EPAM CAR-T Advanced Therapy Management Solution

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CAR-T Solution Overview

Challenges and Opportunity

Industry Challenges

The Market Challenge Unlike traditional therapies, ATM treatment journeys require **continuous, real-time collaboration** across the care continuum from **Manufacturers to Providers and Payers** to ensure Patients receive effective, personalized treatments in a **timely** manner.

Unfortunately, today, care personas across the ATM lifecycle are supported via **several, scattered point solutions**.
This amalgam of services **impairs collaboration, visibility,** and operational efficiency – ultimately leading to increased chances of **patient death.**

Platform Challenges

- Regulatory Compliance

- Complex Data Management

- Collaboration Across Teams

- Supply Chain Management

- Patient Access and Reimbursement

- Patient Management and Engagement

Market Size

The cell and gene therapy market was valued at USD 4.99 billion in 2021

Opportunity

Expected to reach USD 36.92 billion by 2027, growing at a CAGR of 39.62%

Cell And Gene Therapy Potential Customers

Pharmaceutical	Biotechnology	Cell and Gene Therapy	Immunotherapy-focused	Regenerative Medicine
Novartis: A global healthcare company with a focus on innovative therapies, including gene and cell therapies. **Gilead Sciences:** Known for its expertise in antiviral drugs and advancements in cell therapy.	**Bluebird Bio:** A biotechnology company specializing in gene therapies for severe genetic and rare diseases. **CRISPR Therapeutics:** Focused on developing transformative gene-based medicines	**Kite Pharma (a Gilead Company):** Specializing in cancer immunotherapy, including CAR-T cell therapy. **Adaptimmune:** Engaged in developing T-cell therapies to treat cancer	**Bristol Myers Squibb:** A leading pharmaceutical company with a strong presence in immunotherapy. **AstraZeneca:** Involved in the development of immunotherapies for cancer treatment.	**Regeneron Pharmaceuticals:** Known for its work in regenerative medicine and antibody therapies. **Vertex Pharmaceuticals:** Focused on developing therapies for serious diseases, including genetic disorders.

EPAM CAR-T Therapy

An integrated cloud solution for Patients , Care Providers for the Life Sciences Industry

EPAM ATM, a comprehensive, integrated cloud-based **Salesforce** solution designed to realize user experience and value in Life Sciences industry.

CAR-T therapy represents a ground-breaking approach to cancer treatment that has demonstrated significant promise in specific blood cancer types, and ongoing research aims to refine and expand its applications in the field of oncology.

This is an integrated platform to help Patient to track the treatment journey and communicate with similar patients through community portal. The solution augments Salesforce Health Cloud with automation and recommendation.

Patient Portal (Homepage)

- Patient can view treatment journey along with the contact details of doctor/care coordinator.

- Patient can view the medications along with their doses and request for refill.

- Notifications, appointments and tasks are displayed to help patient to plan his day in advance and be aware of the upcoming events.

- Quick links at footer provides the patient contacts for emergency help.

- Wellness programs are available to the patients for financial and emotional support. These programs provide the patient essential links to get further necessary help.

Community

- Patients can be part of multiple communities which provide them a digital space to connect, learn, share, and collaborate, offering numerous opportunities for growth.

- Patient can create or reply to a post for Information and experience sharing on an existing Topic.

- This offers opportunities to connect with others in the same health condition.

- This enables a large number of patients to contribute their perspectives and cure journey.

- Patients can share the Posts in social media to foster a sense of emotional support from their known ones.

Patient Onboarding

- Patients can be onboarded to the portal by care-coordinator

- Care-coordinator can define the patient treatment journey based on the advice received from CAR-T specialist.

