

Impact Assessment Study

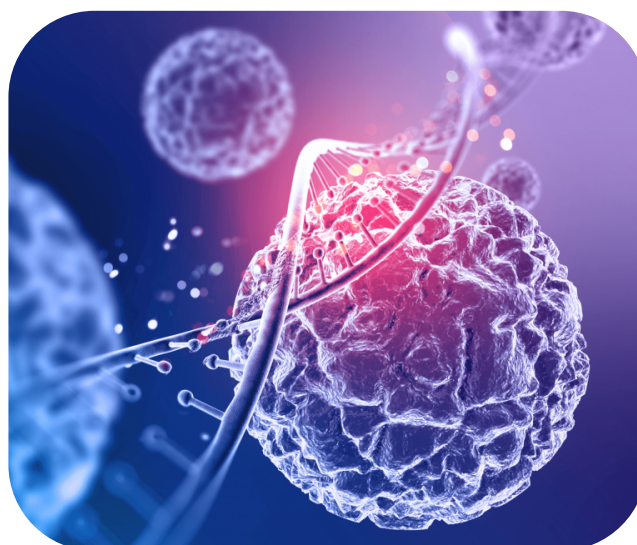
Project Name: The Gujarat Cancer & Research Institute -

(i) Bus with installed Mammography machine along with Hand-hold Oral auto fluorescence Device.

(ii) 3D Laparoscopy system

(iii) Hyperthermic intraperitoneal Chemotherapy (HIPEC) machine.

Project Financial Year 2022-2023



Presented to
Gujarat State Petronet Limited
(GSPL),
GSPL, Bhavan , Gandhinagar



Presented by
Gujarat Industrial and Technical
Consultancy Organisation Limited
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ACRONYMS

List of Acronyms and Abbreviations

Acronym	Full Form
<i>AYUSH</i>	<i>Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy</i>
<i>BMT</i>	<i>Bone Marrow Transplant</i>
<i>CSR</i>	<i>Corporate Social Responsibility</i>
<i>CT</i>	<i>Computed Tomography</i>
<i>FY</i>	<i>Financial Year</i>
<i>GCRI</i>	<i>Gujarat Cancer & Research Institute</i>
<i>GITCO</i>	<i>Gujarat Industrial and Technical Consultancy Organisation Limited</i>
<i>GOG</i>	<i>Government of Gujarat</i>
<i>GSPL</i>	<i>Gujarat State Petronet Limited</i>
<i>ICU</i>	<i>Intensive Care Unit</i>
<i>IPD</i>	<i>In-Patient Department</i>
<i>MA</i>	<i>Mukhyamantri Amrutam Scheme</i>
<i>MCA</i>	<i>Ministry of Corporate Affairs</i>
<i>MRI</i>	<i>Magnetic Resonance Imaging</i>
<i>NICU</i>	<i>Neonatal Intensive Care Unit</i>
<i>OPD</i>	<i>Out-Patient Department</i>
<i>OT</i>	<i>Operation Theatre</i>
<i>PMJAY</i>	<i>Pradhan Mantri Jan Arogya Yojana</i>
<i>SDG</i>	<i>Sustainable Development Goal</i>
<i>USG</i>	<i>Ultrasonography</i>



EXECUTIVE SUMMARY

Gujarat State Petronet Limited (GSPL), under its CSR mandate for Healthcare & Sanitation, supported the **Gujarat Cancer & Research Institute (GCRI)** in FY 2022–23 for the procurement of critical cancer-screening, diagnostic, and minimally invasive surgical equipment. The objective of the support was to strengthen GCRI’s capacity across the cancer care continuum—early detection, triaging accuracy, surgical precision, and equitable access for underserved populations.

The assessment, undertaken by **Gujarat Industrial and Technical Consultancy Organisation Ltd. (GITCO)** as the independent evaluation partner, examined the utilisation, workflow integration, and outcome pathways of five key CSR-supported components:

- Bus with installed Mammography machine along with Hand-hold Oral auto fluorescence device
- 3D Laparoscopy System
- Hyperthermic Intraperitoneal Chemotherapy (HIPEC) machine

Across all components, the equipment was installed, operational, and consistently utilised within GCRI’s community and institutional services. The systems contributed to strengthening GCRI’s outreach capacity, improving diagnostic accuracy in early detection, and enhancing surgical and treatment quality within the hospital. Field data from camps, OPD-based screenings, and institutional departments indicate continuous service delivery, high beneficiary turnout, and measurable improvements in care-process efficiency.

The Mobile Mammography Bus expanded access to preventive breast screening for women who typically face distance, awareness, or socio-economic barriers to care. The HPV DNA testing programme—supported through GSPL CSR—enabled high-performance cervical cancer screening in both camps and OPD settings, including among high-risk groups. The VELscope device improved oral lesion triaging and reduced unnecessary biopsies, particularly in tobacco-using populations screened through community outreach. Within GCRI, the 3D laparoscopy systems and HIPEC machine strengthened minimally invasive surgical capability and advanced oncologic treatment pathways.

The assessment also highlights broader institutional and social benefits. The CSR-supported interventions reinforced equity of access, enabling free or low-cost screening for women, rural communities, labour-intensive workforce groups, and patients from economically weaker backgrounds. They supported GCRI’s mandate as a public tertiary cancer institution serving a high and diverse patient load, including individuals from across Gujarat and outside the state.



The supported systems further contributed to training, clinical research, and evidence generation in cervical, oral, and surgical oncology.

Overall, GSPL's CSR investment delivered a multi-level strengthening effect—expanding outreach, improving early detection, enabling precise surgical interventions, and supporting comprehensive cancer care pathways at GCRI. The findings indicate that the supported systems are embedded in routine practice, operationally stable, and aligned with national and global priorities for cancer prevention and control. The impact pathway observed reflects sustained institutional value and long-term public-health relevance, consistent with GSPL's commitment to high-impact, socially centred CSR.



