



Clinical trials

Less than 3–5% of cancer patients in the US participate in clinical trials, and globally, these numbers are even lower.¹⁸ In addition, enrollment differs significantly among demographic groups. Watson for Clinical Trial Matching (CTM) can ingest thousands of clinical trials, extract the eligibility criteria, and match patients with trials based on the attributes of the patient’s clinical scenario.

The studies shown below demonstrate the potential impact of CTM to enhance clinical trial enrollment rates and to reduce the time spent by clinical trials unit personnel in screening patients for available trials. One client experienced an 84% increase in average monthly clinical trial enrollment for breast cancer patients,¹⁹ while another experienced a 78% reduction in time to screen patients for clinical trials.²⁰

- 18 Schuler, Peter and Buckley, Brendan, Re-Engineering Clinical Trials: Best Practices for Streamlining the Development Process. 2015.
- 19 Haddad T et al. Impact of a cognitive computing clinical trial matching system in an ambulatory oncology practice. J Clin Oncol. 2018;36 (suppl; abstr 6550).
- 20 Beck J et al. Cognitive technology addressing optimal cancer clinical trial matching and protocol feasibility in a community cancer practice. J Clin Oncol.

Foreword

Key studies:

Clinical decision support

Clinical trials

Genomics

Bibliography

A pilot study to implement an artificial intelligence (AI) system for gastrointestinal cancer Clinical Trial Matching*

Jin Z et al. ESMO 2019

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Implementation of Watson for CTM system with a CRC team may enable high volume patient screening for a large number of clinical trials in an efficient manner and promote awareness of clinical trial opportunities within the GI oncology practice.

Excerpt from manuscript

Clinical trials are critical to expanding understanding of disease treatment; however, screening for clinical trial enrollment is complex and time-consuming, leading to low rates of enrollment for newly diagnosed cancer patients.

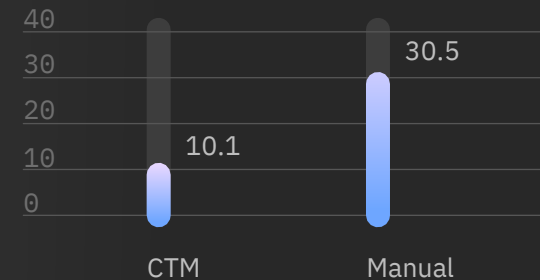
35 patients

50 clinical trials

35 patients with newly diagnosed gastrointestinal cancer screened for 50 clinical trials by clinical research coordinators with Watson for Clinical Trial Matching (CTM) and manual methods

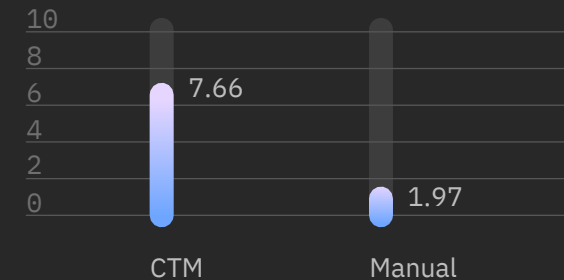
Average Time to Screen (minutes per patient)

p<0.0001



Average trials found (per patient)

p<0.0001



*Mayo Clinic has a business collaboration with IBM Watson Health. This activity is not undertaken to allow IBM to indicate Mayo Clinic endorsement of any IBM product or service.

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Impact of a cognitive computing clinical trial matching system in an ambulatory oncology practice

Haddad T et al. Journal of Clinical Oncology 2018

[Link to study →](#)

Cognitive technology supports increased enrollment in clinical trials for breast cancer.

In July 2016, Mayo Clinic* implemented IBM Watson for Clinical Trial Matching with a team of screening clinical research coordinators in its ambulatory practice for patients with breast cancer at the Rochester campus.