- Care-coordinator can assign 'CAR-T specialist (Doctor), medication, Appointments, Tasks, Events, Goals, Therapy Type (Cancer Type , Cancer Stage), Insurance Representative & Finance Advisors to patient.
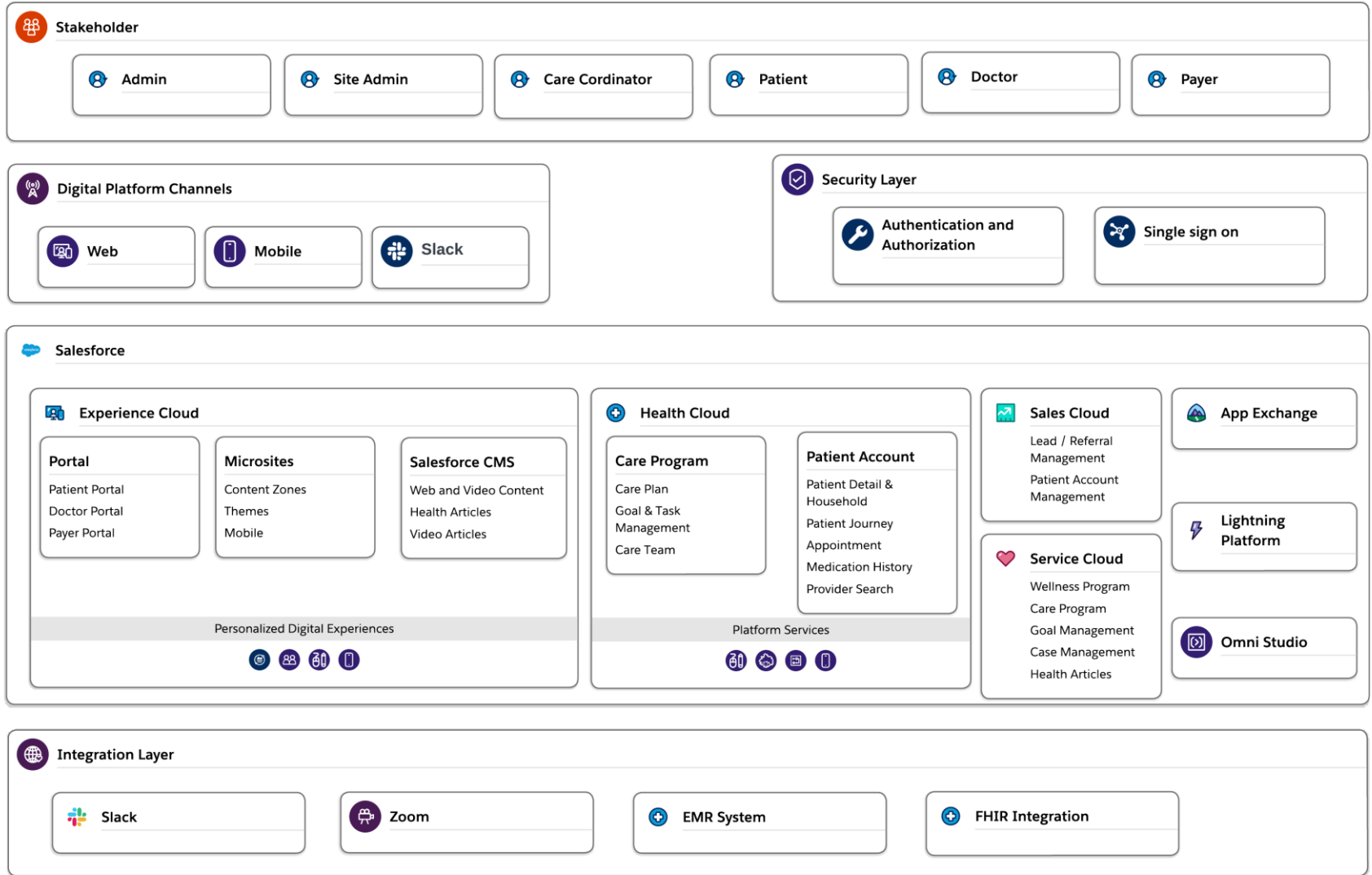
CAR-T Architecture

EPAM CAR-T Architecture

CART Patient Portal High level Architect Diagram

Legend:
- Personalization
- Privacy
- CMS
- Analytics
- Channels
- Low Code
- AI
- Apps
- SSOT
- Automation

Stakeholder
- Admin
- Site Admin
- Care Cordinator
- Patient
- Doctor
- Payer

Digital Platform Channels
- Web
- Mobile
- Slack

Security Layer
- Authentication and Authorization
- Single sign on

Salesforce

Experience Cloud

Portal
- Patient Portal
- Doctor Portal
- Payer Portal

Microsites
- Content Zones
- Themes
- Mobile

Salesforce CMS
- Web and Video Content
- Health Articles
- Video Articles

Personalized Digital Experiences

Health Cloud

Care Program
- Care Plan
- Goal & Task Management
- Care Team

Patient Account
- Patient Detail & Household
- Patient Journey
- Appointment
- Medication History
- Provider Search

Platform Services

Sales Cloud
- Lead / Referral Management
- Patient Account Management

Service Cloud
- Wellness Program
- Care Program
- Goal Management
- Case Management
- Health Articles

App Exchange

Lightning Platform

Omni Studio

Integration Layer
- Slack
- Zoom
- EMR System
- FHIR Integration

Use Cases

Use Case 1: View Patient Homepage (Post Treatment Journey)

