

Picture this: A dramatic drop in wrong patient errors

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Adding a photo of a face to x-ray images can reduce "wrong-patient" errors five-fold, a new study finds.

"[X-rays](#) can look alike, and if one patient's images are confused with another before the radiologist sees them, it can be difficult for the radiologist to determine there is a mismatch," said Dr. Srinivasa Tridandapani, of Emory University and an author of the study.

As part of the study, ten [radiologists](#) interpreted 20 pairs of radiographic images with and without [photographs](#). Two to four mismatched pairs were included in each set of 20 pairs of images. When photographs were added, radiologists correctly identified the mismatch 64% of the time. The error detection rate was about 13% when photographs were not included, said Dr. Tridandapani.

The radiologists in the study did not know they could use the photographs as a means to identify mismatched x-ray images, and some said they purposely ignored the photographs because they thought the study was designed to determine if a photograph would distract them. "We did a second study of five radiologists, and we told them to use the photographs. The [error detection](#) rate went up to 94% in the second study," said Dr. Tridandapani.

Surprisingly, the interpretation time went down in the first study when the photographs were added to the images, said Dr. Tridandapani. "We're not sure why this happened, but it could be because the

photograph provided clinical clues that assisted the radiologist in making the [diagnosis](#)," he said.

"I estimate that about 1 out of 10,000 examinations have wrong-patient errors," Dr. Tridandapani said. "It occurred to me that we should be adding a photograph to every [medical imaging](#) study as a means to correct this problem after I received a [phone call](#), and a picture of the caller appeared on my phone. The picture immediately identified for me who the caller was," he said.

The study required additional personnel to take the pictures of the patients immediately after the patients' x-ray examination. However, Dr. Tridandapani and his colleagues have developed a prototype system where the camera can be attached to a portable x-ray machine; the picture is taken without additional personnel.

The study, jointly conducted at Emory University and Georgia Institute of Technology, will be presented at the ARRS annual meeting on April 15 in Washington, DC.

Provided by American Roentgen Ray Society

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