**AI IMPACT SUMMIT**
भारत *2026* INDIA

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WELFARE FOR ALL | HAPPINESS OF ALL

# IndiaAI – NCG CATCH Grant for Cancer 2026

## Catalysing Responsible AI for Cancer Care in India

Supported by the Government of India and the NCG Network

# FOREWORD

The rapid evolution of artificial intelligence presents a defining opportunity for healthcare systems worldwide, and nowhere is this more evident than in oncology.

Cancer control is inherently complex - requiring coordination, continuity, and precision, across health promotion, prevention, screening, diagnosis, treatment, and long-term follow-up. In a country as diverse and populous as India, the challenge is not only to innovate, but to ensure that innovation is clinically meaningful, ethically grounded, scalable across varied healthcare settings, and reduces, rather than exacerbates inequities.

The IndiaAI–NCG Cancer AI & Technology Challenge (CATCH) was conceived with the objective of bridging the gap between technological potential and clinical reality. By fostering collaboration between technology innovators, clinicians, researchers, and health institutions, the initiative has sought to identify solutions that are not merely novel, but truly responsive to the needs of patients and providers within the Indian context. The emphasis on validation, workflow integration, data governance, and responsible AI principles reflects a deliberate effort to ensure that technology strengthens—not complicates—the delivery of care.

This compendium represents more than a catalogue of AI tools. It is a reflection of a growing national ecosystem that is aligning innovation with patient outcomes, institutional readiness, and ethical responsibility. The diversity of solutions presented here—from early screening and diagnostic augmentation to patient engagement and operational efficiency – demonstrates the breadth of thought and commitment across the oncology and technology communities. Importantly, these solutions are grounded in real clinical environments, shaped by clinician feedback, and oriented toward tangible impact.

Equally significant is the collaborative spirit that underpins this effort. The partnership between IndiaAI, the National Cancer Grid, and participating institutions illustrates how cross-sector alignment can accelerate meaningful progress. Such collaboration ensures that innovation pathways remain transparent, accountable, and inclusive, while also enabling scale across the country's cancer care network. As we look ahead, the responsible adoption of AI in oncology will depend not only on technical excellence, but on sustained engagement with clinicians, patients, regulators, and policymakers.

I extend my appreciation and gratitude to all innovators, clinical partners, evaluators, and supporting teams who have contributed to this initiative. Their collective efforts signal an encouraging shift toward technology that is purposeful, patient-centered, and system-aware. It is my hope that this compendium will serve as both a reference and an inspiration—encouraging continued collaboration and thoughtful deployment of AI to improve cancer care across India.

*Dr. C.S. Pramesh*
Director, Tata Memorial Hospital
Convener, National Cancer Grid

# PREFACE

The IndiaAI Mission was established with a clear mandate: to build national capabilities in artificial intelligence that are responsible, inclusive, and aligned with India's developmental priorities. Healthcare, and particularly oncology, represents one of the most consequential domains for such intervention. Cancer care demands accuracy, timeliness, continuity, and coordination across institutions. In a country of India's scale, the challenge is to ensure that emerging technologies are embedded in clinical systems in ways that are safe, evidence-based, and scalable.

The IndiaAI–NCG Cancer AI & Technology Challenge (CATCH) was designed to operationalize this vision within the oncology ecosystem. The initiative has focused on identifying AI solutions that demonstrate not only technical strength, but also clinical integration, validation planning, and governance readiness. From the outset, the emphasis has been on measurable outcomes, ethical safeguards, data stewardship, and deployment feasibility within real hospital environments. This approach reflects the Mission's broader commitment to building AI infrastructure and applications that are institutionally accountable and system-aware.

The ten use cases profiled in this compendium represent a cross-section of high-impact oncology applications—ranging from screening and diagnostic augmentation to clinical decision support and operational optimization. Each solution has been evaluated against clearly defined parameters, including validation pathways, workflow alignment, and data governance preparedness. The compendium documents these elements in a structured manner, enabling transparency and shared learning across institutions. A key objective of the IndiaAI Mission is to foster collaboration between technology innovators, domain experts, and public institutions. The partnership with the National Cancer Grid demonstrates how such alignment can accelerate responsible adoption. By combining clinical expertise with AI development capability and structured evaluation processes, the initiative establishes a replicable model for deploying AI in other priority sectors.

The IndiaAI Mission continues to invest in foundational capabilities—including compute access, datasets, governance frameworks, and ecosystem partnerships—to ensure that AI solutions developed in India are robust, contextually relevant, and capable of national scale. The CATCH initiative reflects how these mission-level investments can translate into targeted, domain-specific impact.

I acknowledge the contributions of the National Cancer Grid, participating institutions, evaluators, and the innovator community whose efforts have shaped this initiative. It is our expectation that the solutions documented here will proceed through structured pilots, generate high-quality evidence, and contribute to strengthening cancer care delivery across India. This compendium serves as both a record of progress and a foundation for continued collaboration under the IndiaAI Mission.

*Smt. Kavita Bhatia*
Scientist 'G', Ministry of Electronics
& Information Technology
COO, IndiaAI Mission

As AI-enabled tools increasingly enter routine clinical and public health settings, rigorous clinical evaluation becomes central to ensuring safe and responsible adoption. Performance metrics derived from development datasets often fail to capture the complexity and heterogeneity of real-world care settings, where variability in patient characteristics, disease presentation, workflow structures, and resource constraints can influence algorithmic reliability. In this context, data quality, including image gradeability, completeness, representativeness, and annotation, emerges as a critical determinant of validity and must be systematically examined within evaluation frameworks.

Importantly, clinical evaluation extends beyond conventional measures of sensitivity and specificity. It must assess context-specific performance, reproducibility across implementation environments, and the interaction between algorithm outputs and human decision-making processes. Within public health systems, even modest shifts in specificity or referral thresholds may generate unintended system-level burdens, with implications for access, equity, and continuity of care.

From a responsible AI standpoint, robust evaluation supports transparency, accountability, and risk mitigation. It informs regulatory scrutiny, procurement decisions, and scale-up strategies, ensuring that adoption remains evidence-based, ethically grounded, and aligned with long-term health system sustainability.

### Dr. Mona Duggal

Director Organization/Institutional Affiliation: ICMR–National Institute for Research in Digital Health and Data Science (ICMR–NIRDHDS)

Adoption remains one of the most significant challenges in deploying AI within clinical environments, and this was a central consideration in the design of the IndiaAI–NCG CATCH Grant. Building a model that performs well in a controlled research setting is only the first step. In oncology, data distributions vary across institutions, imaging protocols differ, documentation practices are inconsistent, and patient populations are heterogeneous. For AI systems supported under CATCH, the emphasis has therefore been on structured validation, monitored deployment, and clearly defined performance benchmarks. Without post-deployment oversight and feedback loops, even well-designed models can experience performance drift over time.

From a data science perspective, sustainable adoption requires lifecycle management—model versioning, audit trails, bias monitoring, and defined pathways for recalibration based on new data. Continuous learning must occur within a governed framework, with validation checkpoints and clinician oversight before updates are introduced into practice. Through CATCH, we have sought to encourage teams to design their solutions with this operational maturity in mind, ensuring that AI systems evolve responsibly while maintaining clinical reliability and patient safety.

### Mr. Swadeep Singh

General Manager Data Science
India AI

Traditionally, evaluations of AI solutions in healthcare have focused primarily on technical performance metrics, such as model accuracy, precision, recall, and predictive validity in controlled settings. While these benchmarks are essential for initial validation, they fall short of addressing the multifaceted demands of clinical deployment. In the health sector, AI tools must be rigorously assessed like any other medical intervention through properly designed research studies that generate evidence on safety, efficacy, and effectiveness.

Safety encompasses unintended harms, such as algorithmic biases leading to misdiagnoses or disparities in care across patient subgroups. Efficacy refers to performance under ideal conditions, typically via randomized controlled trials that measure clinical outcomes like diagnostic accuracy or treatment response. Effectiveness captures real-world utility, accounting for implementation challenges, user adherence, and contextual factors in diverse settings.

Study designs should align with the maturity stage of the AI solution. Early-stage prototypes require technical validation. Mid-stage tools demand efficacy trials, while mature solutions need effectiveness and implementation studies. Beyond technical metrics, evaluations must incorporate clinical endpoints, implementation outcomes, process outcomes, and ethical considerations (such as safety, transparency, and equity). This comprehensive approach ensures AI solutions transition from promise to practice, informing policy and scaled adoption.