1. My Medications Tab
2. My Appointments
3. Notification
4. Task
5. Quick-links
6. Global Symptom Search
7. Treatment Center Locator
8. Holistic Wellness (access to wellness programs)
9. Community topics you subscribed
10. My Journey (access to view treatment journey)
11. Login/My Profile
12. My Messages
13. Events
14. Videos
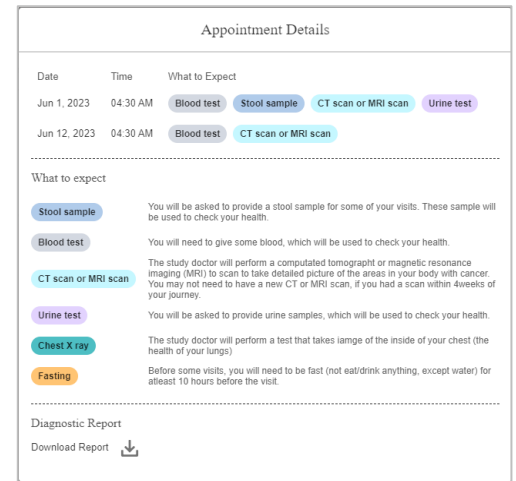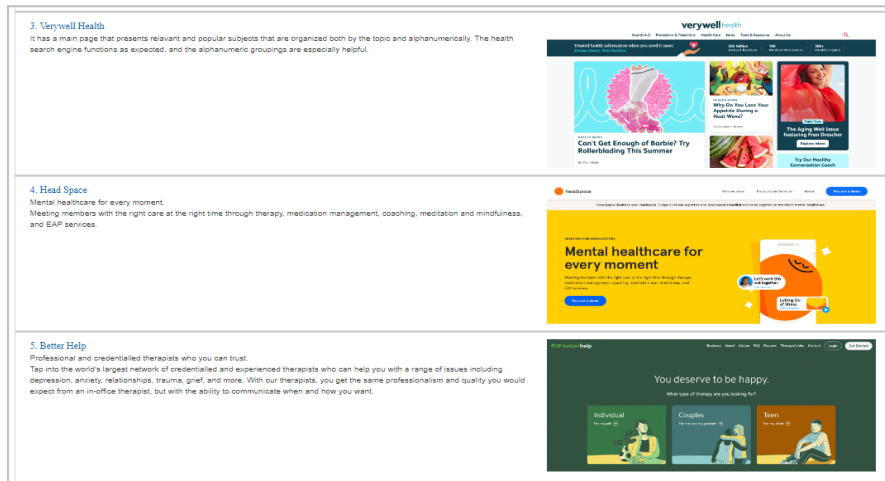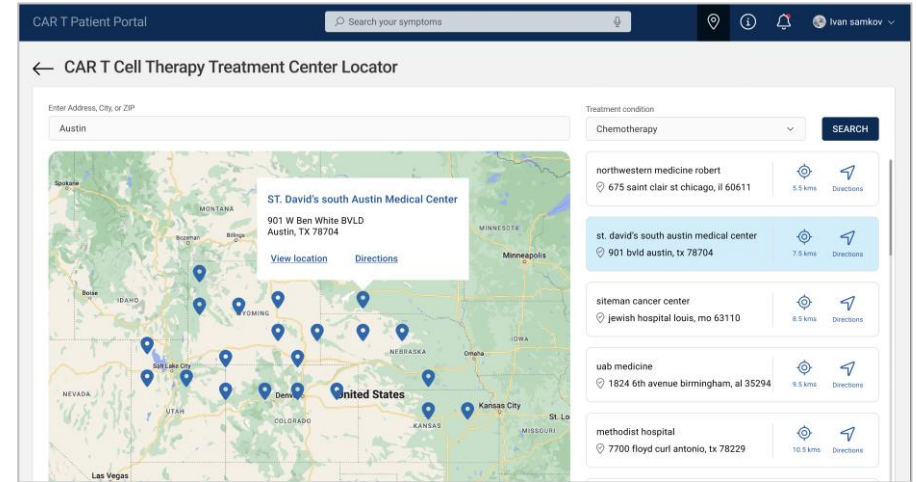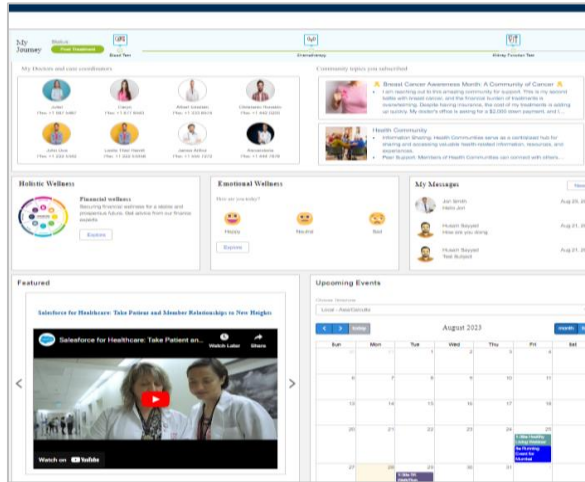
Use Case 2: Access Patient Community to Interact with Patients

