2026 · v1.0 (pre-beta)
13 May 2026 · Miami Beach

CANONIC Nexus.

A case is the unit of clinical knowledge.

Author up. Validate down. **Free community CHATs for patients** (MammoChat + cultural lenses); **enterprise NEXes for providers**, credentialed through ABOPM. One credential circuit; every read mints COIN back upstream.

FOR:

A **Anil Bajnath, MD, MBA**
Founder & President · American Board of Precision Medicine

I **Irman Forghani, MD, FACMG**
Director of Clinical Genetics · Mt Sinai Medical Center of Florida

Presented by **Dexter Hadley, MD/PhD**
Founder and Chair, CANONIC · Director of AI, American Board of Precision Medicine
Powered by LAUDE — the CANONIC agent — across the Galaxy

The case walks the team under CANONIC governance.

Five credentialed authors, one case-001 (mixed Caribbean + Sephardic ancestry, BRCA1 c.5266dupC). Two intersecting boundaries govern the chain: **MSMC** is the institution; **ABOPM** is the credentialing body. Irman sits at the intersection — **ABOPM-credentialed at MSMC**. Knowledge flows ABOPM ↔ MSMC through her. Every signature hash-chains. Every read mints COIN to the upstream author.

ABOPM · CREDENTIALING BODY

M

Marcus

MARCUS LEE · MS3

Medical Student · year 3 · Step-2-CK studying. Pre-rounds prep + discharge teaching on AnkiNex.

S

Sarah

SARAH KIM, MD · PGY-2

Internal Medicine Resident · MSMC floor. Admits the patient, pulls cohort precedent on CaseNex.

Ad

Adrienne

ADRIENNE CHEN, MD, PHD · FACMG

Clinical Geneticist · Variant classification specialist. ACMG/AMP walk on OmicsNex. (Synthetic placeholder until next credentialed FACMG joins.)

I

Irman

MD · THE SPECIALIST

Precision-Med Clinician at MSMC. Sees the case bedside, owns the genomic workup, peer-signs every Tier-1A case-bundle into the chain. The seam between MSMC and ABOPM lives in her chair.

A

Anil

ATTENDING · MD, MBA, IFMCP, ABAARM, MIFHI · ABOPM SIGNER

President + Founder of ABOPM. Peer-signs case-bundle with Irman; brings the precision/functional/anti-aging credential stack to the chain.

MSMC · INSTITUTION

↕ Irman · ABOPM @ MSMC · the bridge

CASE-001 · ABOPM → MSMC · FOURTEEN DAYS

One case. Five signatures.

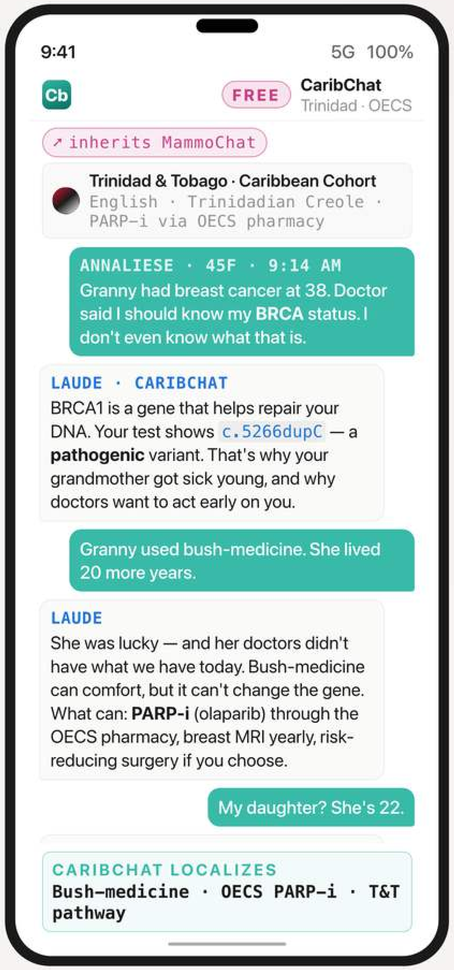
`T+0` Sarah admits at MSMC → `T+1h` Marcus preps card · Sarah reads precedent → `T+4h` Adrienne classifies → `T+1d` Irman + Anil (external ABOPM) peer-sign → `T+3d` Anil tumor-board sign-off → `T+14d` Adrienne + Irman cascade-sign daughter's TP53 R175H at MSMC → `discharge` Marcus walks the Caribbean Cohort deck. **External ABOPM board co-signs every byline.**

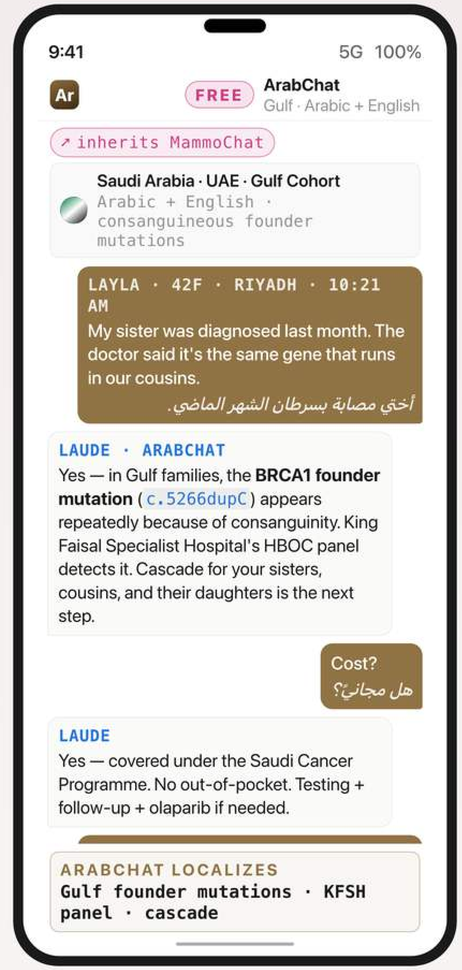
MammoChat is the free community learning ledger funded by FDOH.

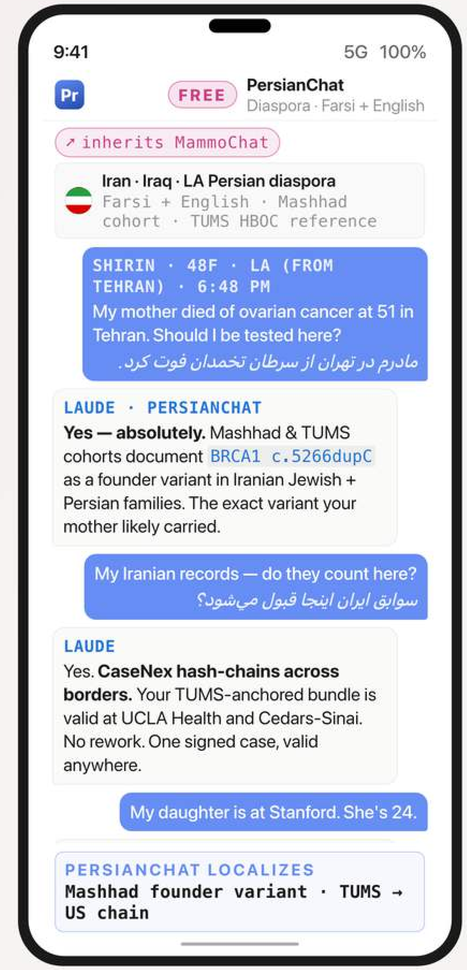
MammoChat is the free community learning ledger — for patients (and the providers who serve them). MammoChat shipped as the original **FDOH-funded patient navigator** for hereditary breast + ovarian cancer (**$2M Casey DeSantis Cancer Research Award**, 2024). CANONIC tuned the same chassis into geo-cultural derivatives: **CaribChat** (Trinidad · OECS), **ArabChat** (Gulf · KFSH), **PersianChat** (Iran/Iraq · TUMS diaspora) all **inherit** from MammoChat. **Free, always.** The enterprise learning ledgers — NEXes for providers, credentialed by ABOPM — are slide 2.

Mm **MammoChat** parent · free to community FREE

COMPOSITION (PATIENT POPULATIONS) `CaribChat` inherits `MammoChat` · `ArabChat` inherits `MammoChat` · `PersianChat` inherits `MammoChat` · one parent governance, three patient populations served in their own language + geography. Adding a 4th population (TurkishChat for the Anatolian cohort, HausaChat for West African diaspora) is a one-line inheritance edge.