*Dr. Vishal Deo*
Director Organization/Institutional Affiliation: ICMR–National Institute for Research in Digital Health and Data Science (ICMR–NIRDHDS)



Axis Bank is proud to be a long-term supporter of the National Cancer Grid towards raising the standards of research, innovation, and digital and AI adoption in oncology in India.

This partnership aligns strongly with the Bank's larger objective of supporting India's inclusive and equitable development, which can never be achieved without having the strong foundation of healthcare.

As AI seems set to revolutionize almost every aspect of society today, its adoption in healthcare still remains largely unexplored, thereby presenting an opportunity for driving deeper AI-focused innovation and adoption. In this light, the India-AI NCG Catch Grant becomes a timely and much-needed initiative to mobilize and support the best AI-focused solutions move from an idea to the implementation stage.

*Mr. Vijay Mulbagal*
Group Executive & Head - Wholesale Bank Coverage and Sustainability
Axis Bank

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# ACKNOWLEDGEMENTS

The IndiaAI–NCG Cancer AI & Technology Challenge Grant Program (CATCH) is a collaborative initiative of IndiaAI, the National Cancer Grid (NCG) - Koita Centre for Digital Oncology (KCDO). This compendium has been developed to document and share AI-enabled solutions supported under the CATCH program and to accelerate learning, adoption, and scale across cancer care institutions in India.

We acknowledge the clinical partners, technology innovators, evaluation committee members, selection jury, IndiaAI team, and NCG, whose expertise and commitment have made this initiative possible.

# WINNING TECH PARTNERS

qure.ai

DEEPTEK

LENEK

VYUHAA MED DATA

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wellytics

FosterHealth

endimension

radai

# JURY MEMBERS



**Dr. C.S. Pramesh (Chair)**
Director TMH
Convener, National Cancer Grid



**Shri Mohammed Y Safirulla K, IAS**
Director Ministry of Electronics and
Information Technology



**Smt. Kavita Bhatia**
Chief Operating Officer
IndiaAI



**Mr. Swadeep Singh**
General Manager Data
Science, IndiaAI



**Prof. Dr. Anurag Agarwal**
Dean, Biosciences and Health
Research, Trivedi School of
Biosciences, Ashoka University
Head, Koita Center for Digital
Health at Ashoka



**Dr. Mona Duggal**
Director, ICMR – National
Institute for Research in
Digital Health and Data
Science (ICMR–NIRDHDS)



**Dr. Caleb Harris M.S, M.Ch.**
Additional Professor and Head,
Department of Surgical Oncology
North Eastern Indira Gandhi
Regional Institute of Health and
Medical Sciences



**Dr. Priyanka Bajaj**
Specialist – Health
Technology Innovations
PATH



**Dr. Vishal Deo**
Scientist, ICMR - National Institute
for Research in Digital Health and
Data Science (ICMR–NIRDHDS)



**Mr. Amit Sethi**
Professor, IIT Bombay

# TERMS, CONDITIONS AND DISCLAIMERS

## Purpose of the Compendium

This compendium documents AI solutions selected under the IndiaAI–NCG Cancer AI & Technology Challenge Grant (CATCH). Its purpose is to share information, implementation insights, and learning from supported solutions and does not constitute endorsement, certification, or procurement recommendation by IndiaAI, NCG, or partner institutions.

## Validation and Regulatory Status

The technologies described are at varying stages of technical maturity (Technology Readiness Levels – TRL). Regulatory approvals, certifications, and performance claims are based on information provided by solution teams and may differ by deployment context. Inclusion in this compendium does not guarantee regulatory clearance or clinical approval at all sites.

## Clinical Use and Liability

All solutions are intended to support clinical decision-making and health system operations. They are not designed to replace professional medical judgement. Responsibility for clinical decisions and patient outcomes remains with the deploying institutions and clinicians. IndiaAI, NCG, and partners disclaim liability arising from downstream use of the technologies described.

## Data Protection, Ethics and Responsible AI

Solutions are expected to comply with applicable Indian laws and guidelines, including the Digital Personal Data Protection (DPDP) Act, institutional ethics requirements, and principles of responsible AI. Implementation must ensure privacy, security, transparency, fairness, and appropriate human oversight.

## Disclaimer for the Call for Applications

The IndiaAI–NCG Cancer AI & Technology Challenge Grant (CATCH) is a competitive, merit-based program intended to support the co-development, validation, and potential deployment of AI-enabled solutions for cancer care in India. Submission of an application does not guarantee selection, funding, pilot implementation, or scale-up opportunities.

IndiaAI, the National Cancer Grid (NCG), and partner institutions reserve the right to modify, suspend, or discontinue the call, evaluation process, timelines, funding tranches, or scope of support at any stage. All information provided by applicants is considered self-declared, and applicants are responsible for the accuracy, completeness, and regulatory compliance of their submissions.

Participation in the call does not constitute endorsement, certification, or approval of any technology, nor does it imply any future procurement or institutional adoption.

## Disclaimer for the Results and Selection of Awardees

The solutions selected under the IndiaAI–NCG CATCH Grant have been shortlisted based on predefined evaluation criteria, expert review, and information submitted by applicants. Selection reflects the potential relevance, readiness, and impact of the proposed solutions within the scope of the CATCH program at the time of evaluation.

Inclusion as a shortlisted or awardee solution does not constitute clinical endorsement, regulatory approval, certification, or recommendation for use by IndiaAI, NCG, or partner institutions. Reported performance metrics, technology readiness levels, and regulatory status are based on applicant-provided information and may vary by deployment context.

Any pilot, validation, or deployment of selected solutions remains subject to institutional approvals, ethical clearances, regulatory requirements, and site-specific feasibility assessments. IndiaAI, NCG, and partners disclaim responsibility for downstream implementation decisions or outcomes arising from the use of these technologies.

# EXECUTIVE SUMMARY

Cancer care delivery in India faces persistent challenges related to scale, access, workforce constraints, and variability in quality. While artificial intelligence (AI) and machine learning (ML) have demonstrated significant potential across the cancer care continuum—ranging from early screening and diagnostics to treatment planning, patient engagement, and operational efficiency—real-world adoption has remained limited. Key barriers include insufficient clinical validation, fragmented data ecosystems, workflow integration challenges, and lack of scalable deployment pathways.

The IndiaAI–NCG Cancer AI & Technology Challenge Grant Program (CATCH) was launched to address these gaps. Co-created by IndiaAI, the National Cancer Grid (NCG) - Koita Centre for Digital Oncology (KCDO), CATCH enables close collaboration between technology developers and oncology institutions to co-develop, validate, and deploy AI solutions that are clinically relevant, ethically aligned, and contextually grounded for Indian cancer care.

This compendium presents a curated set of winning solutions from the CATCH initiative. Together, they span critical areas of cancer care including screening, diagnostics, clinical treatment support, patient engagement, and operational efficiency. The solutions represent a diverse range of technical maturity—from pilot-ready innovations to deployment-ready systems already in use at leading cancer centres.

