The Rise of Precision Empathy™

How One Family's Story Revealed the Next Frontier of Cancer Data

Jason Binder · Founder & CEO · Ember

CDISC Interchange 2026 · Denver, CO

Ember

Prompt: "What does the data tell us is the greatest myth of cancer care?"

Response: "The greatest myth in cancer care is that clinical stability means lived stability."

- Ember Lived Experience data



We fell in love.



We got married.



We built a family.



We built a life.



We assumed we had time.









25+ years in pharma R&D

Merck → Genentech/Roche → AstraZeneca → Pathos AI

Deep experience in oncology drug development and clinical trial execution

Built enterprise data, analytics, ML and decision systems

Led clinical operations data transformation at scale

At Pathos, brought patient and caregiver perspective into AI-driven oncology development



Everything changed...

February 6, 2022

Glioblastoma

The hard truth

~14,000 Americans are diagnosed with glioblastoma each year	Standard therapy extends median survival to 15–20 months
~7% of patients are alive five years after diagnosis	"Standard of care" has remained essentially unchanged since 2005
Recurrence remains nearly universal	A new family enters the glioblastoma journey every 37 minutes











4 Brain Surgeries

37 Radiation Treatments

Loss of appetite

Chemotherapy

Shingles

Memory loss

Optune

Expanded Access

Clinical Trial

Fatigue













Insomnia

Hypervigilance

Panic Attacks

Depression

Trauma Counseling

Blood clots

Vertigo

The medical record told one story. *Our family lived another.*

Medicine Measures the Patient's (only)	The Family Experiences
MRI	Fear
Lab values	Uncertainty
Tumor size	Sleepless nights
Treatment	Hope
Progression	Parenting
Adverse events	Grief

When you're living with Cancer, the questions never stop.

Is this normal?

Should we call?

What does this MRI really mean?

Is chemotherapy worth it?

Are we making the right decision?

How much time is left?

Hospice changed everything.

Truth

Families can handle difficult truths and need it.

24/7 Care

Support shouldn't disappear when the navigator goes home.