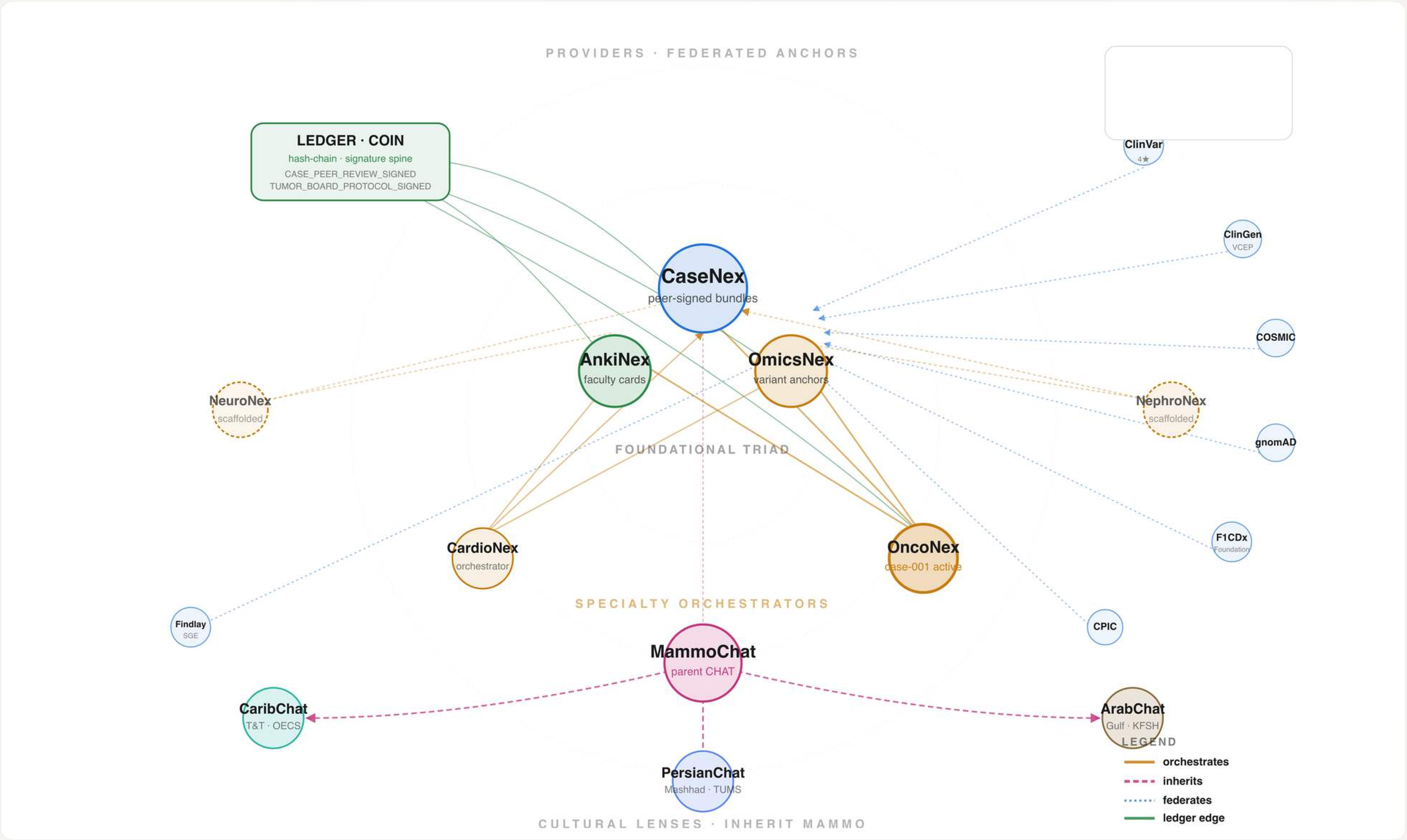




The GALAXY is the map and LAUDE is the CANONIC agent to guide.

The **CANONIC Galaxy** is the map — every NEX (**AnkiNex** / **CaseNex** / **OmicsNex**), every orchestrator (**OncoNex**, **CardioNex**, **NephroNex**), every community CHAT (**MammoChat** + `CaribChat` · `ArabChat` · `PersianChat`), every credential, every case lives as a node; every relationship is a typed edge. **LAUDE is the CANONIC agent** that guides you across it in natural language — federating providers, calling tools, standardizing evidence to ACMG/ClinGen/CPIC anchors, and hash-chaining every interaction into the governed ledger.

OncoNex
`specialist · case-001 active`



LAUDE

`the CANONIC agent · rail across every node`

`IRMAN · 4:02 PM`
Walk me through the galaxy for case-001.

`LAUDE`
Foundational triad: **AnkiNex** + **CaseNex** + **OmicsNex**. **OncoNex** orchestrates them for case-001 right now.

`LAUDE · VIA INHERITS.SCAN()`
`CaribChat` · `ArabChat` · `PersianChat` **inherit** from `MammoChat`. Same governance, three localized surfaces.

`IRMAN`
And the anchors?

`LAUDE · VIA PROVIDERS.FEDERATE()`
7 anchors federated: ClinVar 4★ · ClinGen VCEP · COSMIC · gnomAD · F1CDx · CPIC · Findlay SGE. All into OmicsNex.

`LAUDE · VIA LEDGER.TAIL()`
Every credentialed write hash-chains into `LEDGER+COIN`. **Author up. Validate down.**

`IRMAN`
Add CardioNex next?

`LAUDE`
Same triad, new orchestrator. One config line. `CARDIONEX_INIT` emits.

Ask LAUDE about any node...

NEXes are enterprise learning ledgers credentialed by ABOPM.

The governance triad applies to any specialty: **AnkiNex** is the education ledger, **CaseNex** is the clinical ledger, **OmicsNex** is the research ledger. The three converge on a specialty orchestrator — **OncoNex** for oncology, with parallel siblings (CardioNex, NephroNex, NeuroNex, ...). Every credentialed write hash-chains; LAUDE federates the three ledgers into one signed molecular signout. The patient-facing chats — MammoChat and its cultural derivatives — are the **free community learning ledger** on the next slide.

On **OncoNex** enterprise · case-001 ENTERPRISE

9:41 5G 100%

An ENTERPRISE **AnkiNex** community

18 CARDS | 0.72 TOP DIFF | 62% MISS RATE

ONCONEX · 4:02 PM
Cohort difficulty on **BRCA1 c.5266dupC**. Tumor board in 28 min.

LAUDE · CARDS.COHORT_SIGNAL()
18 faculty cards in HBOC + Caribbean cohort. Top difficulty **0.72** on PI3K/AKT/mTOR mechanism.

COHORT_SIGNAL

cards	18 / 22
top diff	0.72 (hot)
miss rate	62% PI3K
cohort	HBOC+Carib

Why so hard? Where are learners snagging?

LAUDE
62% conflate **PVS1** (null variant) with PVS1_strong evidence weight. Richards 2015 §5.1.

LAUDE · 4:03 PM
ANKI_DIFFICULTY_SIGNAL from **Marcus (MS3)** last night, this exact card.

Pin #17 for the fellows' prep deck.

LAUDE

ANKINEX ANSWER
18 cards · top diff 0.72 · 62% miss PI3K/AKT/mTOR

↓ **cohort signal**

9:41 5G 100%

Cs ENTERPRISE **CaseNex** peer-signed bundles

case-001 BUNDLE | 2/2 SIGNED | +5 COIN

ONCONEX · 4:02 PM
Case-001 bundle. Signature chain + cohort tag before I open the board.

LAUDE · CASE.PULL(CASE-001)
Peer-signed **@anil + @irman, Tier-1A**.

SIGNATURE CHAIN

@anil	CO-SIGN ✓
@irman	PEER-SIGN ✓
hash	ad9c3b2…
tier	1A
cohort	south-fl-carib-seph

LAUDE · COHORT.GAP_CHECK()
3rd Cuban-Sephardic carrier in 14 mo at MSMC. Zero published cohorts on this admixture. case-001 fills the gap on publish.

Embed Toronto surveillance so the daughter inherits.

