

## AB259. Assessing the accuracy of multimedia messaging for the diagnosis of scaphoid fractures

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**Background:** Use of smartphone messaging applications, such as WhatsApp, for communication within clinical teams is widespread. Various studies have shown multiple uses for smartphones and multimedia messaging in orthopaedic clinical practice for coordinating clinical duties and diagnosing various injuries but none have assessed scaphoid fractures.

**Methods:** This was a prospective cross-sectional study of diagnostic accuracy using paired tests. The standard for reporting diagnostic accuracy (STARD) guidelines were used in its' design. We asked orthopaedic specialist

registrars (SPRs) to interpret whether a scaphoid fracture was present on 20 scaphoid X-rays, obtained from the National Integrated Medical Imaging System (NIMIS). These were viewed on a desktop and on a smartphone. Data were then analysed using STATA 14 to run McNemar's test and compare sensitivity and specificity of the two index tests.

**Results:** Phone and desktop interpretation had good sensitivity (72.7% and 78.2%) and specificity (75.2% and 77.9%) in assessing scaphoid fractures with no significant difference in sensitivity (P value =0.507) or specificity (P value =0.547). There was fair to moderate intra-observer reliability (kappa score 0.436; 95% confidence interval, 0.295–0.577).

**Conclusions:** The fair to moderate scores of intra-observer agreement reflect the difficulty of diagnosing scaphoid fractures on X-rays. This study supports the use of smartphones for the diagnosis of scaphoid fractures and by extension their use in orthopaedic practice.

**Keywords:** Multimedia; scaphoid; smartphones

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