More than a catalogue of technologies, this compendium highlights how AI solutions are being embedded into real clinical workflows, designed for Indian constraints, and aligned with responsible AI principles. It is intended as a practical reference for hospitals, policymakers, researchers, and innovators seeking to understand, adopt, or scale AI-enabled cancer care solutions across India.
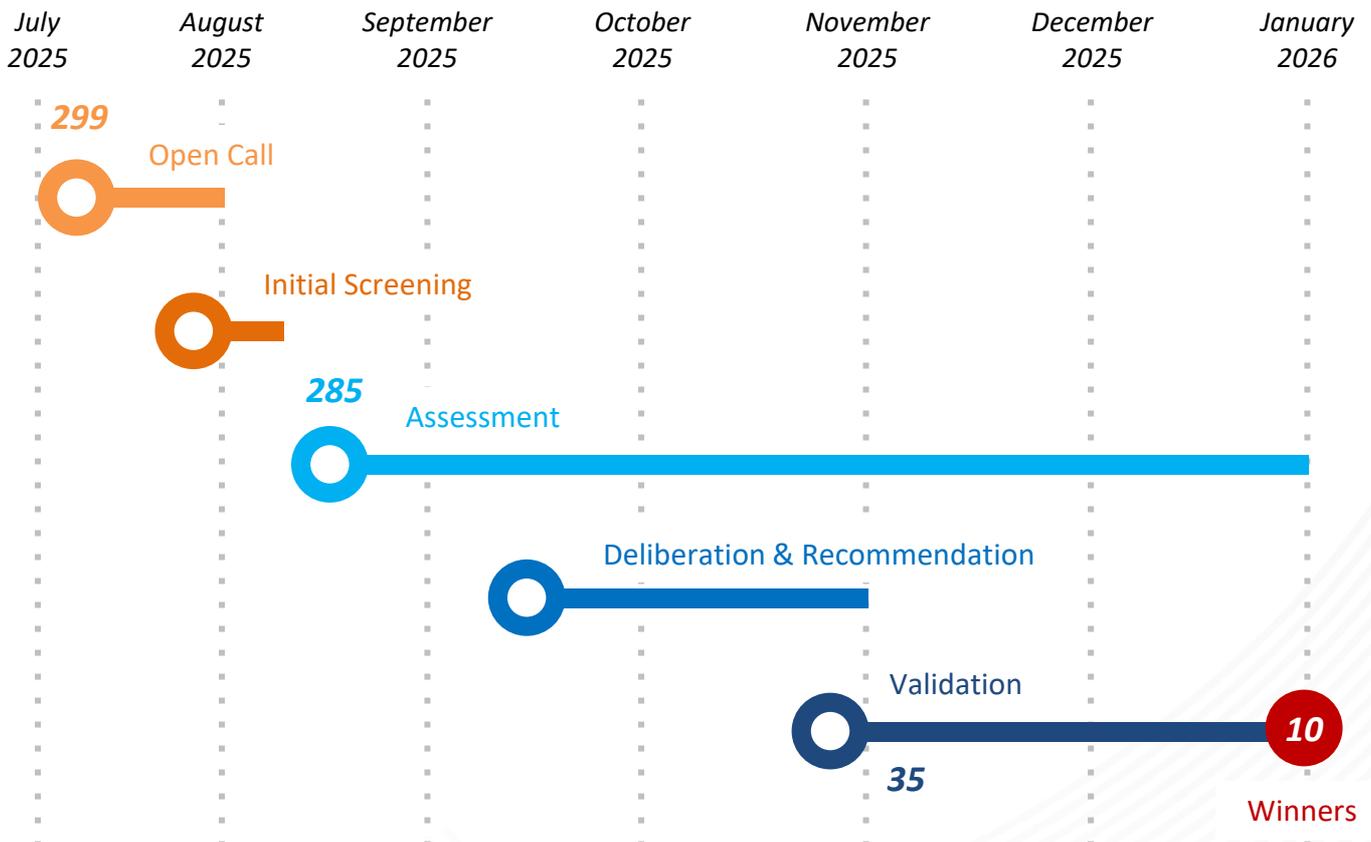
## 1. Objectives of the Compendium

The objectives of this compendium are to:

o Document AI-enabled solutions supported under the IndiaAI–NCG CATCH program.

o Share implementation-ready insights for cancer centres and health systems.

o Promote responsible, ethical, and scalable adoption of AI in oncology.

o Enable cross-learning and collaboration across the NCG network.

o Establish a national reference aligned with global best practices, involving multi-stage screening and expert review.

## 2. Methods

### Solution Identification

Solutions included in this compendium were selected through the structured evaluation process of the IndiaAI–NCG CATCH program. Here is the timeline and method of selection of technologies for the compendium.

| July 2025 | August 2025 | September 2025 | October 2025 | November 2025 | December 2025 | January 2026 |
|---|---|---|---|---|---|---|

**299** — Open Call

Initial Screening

**285** — Assessment

Deliberation & Recommendation

Validation

**35**

**10** — Winners

### Evaluation Inputs

| Criteria | Sub-Criteria | Description | Weightage | Low | Medium | High |
|---|---|---|---|---|---|---|
| **Clinical Relevance (10%)** | Alignment with Oncology Workflow | How clearly the solution aligns with real oncology workflows in NCG hospitals and addresses a genuine clinical bottleneck. | 5 | Solution weakly aligned to oncology; unclear bottleneck. | Some oncology relevance; workflow partially articulated. | Strong mapping to specific NCG workflow & bottleneck. |
| | Clinical Validation Pathway Readiness | Whether a realistic plan exists for clinical validation with identified sites and clinicians. | 5 | No clarity on clinical validation. | Partial clarity but no concrete plan/site. | Clear validation plan with NCG clinician commitment. |

## Evaluation Inputs

| Criteria | Sub-Criteria | Description | Weightage | Low | Medium | High |
|---|---|---|---|---|---|---|
| AI Innovation & Technical Rigor (20%) | Model Architecture & Explainability | Soundness of AI/ML pipeline, architecture, validation design, robustness, explainability. | 10 | Generic/weak methods; limited detail. | Some technical depth; partial validation plan. | Strong architecture, validation, explainability. |
| | Novelty & Adaptiveness | Innovation beyond standard approaches; ability to adapt to data variability and clinical heterogeneity. | 10 | No novelty. | Some innovation. | High novelty + clinically aware adaptiveness |
| Data Access & Readiness (20%) | Dataset Availability & Quality | Access to high-quality cancer datasets; annotation quality; clarity on data volumes. | 10 | No concrete access. | Limited pilot data. | Strong MoU-Partnerships /access + annotated data. |
| | Data Governance & Privacy Readiness | DPDP compliance, de-identification, consent, IRB pathways, data pipeline maturity. | 10 | Weak governance. | Partially planned. | Strong governance structure & compliance. |
| Deployment Feasibility (20%) | Technical Deployability | Feasibility of integrating in hospital infra (PACS/RIS/HIS, cloud/on-prem). | 10 | Unrealistic integration. | Partially feasible. | Strong feasibility; realistic assumptions. |
| | Identified Deployment Site | Presence of confirmed deployment site with clinicians and workflow owners identified. | 10 | None identified. | Tentative interest. | Confirmed site + clinicians + workflow acceptance. |
| Team Capability (10%) | Technical Capability | Strength of AI/ML engineering team and history of deployments. | 5 | Weak team. | Moderate capability. | Strong proven team. |
| | Clinical & Product Capability | Clinical advisors, product team maturity, regulatory understanding. | 5 | Weak. | Partial. | Strong multidisciplinary team. |
| Impact Potential (10%) | Clinical Outcome Potential | Potential to improve detection, accuracy, turnaround time, or outcomes. | 5 | Low outcome impact. | Moderate impact. | High potential with strong justification |
| | Scalability Beyond Pilot | Ability to scale to multiple NCG centers and nationally. | 5 | Limited scalability. | Moderate scalability. | Strong national-scale pathway. |

| Criteria | Sub-Criteria | Description | Weightage | Low | Medium | High |
|---|---|---|---|---|---|---|
| **Ethical & Regulatory Compliance (10%)** | Ethical Safety & Bias Mitigation | Bias mitigation, fairness checks, patient safety guardrails. | 5 | Weak. | Partial. | Strong ethics & bias controls. |
| | Regulatory Pathway Clarity | Understanding of MDR classification, IRB/IEC approvals, regulatory plan. | 5 | No regulatory awareness. | Some understanding. | Clear regulatory pathway. |

## 3. Assessment Criteria

Each solution was assessed based on:
o Clinical relevance to real-world cancer care challenges
o Technical maturity and appropriateness of AI methods
o Deployment and integration feasibility
o Ethical, privacy, and regulatory readiness
o Potential for scale and impact across NCG institutions

## 4. Data Sources

Information presented in this compendium is drawn from:
o The CATCH Pre-Read Summary
o Winning solution summary submissions and presentations
o Technical architecture and implementation documents shared by applicants

## 5. Limitations

Reported performance metrics and readiness levels may vary by clinical setting. Some solutions require further validation, integration, or regulatory processes prior to large-scale deployment.

## 6. Solution Categories

To support clarity and usability, solutions are grouped into four intuitive categories based on readiness and primary use case.

o **Category A: Deployment-Ready and Scalable AI Systems (TRL 8–9):** Solutions already deployed or ready for immediate scale-up across cancer centres.

o **Category B: Pilot-Validated Clinical AI Solutions (TRL 5–7):** Solutions validated in controlled pilots and ready for structured clinical implementation.

o **Category C: Emerging Diagnostic and Multimodal Innovations:** Innovative diagnostic platforms requiring further integration or validation.

o **Category D: Patient-Centric and Care Continuity Tools:** Solutions focused on patient understanding, engagement, and longitudinal care.