1. ABOUT THE CSR FUNDING AGENCY AND THE ASSESSMENT PARTNER

1.1. Gujarat State Petronet Limited (GSPL)

GSPL, a Government of Gujarat enterprise and a subsidiary of Gujarat State Petroleum Corporation (GSPC), is one of India's leading natural gas transmission companies. Beyond its core business, GSPL maintains a consistent commitment to CSR, prioritising inclusive growth and public welfare across Gujarat in alignment with Schedule VII of the Companies Act, 2013.

GSPL's CSR initiatives span Healthcare & Sanitation, Education, Environment & Sustainability, Livelihood Promotion and Rural Development, with a strategic emphasis on strengthening public health infrastructure and improving access to quality medical services for vulnerable and underserved communities.

During FY 2022–23, under its thematic focus on Healthcare & Sanitation, GSPL extended support to GCRI for the procurement and deployment of critical cancer-screening, diagnostic and advanced surgical oncology equipment. This assistance aimed to expand district-level screening coverage, improve precision in oncological diagnosis, strengthen minimally invasive treatment capacity, and reinforce equitable access to cancer care for populations across Gujarat and beyond.

The partnership reflects GSPL's commitment to long-term community impact through evidence-driven CSR investment, contributing directly to SDG 3 (*Good Health & Well-Being*) and complementing the Gujarat State Health Mission's mandate to expand high-quality cancer services.

1.2. Gujarat Industrial and Technical Consultancy Organisation Ltd. (GITCO)

GITCO is a multi-disciplinary consultancy organisation established in 1978 to support industrial, infrastructure, and socio-economic development initiatives in Gujarat. Promoted by leading state financial institutions, GITCO undertakes technical advisory, feasibility assessment, programme evaluation, policy analysis, and CSR impact assessments across sectors including healthcare, education, livelihoods, and institutional strengthening.

In the CSR domain, GITCO conducts independent third-party evaluations to assess utilisation, relevance, effectiveness and outcome pathways of CSR-funded interventions. Its methodology emphasises field-based inquiry, stakeholder interviews, document verification, and evidence-driven interpretation aligned with the Ministry of Corporate Affairs (MCA) CSR Rules, 2021 and global evaluation standards.



For this assignment, GITCO served as the independent assessment partner, responsible for designing the evaluation framework, conducting field data collection and observations, analysing utilisation and outcome patterns of the GSPL-supported equipment, and preparing this impact assessment report for submission to GSPL.

1.3. Study Context

This impact assessment examines the utilisation and contribution of medical and screening equipment supported under GSPL's CSR programme at the GCRI during FY 2022–23. The CSR-supported components - *including the mobile mammography van with digital mammography unit, HPV DNA testing kits, oral autofluorescence device (VELscope), 3D laparoscopy systems, and the HIPEC machine* - were integrated into GCRI's community oncology, diagnostic imaging, and surgical oncology workflows.

The evaluation was undertaken in alignment with the MCA CSR Amendment Rules, 2021, which recommend third-party evaluation for significant CSR-funded projects. The study adopts a field-based qualitative methodology, combining stakeholder interactions (*clinical, technical, administrative and field teams*), review of institutional records, camp datasets, and programme documentation submitted by GCRI.

Given the integrated nature of preventive oncology, diagnostic pathways and multi-disciplinary oncology treatment at GCRI, the assessment focuses on *how the supported equipment strengthens continuity, stability, precision, and equity across screening, diagnosis, treatment, and follow-up care.*



2. INSTITUTIONAL PROFILE: GUJARAT CANCER & RESEARCH INSTITUTE (GCRI)

2.1 Institutional Background

Established in 1972, the Gujarat Cancer & Research Institute (GCRI), located within the Civil Hospital Campus, Asarwa, Ahmedabad, is one of India's oldest and largest Regional Cancer Centres. Jointly managed by the Government of Gujarat and the Gujarat Cancer Society (GCS), and affiliated to B.J. Medical College¹, GCRI functions as a comprehensive tertiary cancer facility integrating clinical care, academic training, and oncology research.

Over the decades, GCRI has evolved into a full-spectrum cancer institute offering advanced diagnostic, surgical, medical, radiation, and supportive-care services for both adult and paediatric patients. Its mandate includes clinical treatment, oncology training (MD, DM, M.Ch., MSc, PhD)² and research through dedicated cancer biology and molecular research laboratories.

2.2 Service Range, Clinical Specialities & Academic-Research Mandate

GCRI's multidisciplinary care ecosystem includes:

- Surgical, Medical and Radiation Oncology
- Nuclear Medicine
- Diagnostic Imaging (PET-CT, MRI, CT, digital mammography)
- Pathology & Cytology
- Transfusion Medicine & Blood Bank
- Palliative Care, Physiotherapy, Nutrition, Psycho-oncology
- Stoma Care, Rehabilitation & Hospice Services

The Institute operates 650 beds for cancer patients, with specialised units for paediatric oncology, head-neck cancers, gynaecologic malignancies, thoracic oncology, gastrointestinal cancers and haematological cancers.

GCRI also runs a strong academic programme, training postgraduate and super-specialty students in oncology and related fields, while its research wing conducts laboratory and clinical studies that contribute to evidence-based oncology practice.



¹ GCRI Official Website – Institutional Profile <https://www.gcricindia.org/profile.html>

² <https://www.uicc.org/membership/gujarat-cancer-research-institute>

2.3 Social Commitment: Community Oncology & Equity of Access

Beyond tertiary care, GCRI plays a significant public-health role in early detection and community-based cancer prevention:

- A dedicated *Community Oncology Centre* conducts regular awareness programmes, screening camps, tobacco de-addiction clinics and hospice services.
- The institute operates the *mobile cancer detection van (Sanjeevani Rath)* to reach rural and under-served areas.
- GCRI also runs free screening OPDs providing *no-cost mammography, HPV DNA testing and oral cancer screening*, improving access for asymptomatic individuals and vulnerable groups.

