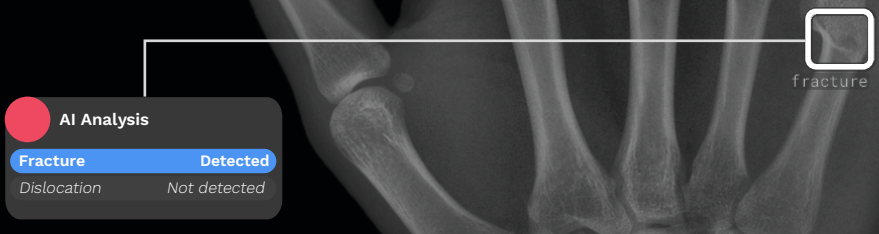
Radiobotics®
A Medimaps Group Company

AI Powered Fracture Detection

Decision support for
paediatric and adult patients



CE 0123 CE-marked, class IIa (MDR)

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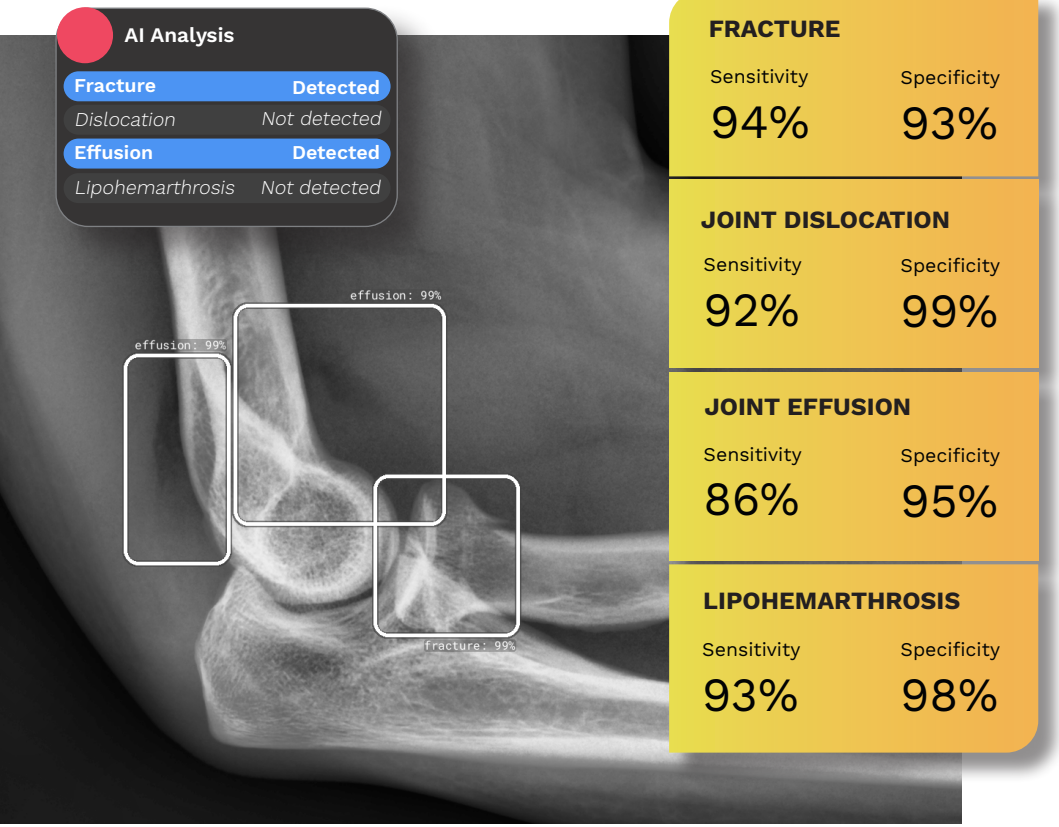
RBfracture™

AI-powered fracture detection

RBfracture's high performance helps Emergency and Radiology **reduce missed fractures** and **avoid unnecessary review of false positives** in both **adult and paediatric patients.**

The detection of **healed or chronic fractures is excluded** by design, ensuring your focus stays on what matters most.



