

Popular handheld devices show promise in the field of emergency radiology

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Handheld devices such as personal digital assistants (PDAs) and the iPod Touch are prevalent among doctors. However a recent study shows that these devices may be particularly useful for emergency radiologists, who in the near future, may be able to use them for teleconsultation and emergency procedures, according to a study published in the February issue of the *American Journal of Roentgenology*.

The usefulness of these devices in medicine is evident. A total of 46 percent of attending physicians and trainees and 45 percent of radiologists use PDAs. "Although the benefits of handheld devices in the daily routine of clinicians is not under debate, the accurate display of medical images is disputed and has not been extensively researched," said Rachel J. Toomey, lead author of the study and researcher at the University College Dublin School of Medicine and Medical Science in Dublin, Ireland.

Researchers compared the diagnostic efficacy of a PDA and iPod Touch against that of secondary-class monitors for each of two image types — wrist radiographs and images from CT of the brain. A total of 168 readings by examining radiologists of the American Board of Radiology were gathered. "In the PDA brain CT study, the scores of PDA readings were significantly higher than those of monitor readings when all observers' readings are taken into account. No statistically significant differences between [handheld device](#) and monitor findings were found for the PDA wrist images or in the [iPod Touch](#) devices studies, although some comparisons did approach significance," said Toomey.

"This study showed that important clinical information about a patient's condition can be made available to clinicians through display of radiologic images on handheld devices. This finding extends the potential of the devices beyond current applications such as teaching residents and organizing clinical commitments," she said.

"The results suggest that the handheld devices investigated in this study may be comparable with secondary monitors for reporting findings on intracranial bleeds on CT images and fractured wrists on radiographs and may be of value in radiology, particularly for teleconsultation and emergency procedures," said Toomey.

Provided by American College of Radiology

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