Improved trial-matching outcomes

A Massive Bio-PCC collaborative project demonstrates excellent outcomes

The combination of **Next-Generation Sequencing (NGS)** with **Artificial Intelligence (AI)** in a multi-trial matching approach resulted in:

Nearly 2-fold increase in potential patient-eligibility for trials for all tumor types

2-fold increase in a single focused tumor profile

Total saving in effort was estimated to be 19,500 hours (99.9%)

Introduction and purpose

- Patients' trial options and overall enrollment rates are severely restricted as a result of manual patient-screening by clinical research teams.
- To address this issue, the Precision Cancer Consortium (PCC) collaborated with Massive Bio to explore an innovative and efficient multi-trial matching method.
- They developed a multi-trial prescreening approach, incorporating NGS testing results, and using artificial intelligence.

Results

- Accuracy and efficiency of trial matching was enhanced, particularly for targeted therapies.
- The total number of matching pairs (patient-trial) was 1,254 resulting in a **1.82-fold increase** as a result of multi-trial matching.
- Compared to the theoretical matching rate, **Massive Bio's matching rate was significantly higher** 50% of trials, and equivalent in 30%.
- The total savings in effort was estimated to be 19,500 hours (99.9%).
- Read more about the lung cancer case study in patients targeted for EGFRm and the reported 12-fold increase in patients on the abstract (scan the QR code).

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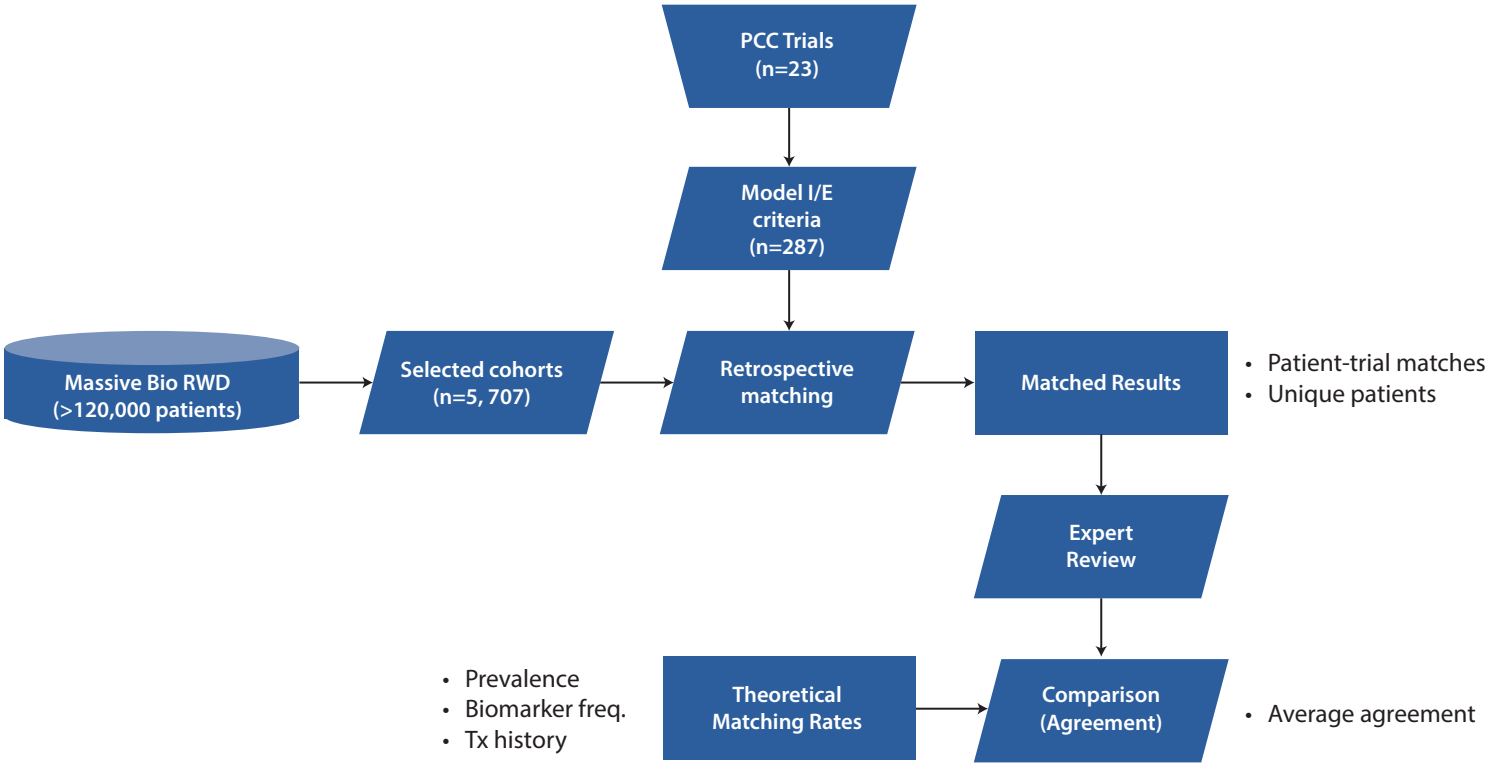
Study design

- The unique AI system extracted 180 structured clinical parameters from the patients' medical records and used a decision-tree algorithm to retrospectively match them to digitized inclusion/exclusion (I/E) criteria from over 14,000 actively recruiting interventional cancer trials. With particular focus on tumor types relevant to 23 selected trials.
- Results were compared to the theoretical matching rate based on specific criteria including tumor type, biomarker prevalence, disease extent at diagnosis, and prior treatment history.



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The PCC is a non-profit organization dedicated to driving global access to comprehensive genomic testing for all patients with cancer. The PCC is composed of and funded by: AstraZeneca, Bayer, GSK, Johnson & Johnson, Eli Lilly, Novartis, and Roche, at the time of writing.

PCC-061 Date of preparation: June 2024

#ASCO24 Abstract e13501