NATURE | FROM PROPUBLICA

Europe bans X-ray body scanners used at US airports

A small number of cancer cases would result from scanning hundreds of millions of passengers a year.

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The European Union on Monday prohibited the use of X-ray body scanners in European airports, parting ways with the U.S. Transportation Security Administration, which has deployed hundreds of the scanners as a way to screen millions of airline passengers for explosives hidden under clothing.

The European Commission, which enforces common policies of the EU's 27 member countries, adopted the rule "in order not to risk jeopardizing citizens' health and safety."

As a ProPublica/PBS NewsHour investigation detailed earlier this month, X-ray body scanners use ionizing radiation, a form of energy that has been shown to damage DNA and cause cancer. Although the amount of radiation is extremely low, equivalent to the radiation a person would receive in a few minutes of flying, several research studies have concluded that a small number of cancer cases would result from scanning hundreds of millions of passengers a year.

Transportation Security Administration

Scanners now banned in the European Union will continue to be used in the US.

European countries will be allowed to use an alternative body scanner, one that relies on radio frequency waves, which have not been linked to cancer. The TSA has also deployed hundreds of those machines – known as millimeter-wave scanners – in U.S. airports. But unlike Europe, it has decided to deploy both types of scanners.

The TSA would not comment specifically on the EU's decision. But in a statement, TSA spokesman Mike McCarthy said, "As one of our many layers of security, TSA deploys the most advanced technology available to provide the best opportunity to detect dangerous items, such as explosives.

"We rigorously test our technology to ensure it meets our high detection and safety standards before it is placed in airports," he continued. "Since January 2010, advanced imaging technology has detected more than 300 dangerous or illegal items on passengers in U.S. airports nationwide."

Body scanners have been controversial in the United States since they were first deployed in prisons in the late 1990s and then in airports for tests after 9/11. Most of the controversy has focused on privacy because the machines can produce graphic images. But the manufacturers have since installed privacy filters.

As the TSA began deploying hundreds of body scanners after the failed underwear bombing on Christmas Day 2009, several scientists began to raise concerns about the health risks of the X-ray scanner, noting that even low levels of radiation would increase the risk of cancer.

As part of our investigation, ProPublica surveyed foreign countries' security policies and found that only a few nations used the X-ray scanner. The United Kingdom uses them but only for secondary screening, such as when a passenger triggers the metal detector or raises suspicion.

Under the new European Commission policy, the U.K. will be allowed to complete a trial of the X-ray scanners but not to deploy them on a permanent basis when the trial ends, said Helen Kearns, spokeswoman for the European transport commissioner, Siim Kallas.

"These new rules ensure that where this technology is used it will be covered by EU-wide standards on detection capability as well as strict safeguards to protect health and fundamental rights," Kallas said.

Five-hundred body scanners, split about evenly between the two technologies, are deployed in U.S. airports. The X-ray scanner, or backscatter, which looks like two large blue boxes, is used at major airports, including Los Angeles International Airport, John F. Kennedy in New York and Chicago's O'Hare. The millimeter-wave scanner, which looks like a round glass booth, is used in San Francisco, Atlanta and Dallas.

Within three years, the TSA plans to deploy 1,800 backscatter and millimeter-wave scanners, covering nearly every domestic airport security lane. The TSA has not yet released details on the exact breakdown.

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