# CATCH 2026 WINNERS

IndiaAI – NCG
CATCH Grant for Cancer 2026

# Vyuhaa Med Data – CerviAI

Comprehensive End-to-End Cervical Cancer Screening System (In-situ)

| Theme | TRL | Status | Pilot / Deployment Sites |
|---|---|---|---|
| Screening | 5-7 | Pilot Ready | Homi Bhaba cancer hospital and reserach centre , Vizag |

### The Challenge

Cervical cancer screening in India is constrained by specialist dependence, fragmented workflows, and delayed turnaround times. Conventional cytology is resource-intensive and difficult to scale, particularly in peripheral and low-resource settings.

### The Solution - CerviAI

CerviAI is a fully integrated, AI-powered cervical cancer screening platform that combines patented GPU-accelerated whole-slide imaging hardware with edge-based AI analytics. It enables real-time digitisation and automated analysis of cervical cytology samples directly at the point-of-care.

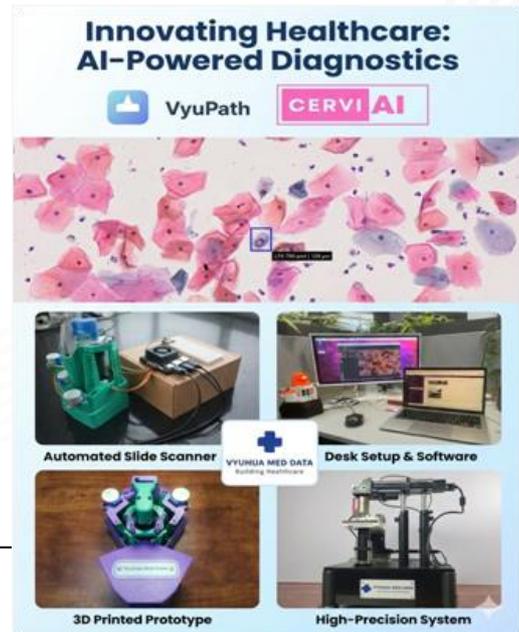**Single-system | Cloud-independent | Population-scale ready**
CerviAI eliminates multi-vendor complexity, reduces screening costs, and delivers expert-level screening accuracy without dependence on central labs or cloud connectivity.

| | |
|---|---|
| **How it Works** | o **AI Models:** Multi-scale CNNs & YOLO-based object detection<br><br>o **Imaging:** Single-shot 3D focus mapping & predictive Z-stacking<br><br>o **Compute:** Embedded GPUs enabling millisecond-level inference |
| **Implementation & Integration** | **CerviAI** integrates seamlessly with hospital EMRs, PACS, and HIS using HL7 and DICOM standards. Slides digitised via the proprietary **VyuPath** system are analysed locally, with results fed directly into routine clinical workflows. |
| **Ethics & Governance** | o Ethics approval obtained in prior pilots<br>o DPDP-aligned data handling<br>o Secure, on-device processing with audit trails |
| **Impact & Scale Potential** | **CerviAI** enables reliable, standardized cervical cancer screening in high-volume and low-resource settings and is positioned for multi-centre validation and scale-up across National Cancer Grid institutions. |



Innovating Healthcare: AI-Powered Diagnostics

VyuPath    CERVI AI

Automated Slide Scanner    Desk Setup & Software

3D Printed Prototype    High-Precision System

# Rad AI Private Limited – MAMMO-Q

AI-Enabled End-to-End Mammography Screening & Reporting Platform

| 🖥️ Theme | ⚙️ TRL | 🎯 Status | 📍 Pilot / Deployment Sites : |
|---|---|---|---|
| Screening | 5-7 | Pilot Ready | Max Healthcare, Delhi |

### The Challenge

Breast cancer screening in India faces persistent constraints due to a shortage of trained breast radiologists, ageing mammography infrastructure, and increasing reporting volumes. These challenges are amplified outside major urban centres, leading to delays in diagnosis and inconsistent screening quality.

### The Solution - MAMMO-Q

MAMMO-Q is an AI-powered mammography screening and reporting platform that delivers rapid, standardized, and clinically interpretable outputs across the screening workflow. The system performs automated image quality assessment, lesion detection, breast density evaluation, BI-RADS categorisation, and structured report generation—typically within one minute per study.

Designed for edge deployment, MAMMO-Q is compatible with legacy computed radiography (CR) mammography systems, enabling AI-assisted screening without the need for infrastructure replacement.
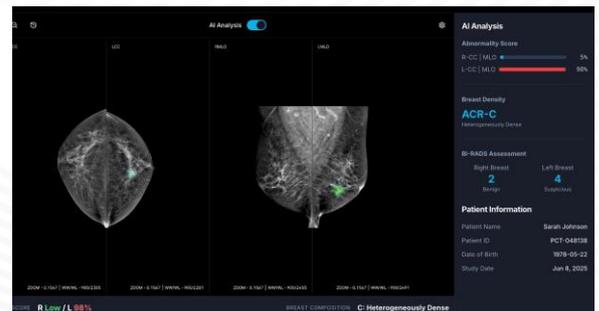
MAMMO-Q is trained on large, indigenous mammography datasets and optimized for breast density patterns commonly seen in the Indian population. Its cloud-independent, on-premise architecture ensures data sovereignty, explainability, and operational reliability, making it well-suited for deployment in resource-constrained and decentralized screening environments.

| Technical Overview | The platform leverages vision-language medical foundation models, Swin-UNet–based segmentation architectures, and joint craniocaudal (CC) and mediolateral oblique (MLO) view analysis. AI outputs are generated in structured JSON and DICOM-SR formats, supporting seamless downstream clinical interpretation and auditability. |
|---|---|
| Implementation & Integration | MAMMO-Q integrates smoothly with existing hospital PACS and HIS using Orthanc, DICOM-SR, and FHIR APIs. AI-generated insights are returned directly to radiologist workstations, augmenting routine reporting workflows with minimal disruption.  |
| Ethics & Governance | The solution has received ethics approval from Max Healthcare and adheres to ISO 13485-aligned quality management processes. It is positioned for CDSCO Class B regulatory readiness, reinforcing patient safety, traceability, and compliance. |
| Impact & Scale Potential | MAMMO-Q reduces radiologist workload, improves reporting consistency, and supports high-volume breast cancer screening programs. With its pilot-ready maturity and compatibility with existing infrastructure, the platform enables decentralised screening across Tier-2 and Tier-3 healthcare settings, supporting earlier detection and improved outcomes. |

**CATCH 2026 Winners**

endimension

# ENDIMENSION Technology Pvt. Ltd.

AI-Powered Brain Tumour & Emergency Abnormality Detection

| 🖥️ Theme | ⚙️ TRL | 🟡 Status | 📍 Pilot / Deployment Sites |
|---|---|---|---|
| Diagnostics | 5-7 | Pilot Ready | Tata Memorial Hospital. Mumbai |

### The Challenge

Timely identification of brain tumours and critical neurological abnormalities on CT and MRI is essential for both emergency response and oncology care. However, increasing imaging volumes, radiologist workload, and inter-reader variability can delay diagnosis—particularly in high-pressure emergency settings and longitudinal cancer care pathways.

### The AI-Enabled Solution

ENDIMENSION has developed an AI-powered neuro-imaging solution that delivers real-time detection, localization, and volumetric quantification of brain tumours and emergency abnormalities from CT and MRI scans. The system automatically flags high-risk findings, supporting rapid triage and informed clinical decision-making.

Designed for use across both emergency and oncology workflows, the solution supports early detection as well as follow-up assessment across the care continuum.

