

PosterLens: an AI-powered tool for rapid summarisation of oncology congress posters

366eP

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Introduction

- Oncology congresses present thousands of posters, creating information overload for Medical Science Liaisons (MSLs) and researchers
- Extracting key findings quickly is challenging due to limited time and overlapping sessions
- PosterLens is a mobile app that uses AI to generate concise summaries, designed to improve efficiency and accessibility

Methods

- PosterLens extracts text from poster images using optical character recognition (OCR) and generates structured summaries with a large language model (LLM; Figure 1)
- In addition to generating summaries, the app can suggest questions to ask the author, identify related research, highlight future research directions, and enable interactive chat with the poster content
- For evaluation, recent oncology congress posters (n=10) were processed with PosterLens. Word counts were compared between original and summarised text
- Each summary was evaluated for accuracy in four elements: objective, population, primary endpoint and conclusion. A self-timed assessment estimated the time required to identify the key findings using original posters versus PosterLens summaries

PosterLens Workflow



Results

- Across 10 oncology congress posters, PosterLens reduced text length by **78%** (IQR 68–89; Table 1, Figure 2)
- Summaries retained essential information with a **median fidelity** score of **4/4** (IQR 3–4); 90% of summaries preserved the objective, population and conclusion; 80% preserved the primary endpoint (Figure 3)
- In a self-timed assessment, the median time to identify each poster's key finding decreased from **23 s** to **11 s**

Figure 1. PosterLens app interface and summary output

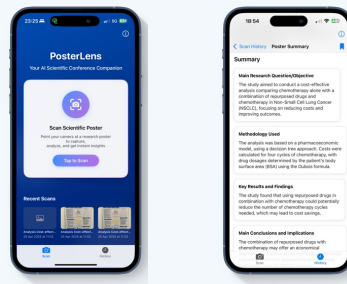


Table 1. Evaluation of PosterLens summarisation performance

Metric	Median (IQR)
Original words	868 (590–1216)
Summary words	172 (150–190)
Reduction (%)	78% (68–89)
Fidelity (0–4)	4 (3–4)
Time to key finding – Poster (s)	23 (6)
Time to key finding – Summary (s)	11 (4)

Figure 2. Word count reduction

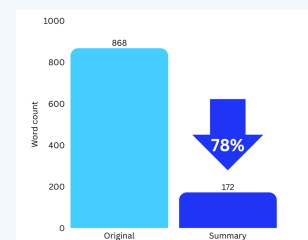


Figure 3. Fidelity of summaries

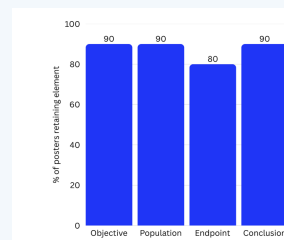


Figure 4. AI-powered interactive features of PosterLens



Conclusions

- PosterLens is a novel digital oncology tool to address information overload at major congresses
- AI-driven summarisation reduces time burden while preserving accuracy of key findings
- Further validation is required in a broader set of posters and user contexts
- Larger-scale evaluation will clarify its role in supporting oncology researchers, clinicians, and trainees
- Future work will explore integration with congress apps for real-time summarisation

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