LAUDE
Attached. CASCADE_PROTOCOL_LINKED. Daughter's subtree now references this bundle.

Sign-ready for the board?

CASENEX ANSWER
Tier-1A · @anil + @irman · 3rd carrier · gap-filling

↓ **case bundle**

9:41 5G 100%

Om ENTERPRISE **OmicsNex** variant interpretation

7× ANCHORS | PATH VERDICT | 1A PARP-I

ONCONEX · 4:02 PM
Pathogenicity on **c.5266dupC**. ACMG + functional + drug response. Tight.

LAUDE · VARIANT.PULL_ANCHORS()
7 anchors federated:

ANCHOR TABLE

ClinVar	VCV055638 · 4★
ClinGen ENIGMA	VCEP v1.1.0
COSMIC	tumor profile
gnomAD v4.1	AFR 0.0008
F1CDx	HRD+ 48%
CPIC	PARP-i 1A
Findlay SGE	−1.68 LOF

LAUDE
Functional: Findlay SGE **−1.68** (LOF → PS3). ACMG: **PVS1 + PS3 + PM2_S + PP5 → Pathogenic**.

Olaparib first-line. Tamoxifen safety for the daughter (TP53+)?

LAUDE · CPIC.TAMOXIFEN.CONTRAINDICATIONS
Daughter only. Tamoxifen + RT contraindicated

OMICSNEX ANSWER
Pathogenic · PVS1+PS3+PM2_S+PP5 · PARP-i Tier-1A

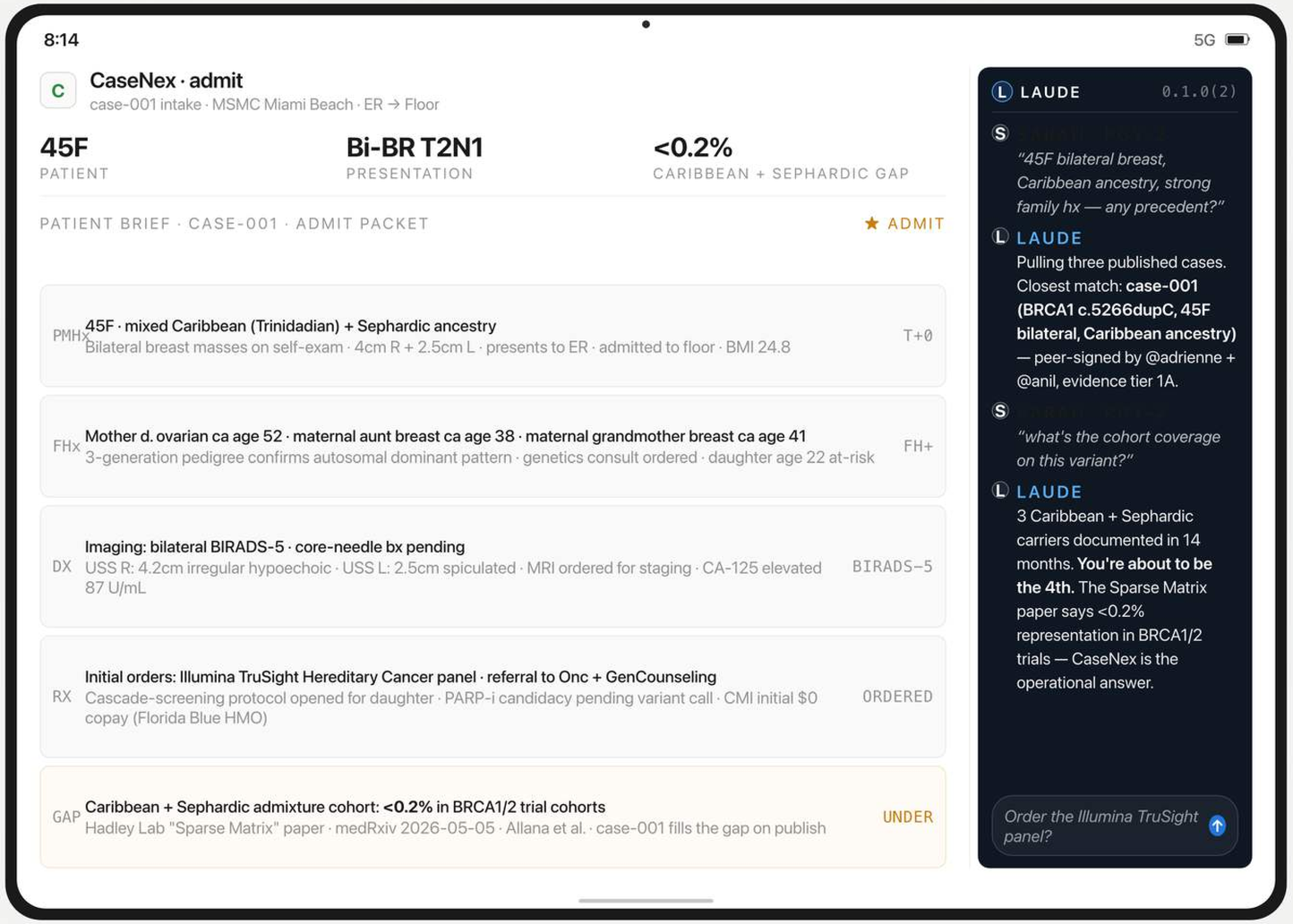
↓ **variant anchors**

ONCONEX SYNTHESIZES

Case-001 tumor-board signout: Pathogenic BRCA1 c.5266dupC · PARP-i Tier-1A · Toronto Protocol for daughter's TP53 R175H.

Three ledgers, three answers, one signed protocol. Same pattern reused by CardioNex, NephroNex, NeuroNex — only the orchestrator changes.

TUMOR_BOARD_PROTOCOL_SIGNED



A 45-year-old Caribbean + Sephardic woman presents with bilateral breast masses.

Family history of early ovarian + breast cancer. She belongs to a cohort with <0.2% representation in BRCA1/2 trials. case-001 is about to be authored on her admission.

SLIDE 06 / 15

RESIDENT · PGY-2 · 8:14AM · MSMC FLOOR

case-001 walks in. Caribbean. Bilateral. Underrepresented.

01 Real patient, real variant, real cohort gap

45F Caribbean + Sephardic admixture · BRCA1 c.5266dupC founder variant · <0.2% representation in published BRCA1/2 trial cohorts.

02 LAUDE finds precedent in seconds

Sarah types one line. LAUDE pivots to case-001 (peer-signed by @adrienne + @anil), surfaces ACMG criteria, flags the Caribbean cohort coverage gap.

03 CaseNex is the operational answer to the paper

Hadley Lab "Sparse Matrix" paper (*medRxiv 2026-05-05*) showed ≥40% under-representation. CaseNex bundles the patients who don't exist in published cohorts — until you publish them.

