TriHealth Cancer Institute's Collaboration with the Tempus AI TIME Program Impact on Clinical Trial Operations and Enrollment

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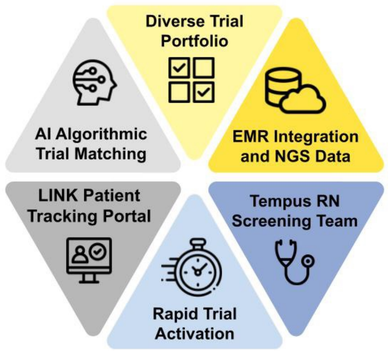
Published Abstract #1553

INTRODUCTION

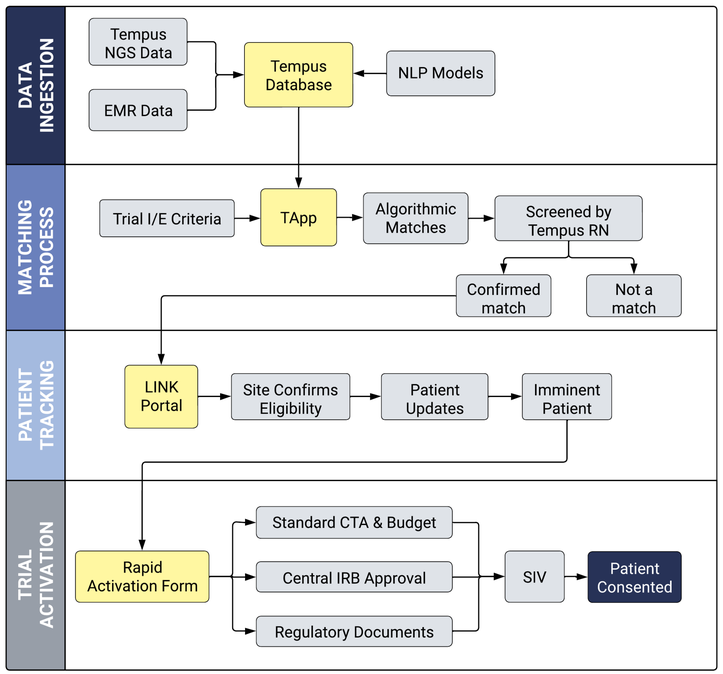
TriHealth Cancer & Blood Institute, the largest personalized medicine program servicing Cincinnati, partnered with the **Tempus AI TIME program** to improve patient recruitment and enrollment in oncology clinical trials over a 15 month period.

Figure 1. TIME Program



METHODS

Figure 2. TIME Program Workflow



RESULTS

Table 1. TIME Matching, Screening, & Enrollment Outcomes

Quarter	TApp Searches	Reviewed by Tempus RN	Passed Tempus RN Review	Consents	Trial Activations
Q1 2022	427,381	74	27	0	0
Q2 2022	521,772	144	75	2	4
Q3 2022	1,416,863	200	78	10	1
Q4 2022	2,637,428	249	57	10	1
Q1 2023	3,649,953	1277	47	6	1
Total	**8,653,397**	**1944**	**284**	**28**	**7**

Table 2. TIME vs non-TIME Trial Activations

TIME or non-TIME Trial	Number of Activations	Average Business Days to Activate	Median Business Days to Activate	Enrollments
TIME	7	37	28	28
non-TIME	3	186	183	3

Figure 3. TApp Screening

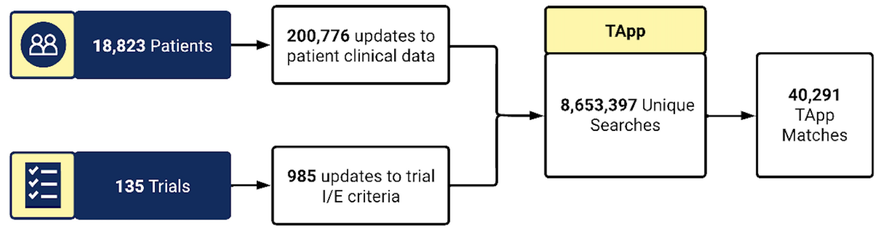


Table 3. Trial Portfolio Insights by Cancer Type, Phase, & Biomarkers

Cancer Type	% of Trial Portfolio	Phase	% of Trial Portfolio	Most Common Biomarkers
Non-Small Cell Lung	26.1%	Phase I	22.3%	EGFR NTRK KRAS HER2 BRAF ROS1 PIK3CA ER
Solid Tumor	18.5%	Phase I & II	18.1%	
Heme	11.8%	Phase II	26.6%	
Breast	8.4%	Phase III	28.7%	
Colorectal	5.0%	Other (Phase IV, II & III)	4.3%	

SUMMARY & CONCLUSIONS

TIME Program enhanced patient identification and enrollment in oncology clinical trials for **TriHealth Cancer & Blood Institute** after their research process improvement was completed.

- **18,800+** patients screened for **135** trials using AI enabled algorithmic patient matching software (TApp) over 15 months
- **8.6M** unique TApp searches resulted in **1,900+** patients screened by Tempus RNs, **284** matches, and **28** consents
- **2.3X increase** in trial activations and **80% reduction** in days to activate
- **9.3 fold** increase in enrollment in TIME trials compared to non-TIME trials

FUTURE STEPS

- Incorporate machine learning into TApp to improve match rates through generative AI
- Grow and expand trial portfolio to increase trial options for patients
- Utilize additional NLP models to boost patient identification while decreasing manual data abstraction
- Futher streamline activation processes to decrease activation time

ACKNOWLEDGMENTS
We thank Amrita A. Iyer, Ph.D from the Scientific Communications team at Tempus for poster development and review.

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