Unlike CT-only emergency triage tools, ENDIMENSION's solution is purpose-built for oncology and longitudinal neuro-imaging. It enables post-surgical assessment, treatment response evaluation, and recurrence monitoring—capabilities made possible through training on large, diverse Indian imaging datasets.

| | |
|---|---|
| **Technical Overview** | The platform uses proprietary deep learning architectures trained on over one lakh CT and MRI scans. Models are deployed via secure APIs on compliant cloud infrastructure, enabling scalable, high-performance inference while maintaining clinical reliability. |
| **Implementation & Integration** | ENDIMENSION integrates as a plug-and-play solution with existing PACS, EMR, and HIS systems using DICOM standards and secure APIs. AI outputs are embedded directly into routine radiology workflows, requiring minimal changes to current reporting |
| **Ethics & Governance** | Deployment follows ISO-aligned information security practices and DPDP-compliant data handling protocols. Clinical validation has been conducted at Tata Memorial Hospital, reinforcing safety, accuracy, and clinical trust. |
| **Impact & Scale Potential** | The solution supports faster triage in emergency settings, improves diagnostic consistency in neuro-oncology, and reduces radiologist burden. With its pilot-ready maturity and oncology-focused design, the platform is well positioned for scalable deployment across National Cancer Grid centres. |

**LENEK**

# Lenek Technologies Private Limited

Robust End-to-End AI-Enabled Screening Platform for Early Lung Cancer Detection

| 🖥 Theme | ⚙ TRL | 🔘 Status | 📍 Pilot / Deployment Sites |
|---|---|---|---|
| Screening | 5-7 | Pilot Ready | Kamla Nehru Memorial Hospital, Uttar Pradesh |

## The Challenge

Early lung cancer detection is hindered by fragmented screening pathways, delayed referrals, and lack of integration between community-level screening and tertiary diagnostics.

## The AI-Enabled Solution

Lenek's platform integrates portable chest X-ray acquisition, AI-based X-ray analysis (LIRA), and low-dose CT workflows into a unified screening-to-diagnosis pathway. It supports rapid nodule detection, malignancy risk assessment, and Lung-RADS-aligned reporting.

The platform bridges community screening and tertiary care in a single workflow, reducing delays and loss to follow-up—an issue common in lung cancer pathways in India.

| | |
|---|---|
| **Technical Overview** | The system uses CNN- and transformer-based computer vision models for X-ray and CT analysis, with modular AI services deployed via containerised pipelines. |
| **Implementation & Integration** | Integration is achieved through DICOM and HL7 interfaces with PACS, EMR, and HIS systems. Deployment supports hybrid cloud inference while retaining hospital-side data control. |
| **Ethics & Governance** | Data handling follows DPDP-aligned anonymisation protocols, with human-in-the-loop review built into diagnostic workflows. |
| **Impact & Scale Potential** | The platform enables coordinated lung cancer screening programs and is suitable for NCG-led population screening initiatives. |

FosterHealth

# Foster AI

AI-Generated Clinical Summaries to Improve Patient Understanding & Engagement

| 🩺 Theme | ⚙️ TRL | ⚙️ Status | 📍 Pilot / Deployment Sites |
|---|---|---|---|
| Patient Engagement | 5-7 | Pilot Ready | Tata Memorial Hospital, Mumbai |

### The Challenge

Cancer consultations often involve complex medical terminology, multiple care decisions, and emotional stress. Patients frequently leave clinical encounters with limited understanding of their diagnosis, treatment plans, and next steps, which can negatively affect adherence, trust, and continuity of care—particularly among populations with varied literacy and language proficiency.
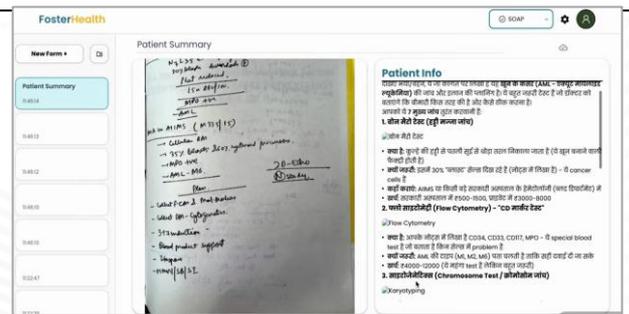
### The AI-Enabled Solution

Foster AI is a patient-centred AI solution that transforms clinical consultations into clear, accessible, and actionable summaries. Using multimodal AI scribing, the system converts visit transcripts into literacy-tiered, patient-friendly summaries that reflect clinician intent while remaining easy to understand.

Summaries are delivered directly to patients via WhatsApp as text and audio messages in English and Hindi, with the option for interactive follow-up, enabling patients and caregivers to revisit and reinforce key information after the consultation.

Foster AI is uniquely designed around the realities of patient literacy, language diversity, and information overload in oncology care. By focusing on comprehension rather than transcription alone, the solution bridges the gap between clinical communication and patient understanding—without adding burden to clinicians or disrupting existing workflows.

| Technical Overview | The platform uses large multimodal models and large language models (LLMs) to process audio recordings and clinical documents. Structured summaries are generated using controlled prompts and reinforcement learning–based quality checks to ensure accuracy, readability, and alignment with clinical context. |
|---|---|
| Implementation & Integration | Foster AI integrates seamlessly with existing ambient clinical scribing systems and does not require changes to hospital EMRs. Patient-facing outputs are delivered through secure WhatsApp APIs, enabling rapid deployment and ease of adoption within routine oncology workflows.  |
| Ethics & Governance | Ethics clearance is being pursued through Tata Memorial Hospital. The solution employs encrypted data pipelines, consent-based data sharing, and role-based access controls to safeguard patient privacy and maintain trust. |
| Impact & Scale Potential | Foster AI enhances patient understanding, engagement, and confidence in care decisions, supporting better adherence and continuity across oncology pathways. With its low-infrastructure, language-first design, the solution is well positioned for scale across diverse cancer care settings within the National Cancer Grid. |

wellytics

MALABAR CANCER CENTRE
THALASSERY

# Wellytics

AI Oncology Agent for Evidence-Based Summaries, Guidelines & Trial Matching

| Theme | TRL | Status | Pilot / Deployment Sites |
|---|---|---|---|
| Operational Efficiency | 8-9 | Deployed across multiple hospitals | Malabar Cancer Centre |

### The Challenge

Oncology care involves extensive clinical documentation, frequent guideline updates, and complex eligibility assessments for clinical trials. These activities place a significant administrative burden on clinicians and can lead to variability in evidence-based decision-making, delayed care pathways, and under-enrolment in trials.

### The AI-Enabled Solution

Wellytics is an AI-powered oncology agent designed to streamline and standardize clinical operations across the cancer care continuum. The platform automates clinical documentation, supports real-time alignment with global oncology guidelines, and matches patients to relevant clinical trials—including genomics-informed studies.

By embedding intelligence directly into routine workflows, Wellytics enables clinicians to focus more on patient care while ensuring consistency and completeness in decision-making.

Unlike standalone scribing tools or isolated trial-matching systems, Wellytics integrates documentation automation, guideline adherence, and trial eligibility assessment into a single, oncology-specific platform. This unified approach reduces workflow fragmentation and supports standardized, evidence-based care delivery at scale.

| | |
|---|---|
| **Technical Overview** | The platform leverages NLP-driven large language models, multimodal clinical data processing, and explainable AI frameworks. It is designed for secure deployment across both cloud-based and on-premise environments, supporting scalability while maintaining institutional control over sensitive data. |
| **Implementation & Integration** | Wellytics supports bi-directional integration with hospital EMRs, PACS, and laboratory systems using FHIR and HL7 standards. This enables seamless ingestion of clinical data and real-time feedback into clinician workflows without disruption. |
| **Ethics & Governance** | The solution incorporates robust data security and governance practices, including role-based access controls, auditability, and transparency through explainable AI outputs. These safeguards support clinician trust and institutional compliance. |
| **Impact & Scale Potential** | Already deployed across leading cancer centres, Wellytics demonstrably reduces clinician administrative burden, improves adherence to evidence-based guidelines, and expands patient access to appropriate clinical trials. With its advanced maturity and proven multi-centre adoption, the platform is well positioned for wider scale-up across National Cancer Grid institutions. |

## CATCH 2026 Winners

# DeepTek

AI-Enabled Chest X-ray Screening for Early Lung Cancer Detection

| 🖥️ Theme | ⚙️ TRL | 🔒 Status | 📍 Pilot / Deployment Sites |
|---|---|---|---|
| Data curation | 8-9 | Commercially deployed | Tata Memorial Hospital ,Mumbvai |

### The Challenge

National-scale oncology research and AI adoption are constrained by fragmented imaging and clinical data, lack of interoperability across hospital systems, and absence of standardized, privacy-preserving data curation mechanisms. Most PACS deployments function only as archival systems, offering limited support for structured data extraction, anonymization, multi-site collaboration, and responsible AI governance. These limitations restrict the ability of NCG institutions to build large, longitudinal, and research-ready datasets for population-scale oncology AI.

