



Business Case and Project Story

Clinical intelligence and care coordination for private practices

PalmettoHacks 2026 · Startup track · October 11, 2026

Nicolas Gauvin, Teagan Donelly, Jorge Naranjo, Aden Roof

The Camellia prototype uses synthetic patient data only. Financial figures are planning assumptions, not results.

Project Story: About the project

Camellia helps the right clinician find the right information early enough to act on it. It reads patient records from many organizations and formats, flags patients whose history matters for an upcoming procedure, and sends that flag, with the evidence attached, to the team that has to plan for it.

What inspired us

We interviewed the Chief CRNA associated with Dominion Anesthesia in Arlington, Virginia. Anesthesia staff do a second job on top of clinical care: finding pregnant patients whose conditions could complicate anesthesia at delivery. That information arrives in scattered provider messages and is typed by hand into spreadsheets or EHR watchlists. In one case, a patient with a serious condition needed planning across several specialties, but the anesthesia team only learned of it when she arrived for delivery. **The information was already in her records. It had not reached the right people in time.**

How we built it

A Java 21 and Spring Boot backend, a React and TypeScript frontend, and Snowflake as the data platform. Normalizers turn FHIR, HL7 v2 lab feeds, legacy practice exports and free-text notes into one record model. Four deterministic screening rules (OB anesthesia review, recurrent fractures, repeated abnormal labs, repeated visits for the same symptom) create flags that cite their source records and route OB cases to the anesthesia team's coordination board. Google Gemini powers plain-English search and a clinical assistant, inside guardrails: it turns questions into allow-listed search criteria, and a citation validator removes any reference to a record that was not actually retrieved. Role-based access is enforced on every endpoint, including what Gemini can see. 79 automated tests cover the rules, access control and citation checks.

Executive summary

- **Customer:** independent clinics
- **Price:** \$129 per clinician per month. A 25-clinician group pays about \$32,900 a year on an annual plan.
- **Market:** about 124,200 US anesthesiologists and CRNAs, worth roughly \$192M a year at our price; about \$81M of that is in private practice.
- **Plan:** our first 10 paying practices within 10 months of launch, 20 by month 12 and about \$2.3M in annual recurring revenue by year 3, funded by a \$1.5M seed round.
- **Before the first sale:** a HIPAA-ready deployment under signed business associate agreements, real sign-on and one live data feed.

Why now. The US recorded 3.63 million births in 2024 (CDC), and low platelets alone affect 7–12% of pregnancies: roughly 254,000 to 435,000 deliveries a year where an epidural decision depends on information someone has to find. Anesthesia teams are short-staffed (a projected shortfall of 3,720 anesthesiologists in 2026, rising to 8,140 by 2031), and 42.2% of US physicians still work in private practice (AMA, 2024), where groups buy their own software and decide quickly.

Pricing model

Camellia is a monthly subscription priced per clinician, with 15% off for annual billing.

Plan	Price	Built for	Includes
Essentials	\$49 per clinician per month (5-seat minimum)	Independent OB/GYN, MFM and primary care practices	Cross-organization search, AI assistant with verified citations, clinical alert rules, document import
Coordination	\$129 per clinician per month (10-seat minimum)	Independent anesthesia groups covering labor and delivery	Everything in Essentials, plus Anesthesia OB Alerts, the coordination board, provider-contact workflow and spoken shift briefings
Network	From \$2,500 per hospital site per month, plus seats	Groups covering several hospitals	EHR integration, single sign-on, audit logs, custom rules, uptime guarantee

Plan	Price	Built for	Includes
Referrer	Free	Referring OB/GYN and MFM clinicians	Receive alerts, answer contact requests, see the plan

- **Other terms:** \$2,500 onboarding per data feed (waived on annual contracts of 25+ seats); 90-day pilots at half price.
- **Value to the customer:** if Camellia saves 8 hours of coordination work a week at \$100 an hour, a 25-clinician group saves about \$41,600 a year against a \$32,900 subscription. We will confirm both figures in pilots.
- **Our margin:** an estimated \$20 per clinician per month to run (AI, data platform, hosting, support), about 84% gross margin.

Competitive landscape

No product we found combines early, cross-organization risk detection with a shared coordination workflow sold to private practices.