[1]

FRACTURE

Sensitivity	Specificity
94%	93%

JOINT DISLOCATION

Sensitivity	Specificity
92%	99%

JOINT EFFUSION

Sensitivity	Specificity
86%	95%

LIPOHEMARTHROSIS

Sensitivity	Specificity
93%	98%

QUOTES ON PERFORMANCE

"RBfracture led to adjusted workflows with **faster patient throughput.**" [2]

faster
throughput

improves
confidence

"**Reporting times decreased significantly**" and "**diagnostic confidence showed significant improvements.**" [3]

"RBfracture's implementation offers significant potential measurable **cost, manpower, and time savings.**" [4]

cost, manpower, and time
savings

86%
less missed fractures

"We saw a **reduction in missed fractures by 86%** — a significant decrease by Emergency clinicians." [5]

"RBfracture can potentially **reduce 75% recalls** due to discrepant radiograph findings." [6]

reduces
recalls

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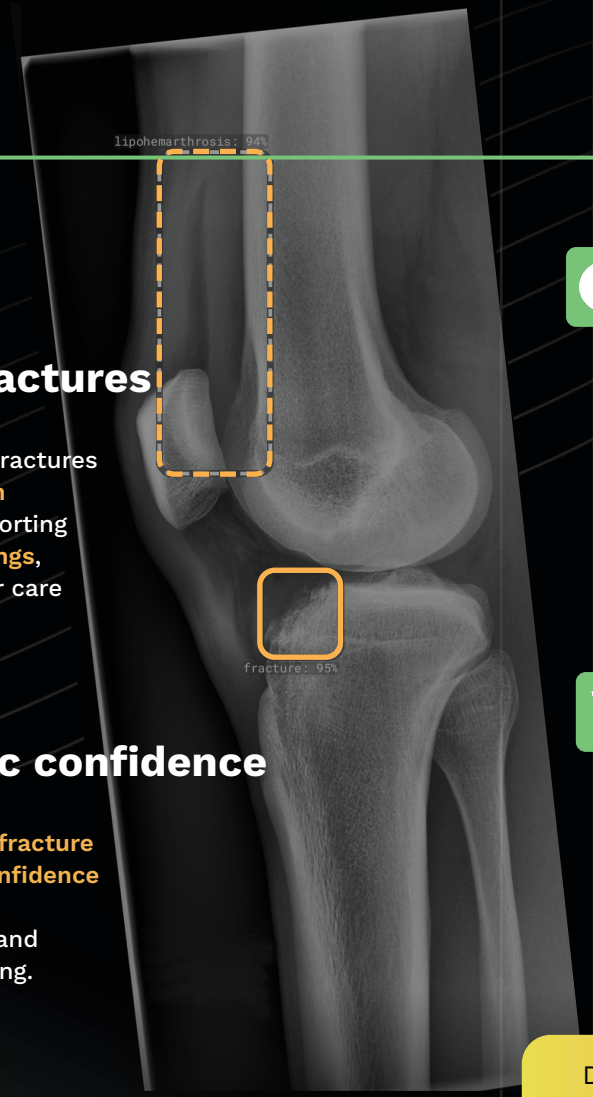
BENEFITS

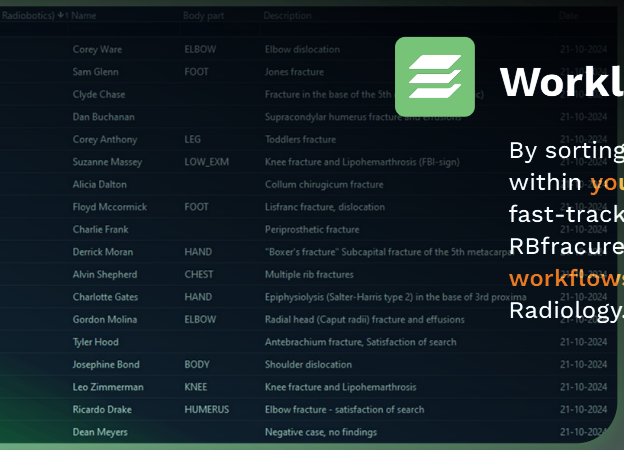


Reduces missed fractures

RBfracture helps reduce missed fractures and unnecessary recalls with **high specificity and accuracy**. By supporting clinicians in **catching subtle findings**, patients benefit from safer, faster care pathways.

Improves diagnostic confidence

RBfracture is the **first and only AI fracture detection solution** to provide a **confidence score alongside findings**, bringing transparency to decision support and supporting more confident reporting.