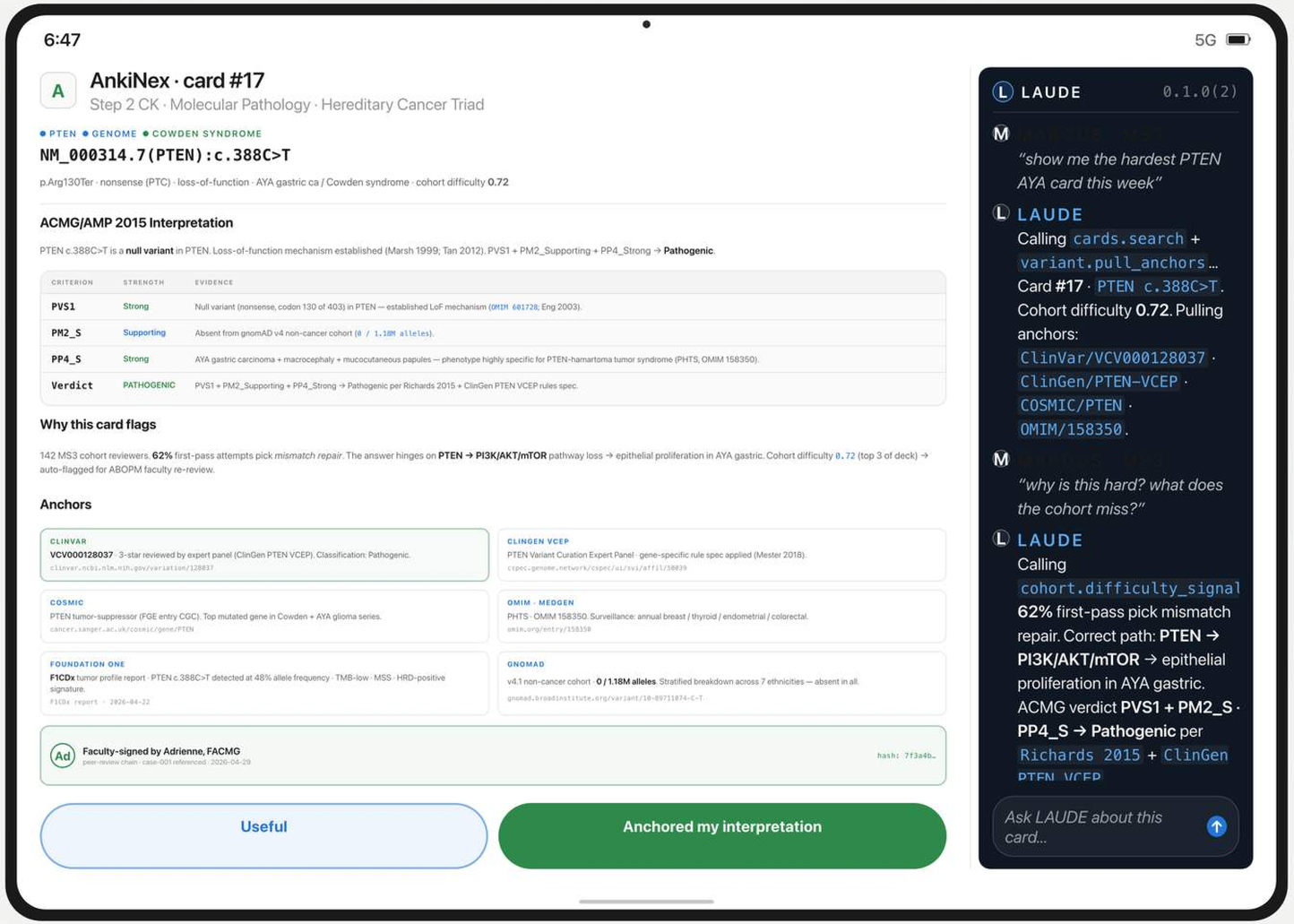
04 The case walks the whole system

Same case-001 reaches Marcus (MS3), Adrienne (FACMG), Anil (PM attending), the OncoNex tumor board, the Caribbean cascade. *One artifact, five tiers.*

CANONIC NEXUS

case-001 · BRCA1 c.5266dupC · 45F Caribbean + Sephardic · MSMC Miami Beach

LEDGER · CASE_PUBLISHED · CASENEX_CASE_UTILITY_SIGNAL



Marcus is a medical student. New case on the floor — the 45F admitted last night.

LAUDE is the driver. The details are the evidence. He asks LAUDE for the hardest PTEN AYA card. LAUDE renders card #17 with the full ACMG/AMP table, ClinVar / ClinGen / COSMIC / OMIM anchors, faculty signature.

SLIDE 07 / 15

STUDENT · MS3 · 6:47AM · HOSPITAL CAFETERIA

Marcus preps for rounds.

01 **LAUDE is the driver**

One natural-language prompt. LAUDE returns card #17 (PTEN c.388C>T) with full ACMG/AMP detail. The details are the evidence.

02 **ACMG/AMP 2015 in one screen**

PVS1 + PM2_Supporting + PP4_Strong → Pathogenic. Every criterion cites Richards 2015 + the ClinGen PTEN VCEP rules spec.

03 **Anchors are real**

ClinVar VCV000128037 (3★, ClinGen PTEN VCEP) · COSMIC FGE entry · OMIM 158350 (PHTS). Every anchor resolves to a public URL.

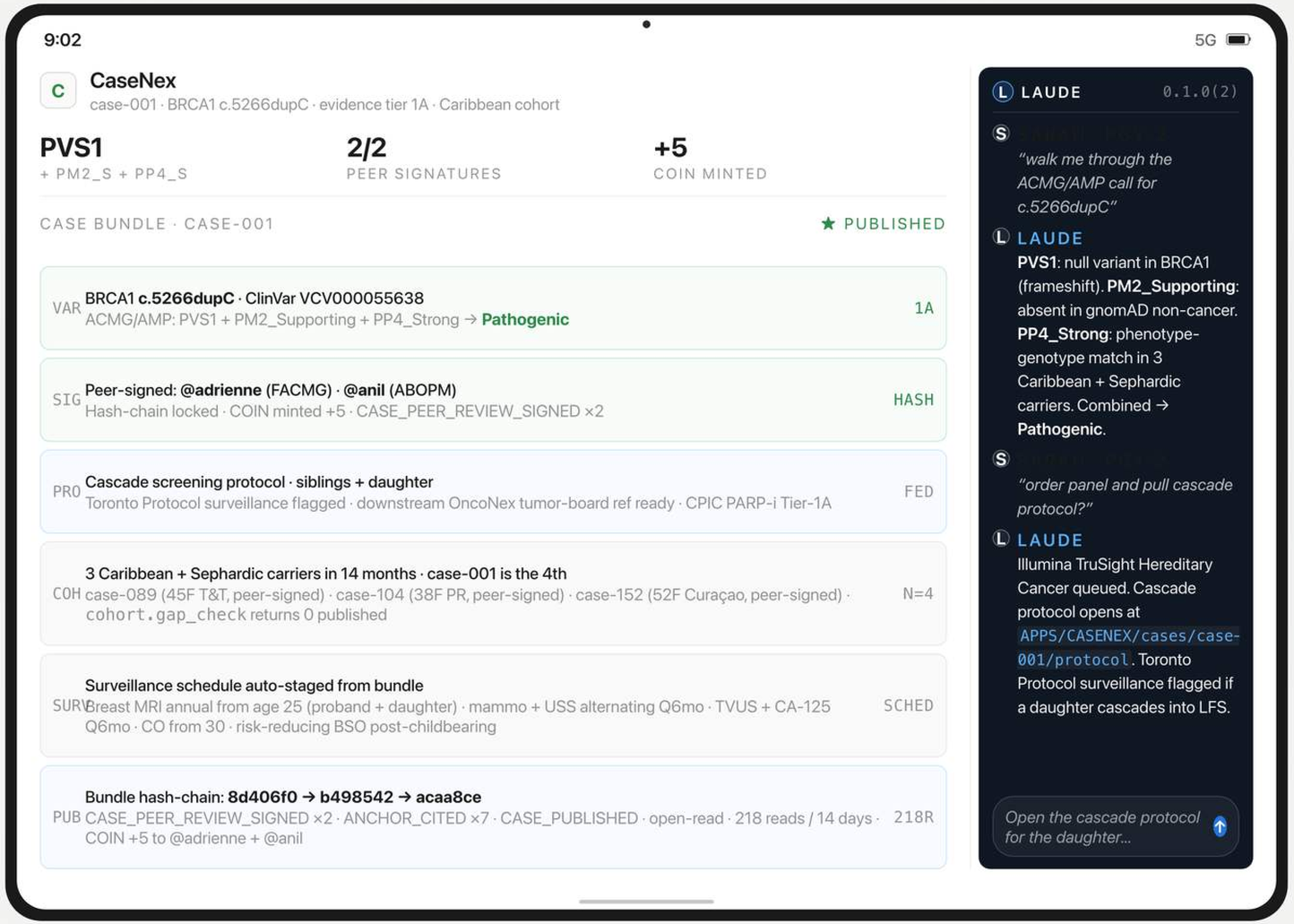
04 **Cohort difficulty drives faculty re-review**

0.72 cohort difficulty triggers ABOPM faculty re-review. Marcus's tap fires ANKI_CARD_REVIEW and hash-chains to case-001.

CANONIC NEXUS

magic://hadleylab/ANKINEX/decks/step2ck-hereditary-triad/card-17

LEDGER · ANKI_CARD_REVIEW · COIN minted on signature



S **Sarah is a PGY-2. She just admitted the 45F bilateral-breast patient and needs precedent.**

She asks LAUDE for a Caribbean-cohort match. case-001 surfaces — peer-signed, tier-1A, ACMG criteria fully traced. She orders the panel and pulls the cascade protocol in two taps.