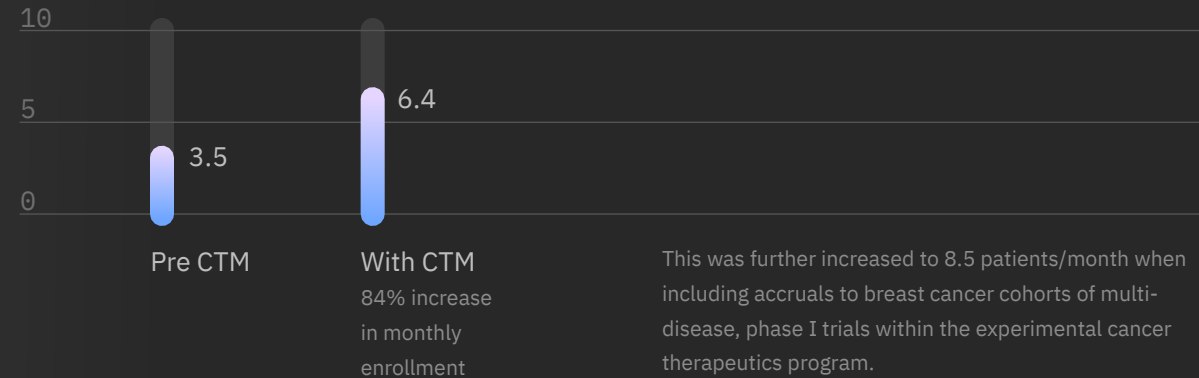
In the 18 months after implementation, there was on average an 84 percent increase in enrollment to Mayo's systemic therapy clinical trials for breast cancer. The time to screen an individual patient for clinical trial matches also fell when compared with traditional manual methods.

84%



Average monthly patient enrollment

Ambulatory breast cancer practice



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Cognitive technology addressing optimal cancer clinical trial matching and protocol feasibility in a community cancer practice

Beck J et al. ASCO Annual Meeting 2017

[Link to study →](#)

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IBM Watson CTM can help expedite the screening of patient charts for clinical trial eligibility and therefore may also help determine the feasibility of protocols to optimize site selection and enable higher and more efficient trial accruals.

Excerpt from manuscript

2,620

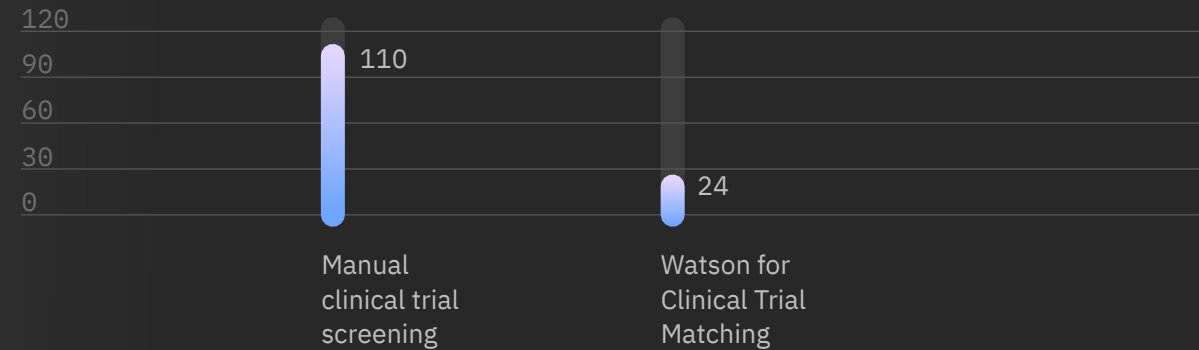
visits by lung and breast cancer patients

78%

reduction in time compared to manual clinical trial coordinator screening when using IBM Watson for Clinical Trial Matching (CTM)

Watson for Clinical Trial Matching excluded 94% of the ineligible patients automatically, providing criteria level evidence regarding the reason for exclusion.

Screening minutes



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