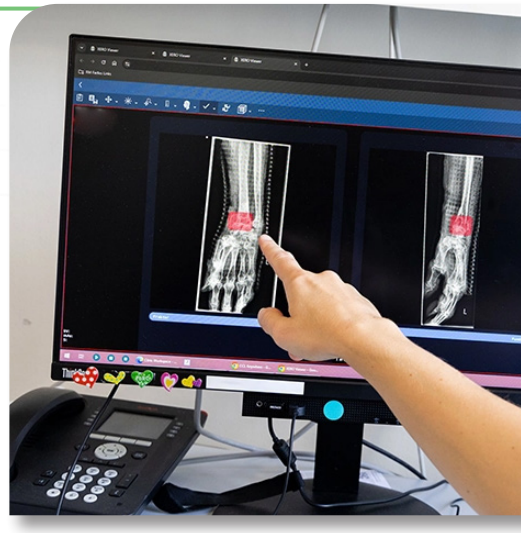


Worklist prioritization

By sorting and prioritizing findings within **your RIS or PACS worklist** — or fast-tracking clear negative findings — RBfracure can **support more efficient workflows** between Emergency and Radiology.

Decision support in seconds

From specialists to frontline clinicians, RBfracture delivers reliable results in seconds — **10 second median processing time**[7] — to users across the care pathway regardless of the time or day.



Comprehensive emergency findings

RBfracture is the **first and only AI fracture detection solution** to provide **lipohemarthrosis detection.** Healed and chronic fractures are excluded by design, as RBfracture is trained to **detect acute fractures and trauma-related findings only.**

[8]

DISLOCATION NPV

100%

FRACTURE NPV

98.1%

Supports confident discharge decisions

Demonstrating a **very high NPV,** RBfracture helps clinicians **rule out fractures and dislocations** with confidence, supporting safer discharge decisions and **faster patient pathways.**

Negative Predictive Value (NPV) indicates how likely it is that a patient truly does not have a finding when RBfracture reports an AI Negative result. A high NPV indicates that RBfrature is very reliable at ruling out trauma-related findings.

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ACCESSIBILITY AND INSTALLATION

Our vision is to ensure that patients receive immediate and precise, expert-level care in MSK imaging, 24/7, **regardless of time, infrastructure, or staffing constraints.**

- **Fracture detection**
  appendicular and axial skeleton
- **Joint dislocation detection**
  appendicular skeleton
- **Joint effusion detection**
  knee and elbow
- **Lipohemarthrosis detection**
  knee

Specific body parts and features can be deactivated

Available on top marketplaces, platforms, and more

Blackford · CARPL · deepc · Harrison.ai · Newton's Tree · SECTRA · TERARECON

RBfracture™ integrates into your existing workflow

On-premise or Cloud Integration

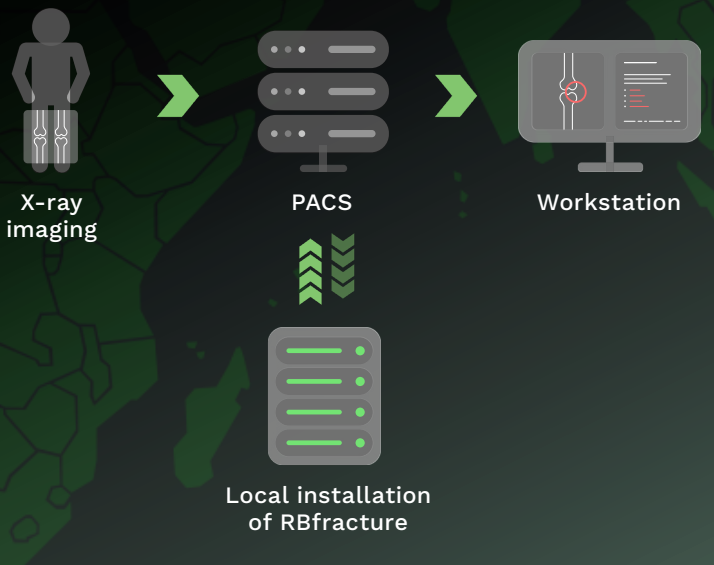

Diagram of an on-premise installation

No training required

+44 countries

Our language options continue to expand so you can work with RBfracture in the environment and terminology you know best.

