The KISMET Project in Precision Oncology: Knowing Individual Specific Mutations Enabling Treatment. No Patient Left Behind.

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Identifying High Value Unsuspected Actionable Targets and Utilizing the CTSA Network to Alert Treating Physicians

Hypothesis

We hypothesize that by notifying treating physicians of new opportunities in advanced cancer for patients with unexpected alterations (e.g. BRAF alteration in brain tumors or HER2 in liver cancer) we can improve response rates, outcomes, prolong survival, and mitigate toxicity in hundreds or thousands of patients with a robust statewide infrastructure using our Texas Regional CTSA Consortium (TRCC).

Methodology and Discussion

We are collaborating with informatics, the MD Anderson Precision Oncology Decision Support (PODS) team, and the clinical research unit in creating a central database for our identify-monitor-alert system. We are currently deploying the system locally with plans to expand to the Texas Regional CTSA Consortium. Using the CTSA infrastructure will allow us to inform many treating physicians throughout the network and then track outcomes. The goal of KISMET is to leave no cancer patient behind in Texas and create a model that could be expanded beyond cancer.

Results to Date

We identified 16 specific alterations that we consider high value unexpected treatable targets (HVUTTs). Genomic analysis of 499 advanced cancer patients at MD Anderson revealed 11 patients (2.2%) with HVUTTs without evidence of targeted therapy. This strategy could favorably improve the lives of cancer patients.

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