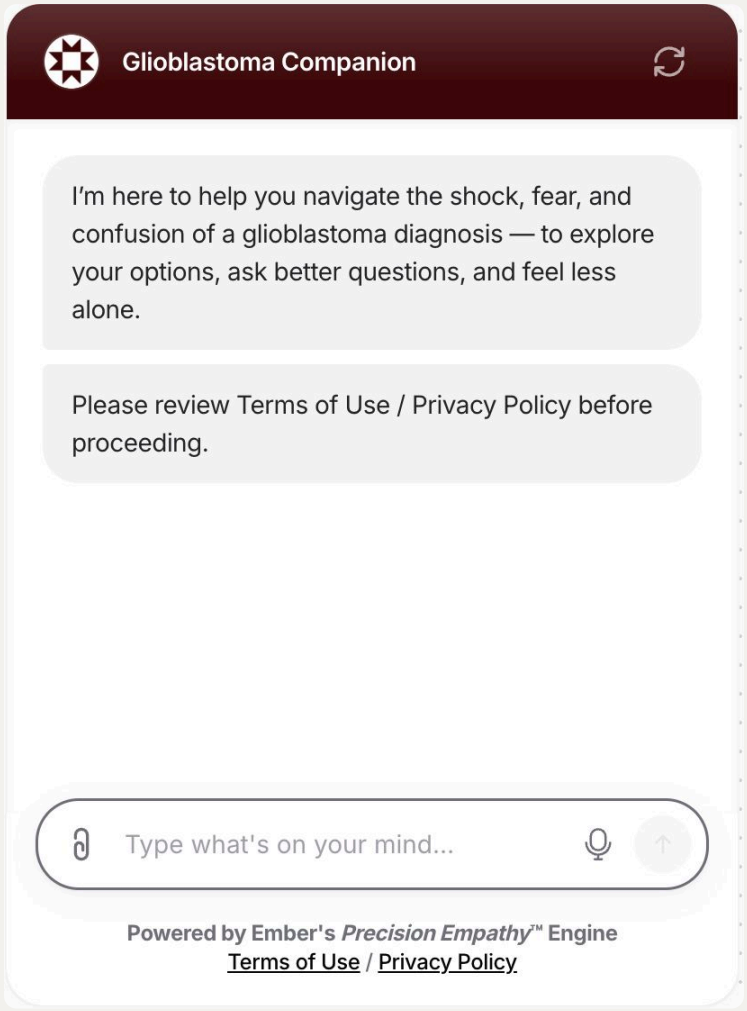


I didn't know what I didn't know

What I experienced	What I needed
Time crunch: decision making under duress	Sounding board: shame free space to ask questions
Hidden costs: decisions today impact options tomorrow	Transparency: ability to weigh choices clearly
Chaos: uncertainty reigns supreme	Agency: in lieu of a cure; a plan
Fatigue: information is fragmented	UX: single user experience; no searching
Frustration: recommendations conflict	Driver seat: the right questions to ask

One question stayed with me.

> *If I'm struggling [with all my experience and network], how can anyone even spell GBM meaningfully?*



We built the Ember Companion.

- Disease-specific · 24/7 · Personalized · Multi-lingual
- Grounded in trusted evidence
- Vetted with Neuro-Oncologist, Palliative Care Specialist, Integrative Care Specialist, Caregivers, Patients & Military Families
- Supports — not replaces — clinical care
- Education, Awareness → AGENCY

What Families Say When They Feel Truly Supported

> “It’s reassuring to hear a rational voice in all the chaos.”
>
> “I want to THANK YOU for being with me along the journey. Your support and knowledge helped me tremendously.”
>
> “The clarification helps me understand and navigate next steps and questions.”
>
> “My neuro-oncologist does not like to answer questions so I appreciate this service very much. Thank you for clarifying.”
>
> “I need reassurance and you never fail me.”
>
> “I can’t even tell you how much this has helped me. I’m so grateful.”

We thought we were building a companion.

We built an observatory.

The questions became data.

Conversation	Hidden Signal
Is this normal?	**Symptom uncertainty**
Is chemo worth it?	**Treatment uncertainty**
I can't do this anymore.	**Caregiver burden**
Are there more options?	**Treatment exploration**
Nobody is listening.	**Loss of trust**

What the Data Reveals

Treatment Decisions

~54% of conversations center on treatment choices, tradeoffs, and what comes next.

Caregiver Burden

Emotional strain and exhaustion appear in ~32% of threads — often unnamed but persistent.

Diagnostic Uncertainty

Prognosis questions and MRI anxiety drive ~25% of engagement across the community.

Functional Decline

Walking, speech, memory, vision, and independence are the outcomes families watch most closely.

Between-Visit Signals

Subtle shifts in cognition, sleep, and behavior surface in conversation before formal clinical events.

The Interpretation Gap

Families can find facts. What they struggle with is what those facts mean for the person in front of them.

Traction and Scientific Validation (as of July 2026)

GBM COMPANION TRACTION

3,170 Unique family journeys

4,028 Conversations

48,977 Messages exchanged

50+ Countries represented

79 NPS

91% Say Ember meets their needs very or extremely well

86% Promoters (9–10/10)

77% Perfect 10/10 recommendation

152 Survey respondents

The usage dataset runs through July 4, 2026 and contains 4,028 conversation threads.

SCIENTIFIC PROOF: ASCO 2026

ASCO® AMERICAN SOCIETY OF CLINICAL ONCOLOGY™

Abstract ID: 1514

Care Delivery / Models of Care

May 29, 2026 • 2:51–2:57 PM (E350)



Use of a patient-facing digital tool for glioblastoma outside scheduled clinic visits

Binder J, Sharma A, Ralic D, Sengupta S

- First analysis of a patient-facing AI companion capturing lived experience outside scheduled clinical encounters.
- **1,661 threads • 15,197 messages • 54 countries**
- Topics included scan uncertainty, treatment sequencing, side effects, caregiver role strain, trial exploration, prognosis, and hospice transition.