GCRI is empanelled under major national and state health-assurance schemes such as *Ayushman Bharat PM-JAY*, ensuring access for low-income, *SC/ST, LIG, ESIS, pensioner and government-employee* categories. This positions GCRI as a leading example of equitable oncology access in Gujarat and India.

2.4 National & State-Level Cancer Burden

According to the National Cancer Registry Programme (NCRP) 2020, India recorded an estimated *1.39 million new cancer cases* in 2020. The WHO's Global Cancer Observatory (GLOBOCAN) 2020 confirms breast cancer as the most commonly diagnosed cancer in women, while cervical cancer remains a major preventable cancer globally.

GCRI's proposal to GSPL highlights key state-level concerns³:

- Breast cancer remains among the leading cancers affecting women in Gujarat.
- Many women present late due to barriers in awareness, mobility and access.
- Oral cancer burden remains high due to widespread tobacco use.
- Cervical cancer requires population-level HPV DNA screening to improve early detection.

These epidemiological patterns reinforce the need for *decentralised* early detection, *robust* screening-to-diagnosis pathways, and *strengthened* oncology treatment capacity across districts.



³ Annexure I – GCRI Project Proposal, CSR FY 2022–23 (pages covering cancer statistics and justification)

3. PROJECT OVERVIEW

3.1 Background of CSR Support

During FY 2022–23, Gujarat State Petronet Limited (GSPL), under its CSR thematic priority of Healthcare & Sanitation, extended support to the Gujarat Cancer & Research Institute (GCRI) for the procurement and deployment of critical cancer-screening, diagnostic, and minimally invasive oncology treatment equipment. The supported components span the full continuum of oncology services - early detection, diagnostic strengthening, and advanced surgical care - and were selected *based on GCRI's operational needs* and district-level epidemiological patterns for breast, cervical, oral, and peritoneal cancers.

The initiative was designed to:

- Expand district-level cancer screening access,
- Strengthen women's early detection pathways (breast and cervical),
- Improve triaging accuracy for oral potentially malignant disorders,
- Enhance minimally invasive surgical capability, and
- Support advanced oncology treatment such as HIPEC for peritoneal surface malignancies.

The support was structured under Section 135 of the Companies Act, 2013, fully aligned with national CSR guidelines and GCRI's public-health mandate. GSPL's contribution emphasised high-utility clinical systems that contribute directly to improved care quality, workflow efficiency, patient safety, and equity in access: *particularly for rural, underserved, and institution-based populations.*

3.2 Nature and Extent of Support

A total CSR sanction of **INR 7.66 crore** was approved by GSPL for GCRI under the *FY 2022–23 cycle*, enabling the procurement and operational integration of key screening, diagnostic, and surgical oncology systems.

The following table shows the list of equipments and consumables that were procured through CSR by GSPL:

Sr.	List of equipments	Description
1	<i>Bus with installed Mammography machine along with Hand-hold Oral auto fluorescence device</i>	• For district-level breast cancer screening through outreach camps.



Sr.	List of equipments	Description
		- Includes female-operated imaging workflow and radiologist reporting. - For fluorescence-based triage of oral lesions in OPD and large-scale camps
2	<i>3D Laparoscopy Systems (3 Units)</i>	For minimally invasive oncology surgeries across surgical oncology departments.
3	<i>HIPEC Machine</i>	For Hyperthermic Intraperitoneal Chemotherapy in peritoneal malignancies

The procurement was fully supported under GSPL's CSR allocation for the year, enabling seamless integration into GCRI's clinical, diagnostic, and outreach workflows. The support aligns with state and national cancer-control priorities and reinforces GCRI's role as a leading public-sector cancer centre serving a broad socioeconomic spectrum.



4 OBJECTIVES OF THE IMPACT ASSESSMENT

4.1 Rationale

In accordance with the MCA CSR Amendment Rules (2021), CSR projects with an outlay above INR 1 crore require an independent impact assessment. This evaluation for GCRI was undertaken to examine how GSPL's CSR-supported screening, diagnostic, and surgical oncology systems have contributed to early detection, triaging accuracy, surgical capability, patient management continuity, and public-health reach across Gujarat.

4.2 Specific Objectives

The assessment sought to:

- **Verify** installation, operational readiness, and utilisation of GSPL-supported systems across community outreach, OPD-based screening, and surgical oncology units.
- **Examine** how the mobile mammography system has strengthened breast cancer detection through outreach and institutional camps, supported by female-operated, privacy-sensitive workflows.
- **Assess** the contribution of HPV DNA testing in enhancing quality cervical cancer screening, improving follow-up adherence, and supporting evidence generation in research cohorts.
- **Evaluate** the role of VELscope in identifying early oral mucosal abnormalities, reducing unnecessary biopsies, and supporting tobacco-related cancer prevention efforts.
- **Understand** how 3D laparoscopy has improved surgical precision, ergonomics, trainee exposure, and postoperative recovery pathways in complex oncology procedures.
- **Assess** the integration and emerging contribution of HIPEC in peritoneal malignancy management within GCRI's multi-disciplinary surgical oncology framework.
- **Capture** perspectives of clinicians, technicians, outreach workers, and programme coordinators regarding workflow efficiency, beneficiary comfort, follow-up clarity, and care pathway alignment.
- **Evaluate** how the supported equipment strengthens institutional capability, including district outreach expansion, data-driven screening systems, surgical readiness, and research output.
- **Interpret** how these systems collectively improve equity of access, particularly for women, low-income groups, PLHIV beneficiaries, tobacco-exposed populations, and individuals from outside Gujarat who access care at GCRI.