Alternative	Pricing	Why it falls short
Spreadsheets, EHR watchlists, phone calls	No software cost; paid in clinician hours	Depends on someone remembering to send a message; no evidence trail or owner
Epic alerts and patient lists	Bundled into the hospital's EHR contract	Controlled by the hospital, not the anesthesia group; cannot see other organizations' records
PeriWatch Vigilance (PeriGen)	Quote only; sold to hospitals	Starts once the patient is in labor; Camellia acts days or weeks earlier
Navina	Quote only; enterprise sales	Pre-visit summaries for primary care; no anesthesia focus or team workflow
Graphium Health	Estimated from \$200 per user per month	Anesthesia record and billing during the case; does not search obstetric records beforehand
Freed (AI scribe)	\$39–\$119 per clinician per month	Writes notes from a visit; cannot find information that was never shared

How we handle regulatory constraints

No real patient data enters Camellia until every item marked "before launch" is done. Each constraint has a named owner on the team and is checked at the gate between the build phase and the first pilot.

Constraint	What it requires	How Camellia meets it	When
HIPAA Privacy and Security Rules	Protect patient data; sign business associate agreements (BAAs) with every vendor that touches it	BAAs with AWS, Snowflake (Business Critical edition, required for patient data) and Google Cloud; Gemini runs on Vertex AI under that BAA, never the public API; encryption in transit and at rest; minimum-necessary access by role	Before launch
Access and audit	Know who saw which patient and why	Replace demo users with single sign-on; audit log of every record view and AI request; care-relationship access with break-glass review	Before launch
FDA rules for clinical decision support	Software that steers clinical decisions can be a regulated medical device	Camellia is designed to meet the four criteria for non-device decision support in the 21st Century Cures Act: it shows information and the full basis for each alert, a clinician makes every decision, and alerts arrive days ahead, not in time-critical moments. Wearable monitoring stays out of the launch product. We will confirm this with regulatory counsel	Counsel review before launch
Security assurance	Customers and hospitals expect independent proof	Penetration test before the first live patient; SOC 2 Type I by month 9, Type II in year 2; cyber and errors-and-omissions insurance	Months 3–9
Clinical safety	Rules must be accurate and not overwhelm staff	Screening rules written and reviewed by our clinical advisory board; every pilot tracks missed patients and the share of alerts marked useful	Every pilot

Constraint	What it requires	How Camellia meets it	When
Data access rules	Hospitals and practices control their records	Start with records referring practices send through free Referrer seats and file import; use federal information-blocking rules and SMART on FHIR APIs to request hospital data	Months 3–12

Getting our first 10 customers

We will sell directly, founder to clinician, to independent anesthesia groups in Virginia, the Carolinas and Georgia: close enough to visit, and enough groups to build regional references. Our ideal first customer has 10–60 clinicians, covers a labor and delivery unit with 1,000+ births a year, and already has someone (often a Chief CRNA) tracking high-risk patients by hand.

Step	What we do	Target	By month
1. First design partner	Ask the Chief CRNA we interviewed to run the first pilot and introduce us to peers at other groups	1 pilot, 5 introductions	3
2. Credibility	Recruit a 3-person clinical advisory board (OB anesthesiologist, Chief CRNA, maternal-fetal medicine physician) to review our rules and open doors	3 advisors	3
3. Target list	List 60 independent anesthesia groups in the region from state CRNA association directories, hospital anesthesia contracts and LinkedIn	60 groups	3
4. Outreach and demos	Warm introductions first, then direct outreach to Chief CRNAs and practice administrators; demo on a real-looking synthetic case	25 calls, 15 demos	6
5. Founding-customer offer	90-day pilot at half price, price locked for 3 years and onboarding waived, in exchange for a case study and reference calls	12 pilots	7
6. Convert	Pilots that hit their targets (80% of high-risk patients flagged a week before delivery; 70% of alerts rated useful) move to annual contracts	10 paying practices	10

Customers 6–10 come faster than 1–5: we present early pilot results at the Society for Obstetric Anesthesia and Perinatology (SOAP) and AANA meetings, and each alert invites a referring OB office as a free user, which turns into referrals. Customers get one free month for each practice they refer that signs.

Program structure: UML class diagram

Generated from the source code: all 95 classes, interfaces, records and enums of the backend, grouped by package (21 utility, DTO and config helpers omitted). “-” fields are injected dependencies; “repos” lists the repositories a service uses. Hollow triangle: implements. Diamond: composition.

