AUSTRALIAN ORTHOPAEDIC ASSOCIATION

13 November 2019

The Royal Australian and New Zealand College of Radiologists
Level 9, 51 Druitt Street,
Sydney 2000 NSW

By email: fcr@ranzcr.edu.au

Dear Artificial Intelligence Committee,

Consultation - Standards of Practice for Artificial Intelligence

Thank you for the opportunity to respond to your consultation paper on the standards of practice for artificial intelligence in radiology.

Your consultation paper has been considered by AOA's Digital Imaging Committee and I would offer the following comments on behalf of AOA.

Line 449 -
The CMIO and governance body will consider how to guard against (contain and manage) automation bias xvi.

The term "Automation Bias" should be included in the definition section.

If such technology is to augment and assist the existing diagnostic capabilities of the radiologist who is providing the service then the decision and thus liability for the quality and performance of such technology rests entirely with the radiologist who is providing the service.

The document refers to "Shared responsibility". It is not entirely clear who is sharing the responsibility as the accountability for providing an accurate report to the treating clinician should lie with the radiologist. It is the radiologist who has decided to use such technology to facilitate or augment the service they are providing – for which they are being paid and whose diagnostic expertise is sought.

Words like "liability", "adverse", "error" do appear in the document. The fallibility of the system is thus recognised. The AOA would wish only that more accurate and diagnostically helpful information is provided rather than the introduction of a new variable (artificial intelligence). The production of a diagnostically accurate report is the product this Association seeks for its members not less responsibility, reliability or "ownership" by virtue of a new technology.

The responsibility now appears to rest with the practice and service provider, which is a change from currently where errors or mistake reside with the individual reporting radiologist – unless there was some level of negligence on the part of a supplier of the practice itself.

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What ultimate oversight is required, what quality assurance is reasonable, and what are the check and balance? There is also a deflection to referring clinicians who apparently share some of this responsibility. This is fine if the referring practitioner has some control on provision and quality of such services, however the current situation is that apart from discretionary referral, referring practitioners have no control at all.

Health Insurance Act 1972 pays a fee for a clinically relevant service. There is the same issue with the supplier of that service is the one who decides on whether the service was delivered in compliance with the Act.

The individual Radiologist who provides the service must be ultimately responsible for any adverse outcome which may result from their decision to utilise AI or ML that they choose to augment their paid service delivery. Clinicians can in no way be held accountable unless they actively sought to engage such technology. Further they must be made aware if AI or ML technology was involved in the requested service.

Responsibility cannot be simply absorbed by the practice or service.

Overall, AOA has no issue with the concept of AI or ML, but is concerned about reliability, quality and accuracy of reporting. AOA wishes the best the patients and the most reliable diagnostic tools for its members. Liability is not mentioned, although workflow was mentioned multiple times. Improved efficiency and improved analysis of the diagnostic services will benefit the whole system, but often the drivers are more conflicted.

There is an interesting situation with operator discretion regarding thresholds and measurement values. Ordinarily the operator has a great deal of control on setting the perceived boundaries between different tissues. Tighter boundaries can make models easier to separate, but reduce the size of the anatomical structure – and so will not be true to life. Primary radiology capture has much more standard setting and can be validated to be true to life. The more complicate 3D and similar has a much tougher time being sure it is real. There can be difficulty understanding how any such technology, where there is significant operator discretion, is able to be TGA/FDA certified. Some software has a disclaimer which says (something like):

"Due to operator discretion, true anatomical matching cannot be guaranteed. Such images should be used to assist in the interpretation of the primary diagnostic information."

Maybe this should be considered as standard practice.

Please also see attached marked up copy of your Consultation Document – for your consideration.

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Kind regards,

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