



AI-Powered Oncology Care Platform for Continuous Cancer Patient Support

Enabled continuous cancer care through secure web and mobile applications

Ccube developed an **AI-powered oncology** care platform that enables cancer patients to manage their treatment journeys digitally while giving oncologists real-time visibility into patient health, symptoms, and treatment adherence. The platform was built using **Ccube's Mindful Vibe Streaming** approach, ensuring patient-centric design, empathetic user experiences, and clinically aligned digital workflows.

A Ccube Case Study



Problem Statement

The **oncology provider** faced several challenges while managing cancer patient care.



Limited Patient Monitoring Between Treatments

Healthcare providers had limited visibility into patient symptoms and well-being between chemotherapy or radiation sessions.



Fragmented Patient Records

Medical reports, treatment plans, and prescriptions were stored across different systems, making it difficult to maintain a unified patient profile.



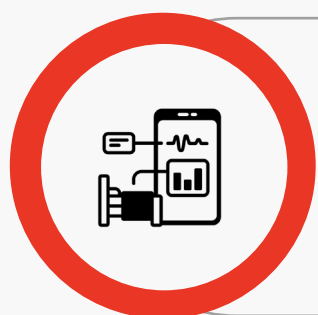
Manual Care Coordination

Coordinating treatments, follow-ups, and patient communications required manual administrative work.



Lack of Personalized Patient Guidance

Cancer patients require personalized nutrition, wellness, and recovery guidance during treatment, which was difficult to provide at scale.



Medication Adherence Challenges

Patients undergoing treatment often struggle to track complex medication schedules.



Compliance and Security Requirements

Sensitive oncology patient data required secure infrastructure aligned with HIPAA compliance standards.

Solution

Ccube developed a secure **AI-powered oncology** platform delivered through **web and mobile applications**, enabling continuous care coordination between cancer patients and healthcare providers

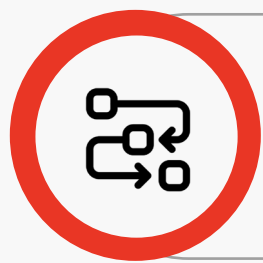
The solution was built using a **Mindful Vibe Streaming framework**, focusing on:



Empathy-driven patient experiences



Reduced cognitive load for patients undergoing treatment



Intuitive workflows for both clinicians and patients



Emotionally aware engagement design for sensitive healthcare journeys

Platform Development

Ccube designed and developed a unified, secure AI-powered oncology care platform enabling seamless interaction between cancer patients and healthcare providers, ensuring continuous care throughout the treatment journey.

The platform provides a centralized system for managing patient health data, treatment plans, and clinical workflows, while offering patients easy access to records, guidance, and reminders. Built using a Mindful Vibe Streaming approach, the platform delivers an intuitive, empathetic, and supportive experience for both patients and clinicians.

Key capabilities include:

- ✓ Centralized patient medical records & treatment history
- ✓ Prescription and medication management
- ✓ Patient symptom monitoring and tracking
- ✓ Appointment scheduling and follow-up coordination
- ✓ Clinical notes and treatment updates
- ✓ Real-time access to reports, records, and care plans
- ✓ Continuous engagement through reminders and insights

The platform is engineered for performance, scalability, and flexibility, leveraging a combination of modern technologies including React.js, Node.js (MERN stack), React Native, and native mobile frameworks (iOS and Android). This ensures:

- ✓ High performance for critical healthcare workflows
- ✓ Seamless data synchronization across systems
- ✓ Flexibility based on infrastructure and deployment needs
- ✓ Consistent and reliable user experience across devices



Using mindful vibe streaming principles, the platform experience was carefully designed to:

- ✓ Reduce cognitive load for patients undergoing treatment
- ✓ Provide intuitive workflows for clinicians
- ✓ Deliver emotionally supportive and non-intrusive interactions
- ✓ Ensure clarity, speed, and ease of use in high-stress healthcare scenarios

AI-Powered Patient Support Engine

An intelligent AI engine analyzed patient inputs and engagement patterns to provide personalized support.

The system generated recommendations related to:

- ✓ Nutrition plans for cancer patients
- ✓ Medication reminders
- ✓ Exercise and recovery guidance
- ✓ Wellness and mental health support

The **AI engine** also periodically checked patient symptoms to identify potential issues early.

The AI layer was enhanced with context-aware engagement logic, ensuring that recommendations were:

- ✓ Timely but non-overwhelming
- ✓ Delivered in a supportive, human-like manner
- ✓ Personalized to patient condition and emotional state

Tools & Capabilities

01 Application Layer

Web:

- ✓ React.js
- ✓ Node.js
(MERN Stack)

Mobile:

- ✓ React Native
- ✓ Native iOS (Swift)
- ✓ Native Android (Kotlin)

02 AI Capabilities

- ✓ AI-Based Patient Recommendation Engine
- ✓ Symptom Monitoring Automation
- ✓ Patient Engagement Insights

03 DevOps & Infrastructure

- ✓ AWS (Amazon Web Services)
- ✓ Microsoft Azure

04 Security & Compliance

- ✓ HIPAA-aligned PHI governance
- ✓ GDPR compliance for data privacy
- ✓ Role-based access control (RBAC)
- ✓ Secure audit logging and monitoring
- ✓ Data encryption and secure cloud architecture

Impact

The **oncology care platform** enhanced how cancer patients were supported throughout their treatment journey.



Patient Engagement

- ✓ Stronger and continuous interaction between patients and providers
- ✓ Improved consistency in following treatment & medication plans
- ✓ Better adherence to scheduled consultations
- ✓ More emotionally supportive and less overwhelming digital experience



Clinical Impact

- ✓ Improved visibility into patient symptoms between treatment cycles
- ✓ More proactive and informed clinical decision-making
- ✓ Better coordination between oncologists and patients



Operational Efficiency

- ✓ Reduced administrative effort in care coordination
- ✓ Faster and more streamlined access to patient records
- ✓ Improved efficiency through intuitive and mindful system design

Business Outcome

By implementing an **AI-powered oncology** care platform built **with mindful vibe streaming** principles, the healthcare provider significantly transformed how cancer patients are supported throughout their treatment journey.

The platform enabled continuous engagement, real-time monitoring, and personalized care interventions, ensuring that patients remained connected with their care teams beyond clinical visits.

The organization is now able to:

- ✔ Deliver personalized oncology care at scale across patient populations
- ✔ Improve patient engagement and adherence to complex treatment protocols
- ✔ Enable proactive clinical decision-making through real-time symptom tracking
- ✔ Reduce gaps in care between chemotherapy and radiation cycles
- ✔ Strengthen secure healthcare data management aligned with HIPAA and GDPR standards
- ✔ Expand digital oncology services across multiple providers and care networks
- ✔ Provide a more empathetic, patient-first digital care experience







Want results like this?

Book a Call

to see how Ccube can build **AI-powered healthcare platforms** and data engineering solutions for **oncology care**.

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