The objectives⁴ are directed toward documenting how the GSPL-supported equipment functions within routine oncology workflows, identifying the clinical and public-health value it adds, and understanding its contribution to GCRI's mandate as a public-sector regional cancer centre.



⁴ The objectives form the lens with which the study was designed and approached.

5 METHODOLOGY

The impact assessment adopted a structured and rigorous approach consistent with established CSR evaluation standards and widely accepted development-evaluation frameworks. The methodology relies exclusively on verified institutional documents, field-collected data, stakeholder interactions, and publicly accessible epidemiological evidence. No extrapolations or modelled estimates have been used.

5.1 Evaluation Framework

The assessment follows the OECD-DAC criteria adapted for CSR projects in the healthcare sector, extracting evidence for citing relevance, effectiveness, efficiency, impact and sustainability of the intervention/investment. The framework ensured a consistent, transparent, and evidence-linked evaluation across all five GSPL-supported components at GCRI.

5.2 Data Sources

The findings in this assessment are based on verified primary and secondary sources:

- *Institutional Documents*
- *Field-Collected Data*
- *Stakeholder Interviews*
- *Beneficiary Feedback*
- *Secondary Public-Health Evidence*

5.3 Study Design & Approach

5.3.1 Study Design:

The assessment adopted a mixed-methods design, combining qualitative enquiry with structured verification of utilisation, workflow integration, and performance of the supported equipment across screening camps and hospital departments. The design prioritised field-based evidence and practitioner perspectives.

5.3.2 Sampling:

A purposive sampling strategy was used to engage stakeholders directly involved in or affected by the supported equipment. Camps were selected based on scheduled GCRI outreach activities during October 2025, enabling direct observation of screening operations, and beneficiary interactions.



5.3.3 Study Tools:

Semi-structured interview schedules and observational formats were used to capture practitioner insights, operational behaviour, workflow integration, and beneficiary experience. All tools were pre-tested for clarity and contextual suitability before field administration by trained field enumerators during the October 2025 site visits.

5.3.4 Data Collection Approach:

Field data was collected through direct, on-site observation of equipment deployment during two screening camps (*October 9-10, 2025*), examination of operational workflows, interactions with clinicians and technical staff, and beneficiary interviews conducted in camp and hospital environments.

Enumerators systematically recorded all responses through standardised formats to ensure consistency and comparability. The findings are grounded in observed practice, practitioner experience, and documented evidence, maintaining methodological rigour and reliability throughout the assessment.

5.4 Data Cleaning and Verification

A rigorous data-quality protocol was followed to ensure that all findings in this assessment rest on verified and internally consistent evidence. Triangulation was applied across every major source to confirm accuracy and coherence. No assumptions, extrapolations, or reconstructed inputs were introduced at any stage.

5.5 Approach to Analysis

The analysis was guided by a structured interpretive framework that drew directly from the verified evidence collected across field observations, stakeholder interactions, and institutional records. Statements and perspectives were retained in their original tone where they provided clarity or conveyed professional insight. Verification remained central to the analytical process.

5.6 Ethical Compliance

The assessment conformed to institutional ethics norms and MCA Impact Assessment protocols, organisational permissions and standard ethical practices applicable to field-based CSR evaluations, with no conflict of interest. All interactions were conducted with informed concurrence, and confidentiality was maintained throughout the process. Ethical handling of information, respondent comfort, and accuracy of transcription were maintained throughout the process.



5.7 Contextual Limitations

- **Context of Camp-Based Observations**

Field observations were conducted at GCRI's institutional outreach camps held within a controlled campus environment. While these camps provided reliable insight into operational workflow and user interaction, they do not fully reflect the conditions of rural or hard-to-reach outreach settings. This limitation can't be attributed to any party, *as the camp was organised during the field data collection duration. Rural settings camps are done on regular basis as institutional records show but due to study time constraints, the team couldn't be a part of one.*

- **Multi-Source Service Environment**

As GCRI delivers services supported by state health schemes, institutional funding, and multiple CSR contributions, the assessment focuses solely on the contribution of GSPL-supported equipment within this broader service ecosystem. No attribution is made to isolate outcomes to a single funding stream.



6 FINDINGS AND ANALYSIS

6.1 Mobile Mammography Bus (with Digital Mammography Unit)

Purpose & Relevance

The Mobile Mammography Bus (with Digital Mammography Unit) expands access to breast-cancer screening by bringing mammography directly to screening camps and institutional outreach events. This function aligns with national and state priorities for early detection, given breast cancer's rising incidence in urban and semi-urban Gujarat.

Operational Status

The bus is fully functional, and regularly deployed for institutional outreach camps. The equipment was observed to be in steady clinical use, with technicians reporting consistent workload during institutional camps and OPD-linked screening activities.

Utilisation (Verified Outputs)

The bus has substantially expanded GCRI's community screening reach. In FY2022–24 (*as on May 4, 2024*), 12+ camps were conducted with this van, screening over 200 women by mammography. Clinicians note that women aged 30–60 years, especially from rural or lower-income communities, benefit most from on-site screening (*reducing travel/time costs*). In practice, one van can screen about 40 women per day (*each mammogram takes ~15–20 minutes*).

“The equipment has shown high diagnostic reliability, with 95–98% sensitivity and specificity”, as noted by Dr. Himanshu Soni (*Professor & Lead, Mammography Outreach Initiative*). This ensures that early findings are appropriately escalated for confirmatory investigation and intervention, thus strengthening GCRI's screening-to-diagnosis pathway. Community response has been very positive and awareness high.