### The AI-Enabled Solution

**Augmento** is a regulatory-cleared, interoperable PACS and AI orchestration platform that enables large-scale imaging and clinical data curation, anonymization, and research-ready organization. It functions both as a clinical-grade PACS and a dedicated research engine, supporting seamless integration of imaging, pathology, and clinical records across institutions. The platform provides modular AI integration, federated learning, and responsible AI governance within a single ABDM-compliant ecosystem. Designed for flexible on-prem, cloud, or hybrid deployment, Augmento enables NCG hospitals to curate longitudinal, anonymized datasets while continuing routine clinical operations without disruption.

DeepTek combines proven diagnostic performance with seamless workflow integration and regulatory readiness. Unlike manual interpretation or isolated AI tools, the solution delivers consistent, real-time triage at scale, supported by explainable visual outputs and mature deployment practices.

| | |
|---|---|
| **Technical Overview** | Augmento is built as a modular, interoperable PACS and AI orchestration platform designed for large-scale clinical and research environments. The system combines computer vision and deep learning for medical imaging with NLP and large language models for structured extraction from clinical text. These AI pipelines convert fragmented multimodal healthcare data into standardized, anonymized, and research-ready datasets. |
| **Implementation & Integration** | Augmento is designed for flexible deployment across on-premise, cloud, or hybrid environments, allowing institutions to maintain data sovereignty while enabling scalable collaboration. The platform integrates directly with hospital PACS using DICOM for image storage, retrieval, and review, and with HIS/EHR systems through FHIR APIs for structured clinical data exchange.  |
| **Ethics & Governance** | Augmento embeds Responsible AI (RAI) governance as a core system layer rather than an external add-on. The platform includes continuous monitoring of model bias, performance drift, and output reliability, with built-in explainability tools to support clinical transparency and auditability. |
| **Impact & Scale Potential** | Augmento provides NCG with a foundational digital infrastructure for population-scale oncology data curation and AI-driven research. By transforming routine clinical data into structured, longitudinal, and anonymized datasets, the platform enables multi-centre studies, AI model development, and real-world evidence generation at unprecedented scale. |

## CATCH 2026 Winners

manentia.ai

**Koita Centre for Digital Health at Ashoka** — ASHOKA UNIVERSITY

Tata Memorial Hospital, Mumbai

# PREDICT-AI

AI-Based Decision Support for RP-LND Prediction in Testicular Cancer

| 👨‍⚕️ Theme | ⚙️ TRL | 🏅 Status | 📍 Pilot / Deployment Sites |
|---|---|---|---|
| Research | 5-7 | Pilot-ready | Tata Memorial Hospital, Mumbai |

### The Challenge

Determining the need for retroperitoneal lymph node dissection (RP-LND) following chemotherapy in testicular cancer is clinically complex. Decisions rely on subtle radiological patterns and expert judgement, often leading to variability in care, potentially unnecessary surgeries, or delayed interventions that impact outcomes and resource use.
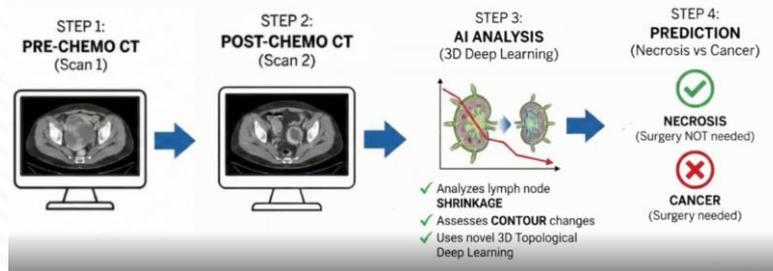
### The AI-Enabled Solution

Predict-AI is an AI-driven clinical decision support system that analyses paired pre- and post-chemotherapy CT scans together with relevant clinical data to predict the likelihood that a patient will benefit from RP-LND.

By quantifying radiological response patterns that are typically assessed qualitatively by experts, Predict-AI supports more consistent and timely surgical decision-making.

Predict-AI uniquely translates expert radiological reasoning into measurable AI features using topological pattern recognition. This approach enables transparent, reproducible, and auditable triage decisions—bridging the gap between expert intuition and data-driven support.

| **Technical Overview** | The system combines convolutional neural networks retrained specifically for retroperitoneal lymph node assessment with topological algorithms that capture spatial and morphological response patterns. Explainable visual overlays are generated to support clinician interpretation and trust. |
|---|---|
| **Implementation & Integration** | Predict-AI integrates directly into existing PACS workflows at Tata Memorial Hospital. AI insights are presented alongside routine imaging review, ensuring decision support is available at the point of care without disrupting established clinical practices. |



| **Ethics & Governance** | The solution follows data handling practices aligned with India's Digital Personal Data Protection (DPDP) framework and operates under institutional clinical oversight. Human-in-the-loop validation is embedded to ensure AI outputs are reviewed and contextualized by treating clinicians. |
|---|---|
| **Impact & Scale Potential** | Predict-AI has the potential to optimise surgical decision-making, reduce unnecessary RP-LND procedures, and improve utilisation of specialist surgical resources. With further validation, the approach could be extended to other centres of excellence and adapted to similar post-therapy decision points in oncology. |

**CATCH 2026 Winners**

qure.ai

# Qure.ai

Qure Lung Cancer AI Suite

| Theme | TRL | Status | Pilot / Deployment Sites |
|---|---|---|---|
| Screening | 5-7 | Pilot-ready | Rajiv Gandhi Cancer Institute . Delhi |

### The Challenge

Lung cancer care pathways frequently break down due to fragmented detection, delayed diagnostic escalation, and poor continuity of follow-up across care settings. These gaps contribute to late-stage diagnosis and loss to follow-up, limiting the effectiveness of screening initiatives.

### The AI-Enabled Solution

The Qure Lung Cancer AI Suite is an integrated ecosystem that supports the full continuum of lung cancer care—from early screening to diagnosis and longitudinal follow-up. The suite combines qXR for chest X-ray screening, qCT for CT-based diagnostic assessment, and qTrack for ongoing patient monitoring and navigation.

Together, these components enable coordinated, data-driven lung cancer pathways across imaging modalities and care settings.

Unlike isolated screening or diagnostic tools, Qure's ecosystem approach connects detection, confirmation, and follow-up within a single platform. This integrated design reduces loss to follow-up, supports timely escalation of care, and enables more coordinated clinical decision-making across institutions.

| Technical Overview | The platform leverages advanced convolutional neural networks (CNNs) and transformer-based models for automated detection, segmentation, and structured reporting across both X-ray and CT imaging. Outputs are optimized for clinical interpretability and workflow compatibility. |
|---|---|
| Implementation & Integration | The suite integrates seamlessly with existing PACS and EMR systems using DICOM and HL7/FHIR standards. AI-generated overlays and structured reports are delivered directly within routine radiology workflows, minimising disruption to clinical practice.  |
| Ethics & Governance | The platform follows secure deployment and data handling practices, with clinician validation embedded at each decision point to ensure patient safety and appropriate clinical oversight. |
| Impact & Scale Potential | Qure's integrated AI suite enables population-scale lung cancer screening programs while maintaining continuity from screening to follow-up. With its pathway-centric design, the solution is well suited for coordinated deployment across National Cancer Grid institutions. |

# BandhuCare Consortium - BandhuCare

Multilingual AI-Powered Support Platform for Cancer Patients

| 🩺 Theme | ⚙️ TRL | ⚙️ Status | 📍 Pilot / Deployment Sites |
|---|---|---|---|
| Patient Engagement | 8-9 | Pilot-ready | Christian Medical College (CMC), Vellore |

### The Challenge

Cancer patients in India often face gaps in access to reliable, comprehensible, and language-appropriate information. Limited availability of continuous psychosocial support—especially outside tertiary centres—can affect treatment adherence, symptom reporting, and overall quality of life, particularly among linguistically diverse and digitally underserved populations.

### The AI-Enabled Solution

BandhuCare is a multilingual, AI-powered patient engagement platform designed to provide continuous, accessible support throughout the cancer care journey. The platform offers voice- and text-based interactions, symptom tracking, and clinician-verified information delivered across 8–10 Indian languages.