> *"These data suggest that a patient-facing AI platform can capture meaningful lived experience in real time and at scale—providing insight beyond what is typically available in clinical encounters."*
>
> – ASCO 2026 Abstract 1514

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STAND UP TO CANCER® · INNOVATE GBM · ANCHORED FOR GOOD · STACHE STRONG · Uncle Kory FOUNDATION

Home > Journal of Neuro-Oncology > Article

Integrating ex vivo platforms with AI to guide glioblastoma treatment

Review | Published: 03 September 2026

Volume 179, article number 70 (2026) Cite this article

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Mainak Bardhan, Samanta Paul, Sirjana Pun, Manish Raj Aryal, Pier Paolo Claudio, Jason Binder, Riccardo Barrile & Daniel A. Pomeranz Krummel

QOL-04 10:29-10:34am

AI-assisted longitudinal analysis identifies care-navigation inequities and persistent decision burden in glioblastoma

JADADS

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Ember

Ember Companion

A new modality for cancer

Radiology imaging — MRI, CT, PET, mammography, ultrasound

Digital pathology — H&E slides, immunohistochemistry, spatial pathology

Genomics — DNA mutations, copy-number changes, fusions, germline variants

Transcriptomics — RNA expression, single-cell RNA sequencing

Proteomics — protein expression, phosphoproteomics

Epigenomics — DNA methylation, chromatin accessibility

Metabolomics — metabolites and metabolic signatures

Clinical data — diagnosis, stage, treatment history, labs, performance status, comorbidities

Longitudinal outcomes — progression, recurrence, toxicity, hospitalization, survival

Patient-reported outcomes* — symptoms, quality of life, function, treatment burden

Wearables / digital biomarkers — activity, sleep, gait, heart rate, mobility

Lived-experience language — patient and caregiver conversations, symptom descriptions, uncertainty, functional change, treatment concerns

PROs Ask. Lived Experience Is Already Being Expressed.

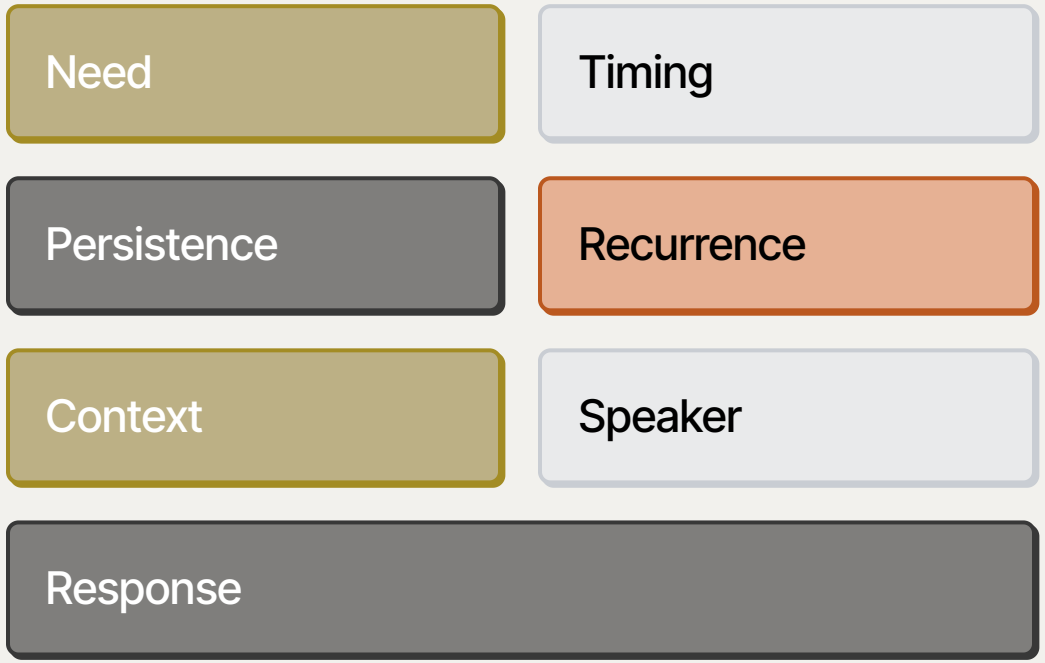
Patient-Reported Outcomes	Lived Experience Language
Active data collection	**Passive data capture** from naturally occurring interactions
Patient must complete an assessment	**No additional questionnaire required**
Structured at collection	Unstructured at capture → **AI/NLP structures the signal**
Predefined questions and domains	Patient/caregiver determines **what matters in the moment**
Scheduled, **episodic snapshots**	Potentially **longitudinal and event-driven**
Recall periods introduce **recall bias**	Captured closer to the experience, potentially **reducing recall burden**
Usually patient perspective	**Patient + caregiver** perspective
Measures known constructs	Can surface **unexpected or emerging needs**
Standardized score	AI/NLP derives **domains, timing, recurrence, persistence, role, change**