SLIDE 08 / 15

RESIDENT · PGY-2 · 9:02AM · MSMC FLOOR

Sarah finds precedent. Peer-signed. Hash-chained.

01 **Case-bundle is the unit of evidence**

Not a paper. Not a chart note. A **case-bundle**: peer-signed by two ABOPM-credentialed authors, hash-chained, COIN-minted, content-addressable, federated.

02 **ACMG/AMP criteria live in the bundle**

`PVS1 + PM2_Supporting + PP4_Strong → Pathogenic`. Every criterion traces to public-database evidence (ClinVar VCV, gnomAD, PharmGKB).

03 **CaseNex is the RWE gold standard**

2 peer signatures gate `CASE_PUBLISHED`. HIPAA-deidentified by construction. Caribbean cohort first-class, not afterthought. Open reading · credentialed authoring.

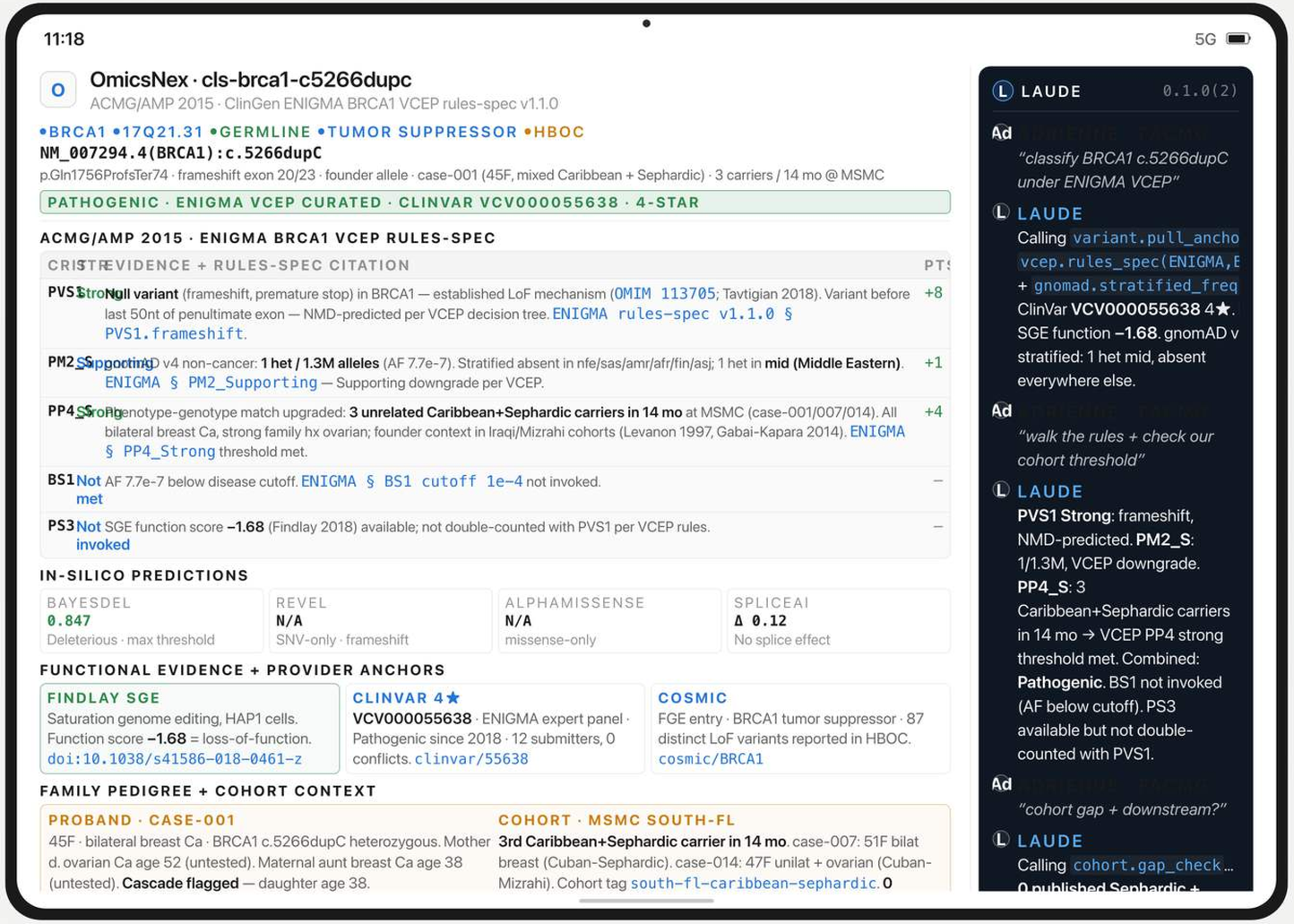
04 **Sarah orders the panel; LAUDE federates**

One tap orders TruSight; LAUDE simultaneously opens the cascade protocol for the daughter, flags Toronto Protocol surveillance in OncoNex. *Cross-NEX handoff is the unfair advantage.*

CANONIC NEXUS

`magic://hadleylab/CASENEX/cases/case-001 · evidence tier 1A`

LEDGER · `CASE_PEER_REVIEW_SIGNED ×2` · `CASE_PUBLISHED` · +5 COIN



Adrienne classifies. The Illumina panel returned BRCA1 c.5266dupC.

Genetics consult, 11:18am. She opens OmicsNex. LAUDE walks the ACMG/AMP 2015 rules under the **ClinGen ENIGMA BRCA1 VCEP** rules-spec — functional assays, gnomAD non-cancer stratification, in-silico predictions, family-pedigree cohort. PVS1 + PM2_Supporting + PP4_Strong → **Pathogenic**. Submit queues peer-sign for Anil + Irman.

SLIDE 09 / 15

SPECIALIST · FACMG · 11:18AM · GENETICS CONSULT

Adrienne classifies.

01 **ENIGMA VCEP rules-spec walked end-to-end**

PVS1 + PM2_Supporting + PP4_Strong → Pathogenic. Every criterion cites the rules-spec line; BS1 + PS3 explicitly considered and dismissed under VCEP guidance.

02 **Functional + in-silico anchored**

Findlay SGE –1.68 (LoF) · BayesDel 0.847 · SpliceAI no effect · ClinVar 4-star (ENIGMA expert panel) · COSMIC FGE entry. Every anchor public.

03 **Cohort is novel evidence, not a footnote**

3 mixed Caribbean+Sephardic carriers in 14 mo at MSMC. **0 published cohorts** in this admixture. case-001 is the fill — and the byline.