By combining conversational AI with culturally contextualized content, BandhuCare supports patients and caregivers between clinical visits, reinforcing understanding, reassurance, and timely escalation of concerns.

BandhuCare is purpose-built for inclusivity in Indian healthcare settings. Its low-data usage, offline-access capabilities, and culturally adapted interactions distinguish it from generic patient apps, enabling meaningful engagement even in low-connectivity environments and among first-time digital users.

| | |
|---|---|
| **Technical Overview** | The platform leverages natural language processing (NLP), automatic speech recognition (ASR), text-to-speech (TTS), and multilingual large language models (LLMs). Secure data pipelines support personalised interactions while generating structured summaries that can be reviewed by clinicians when required. |
| **Implementation & Integration** | BandhuCare integrates with hospital systems through clinician dashboards and APIs. Data sharing is consent-driven, allowing patients to control how information is shared with care teams while enabling clinicians to monitor engagement and key patient-reported signals. |
| **Ethics & Governance** | Ethics approval has been obtained at CMC Vellore. The platform incorporates robust consent management, role-based access controls, and secure data handling practices to ensure patient privacy, safety, and trust. |
| **Impact & Scale Potential** | BandhuCare strengthens patient engagement, improves adherence to care plans, and supports psychosocial well-being across the cancer continuum. With its advanced maturity and inclusive design, the platform is well positioned for scale across National Cancer Grid institutions and diverse regional contexts. |
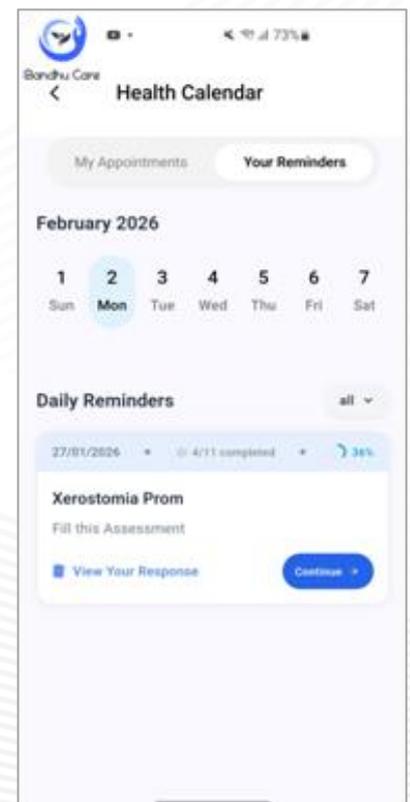
# CATCH 2026 FINALISTS

**IndiaAI – NCG**
**CATCH Grant for Cancer 2026**

# CDAC - iOncology.ai

iOncology.ai is an AI-powered oncology data platform for breast and ovarian cancer diagnostics and therapeutics. The project will integrate clinical validation, a multilingual patient consent management system, and a Responsible AI framework ensuring privacy, fairness, and regulatory compliance. These modules will enable ethical, transparent, and clinically reliable AI deployment in cancer care.

| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Screening | 40+ users | Pilot Ready | AIIMS Delhi |

# Deeptek

**AI-Enabled Chest X-ray Screening for Early Lung Cancer Detection**

DeepTek's AI-powered chest X-ray solution enables early lung cancer detection by identifying nodules, masses, and 22 thoracic abnormalities with explainable outputs like heat maps and bounding boxes. Validated on 500,000+ CXRs and approved by CDSCO, CE MDR IIb, and US FDA, it integrates with PACS/RIS, works offline, and supports mobile outreach.

| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Screening | 1 Lakh patients in 1 year | Pilot Ready | AIIMS Delhi |

# Tata Medical Center

**Improving Radiotherapy Process Quality using Deep Learning based Radiotherapy Autosegmentation Workflow (DRAW)**

DRAW is an end-to-end radiotherapy autosegmentation pipeline integrating training and inference into clinical workflows. It automates dataset curation, segmentation, validation, and performance tracking per AAPM TG263 standards. Deployed via secure, on-demand GPU VMs, it enables seamless, license-free model deployment, PHI-safe data handling, and synchronized updates across centers.

| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Clinical Treatment | 520 unique patients | Pilot Ready | PGIMER, KMC Manipal |

# Navya

**Earthshot - Building Local Capacity for AI-enabled Cancer Care**

Navya Earthshot is an AI-powered decision support platform that transforms NCG guidelines into actionable, point-of-care recommendations. Using NLP and machine learning, it generates structured case summaries, patient reports, and guideline concordance tracking—reducing preparation time from hours to minutes.

| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Clinical Treatment | 2000+ users | Pilot Ready | NATCO Cancer Centre<br>Guntur General Hospital and Medical College |

# Partex AI

**AI-Driven Clinical Trial Prediction and Patient Matching for Oncology Research Enablement**

Its Trial Matching Engine analyzes patient records, treatment history, and eligibility criteria to identify suitable ongoing trials, while the Remote Phenotyping Module uses multimodal data to derive digital phenotypes for eligibility and stratification, informed by prior large-scale multimodal research. A Protocol Design & Feasibility Predictor estimates trial success probability by assessing endpoints, comparators, study duration, and investigator capacity, and an Investigator & Site Recommendation module identifies high-probability sites based on enrollment performance, experience, and publication strength.



| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Research | 33,717 unique users | Pilot Ready | NCG Hospital |

# SAKHI Manipal

**Smart AI Kit for Healthcare Innovation**

Navya Earthshot is an AI-powered decision support platform that transforms NCG guidelines into actionable, point-of-care recommendations. Using NLP and machine learning, it generates structured case summaries, patient reports, and guideline concordance tracking—reducing preparation time from hours to minutes.



| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Screening | 200+ trained healthcare professionals | Pilot Ready | KMC Hospital, Manipal |

# B Cell Biologics

**Next Generation AI-Powered Cervical Cancer Diagnostic for Early and Stage-Specific Detection: InstaLFA**

An AI-powered biosensor for rapid cervical cancer screening delivers results in 5–10 seconds, detecting disease-specific molecular signatures with high sensitivity. Beyond HPV detection, it provides stage-specific prognosis using self-learning AI trained on large clinical datasets. The device offers actionable insights for immediate referral, works in real time at the point of care, and is affordable and non-invasive



| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Screening | 200 Users in 6 months | Pilot Ready | Adyar Cancer Institute |

# Affordable Quality Health (AQH)

**AI for Her Health – Cervi Screen**

AQH and Nitara Health's CerviScreen uses AI-powered mobile cervicography to improve early detection, diagnostic accuracy, and efficiency. By addressing systemic challenges in public health, it supports to deliver equitable, patient-centric screening in underserved regions, bridging the gap to advanced technologies.



| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Screening | 20+ doctors in 6 months | Pilot Ready | Multiple doctors in Madhya Pradesh, Assam and Haryana |

# OncoAI

**Multi-Modal Imaging and Machine Learning for Breast Cancer Diagnosis**

An AI-driven diagnostic platform that integrates mammography, ultrasound, and PET/CT data to enhance early breast cancer detection and risk stratification. Using CNNs, ResNet / DenseNet models, and U-Net segmentation, it delivers automated, explainable lesion analysis to support radiologists and reduce diagnostic variability. Validated on retrospective datasets and aligned with Indian clinical needs, it is at TRL 5–6 with IEC approval and ready for NCG pilot deployment.

| Category | Potential Impact | Status | Sites |
|---|---|---|---|
| Diagnostics | 300 per modality: ultrasound, mammography, PET/CT | Pilot Ready | Malla Reddy Cancer Hospital & Research Institute |

# DecXpert

**Comprehensive Respiratory Screening Assistance Tool - DecXpert**

DecXpert is an AI-driven lung cancer screening platform that detects and characterizes nodules with over 95% accuracy in under a minute. Built for India's cancer care needs, it reduces misdiagnosis 4x, improves early detection by 50%, and is 4x more affordable. Its adaptive, CDSCO-compliant architecture integrates easily into NCG hospital workflows, supporting scalable and equitable screening.

| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Diagnostics | 10,000+ individual patients screened | Pilot Ready | Sanjay Gandhi Post Graduate Institute of Medical Sciences |