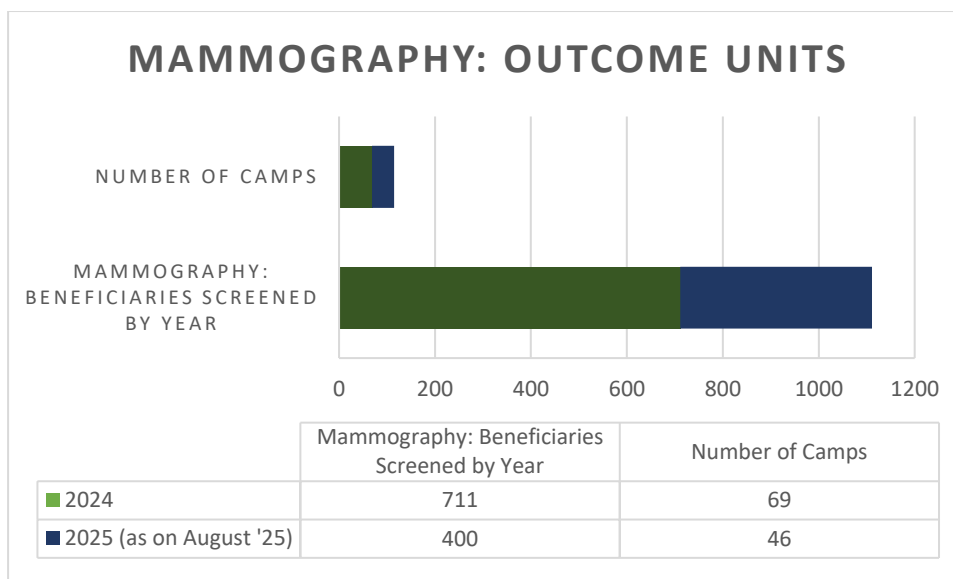


Chart1 shows the data and numbers beyond the study year to highlight the upward trend of camp-based screening in earlier years and sustained utilisation in 2025

Operationally, the bus allows simultaneous multi-district camps. As Dr. Anand Shah (Associate professor, Community Oncology) observed, “two mammography vans [a basic one was already there] has substantially increased GCRI’s ability to conduct simultaneous screening camps across districts. The new, well-equipped mammography van has improved efficiency, coordination... resulting in more consistent and effective screening delivery.”

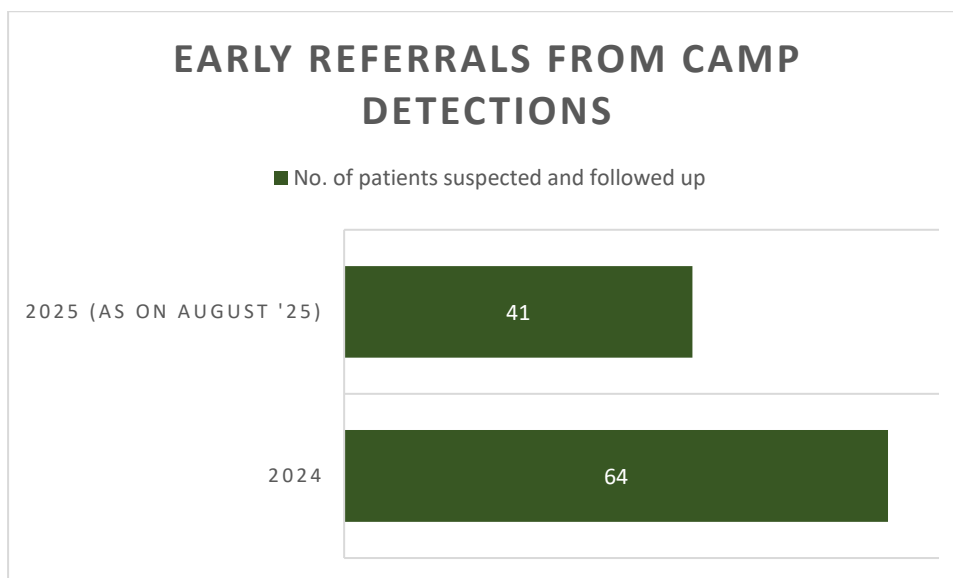


Chart 2: Clinicians confirmed increased early referrals from van detections. The number till August 2025, of patients detected from camps and received treatment remain 5 as per institutional record.



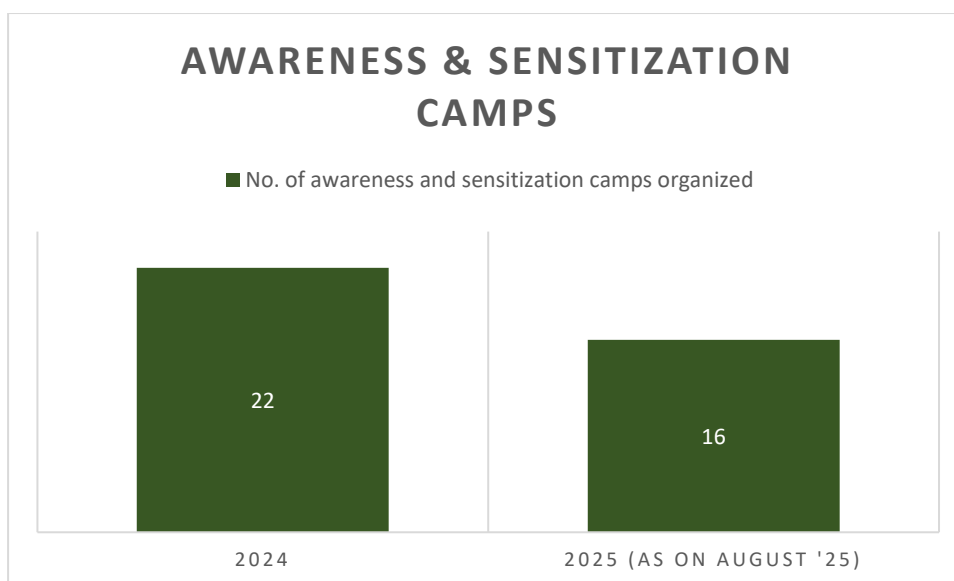


Chart 3: The van also serves as a visible health-education platforms: screening events include breast self-exam training and lifestyle counselling, raising community awareness.

