) to all autopsies. We continue to operate the same because, with the support of technology, we do autopsies faster," he said.

Without this new team, he acknowledged, the ICF would not have been able to handle the load and would have had to send the tests to another laboratory or do the autopsies in a conventional way, as they still do with homicide and criminal cases.

While a virtual autopsy takes only a few minutes, he said, a conventional one can take three to four hours. "We have given more speed to the process, despite and motivated by the pandemic," he said.

With the new technology, the machine to do COVID tests and a team of 10 pathologists, 12 pathology assistants and forensic radiologists hired to read images, the official assured that the pandemic has not caused an overload of work in the ICF.

"We are up to date, doing cases when they arrive. The staff is sufficient, and we are delivering cases in 48 hours," he said, warning that some take up to 72 hours for documentation procedures.

Regarding the effect of the pandemic on the island, the head of the ICF pointed out that, at first, it caused an increase in deaths from natural causes of people who had neglected their medical care and had a lethal deterioration of chronic health conditions they already suffered, such as diabetes and cardiovascular diseases.

However, Conte Miller said this situation improved when the measures for the control of the virus imposed last year were relaxed and people resumed medical care for their pre-existing conditions.

"But there are still people who don't go to the doctor, despite having symptoms, for example, of a monga. I'm worried that people won't go to the doctor (and die from COVID-19)," he said.

He stressed that there are many infected with the virus without the typical picture of symptoms seen before, such as respiratory distress or loss of taste or smell.

"I see more extreme tiredness, as well as gastrointestinal symptoms, such as diarrhea and vomiting. And that's not related to COVID symptoms," he said.