

# MyTreatmentPath

Precision medicine meets patient empowerment.

A comprehensive health records and research platform for cancer patients.

Built by a stage 4 bladder cancer patient for patients who want control over their treatment journey

# The Problem

## Cancer Patients Are Drowning in Data

- Genomic reports with complex mutations
- Hundreds of lab results across multiple portals
- Medication protocols from different specialists
- Research papers and clinical trial criteria
- Vitals tracking across treatments

## Current "Solutions" Fall Short

- Patient portals are fragmented silos
- Spreadsheets are error-prone and unscalable
- Paper records get lost
- No connection between genomics and treatment
- Research discovery is manual and time-consuming

# The Solution

A single, secure platform that organizes your complete health record and automatically connects the dots between genomics, treatment options, and cutting-edge research.



## Precision Medicine

Connect genomic mutations to targeted pathways, treatments, and clinical trials



## Complete Records

All your health data—labs, vitals, medications, imaging—in one place



## Research Scanner

Automated nightly scans for relevant clinical trials and treatment research



## HIPAA Security

AES-256 encryption, audit logging, automated encrypted backups

# Key Features



# Precision Medicine Dashboard

Complete genomic data integration with actionable treatment insights.

- **Mutation tracking:** Foundation One CDx integration (ARID1A, CDKN1A, MLL2, TERT)
- **Pathway mapping:** Connect mutations to biological pathways (Hypoxia/HIF-1 $\alpha$ , MDR phenotype, PD-L1 immune escape)
- **Treatment correlation:** 13 targeted therapies mapped to specific mutations
- **Clinical trials:** 10+ relevant trials with eligibility criteria
- **Genomic rationale:** Molecular mechanisms explaining WHY each supplement/medication targets specific tumor vulnerabilities



# Complete Health Records

Unified view of your entire medical history with intelligent organization.

## Records Tracking

- 500+ lab results (automated CareSpace sync)
- Vitals tracking with trending
- 19 medications with evidence modals
- 7 conditions with status tracking
- 14 healthcare providers across 6 institutions

## Smart Features

- Abnormal result flagging
- Trend analysis for key metrics
- Provider network visualization
- Medication evidence documentation
- Diet/nutrition tracking with pathway scoring



# Automated Research Scanner

Never miss important research. Automated discovery working 24/7 for you.

**28**

Search Terms

**35**

Papers Tracked

**2 AM**

Daily Scan Time

## What It Scans

- PubMed for peer-reviewed research
- ClinicalTrials.gov for new trials
- Conference proceedings (ASCO, ESMO, AACR)
- FDA drug approvals and breakthrough designations
- Custom search terms based on your genomic profile

# **Portal Automation**

Automated syncing with healthcare provider portals. Your data, automatically updated.

## **CareSpace (Flatiron)**

Full browser automation, OAuth SSO, 354 lab results from 10 weekly reports synced

## **Epic MyChart**

FHIR API integration planned, credentials encrypted AES-256

## **Cerner**

Planned via Playwright automation

## **Credential Vault**

Session-based encryption, PBKDF2 key derivation, zero plaintext storage

**12% faster syncs with intelligent cookie caching. Historical data back to December 2025.**



# Nutrition & Lifestyle Tracking

Evidence-based dietary tracking connected to your genomic profile.

## Features

- Meal logging with genomic pathway tracking
- 20 pre-loaded anti-cancer foods with pathway connections
- Meal scoring based on genomic profile coverage
- AI analysis using Claude Haiku (Anthropic API)
- Energy and symptom tracking (nausea, fatigue)

## Pathway Targeting

- Hypoxia/HIF-1 $\alpha$  pathway inhibition
- PI3K/mTOR pathway suppression
- MDR phenotype reversal
- Immune checkpoint modulation
- Anti-inflammatory pathways

# **AI-Powered Strategy Summary**

GPT-4o synthesis of your complete healthcare approach.

- **Strategy Overview:** High-level summary of your multi-modal treatment approach
- **Alignment Analysis:** How genomics, medications, diet, and research align
- **Coverage Gaps:** Pathways or mutations not currently addressed
- **Research Opportunities:** Specific trials or studies worth investigating
- **Evidence Strength:** Rating of supporting research for each component

**Turns 500+ data points into a coherent, evidence-based narrative you can share with your oncology team.**



# Security & Privacy

**Your health data belongs to you. Period.**

## HIPAA-Grade Security

- AES-256-GCM encryption at rest
- SQLCipher encrypted database
- Session-based key management
- Complete audit logging
- Automated encrypted backups
- 30-day backup retention

## Privacy First

- Local-only storage (no cloud)
- Zero third-party sharing
- No analytics or tracking
- No external PHI transmission
- You control all data export
- Open source & auditable

# Technology Stack

Modern, secure, and performant technology choices.

## Desktop

Electron 40+

## Frontend

React 18.3 + Vite

## Backend

Node.js + Express

## Database

SQLite + SQLCipher

## Cloud (PHI-free)

Supabase  
(PostgreSQL + Auth)

## AI

OpenAI GPT-4o,  
Anthropic Claude

## Automation

Playwright (portal  
sync)

## Security

bcrypt, AES-256,  
PBKDF2

## Research

PubMed API,  
ClinicalTrials.gov

## Distribution

electron-builder +  
GitHub Releases

## Updates

electron-updater  
(auto-update)

**PHI stays local. Cloud services handle only non-PHI features  
(auth, backups, research aggregation).**



## By the Numbers

**500+**

Lab Results Tracked

**19**

Medications with Evidence

**4**

Genomic Mutations

**6**

Biological Pathways

**13**

Targeted Treatments

**35**

Research Papers

**14**

Healthcare Providers

**28**

Automated Search Terms

# What Makes It Different

## Built by a Patient

Not venture-backed health tech. Built by someone living this reality every day.