Field Observations

During the camp visit, the team observed:

- A steady inflow of women who had “*awaited an opportunity for free mammography*” (*beneficiary statement*); smooth mobilization and high participation.
- The mammography unit was consistently occupied with minimal idle time.
- Well-coordinated screening flow from *registration* → *counselling* → *mammography*.
- Staff demonstrated familiarity with the equipment and coordinated well with camp organisers.
- Beneficiaries expressed comfort with the process and appreciated the privacy provided.

Beneficiary statements:

“I came because it was near my workplace. It is difficult to take leave and go to the hospital.”

“It was my first mammography, and the process was smooth. They guided me well.” This confirms the access-enhancing role of the mobile unit.

Key quantitative outcomes are summarized below:



Camp Date	Women Screened	Mammograms Done	Avg. Time/Scan	Satisfaction (1–5)
09-Oct-2025	128	28	15–20 min	5
10-Oct-2025	167	70	15–20 min	5

Staff feedback confirms steady functioning of the unit during camps (no breakdowns reported). However, *bottlenecks were noted*: limited space and long scan times led to waiting queues, and technicians suggested scaling up the service, “...equipment needs to be upgraded or quantity increased to further reduce the downtime.”

Contribution to Institutional Strengthening

“Many women in villages don’t understand what a breast lump means. Through these mobile vans, we can identify the issue early and guide the right treatment. It’s a life-saving initiative.” - Dr. Soni.

The GSPL-supported Mobile Mammography Bus (with Digital Mammography Unit) has, thus, made breast cancer screening far more accessible and efficient, strengthening GCRI’s preventive outreach by:

- Bringing screening directly to beneficiaries in organised camp environments;
- Supporting early detection by reducing distance and access barriers for women;
- Creating direct referral pathways to GCRI for confirmatory diagnosis, thereby integrating with GCRI’s preventive oncology workflow ecosystem

6.2 Hand-held Oral Autofluorescence Device

Purpose & Relevance

The handheld oral autofluorescence device (VELscope) is intended for early detection of pre-cancerous and suspicious oral mucosal lesions, particularly relevant in high-risk populations, and used extensively in OPD and in targeted outreach.



Operational Verification

The device is installed, functional, and used primarily in OPD and targeted screening outreach activities. Clinical staff confirmed that it is well integrated into oral cancer detection pathways.

Utilization (Verified Outputs)

In parallel with breast cancer screening, the VELscope is being effectively deployed at camps and OPDs for early oral cancer screening. This component has extended GCRI's screening toolkit, providing high-visibility preventive care. In FY2022–24 (as on May, 2024), over 1,000 patients have been screened with this device, combining both OPD and camp settings.

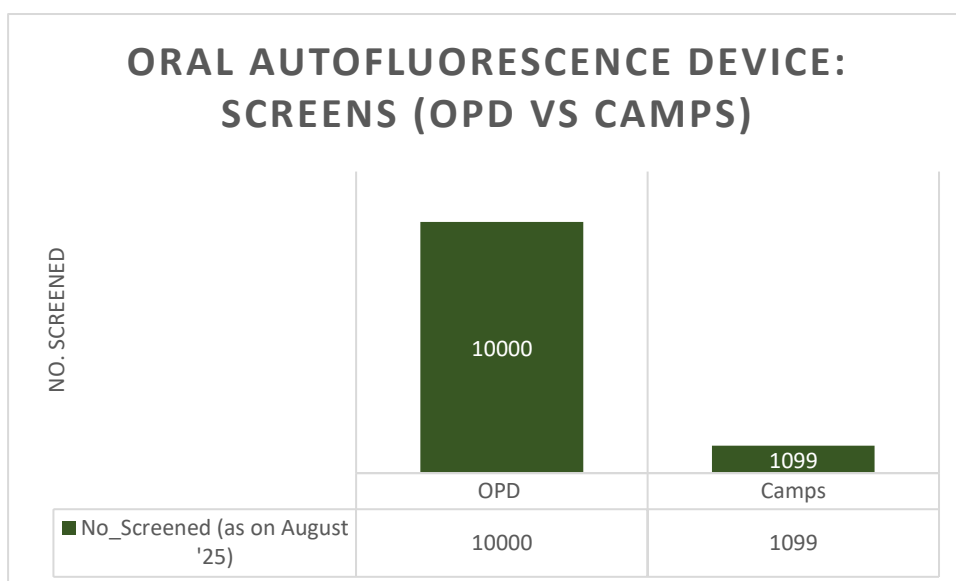


Chart 4 shows the data and numbers (10000+) beyond the study year to highlight the upward trend of camp-based screening and sustained utilisation in 2025

Community oncology staff report high significance of VELscope in screening camps in rural areas with prevalent tobacco use. Dr. Shah notes that it “enables early identification of lesions invisible to the naked eye. Multiple real cases demonstrate [its] ability to detect early cancers... where standard clinical inspection would have missed abnormalities.” In practice, this means suspicious mucosal areas are flagged earlier, leading to timely confirmatory biopsies.

The device is portable, making it well-suited for rural camps where oral cancer rates are high. While cancers cases found till now are not much in numbers (as expected in general screening), each detection is clinically important given the typically late-stage diagnosis otherwise. This



technology, thus, is seen as cost-efficient and high-impact for Gujarat (*which has among the nation's highest oral cancer rates*).