What if lived experience could become a *leading indicator* of a clinical event?

Precision Empathy™

Precision Empathy is a framework for identifying recurring signals of unmet need in patient and caregiver language early enough to connect people with the right human support before those needs become crises.

We don't measure vitals.
We measure patterns.



1 What begins to show up at home

> *"He seems a little more confused today."*

> *"His words are getting harder to understand."*

> *"He slept most of the day. Could this just be the steroid taper?"*

> *"I don't know if this is something I should call about."*

Small observations recur before the chart clearly changes.



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3 What the care system sees later

- Unscheduled clinical call
- Medication adjustment
- Urgent imaging / evaluation

The question is whether the language signal appears early enough to warn of rising risk.



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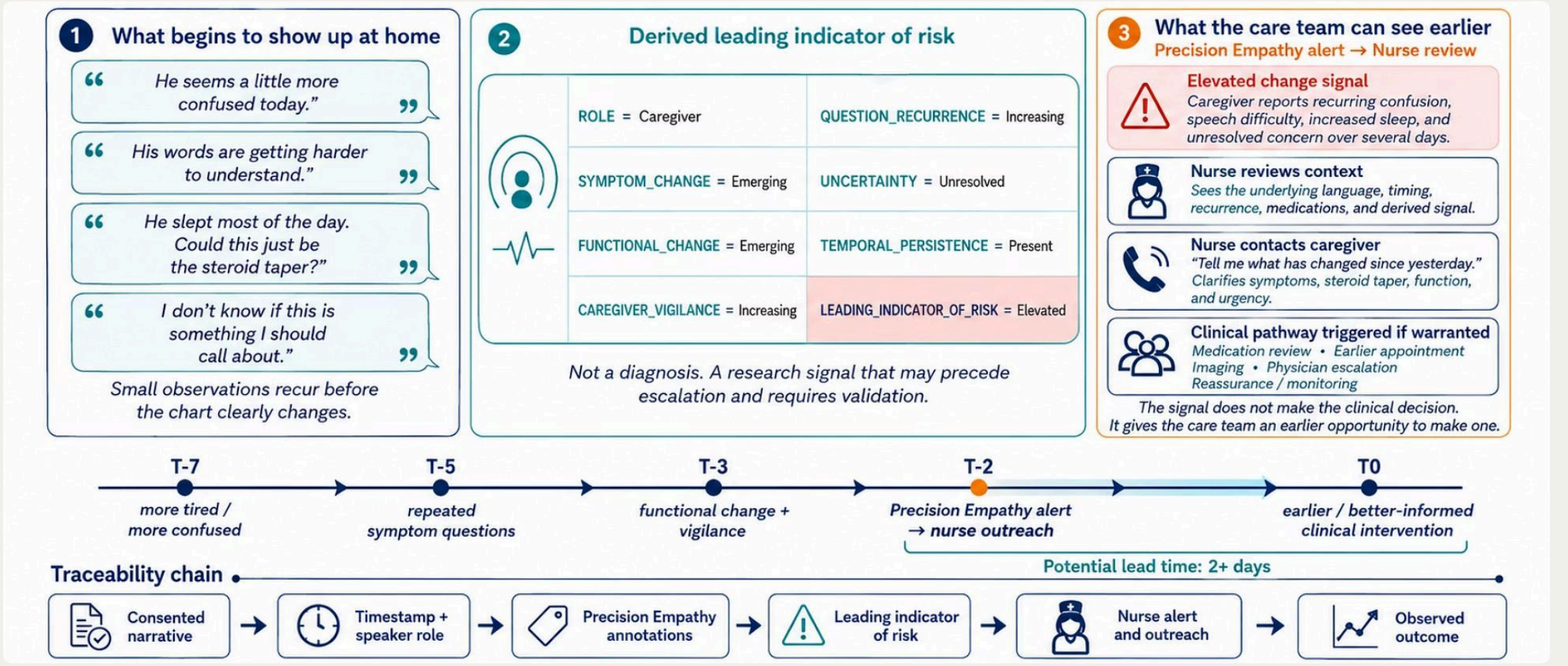
Small observations recur before the chart clearly changes.