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CLINICAL VALIDATION

BIR British Institute of Radiology **BJR Open**

Best Article Award 2024

The best original research article published in BJR|Open during 2024

R. Bachmann et al.:

Improving Traumatic Fracture Detection on Radiographs with Artificial Intelligence Support

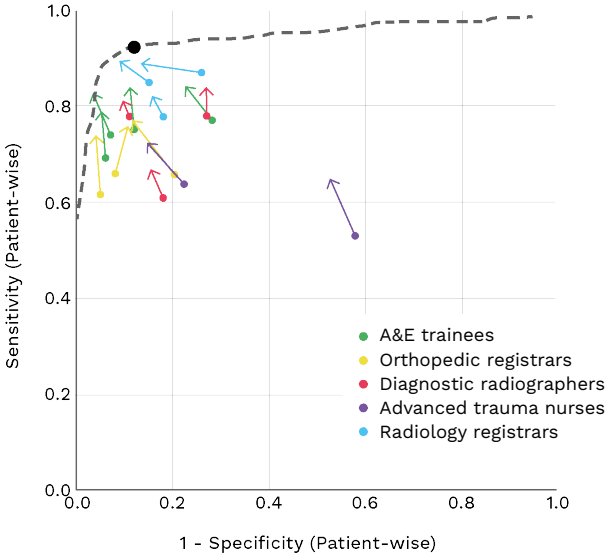
A multi-reader study

Objective

The aim of this study was to evaluate the diagnostic performance of emergency clinicians using an AI support tool to detect traumatic fractures on radiographs of the appendicular skeleton.

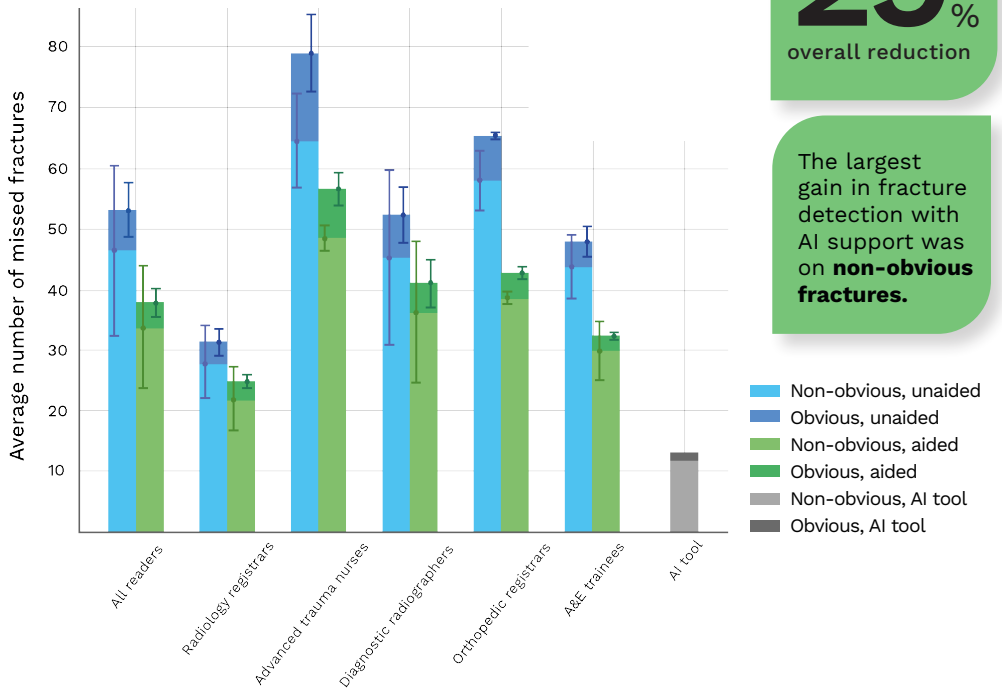
Conclusion

RBfracture™ showed an overall reader improvement in sensitivity and specificity when supported by the AI tool, without negatively affecting the reader time. This increased reader performance for clinicians can potentially increase patient satisfaction and lower the amount of patient recalls.



Receiver operating characteristic (ROC)

Colored circles show the unaided performance and the arrow-ends show the aided performance for each reader. Arrows pointing towards the upper left corner indicate readers who improved both the sensitivity and specificity. The dashed lines were constructed by artificially varying the probability threshold of RBfracture.



