

Arizona authorities turn to genetic genealogy in ongoing search for Nancy Guthrie

Nancy Guthrie, 84, was reported missing from her home in the Tucson, Arizona, area on Feb. 1. She was last seen the night before, when family dropped her off at home.



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Authorities turn to genetic genealogy in Nancy Guthrie case

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By Pilar Melendez and Liz Kreutz

Federal and local authorities will use genetic genealogy to analyze DNA found at Nancy Guthrie's home as the ongoing investigation into her possible abduction stretches into its third week.



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The 84-year-old mother of “TODAY” co-host Savannah Guthrie was reported missing around noon on Feb. 1 after she did not show up to a friend’s house to attend virtual church services. Guthrie was last seen the previous night at around 9:45, after dinner at her daughter Annie’s house.

Authorities believe that Guthrie was possibly taken from her home. They have not publicly identified a suspect or person of interest. All members of the Guthrie family have been cleared as potential suspects in the case, which involves local, state and federal law enforcement agencies.

In an update this week, authorities said DNA recovered from a glove found about 2 miles from Guthrie’s home did not match any samples in the FBI’s DNA database, called CODIS, nor did it match DNA found at Guthrie’s property, authorities said Tuesday. The Combined DNA Index System has 19 million offender DNA profiles and more than 1 million forensic profiles, [according to the FBI](#). But a match would not necessarily break the case.

The glove appeared to match the gloves worn by a person seen in security video from outside Guthrie’s home, authorities have said.

Pima County Sheriff Chris Nanos on Tuesday told NBC News that investigators are analyzing some partial DNA that was found at Guthrie’s home. Investigators are also exploring “investigative genetic genealogy options” to identify possible DNA matches, the department said.

“We believe that we may have some DNA there that may be our suspect, but we won’t know that until that DNA is separated, sorted out, maybe admitted to CODIS, maybe through genetic genealogy,” Nanos said.

Investigators are now turning to genetic genealogy, which has previously successfully identified other high-profile criminals like the Golden State Killer and University of Idaho murderer Bryan Kohberger.

“If I was the kidnapper, I would be extremely concerned right now, because using investigative genetic genealogy, he will be identified,” DNA expert CeCe Moore told “TODAY” Thursday.

Authorities, however, are not allowed to use well-known genealogy sites such as Ancestry.com or 23andMe, and will have to rely on publicly available DNA databases to test the DNA. Moore noted that the process may take awhile.

“If they have deep roots in the United States, it could be minutes, it could be a few hours,” Moore said. “But if it’s somebody who doesn’t have connections to the U.S. in their tree in more recent generations, then it could take much longer.”

Last week, the FBI released security camera images and videos of an armed and masked man outside Guthrie’s home on the morning of her disappearance. The FBI has since described that suspect as a 5’9” to 5’10” male carrying a unique gun holster and an Ozark Trail backpack from Walmart. He also may have been wearing a ring.

Nanos noted that identifying the suspect’s backpack could be a critical clue in the investigation.

“We’re working with our Walmart managers all across the state to try to find out how many sales there were of that backpack in the last 20, 30 days, the last 60 days,” Nanos said. “And can we do something with that? Can we break it – maybe we’ll find a credit card or a bank card? Maybe we’ll find a video of the guy walking in.”

The FBI currently has a \$100,000 reward for information leading to the location of Guthrie or an arrest for anyone involved in her disappearance. As of Thursday morning, the [FBI said it has received](#) more than 19,000 tips related to the case since Feb. 1.

An additional \$102,500 reward is being offered through Tucson Crime Stoppers, known locally as 88-CRIME.

There’s no evidence that Guthrie was taken over the U.S.-Mexico border, two officials briefed on the case said.

The Pima County Sheriff’s Department and, later, the FBI have been in touch with officials on both sides of the border to share information in the case, officials said, noting that such outreach is standard in missing-person cases like this one.

The Sonora State Attorney General’s Office said Thursday that it has not received a “formal request for collaboration, assistance, or information exchange from U.S. authorities or Mexican federal agencies in connection with this case.” The statement added that should “an official request be received through the appropriate institutional channels, it will be addressed with full cooperation and within the scope of its legal authority and existing cooperation mechanisms.”

A Tucson attorney [confirmed to NBC affiliate News12](#) that his client, 37-year-old Luke Daley, was briefly detained Friday night during a search of his home but was not arrested. Daley has no link whatsoever to Nancy Guthrie and has no information related to her kidnapping, his attorney said.

"Like the entire Tucson community, both Mr. Daley and his mother are hopeful that Nancy will be returned to her family unharmed," attorney Chris Scileppi said in a statement.

As authorities continue to comb through thousands of tips and leads, Nanos stressed that the case is far from cold.

"As long as we have the ability to chase a lead, it's not cold," Nanos said. "We're not going to give up. We're going to find Nancy, and we're going to find out who did this."

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