

MyRadAssistant

A Verification-First AI Assistant for Radiology Education and Clinical Second Opinion

Y. Skarparis^{1,2} R. Oliver²

¹ Department of Radiology, Newcastle upon Tyne Hospitals NHS Foundation Trust ² The Radiology Academy Ltd, Behind GPNotebook, United Kingdom

Background

Radiology trainees and consultants increasingly use general-purpose LLMs for FRCR preparation and clinical second opinions. Two error patterns carry clinical risk:

- Fabricated citations:** non-existent papers cited with confidence.
- Miscalibrated confidence:** identical assertive tone for established guidelines and isolated case reports.

Frontier models (ChatGPT, Claude, Gemini) now approach or exceed radiology board pass thresholds^{1,2}, yet high-confidence factual errors persist at rates difficult to detect at the point of use without independent verification.

APPROACH

A retrieval-grounded clinical assistant for UK radiology - every answer anchored to curated evidence, with confidence calibrated

Aims

- Ground every claim in a real, retrievable source.
- Calibrate confidence to evidence strength.
- Screen for retracted sources before they reach the user.
- Prioritise UK clinical context (NICE, RCR iRefer, NHS pathways).
- Operate within a defensible UK regulatory framework (MHRA SaMD, DSPT, DCB0129).

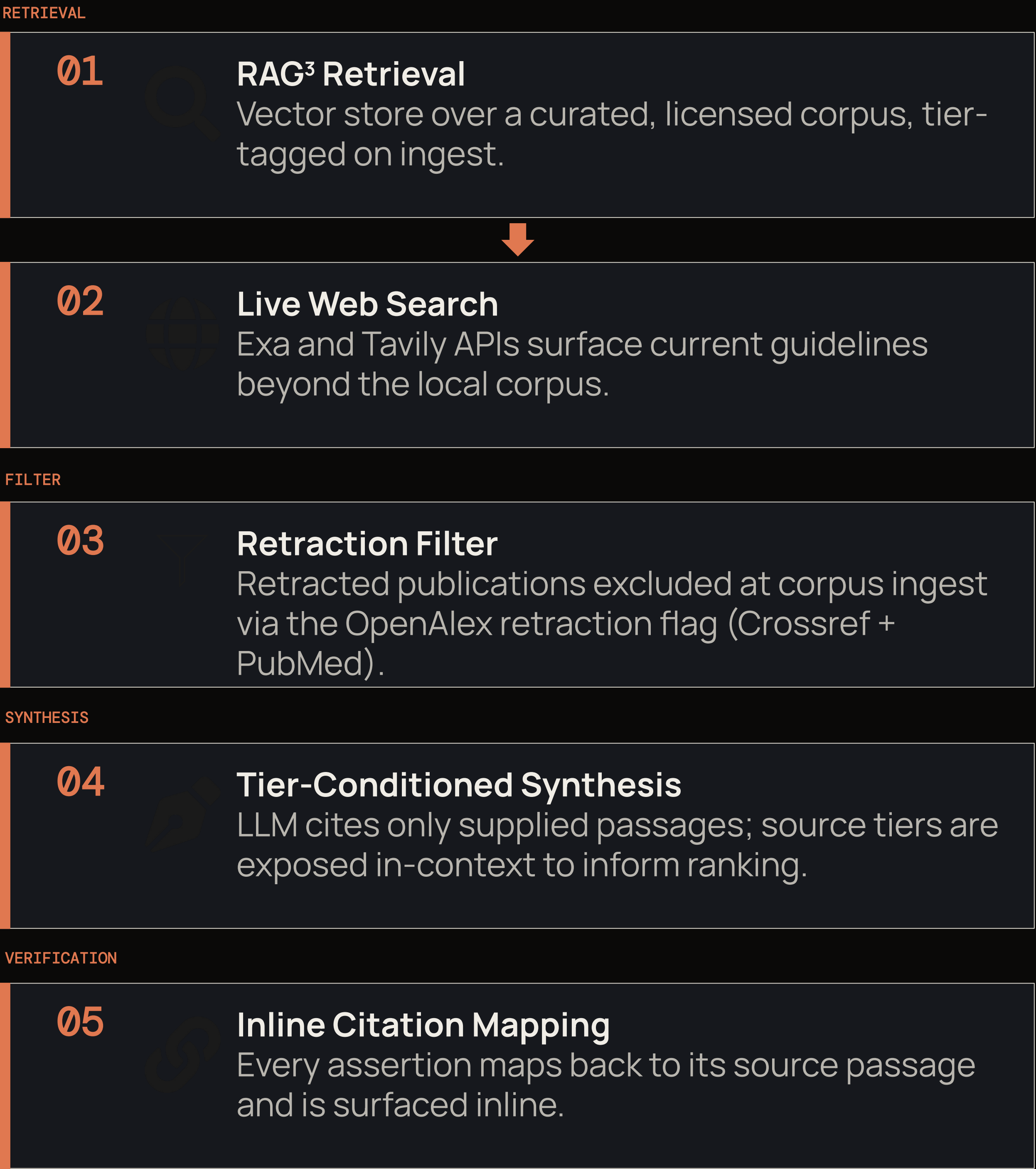
Conclusion

A verification-first RAG architecture with three-tier evidence grading is a defensible alternative to general-purpose LLMs for radiology education and clinical second opinion.

