Screening Revolutionized.

Revolutionize Clinical Trial Screening at a Comprehensive Cancer Center

The Challenge

NCI-designated comprehensive cancer centers face the ongoing challenge of efficiently screening a growing number of patients for increasingly complex clinical trials. Traditional, manual screening workflows often limit the reach and effectiveness of these efforts. One comprehensive cancer center (CCC) sought to augment its clinical trial screening process to ensure broader patient participation and improve accrual rates.

The Solution

The CCC partnered with Carta Healthcare, implementing its AI-powered platform to enhance their clinical trial screening workflows. Carta Healthcare's platform utilizes a validated combination of clinical knowledge, large language models (LLMs), and natural language processing + understanding (NLP/NLU) to analyze both structured data and unstructured clinical notes directly from the electronic health record (EHR). The platform supports various document types and sources, providing rich real-world data summarized at the patient level, which is then used to screen against complex trial inclusion/exclusion criteria.

The Impact:

Precision Screening Accelerates Clinical Enrollment

Within a six-week project period in Q1 2024, the CCC's clinical research teams experienced significant and measurable benefits:

Increased Efficiency and Screening Reach: Carta Healthcare enabled a **24x efficiency gain** compared to manual screening. This allowed the center to screen **100% of scheduled cancer patients with high-priority diagnoses across 10 site**s for all open and actively accruing clinical trials, all without increasing full-time effort (FTE).

More Patient Matches and Enrollments: The Carta Healthcare platform identified **7.6 times more patient matches** compared to manual efforts during the same six-week period, identifying 38 patients who met all inclusion/exclusion criteria for one or more clinical trials versus an anticipated 5 matches through manual screening. This resulted in a doubling of patient enrollments. Notably, the platform also identified an additional 20 patients for active surveillance with a high probability of future trial matching. Including these "pending" patients increases the match efficiency gain to 11.6x.

Enhanced Diversity and Inclusion: By expanding screening to community care sites (a 5x site expansion) and eliminating physician bias inherent in referral-based screening, Carta Healthcare fostered authentic diversity in positive match patient cohorts.

The Impact:

Precision Screening Accelerates Clinical Enrollment

Immediate ROI and Revenue Growth: The cost of deploying Carta Healthcare was recouped within the six-week project period due to increased efficiency and enrollment. This led to positive projected revenue gains resulting from increased matches and enrollments from sponsored clinical trials.

Validated and Clinician-Trained AI: Carta Healthcare's LLM and clinical models demonstrated strong performance validation, achieving **97-100% accuracy** at the document level for semi-structured data elements and **85-93% per-patient accuracy**.

The Conclusion

Carta Healthcare's AI-powered platform significantly augmented the clinical trial screening workflows at this NCI-designated comprehensive cancer center, leading to rapid scaling of patient screening, increased patient identification and enrollment, enhanced diversity, and immediate revenue ROI. The success achieved within the initial six-week period has positioned the CCC to expand the use of Carta Healthcare's platform to all solid tumors, further demonstrating the transformative potential of AI in accelerating oncology research and improving patient access to clinical trials.