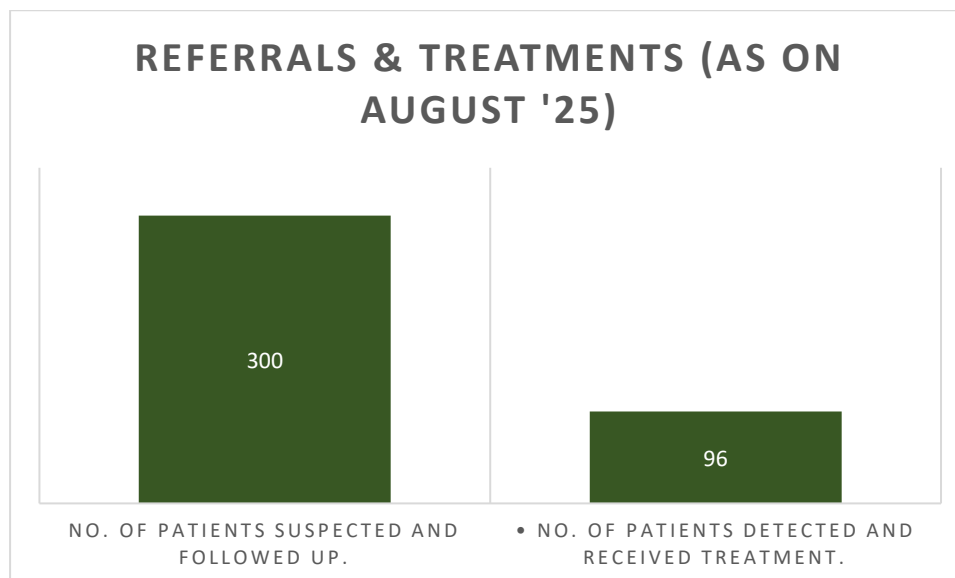


Chart 5: The number till August 2025, of patients suspected and followed up (300+) detected and received treatment as per institutional record.

Staff observe high community interest and demand during camps (*no stigma was noted during sessions*). To-date there have been no reported equipment failures in the field, and staff training has been sufficient to maintain screening flow.

Field & Clinician Insights

Technicians reported ease of use and efficient flow between visual examination and device-assisted evaluation: “...*autofluorescence helps quickly identify patches needing further assessment.*” The device is reported as useful for screening high-risk groups (*factory workers, community clusters*) and for triage in OPD workflows.

Contribution to Institutional Strengthening

The device complements GCRI's preventive oncology programme by significantly strengthening early oral cancer detection. “*Bringing screening closer [to beneficiaries] reduces travel time [on beneficiaries' part] and improves follow-up.*” - Dr. Bijal M. Patel (*Professor & Head, Gynaecological Oncology*).



6.3 HPV DNA Testing Kits

Purpose & Relevance

HPV DNA testing is a key and high performing method for early cervical cancer detection, particularly suitable for large-scale screening. GCRI's outreach team implemented HPV-based cervical cancer screening in 2023, part of which was conducted by utilizing GSPL CSR fund.

Utilization (Verified Outputs):

HPV DNA testing in the GCRI mobile unit has markedly improved cervical cancer screening. Clinicians highlight that HPV testing is far more sensitive than traditional cytology, allowing longer follow-up intervals (*5 years instead of 3*) when negative, thus reducing patient burden.

Women aged 30–50 are identified as the key beneficiaries (*the age when cervical cancer risk rises*), especially those from lower socio-economic and rural backgrounds. By bringing HPV testing to community sites, the intervention “addresses barriers [of] distance [and] cost” and significantly raises awareness and uptake. Field data highlight the program's integration and follow-through.

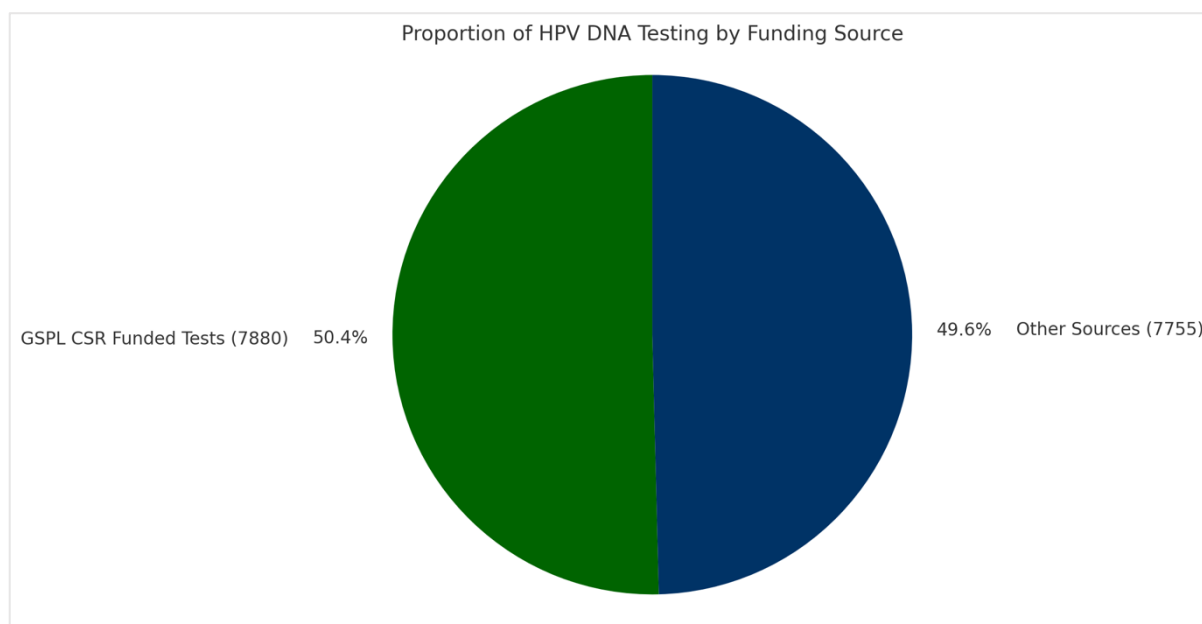


Chart 6: From 2023 through mid-2025, GCRI has conducted approximately 15635 HPV DNA tests in campus and at community camps (combined), out of which 7880 tests, over **50% of the total**, have been performed by utilizing GSPL CSR fund. This makes GSPL the **largest single-source contributor** to GCRI's HPV DNA testing efforts during this period.