2 Derived leading indicator of risk

ROLE = Caregiver	QUESTION_RECURRENCE = Increasing
SYMPTOM_CHANGE = Emerging	UNCERTAINTY = Unresolved
FUNCTIONAL_CHANGE = Emerging	TEMPORAL_PERSISTENCE = Present
CAREGIVER_VIGILANCE = Increasing	LEADING_INDICATOR_OF_RISK = Elevated

Not a diagnosis. A research signal that may precede escalation and requires validation.




1
What begins to show up at home
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Not a diagnosis. A research signal that may precede escalation and requires validation.
3
What the care team can see earlier
Precision Empathy alert → Nurse review
Elevated change signal
Caregiver reports recurring confusion, speech difficulty, increased sleep, and unresolved concern over several days.
Nurse reviews context
Sees the underlying language, timing, recurrence, medications, and derived signal.
Nurse contacts caregiver
"Tell me what has changed since yesterday."
Clarifies symptoms, steroid taper, function, and urgency.
Clinical pathway triggered if warranted
Medication review • Earlier appointment
Imaging • Physician escalation
Reassurance / monitoring
The signal does not make the clinical decision.
It gives the care team an earlier opportunity to make one.
T-7
more tired / more confused
T-5
repeated symptom questions
T-3
functional change + vigilance
T-2
Precision Empathy alert → nurse outreach
T0
earlier / better-informed clinical intervention
Potential lead time: 2+ days
Traceability chain
Consented narrative
Timestamp + speaker role
Precision Empathy annotations
Leading indicator of risk
Nurse alert and outreach
Observed outcome

Precision Medicine helped us understand *Disease*.

Precision Empathy™ helps us understand *People*.

Better Care Requires Both.