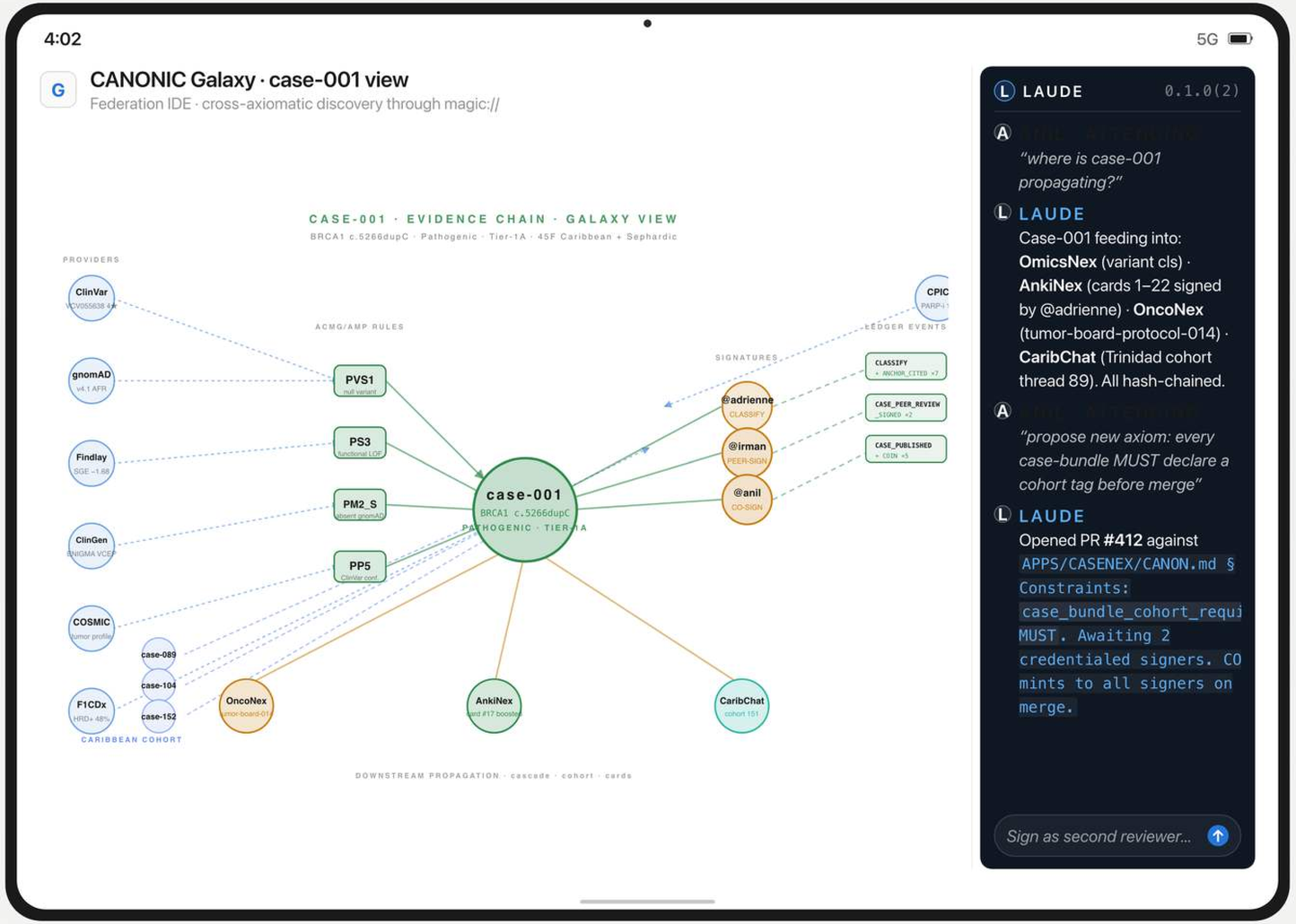
04 **Submit fires the ledger chain**

CLASSIFY on submit. Peer-sign queue: @anil (ABOPM) + @irman (FACMG · MSMC). On 2nd signature: bidirectional bind to case-001; ClinVar resubmission under ENIGMA VCEP.

CANONIC NEXUS

magic://hadleylab/OMICSNEX/cls-brca1-c5266dupc

LEDGER · CLASSIFY · CASE_PEER_REVIEW_SIGNED · ClinVar resubmit queue



Anil is the precision-medicine attending. Tumor board, 4 PM. case-001 is on the agenda.

He opens Galaxy, sees the case feeding AnkiNex + OncoNex + CaribChat. Asks LAUDE to propose a new axiom in CANON.md. LAUDE opens PR #412. Two signatures merge it. COIN mints to all signers.

SLIDE 10 / 15

ATTENDING · PRECISION MED · 4:02PM · TUMOR BOARD

Anil sees the whole graph. And opens an axiom.

01 Galaxy is the federation IDE

Every governed scope, every `CANON.md`, every case-bundle as a navigable node. Galaxy is infrastructure — like LAUDE — not workload.

02 case-001 propagates in five directions

One artifact feeds: OmicsNex classification · AnkiNex cards 1–22 · OncoNex tumor-board protocol-014 · CaribChat Trinidad thread 89 · LAUDE's next discovery prompt.

03 Governance via natural language

"propose new axiom: every case-bundle MUST declare a cohort tag." LAUDE opens PR #412 against the governed CANON.md. Two credentialed signatures merge it.

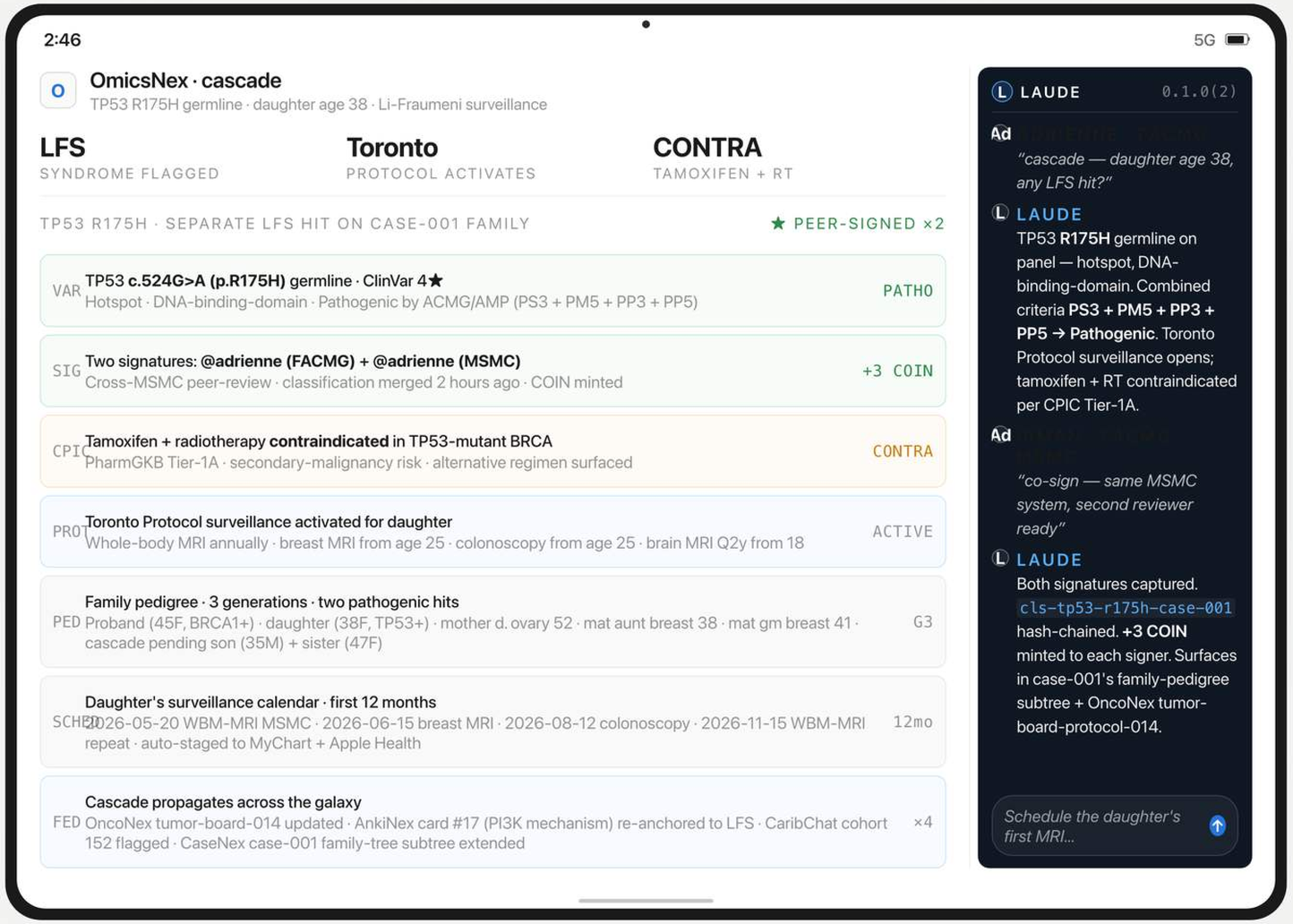
04 The ABOPM credential is the gate

Open-write base (anyone reads, anyone proposes). Credentialed-write apex (only ABOPM-credentialed signatures merge axioms or peer-sign case-bundles). COIN mints on merge.

CANONIC NEXUS

`magic://hadleylab/GALAXY · case-001 federation view`

LEDGER · `GALAXY_NODE_VIEWED` · `AXIOM_PROPOSED` · `CANON_PR_OPENED`



Ad **Two weeks later. Cascade screen on the patient's daughter, age 38.**

TP53 R175H germline — a separate Li-Fraumeni hit on the same pedigree. Adrienne classifies. Irman co-signs from MSMC. Toronto Protocol surveillance activates. Tamoxifen + radiotherapy contraindicated.

SLIDE 11 / 15

CASCADE · 2 WEEKS LATER · 2:46PM

The cascade activates. Toronto Protocol on the daughter.