# PRR.AI - NuGleason

**Gleason Scoring Algorithm for Prostate Cancer**

NuGleason is an AI algorithm that detects tumor regions in prostate biopsy WSIs and assigns Gleason grades following ISUP/WHO guidelines. It segments glands into normal vs. abnormal, classifies glandular patterns, and generates a structured Gleason Score with the overall grade group. The tool improves diagnostic consistency, reducing inter-observer variability, and supports Human-in-the-Loop validation where pathologists can review or override outputs. It is interoperable with common pathology viewers and can also be deployed with PRR's proprietary viewer (PathVu) for seamless workflow integration.

| Category | Status | Sites |
|---|---|---|
| Diagnostics | Pilot Ready | NCG Hospital |

# OncoPath AI

**AI-driven Histopathological Prognostication in Oral Cancer: Towards Scalable Clinical Deployment**

TPhase I uses MAPSNet AI to detect fine-grained Worst Pattern of Invasion (WPOI) features in oral cancer images, and Phase II groups these patterns into three RCPath-UK categories—Cohesive, Non-cohesive, and Dispersed—usable for both biopsy and surgical specimens. This phased framework is unique in India, bringing objective AI-based pathology assessment aligned with international standards. It automates complex invasion-pattern recognition, reduces diagnostic variability, and converts detailed AI outputs into clinically actionable categories.

| Category | Potential Impact | Status | Sites |
|---|---|---|---|
| Diagnostics | 15 pathologists will be validating | Pilot Ready | Dental Department, Ramaiah University, Bareilly & Rohilkhand Cancer Institute |

**30**

# Futurtap

**Next-Gen Multimodal AI for Cancer Diagnosis Leveraging CNNs, Transformers and Fusion Models**

The solution uses multimodal AI to integrate radiology images, pathology slides, genomic profiles, and clinical records into a single diagnostic model. CNNs and Transformers extract rich features from each data type, while fusion networks combine them for stronger predictive power. This approach captures cross-modality patterns that single-source AI misses, enabling more accurate, explainable, and scalable cancer diagnostics.

| Category | Potential Impact | Status | Sites |
|---|---|---|---|
| Diagnostics | NA | Pilot Ready | NCG Hospital |

# Partex AI

**AI-Powered Patient Engagement Ecosystem for Cancer Care in India**

An integrated platform supporting cancer patients, hospitals, and researchers through three components:
- Onco App – Patient-Centric Engagement
- Symptom tracking and smart reminders for adherence.
- Multilingual AI translation of clinical instructions.
- Personalized education on treatment, nutrition, and self-care.
- Verified second opinion services.
- My Data Vault: secure, consent-based record storage and sharing.



| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Patient Engagement | 1.5 Mn globally | Pilot Ready | NCG Hospital |

# OncoPredict AI

**Prognosis Prediction of Radiation Induced Lung Injury (RILI) and Radiation Optimization in Breast Cancer Patients with Artificial Intelligence**

CT images of breast cancer patients are given to the pretrained CNN and Vision Transformer model for segmentation of the cancer-affected portion and classification of the level of cancer. Based on the classified level, the immunotherapy required is provided with the support of Predictive AI. Dose distribution and optimization of radiation delivery are done entirely by the transformer-based network, which is trained using retrospective data of breast cancer patients and can be further clinically validated with prospective data and the clinical team involved in the project. This radiation planning and therapy prediction will reduce the cost of treatment, as contouring and planning are automated and useful in resource-limited settings, especially in rural India..

| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Clinical Treatment | 100+ patients | Pilot Ready | Deepa Hospital - Indian Cancer Centre |

# Medsee AI

**Better Report Generation to Improve Radiologist Efficiency and Tumor-Board Communication**

The solution leverages skeletal muscle mass index (SKM) as a superior metric to BMI for personalizing chemotherapy dosing. We publish reference SKM ranges derived from CT scans of the Indian population, linked to prescribed chemo doses and patient outcomes. Using automated skeletal muscle segmentation on CT images, we assess sarcopenia and guide chemo dose adjustments. The segmentation algorithm, trained on a combination of public and private datasets, uniquely employs semi- and unsupervised learning leveraging state-of-the-art models like SAM, CLIP, and vision-language embeddings. This approach allows scalable learning from 20 years of retrospective cancer data at Tata Memorial Hospital, overcoming the limitations of purely supervised methods.

| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Operational Efficiency | Used dataset for SKM training yet to be deployed | Pilot Ready | Tata Memorial Hospital |

# Meeval Care

**Patient Reported Outcomes to help Clinical Decision Making and Interventions in Oncology**

Meeval enables patients (or caregivers) to log symptoms and meds in English or Malayalam, get gentle nudges, and share clear timelines with their care team. A simple rules-based triage highlights potential red flags for clinician review. The WhatsApp conversational layer and advanced analytics are planned, not live.

| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Clinical Treatment | 250+ Users | Pilot Ready | EMC, Kochi. MOSC, Kolenchery. Amrita Hospital, Kochi |

# DoctorAssist

**AI Tools for Advancing Value Based Care in Oncology**

A multimodal AI engine integrating structured/unstructured hospital data (EHR, labs, imaging, genomics, lifestyle). Provides real-time reasoning, prescription checks, predictive risk scoring, Molecular tumor board, Multi specialty board and research analytics.

| Category | Current Usage | Status | Sites |
|---|---|---|---|
| Operational Efficiency | 10 institutions across India, GCC and Africa. | Pilot Ready | Malabar Cancer Centre, Thalassery |

# KEY LEARNINGS FROM THE CATCH GRANT CHALLENGE

The CATCH Grant Challenge witnessed strong interest from across the AI and oncology ecosystem, receiving 299 applications from innovators nationwide. Following the removal of duplicate submissions, 285 unique solutions were taken forward for evaluation. These proposals underwent a rigorous, multi-stage screening process that assessed clinical relevance, technical maturity, scalability, data governance, and alignment with responsible AI principles. This process resulted in a shortlist of 35 solutions, which were invited to present detailed demonstrations and implementation plans to a multidisciplinary final jury comprising clinical leaders, technologists, and policy experts.

Based on in-depth deliberations, 10 finalist solutions were selected for support under the CATCH Grant. The evaluation journey highlighted both the breadth of innovation emerging in cancer AI and the importance of grounding technology in real clinical workflows. It reinforced the need for end-to-end solutions, strong clinician engagement, and readiness for deployment within India's diverse healthcare settings. Collectively, the process ensured that the final cohort represents not only technical excellence, but also a clear pathway to meaningful, scalable impact in oncology care.

## Impact of AI in Oncology

The CATCH Grant Challenge establishes a replicable national model for advancing AI in oncology—one that combines innovation funding, clinical validation, responsible governance, and pathway-level thinking.

## Anticipated Impact

o   Accelerated adoption of clinically validated AI across NCG centres

o   Improved early detection and standardization of cancer screening

o   Reduced clinician burden through operational AI

o   Enhanced patient understanding and continuity of care

o   Strengthened evidence base for AI-enabled oncology policy

By anchoring AI innovation in real clinical environments and national priorities, CATCH lays the foundation for scalable, ethical, and impactful AI-driven cancer care in India

## Conclusion

Together, the solutions documented in this compendium demonstrate a growing ecosystem of clinically grounded, ethically aligned AI innovations tailored for Indian cancer care. By emphasizing validation, integration, and scale, the IndiaAI–NCG CATCH initiative provides a blueprint for translating AI innovation into sustained, system-level impact across the National Cancer Grid.

The IndiaAI–NCG CATCH Compendium demonstrates that responsible, workflow-embedded AI can address real challenges in Indian cancer care. By focusing on validation, integration, and scale, the CATCH initiative provides a replicable model for translating AI innovation into measurable clinical and system-level impact.

## Authors

Mr. Anurag Deb, IndiaAI

Ms. Swapna Verlekar, NCG-KCDO

Dr. Vinisha Poojari, NCG-KCDO

**NCG - Koita Centre for
Digital Oncology**

**IndiaAI – NCG
CATCH Awards 2026**

Strategic Partner

**NCG-Koita Center for Digital Oncology**
Tata Memorial Hospital, 10th Floor,
Homi Bhabha Block
Dr. Ernest Borges Rd, Parel East
Mumbai 400 012. India.

**Email:** admin.kcdo@ncgindia.org
**Mobile:** 9152339945
**Phone:**+91-22-24177300 Ext: 6893