29% overall reduction

The largest gain in fracture detection with AI support was on **non-obvious fractures.**

	Missed fractures unaided	Missed fractures aided	Relative reduction in missed fractures
All readers	53.1 [26;89]	37.8 [20;60]	**29%**
Radiology registrars	31.3 [26;41]	24.7 [20;32]	**21%**
Orthopedic registrars	65.3 [61;70]	42.7 [41;43]	**35%**
A&E trainees	47.8 [42;57]	32.2 [30;39]	**33%**
Diagnostic radiographers	52.3 [41;74]	41.0 [31;59]	**22%**
Advanced trauma nurses	79.0 [69;89]	56.5 [53;60]	**29%**

Numbers reported are the average [range] across readers

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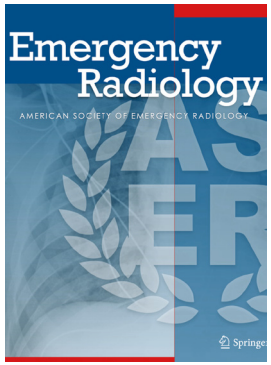
CLINICAL VALIDATION



RBfracture v2.2

Comparative accuracy of two commercial AI algorithms for musculoskeletal trauma detection in emergency radiographs

Jarno T. Huhtanen et. al.

This study found no statistically significant differences in sensitivity or specificity between RBfracture v2.2 and Gleamer's BoneView across the included MSK regions. RBfracture demonstrated strong performance, with a sensitivity of 87.2%, specificity of 89.2%, a positive predictive value of 85.1%, a negative predictive value of 90.8%, and an overall accuracy of 88.4%.

RBfracture v1.8

Real-life benefit of artificial intelligence-based fracture detection in a pediatric emergency department

Maria Ziegner et. al.

RBfracture v1.8 achieved a sensitivity of 92%, specificity of 83%, and overall accuracy of 87%. When supported by RBfracture, radiology residents improved across all metrics—sensitivity increased from 84% to 87%, specificity from 91% to 92%, and diagnostic accuracy from 88% to 90%. The algorithm performed consistently well in children under and over the age of five, with no significant drop in performance.

RBfracture v2.0

Accuracy of radiologists and radiology residents in detection of paediatric appendicular fractures with and without artificial intelligence

Praveen M Yogendra et. al.

RBfracture v2.0 demonstrated the highest standalone performance, with 97% accuracy and 97% sensitivity. Both junior and senior readers improved their diagnostic accuracy when supported by RBfracture. Notably, the AI successfully detected six subtle fractures that were missed by all human readers, highlighting its value in enhancing clinical decision-making.

RBfracture v1.7

Deploying artificial intelligence in the detection of adult appendicular and pelvic fractures in the Singapore emergency department after hours: efficacy, cost savings and non-monetary benefits

John Jian Xian Quek MBBS et. al.

RBfracture v1.7 demonstrated a sensitivity of 98.9% and an accuracy of 85.9%, showing near-perfect agreement with the reference standard. Its implementation highlights significant potential for reducing costs, saving time, and easing manpower demands. By minimizing missed diagnoses, RBfracture helps prevent delays in treatment for patients and reduces the need for callbacks, ultimately supporting more efficient emergency care.

Read more peer-reviewed publications and research at **Radiobotics.com**

REFERENCES

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3 Philipp Prucker et. al. Real-world clinical impact of three commercial AI algorithms on musculoskeletal radiography interpretation: A prospective crossover reader study. International Journal of Medical Informatics, volume 205, January 2026. RBfracture v2.1.

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5 Ben Madden, Kettering General Hospital, NHS Foundation Trust. Publication pending. June 2024. RBfracture v2.0.

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7 Radiobotics ApS. Customer Metrics Analysis of RBfracture version 2.5 on ~184.000 trauma radiographs. June 2025.

8 Södersjukhuset. Södersjukhuset Fracture project. Emergency department audit of RBfracture version 2.2 on 1308 exams, ages 15 and up. March 2025.

Demo RBfracture™

Get started in seconds

With our free demo

see AI-powered trauma-detection in action on your own cases:
radiobotics.com/demo

How it works:

1 Register to access the free demo

2 Check your email for your demo link

3 Upload your cases (DICOM, JPEG, or PNG formats)

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Founded in 2017, Radiobotics is an award-winning Danish MedTech company dedicated to advancing musculoskeletal (MSK) radiology with AI-powered solutions. Radiobotics' flagship solution, RBfracture™, is designed to support Emergency and Radiology with highly accurate detection of trauma-related findings, including fractures, dislocations, lipohemarthrosis, and effusion.

Radiobotics' commitment to delivering precise, expert-level care in MSK imaging 24/7, regardless of time, infrastructure, or staffing constraints, has been recognized in the industry with numerous accolades, including winning the SBRI Healthcare Competition to support the NHS A&E, NICE approval for urgent care settings across the NHS, and Best New Radiology Vendor at the EuroMinnies 2022.

July 2026 | MM 26-001, rev.02 | © Radiobotics