01 **Separate hit on the same family**

Daughter (38) panels positive for **TP53 R175H germline** — a Li-Fraumeni hotspot. Independent of the mother's BRCA1. Two pathogenic variants, one pedigree, two surveillance protocols.

02 **Cross-MSMC peer-signature**

Adrienne (FACMG) classifies. **Irman (FACMG · MSMC)** co-signs as second reviewer — same system, faster cycle. Hash-chain locks, COIN mints to both.

03 **CPIC contraindication lands immediately**

Tamoxifen + radiotherapy contraindicated in TP53-mutant breast cancer (PharmGKB Tier-1A). LAUDE surfaces this as the classification merges — no clinician digs for it.

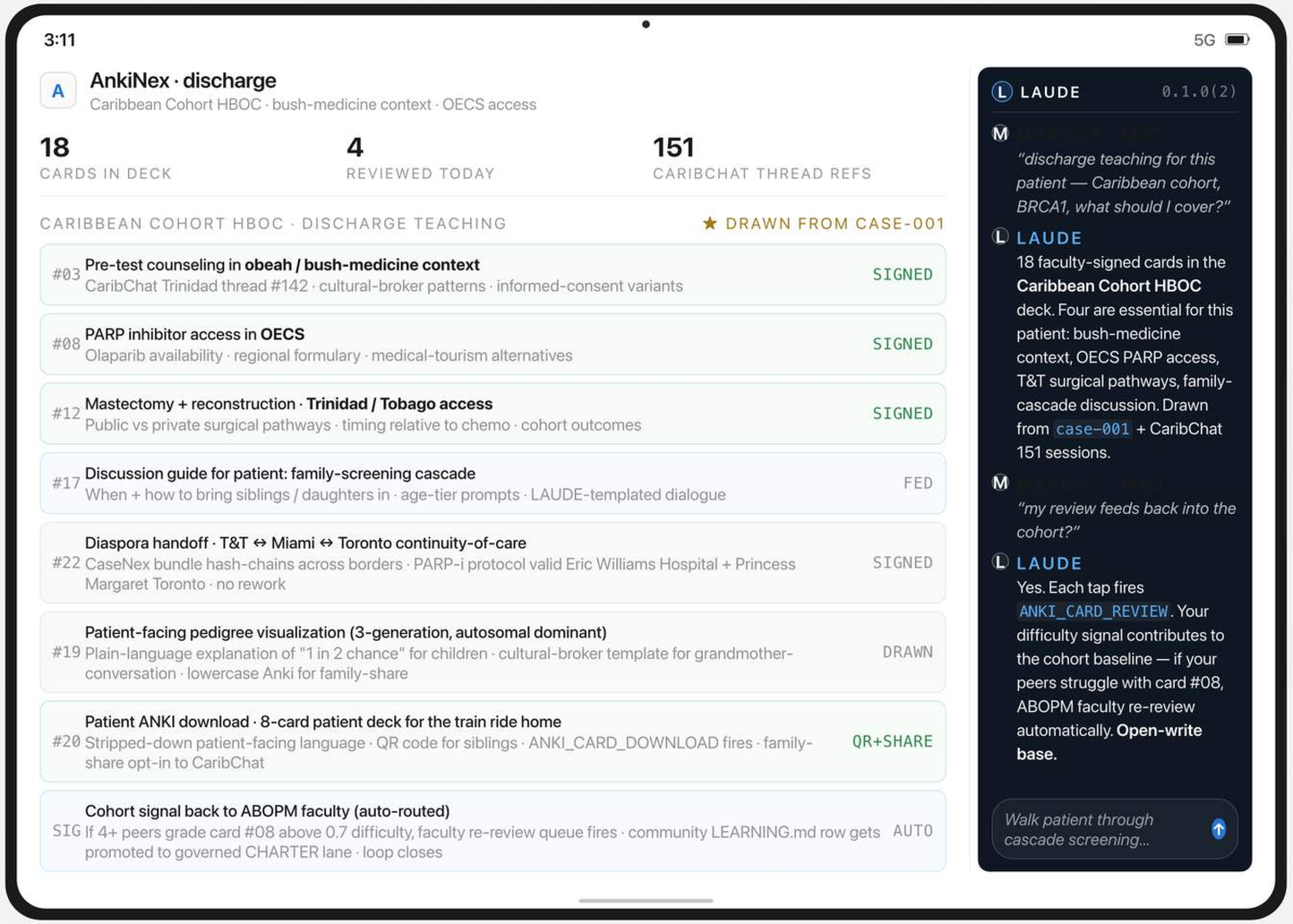
04 **Toronto Protocol becomes a calendar**

Whole-body MRI annually · breast MRI from 25 · colonoscopy from 25. LAUDE schedules the daughter's first MRI from the cascade view. Surveillance is operational, not a PDF.

CANONIC NEXUS

magic://hadleylab/OMICSNEX/cls-tp53-r175h-case-001 · Li-Fraumeni cascade

LEDGER · CLASSIFY · CASE_PEER_REVIEW_SIGNED ×2 · +6 COIN



M **Discharge day, 3 PM. Marcus is asked to walk the patient through what comes next.**

He opens the Caribbean Cohort HBOC deck — 18 faculty-signed cards on bush-medicine context, OECS PARP access, T&T surgical pathways. Four reviews feed the cohort signal back. The system loops.

SLIDE 12 / 15

STUDENT · MS3 · DISCHARGE DAY · 3:11PM

The loop closes. Marcus walks the patient out.

01 **Discharge teaching is a deck**

Not a brochure. Not a stack of PDFs. An 18-card Anki deck signed by ABOPM faculty, drawn from `case-001` + 151 Trinidad CaribChat threads.

02 **Cultural context is governed**

Obeah / bush-medicine patterns. OECS PARP-inhibitor access. T&T surgical pathways. Faculty-signed by clinicians who serve those communities — not generic patient-ed material.

03 **Open-write base feeds the cohort**

Marcus's `ANKI_CARD_REVIEW` events flow into the same ledger as 142 other MS3s. If cohort difficulty crosses 0.7, ABOPM faculty re-review fires automatically.

04 **The case becomes curriculum**

`case-001` → AnkiNex cards 1–22 → CaribChat threads → ABOPM curriculum update → next MS3's morning rounds. *One signature, downstream forever.*

