# पेटेंट कार्यालय
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(57) Abstract :
ABSTRACT A predictive biomarker analysis system for early cancer detection is disclosed. The system integrates genomic, proteomic, and metabolomic biomarkers into a single diagnostic platform. Machine learning algorithms are employed to assess risk and provide real-time predictive analytics. Temporal modeling is used to track biomarker changes and predict disease progression. The system supports multiple cancer types and is adaptable to different clinical settings. Clinicians can interact with a user-friendly interface featuring risk scores and confidence metrics. Data privacy is ensured through secure architecture compliant with healthcare regulations. Results are validated against clinical data and can be exported or integrated into EHRs. The invention continuously learns from new patient data to enhance its performance. It includes alerting mechanisms and customizable diagnostic thresholds. This invention significantly improves diagnostic precision and patient outcomes. It represents a scalable, intelligent solution for modern cancer detection and management.

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