Citation restriction to supplied passages, retraction filtering at corpus ingest, and tier metadata exposed in-context are demonstrable today, under a defensible UK regulatory posture (MHRA Class I, ICO, DSPT, DCB0129).

Methods

Five verifiable stages, each emitting an auditable artefact.



Evidence Grading

Sources are tier-classified on ingest.

Tier 1	Guidelines · Meta-analyses · RCTs
Tier 2	Cohort & case-control studies
Tier 3	Case reports · Expert opinion

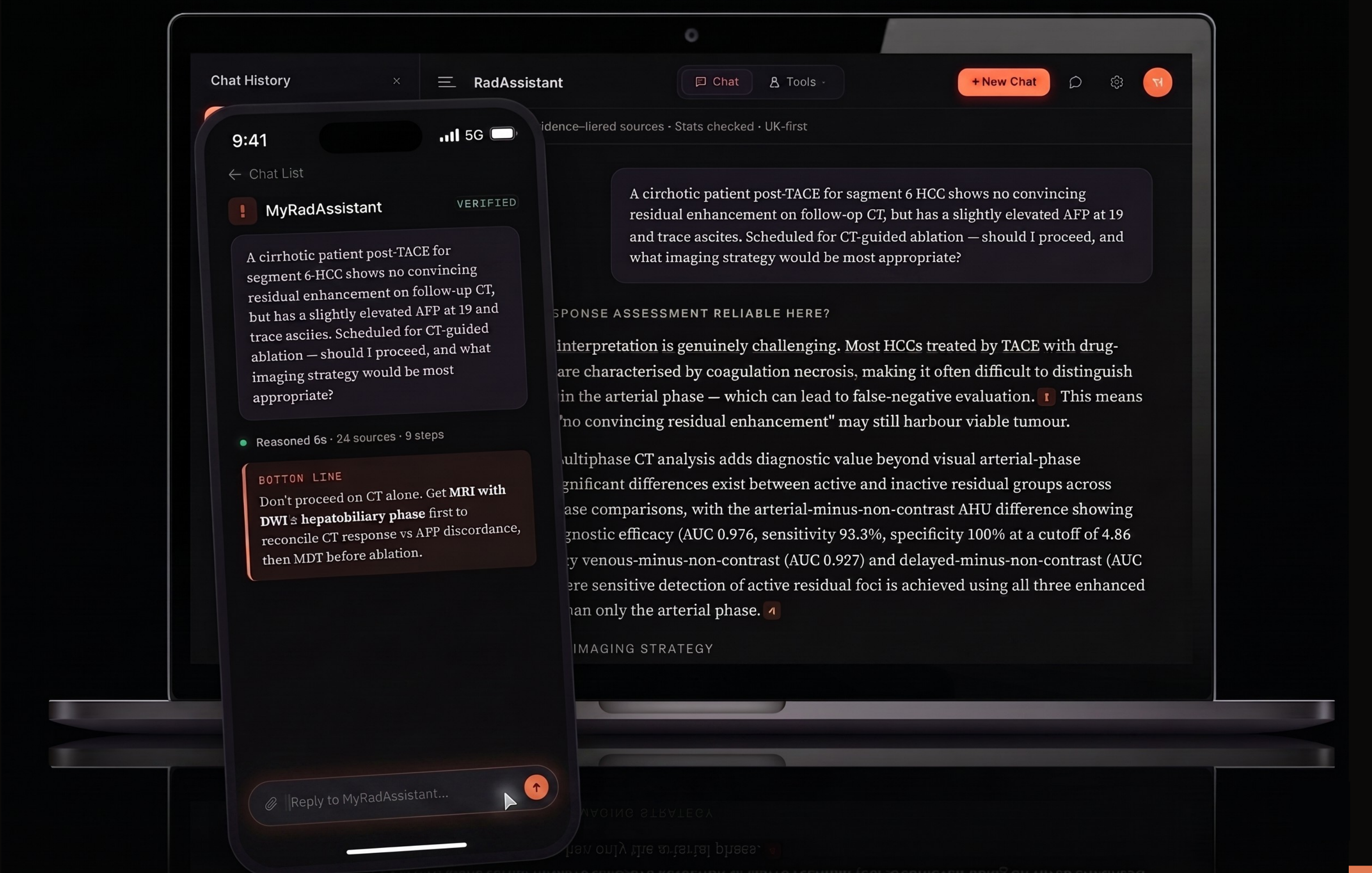
Corpus

Evidence base	
✓ NICE guidelines	
✓ RCR iRefer referral criteria	
✓ Peer-reviewed journals	
✓ RCR · ESR · ACR guidance	
✓ Reference works	
	MHRA Class I SaMD Registered May 2026.
	ICO + NHS DSPT ICO ZB621582. DSPT Standards Met 2025–26.
	DCB0129 Clinical Safety Active safety case. Named Clinical Safety Officer.

Limitations

- Comparative accuracy evaluation against general-purpose LLMs in progress.
- LLM-assigned tier; expert consensus validation pending.
- Corpus curation by single clinician; formal multi-reviewer consensus pending.
- Clinical workflow integration and radiologist-response benchmarking not yet conducted.

MyRadAssistant — clinical second opinion



Try the system.

Scan to test the site on your own clinical queries.



myradassistant.com