

We report you decide.

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Before the era of medical imaging, surgical decisions were primarily based on subjective assessments. When the diagnosis was unclear, the 'open and see' approach was commonly adopted in the past. With the advent of medical imaging, decisions began to be supported by objective evidence, enabling focused and planned surgical interventions. Imaging has now become an integral part of modern-day surgical practice, with crucial decisions often relying heavily on imaging results. However, it is important to note that although imaging provides fixed visual data, its interpretation and reporting are subject to human involvement. Therefore, human errors in interpreting imaging results are a reality. Incorrect decisions based on misinterpretations can lead to disastrous outcomes for the patient.

Errors in reporting

Errors in radiology reporting can be categorized into two types: cognitive errors and observational errors. Cognitive errors occur when the reporter fails to comprehend the observation, whereas observational errors arise when the radiologist overlooks an abnormality. Real-time reporting errors have been noted to occur in only 5%, whereas retrospective assessments have documented rates as high as 30% (2). In a study comparing specialist neuro-radiologists and general radiologists revealed a 13% incidence of major errors and 21% incidence of minor errors in generalists (1). Additionally, communication failures may occur during the production of the printed report. Several factors may contribute to these errors, including equipment malfunction or misuse, workload implications, and cognitive biases.

It is interesting to note that the performance of trained human activities does not follow a Gaussian distribution. Rather, performance is expected to adhere to an initial standard, with some individuals exhibiting exceptional performance, referred to as "Pareto distribution" (2) (Figure 1). However, whether training can completely overcome the natural

distribution seen in Gaussian distribution to perfect Pareto distribution is questionable. There will always be individuals on the left of the standard.

Is it an error?

When a clinician makes an error in a court of law, they are liable to be charged with negligence or malpractice. Visual comprehension of an object and its interpretation is a highly subjective human quality. Hence, whether an incorrect interpretation can be considered an error remains a matter of debate (3). However clinicians are held legally and morally accountable and responsible for the decisions, whereas the accountability of the imaging report is less direct, often adopting the perspective of "we report, you decide." Relying solely on a report in clinical decision-making can potentially lead to detrimental consequences.

We are accountable

Clinicians bear the ultimate accountability for patient outcomes. We must exercise caution before blindly relying on a report, recognizing that it should not be considered the definitive conclusion. At times imaging modality may have its limitations in sensitivity. Hence employing clinical judgment, questioning, and engaging in discussions with radiologists while providing necessary information, further tests and seeking a second opinion when necessary, are essential practices. It is imperative that clinicians develop the skill to understand imaging themselves and make own judgments,

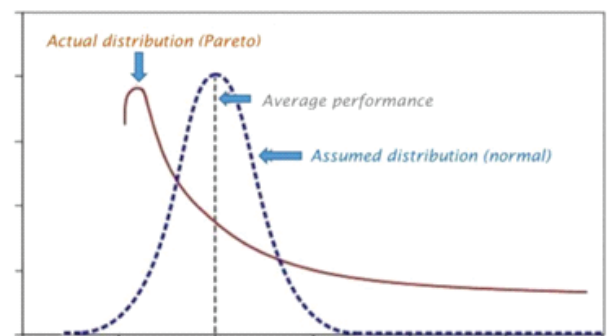



Figure 1.

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Received: 23-11-2023 Accepted: 28-11-2023

DOI: <http://doi.org/10.4038/sljs.v41i03.9098>



applying the knowledge of what to look in an image study. Providing feedback on outcomes allows the reporter to engage in reflection and improvement. Further clinical services have progressed significantly in the domain of sub-specialization. It is equally important to recognize areas of sub-specialization and foster parallel development in radiology. In conclusion, radiology has improved the outcomes and how we practice medicine. However, its application should be judicious.

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