We are Ember



Jason Binder — Founder & CEO



Angeline Giammona — Co-Founder & COO



Tiffany Patrick — Chief Patient Officer



Scott Toth — CFO



Soma Sengupta MD, PhD, MBA — Neuro-Oncology & Integrative Care



Matt De Silva — Entrepeneur & Venture



Greg Grevera — Patient Advocacy & Clinical Strategy



Erica Olenski, BCPA, CPXP — Healthcare & Patient Experience



Danielle Ralic — Healthtech & Analytics

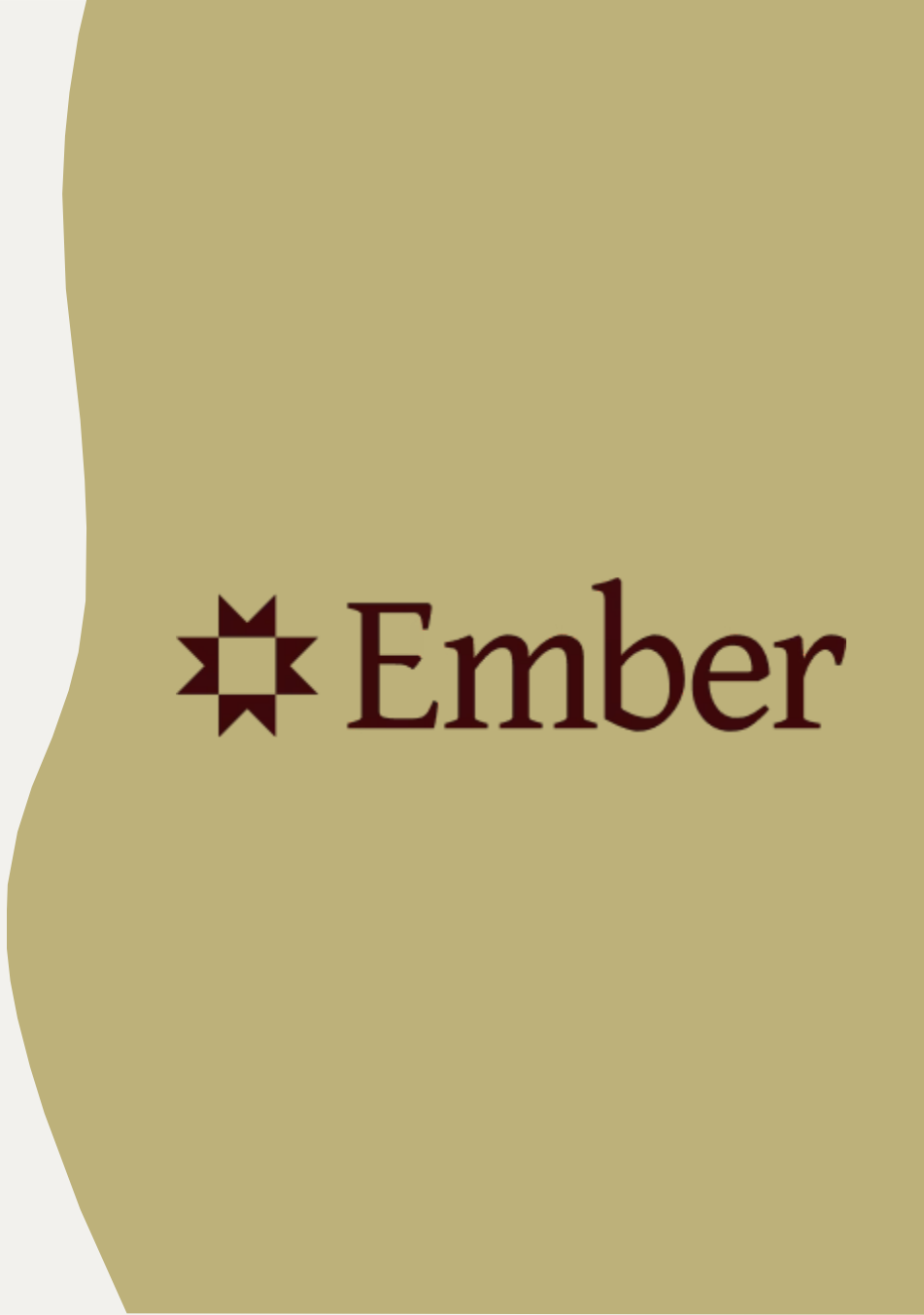
Ember

Filling the lived-experience gap in healthcare.

Ember captures what matters most to patients and caregivers and turns it into real-time intelligence that drives better decisions and healthcare outcomes.

Free for families. Valuable to Life Sciences.

@emberhealth.ai



Feedback?

