

# Guided Reporting, the new way to report

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Although one of the more recent medical fields, radiology is at the forefront of technological advancement. Historically, technological progress is the origin of radiology. Innovations in this medical specialty are quick to be adapted. In 1971, for example, the first computed tomography (CT) scan was performed; in 2019, just a few decades later, more than 90 million CT scans were conducted in the U.S. alone.

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Definitely, the growing number of scans and increasing complexity of cases is a real challenge for radiologists. They need to keep up with the rapid changes in the field, read more cases in less time, write more cases for less money, deal with turfing and a shortage of newly trained colleagues.

Despite these circumstances, radiologists are expected to become more accurate, faster and better. This is especially true for their main task: writing reports. However, due to the challenges radiologists face, quality and delivery time can be negatively impacted.



Radiologists dictate their reports in “freestyle,” with the aid of speech recognition software: although writing reports is a key task, there is minimal training for this element. You wouldn’t ask a surgeon to work without surgical training, but we demand that radiologists write reports without training in writing. Many studies have shown that freestyle dictation of radiology reports is variable, time-consuming, and error-prone.

That is why several professional societies in radiology have proposed guidelines for reporting and advocate the use of structured reporting.

Structured reporting could be defined as the use of IT-assisted means to import and arrange medical content in radiological reports. Structured reporting aims to improve the consistency, clarity and reproducibility of reporting in radiology. The new, revolutionary type of digital reporting, Guided Reporting, goes one step further.

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Guided Reporting is an IT-based system for generating report content. To date, Guided Reporting is the only system that takes anatomy as its starting point and covers all areas of examination with just a few modules. By using drop-down menus, selection lists and point-and-click systems, an accurate, consistent and clear radiology report is generated in an efficient manner. Guided Reporting helps communicate radiology information to the referring physician and patient in a clear and effective way. Effective in this context means accurate, consistent and fast. Artificial Intelligence (AI) in radiology will benefit

from Guided Reporting in a very particular way. Deep-learning algorithms are making breakthroughs in pattern recognition in radiology. For example, they can detect pneumonia or malignant breast lesions as good as experienced radiologists. However, the variability of conventional radiology reports is unsuitable for AI algorithm development. For the first time, Guided Reporting makes it possible to combine complete, machine-readable and structured diagnostic data with image data.

This confers new and lasting value to the reports radiologists generate in their daily clinical routine. In this way, report data can also be utilized in the long term for data analyses or for machine learning. Results serve both optimized service for patients and referring physicians as well as economic sustainability.

The new possibilities of reporting cry out for a paradigm shift, which radiology needs. It is a matter of questioning the freedom of conventional dictation, recognizing the immense advantages of standardized and Guided Reporting and transferring them to everyday clinical practice. ■

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RadioReport® screen of a Thoracic CT localizer