## Genomics-First

Treatment decisions connected to your specific mutations, not one-size-fits-all protocols.

## Native Desktop App

Not another web portal. Real native app (Mac/Win/Linux) with offline-first architecture.

## Privacy by Design

PHI never leaves your device. Cloud services handle only non-PHI data. No HIPAA complexity.

## Hybrid Architecture

Best of both worlds: local privacy + cloud convenience without sacrificing security.

## Research-Driven

Automated discovery means you never miss important developments in your specific cancer type.

# Who It's For

## Primary Users

- **Research-driven patients** who want to understand the science behind their treatment
- **Stage 4 patients** managing complex, multi-modal treatment protocols
- **Patients with genomic testing** (Foundation One, Guardant360, Tempus, etc.)
- **Integrative oncology patients** combining traditional + evidence-based complementary approaches

## Secondary Users

- **Oncology teams** who want organized patient data for treatment planning
- **Integrative oncologists** designing genomic-driven supplement protocols
- **Clinical trial coordinators** matching patients to relevant trials
- **Caregivers** helping loved ones navigate complex treatment decisions

# Roadmap

## ✅ Completed (Feb 2026)

- Core health records management (vitals, labs, medications, conditions)
- Precision medicine dashboard with genomic integration
- Automated research scanner (nightly cron jobs)
- CareSpace portal automation (Flatiron Health OAuth SSO)
- HIPAA-grade security (AES-256, audit logging, encrypted backups)
- Nutrition tracking with genomic pathway scoring
- AI strategy summaries (GPT-4o integration)
- Medication evidence modals (22 treatments documented)
- **Electron desktop app** (Mac/Windows/Linux native packaging)

# Future Vision

## Near-term (6 months)

- Mobile app (React Native)
- Imaging integration (DICOM viewer)
- Treatment timeline visualization
- Symptom tracking with ML pattern detection
- Family health history mapping
- Telemedicine visit recording & transcription

## Long-term (12+ months)

- Multi-patient support (caregivers managing multiple family members)
- Anonymized research data contribution (opt-in)
- Patient community features (opt-in)
- Clinical trial matching algorithm
- Wearable device integration (Apple Health, Fitbit)
- Insurance claim tracking

# Deployment Strategy

## ✓ Current: Hybrid Electron + Cloud

- ✓ Native desktop app (Mac/Win/Linux)
- ✓ PHI stays local (zero cloud exposure)
- ✓ Cloud for research/backups only
- ✓ No HIPAA complexity

## Cloud Services (PHI-Free)

- ✓ Supabase free tier (\$0/month)
- ✓ User auth + settings sync
- ✓ Encrypted backup storage
- ✓ Research library aggregation

## Distribution

- ✓ Code-signed .dmg (Mac)
- ✓ Code-signed .exe (Windows)
- ✓ AppImage/deb/rpm (Linux)
- ✓ Auto-update via GitHub Releases

## Cost Structure

- ✓ Cloud: \$0-25/month (Supabase)
- ✓ Code signing: \$400-600/year
- ✓ Distribution: \$0 (GitHub)
- ✓ Total: ~\$1k/year

**Architecture: PHI local-only + cloud services for non-PHI features**

privacy + convenience without HIPAA nightmares

# Hybrid Architecture: Best of Both Worlds

## Local (PHI-Safe)

- Electron desktop app (native Mac/Win/Linux)
- Embedded Express backend
- SQLite encrypted database (AES-256)
- All patient health data stays local
- Works 100% offline
- No cloud transmission of PHI
- Zero HIPAA cloud compliance

## Cloud (Non-PHI)

- Supabase (PostgreSQL + Auth + Storage)
- User authentication (email/password only)
- App settings sync (preferences, themes)
- Encrypted backup storage (patient-controlled)
- Research library aggregation
- Daily research scans (cancer type only)

# Potential Business Models

## Option 1: Open Source + Services

- Free core product (MIT or GPL license)
- Premium support for hospitals/clinics
- Custom integrations (EMR systems, research platforms)
- Revenue: Consulting/integration fees (~\$100-250/hr)

## Option 2: Freemium Desktop App

- Free: Core features, local-only
- Pro (\$9-19/month): Cloud sync, encrypted backups, advanced analytics, priority support
- Enterprise (\$500-2000/month): Multi-patient, white-label, custom branding, dedicated support

# MyTreatmentPath

Your Treatment. Your Data. Your Path.

## Next Steps

- Demo available at: <http://localhost:5176>
- GitHub: [github.com/mytreatmentpath](https://github.com/mytreatmentpath) (coming soon)
- Documentation: [docs.mytreatmentpath.com](https://docs.mytreatmentpath.com) (coming soon)
- Contact: [john@mytreatmentpath.com](mailto:john@mytreatmentpath.com)

*For patients, by a patient.  
Open source. Privacy-first. Evidence-based.*