1. Access Patient Community Page

2. Search for a community

3. Navigate to a community

4. Create new post

5. View/comment on POST

6. View POST details page

Use Case 3: Patient Onboarding

1. Patient Form

2. Maintaining Patient Records

3. Care Coordinator
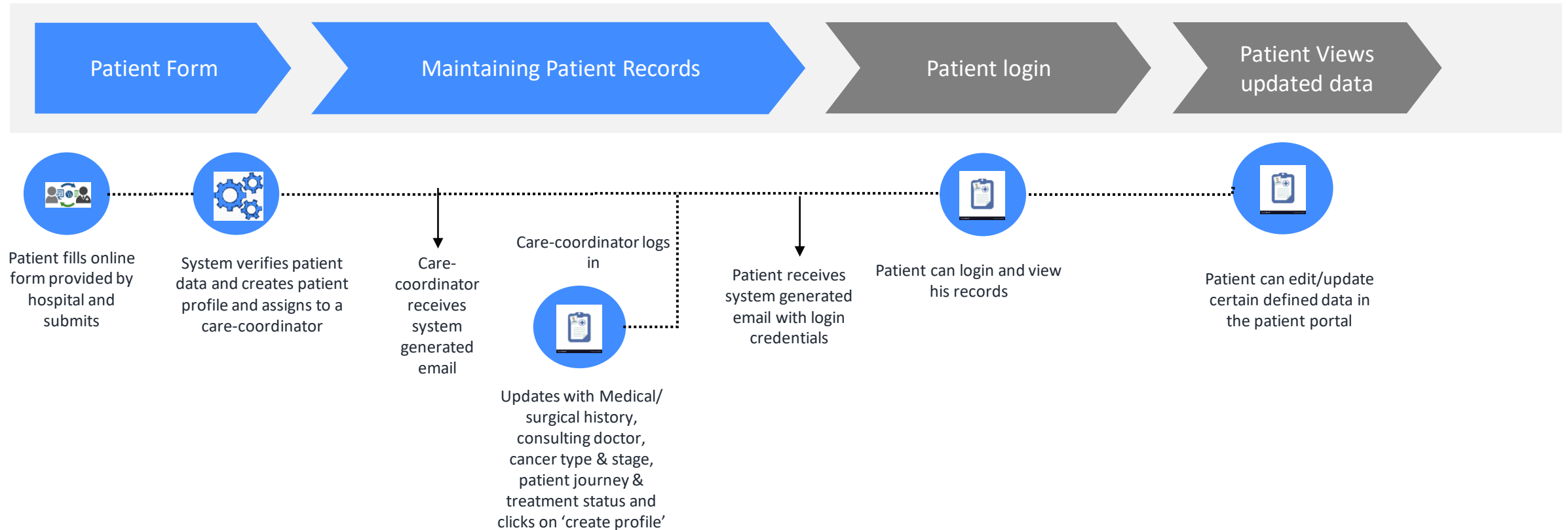
4. Patient Login

5. Patient Views Updated Data

Patient Onboarding Process

salesforce health cloud

| Patient Form | Maintaining Patient Records | Patient login | Patient Views updated data |

Patient fills online form provided by hospital and submits

System verifies patient data and creates patient profile and assigns to a care-coordinator

Care-coordinator receives system generated email

Care-coordinator logs in

Updates with Medical/ surgical history, consulting doctor, cancer type & stage, patient journey & treatment status and clicks on 'create profile'

Patient receives system generated email with login credentials

Patient can login and view his records

Patient can edit/update certain defined data in the patient portal

Accessing Patient Community

Patient Homepage ▸ **Patient Community** ▸ **View Community Details**
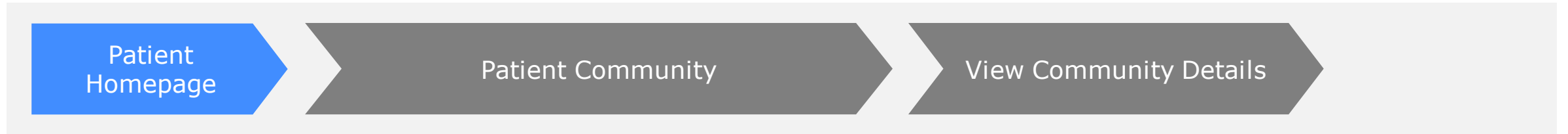
Registered patient

Community page group, Create new Post, Add a reply, view all replies, Join a community, create new community, Search a community

Navigate to community details from community group

Navigate to community details from Recommended communities

Patient can view community description, tag a patient, patient name, date, option to like and reply, view replies and no of views & likes, post a reply and share to social media

Use Case 2: Access Patient Community for posting messages, Responding to a message and Sharing experience, posting to other platforms, create/join community, search for a relevant community etc to enhance confidence on therapy

Thank You!

For more information, contact

EPAM CAR-T Team