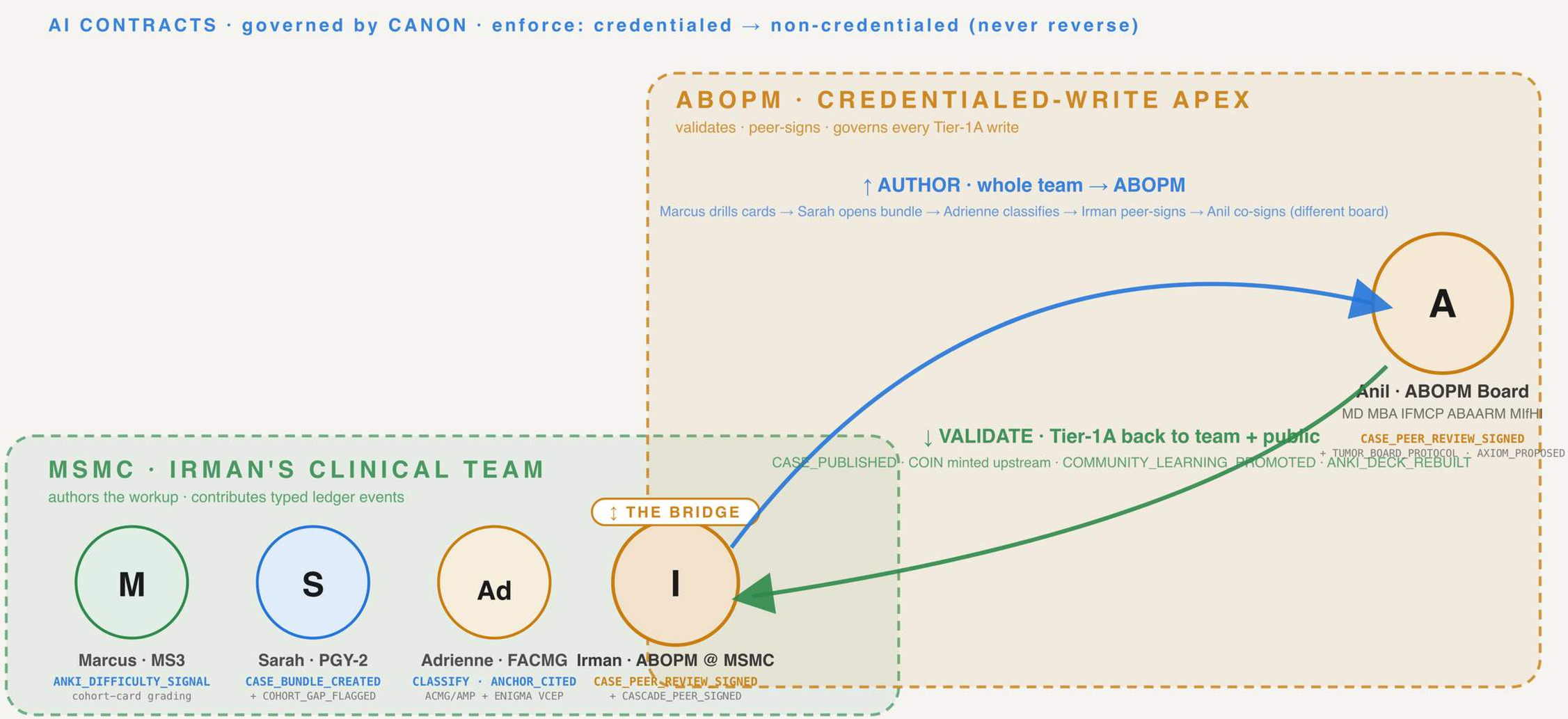
CANONIC NEXUS

`magic://hadleylab/ANKINEX/decks/caribbean-cohort-hboc · 18 cards · 4 reviewed`

LEDGER · ANKI_CARD_REVIEW · ANKI_CARD_DOWNLOAD · ANKI_DIFFICULTY_SIGNAL

Author up. Validate down.

The CANONIC credential circuit — the **entire team** contributes to validation through real community learning ledgers. MSMC team authors up the chain; ABOPM external board peer-signs at the apex; Tier-1A evidence flows back down to the team + open-read public. **AI contracts (governed by CANON) enforce the flow — credentialed-write apex feeds non-credentialed-read base, never the reverse.** Irman is the bridge: clinical practice at MSMC + ABOPM credentialed authorship.



CONCLUSION · THE AXIOM

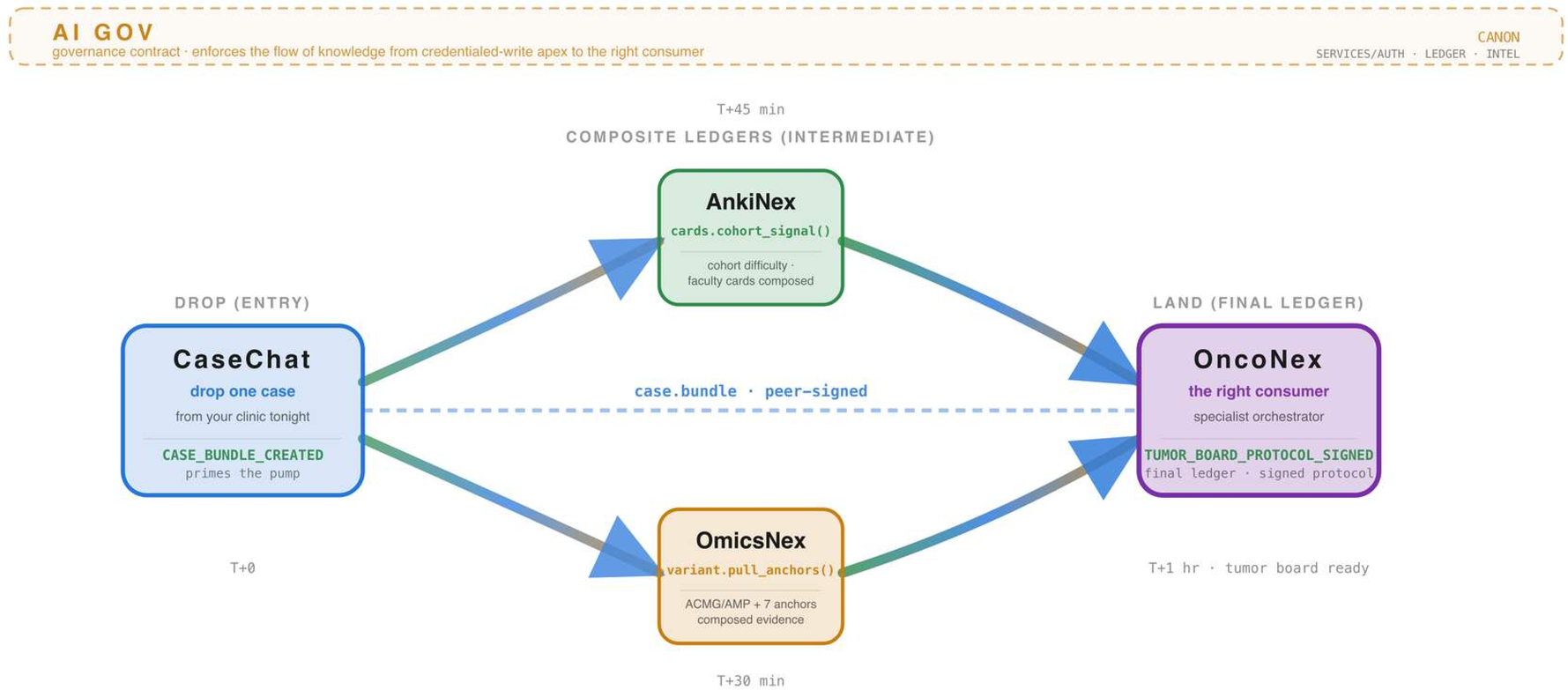
A case is the unit of clinical knowledge.

Drop one case from your clinic tonight to feed a community of learning. The drop primes the pump in **CaseChat**. **AI GOV** routes the flow downstream — AnkiNex + OmicsNex compose the evidence — **OncoNex** is where the knowledge lands for the right consumer. Every read mints COIN back upstream. The chain compounds from there.

• Betas coming soon across the CANONIC NEXUS suite

COMING SOON TO THE App Store

iPad + iPhone · iOS 17 · TestFlight Q3 2026



REAL-TIME GALAXY · COMPOSITE LEDGERS → FINAL LEDGER

Drop primes the pump · AI GOV enforces the flow · knowledge lands at the right consumer · every read mints COIN upstream

LAUDE
routes every step in the chain

Drop one case from your clinic tonight — feed a community of learning.

A case is the **unit of clinical knowledge.** One mixed-ancestry workup, peer-signed by **Irman + Anil**, primes the credential pump. **AI GOV** routes the flow downstream. **OncoNex** is where the knowledge lands. Every read mints COIN back upstream — the chain compounds from there.

TestFlight invite tonight

galaxy.canonic.org/testflight · iOS 17+

The federation is growing.

Eight institutions have already joined. CANONIC builds the credential circuit shoulder-to-shoulder with academic medical centers, health systems, and community partners — from Miami Beach to Trinidad, from Riyadh to Madrid. Every partner brings their patients, their case histories, their voice. Together we make medicine that reflects the people it serves.

8+
PARTNER INSTITUTIONS, EIGHT AND COUNTING

ABOPM
The board that credentials precision-medicine clinicians
FOUNDING CREDENTIALING BODY

AdventHealth
Florida hospital network running the first pilot
PILOT SIGNED

Howard University
Howard Medicine — serving cohorts traditional trials miss
TALKS MOVING FAST

UCF
College of Medicine · precision-med curriculum
LIVE COHORT

UWI
University of the West Indies · Caribbean cohorts
LIVE COHORT

University of Malta
Mediterranean and Maltese cohorts · islands matter
IN CONVERSATION

UNED
Spain · reaching Iberian and Latin American patients
IN CONVERSATION

Mt Sinai Medical Center
Miami Beach · where the first case-001 began
HOME INSTITUTION

Pull up a chair.
Every partner reshapes the chain. **Bring your hospital, your residency program, or your patient community** — we walk the first case together, and your name joins the federation alongside the eight above.

→ partners@canonic.org

Eight in. The circuit gets stronger every time another institution leans in.