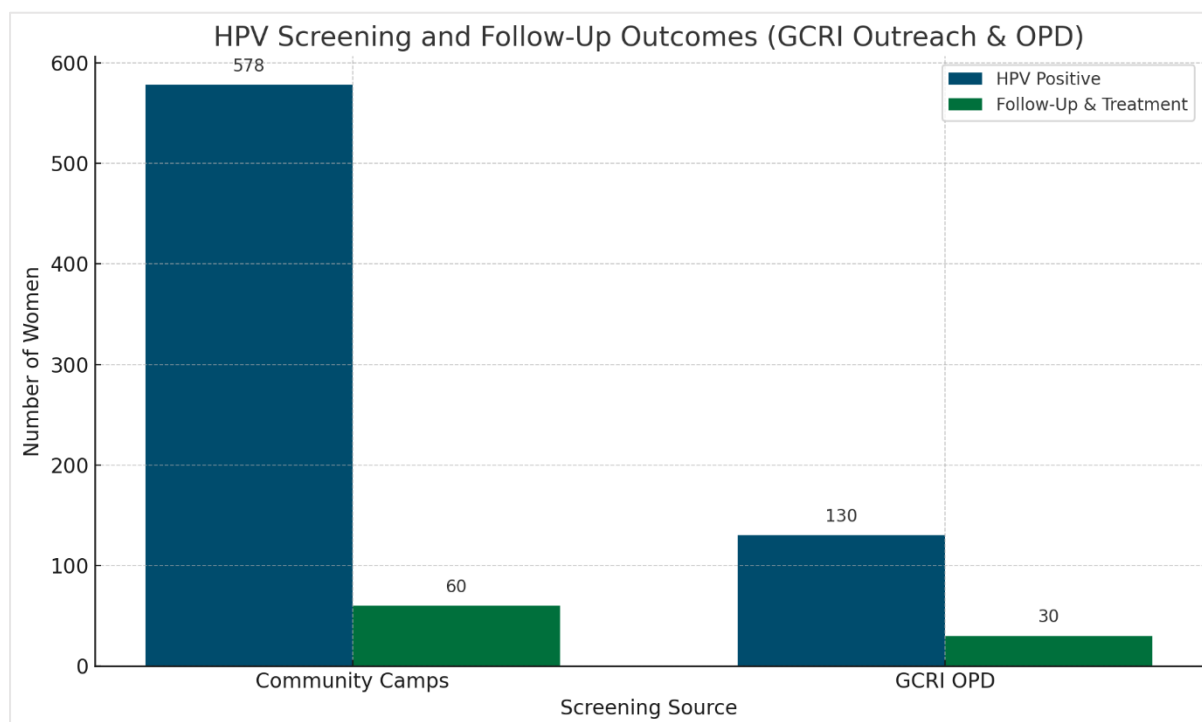


Chart 7: From 2023 through mid-2025, GCRI held over 190 outreach camps. Beneficiary patients have since received follow-up evaluation and treatment. This translates to an overall “yield” of roughly 5–7% positivity, aligning well with population-level expectations.

Importantly, all women testing positive for *high-risk HPV (types 16/18)* have been actively recalled for GCRI colposcopy and biopsy (*referral compliance is reported as very high*). Clinicians report that many of these women (*despite no prior visible symptoms*) have been diagnosed with early precancerous changes and treated in time. This is expected to improve early-stage detection and prevent future progression to invasive cancer.

Data evidence shows consistent usage and referral. The GCRI Community Oncology team, however, emphasize the need for more consumables (HPV kits) for the testing to scale up.

Field Observations

During the camp visits, the team observed

- The HPV screening line moved steadily, with staff maintaining clarity and comfort for beneficiaries.
- Many women expressed appreciation for “tests made available close to home or work.”
- GCRI staff demonstrated strong familiarity and efficiency with sample handling.



A staff member shared: *“These kits allow us to run high-volume camps with confidence in test accuracy.”*

Contribution to Screening & Prevention

HPV testing kits strengthen GCRI’s cervical cancer prevention efforts by:

- enabling consistent, high-volume community and institutional screening;
- supporting systematic triaging for follow-up; and
- contributing to shift towards evidence-based screening strategies.

Their large-scale utilisation reflects strong integration with GCRI’s community outreach commitments, OPD preventive programs, and national objectives for cervical cancer elimination.

6.4 3D Laparoscopy Systems (3 Units)

Purpose & Relevance

3D laparoscopy enhances precision in minimally invasive oncology surgeries through depth perception, improved visibility, and surgeon ergonomics.

Operational Status

All three laparoscopic systems were confirmed to be installed and actively used in routine and advanced oncologic surgeries. Clinicians reported that the systems are part of daily surgical workflows.

Utilisation (Verified Outputs)

The 3D laparoscopy systems are in effective use in GCRI’s operating theatres, with *over 1500 cancer surgeries* performed with this system to date (*as on August 2025*). As per the field data, *till May 2024, 200+ surgeries* were performed. The effective use of the system is, thus, evident.

Staff reports that roughly *50–60 procedures per month* utilize 3D laparoscopy across GI, gynaecology, uro-oncology and other specialties. Surgeons unanimously compliment the enhanced depth perception and clarity that comes with the *3D visualization*, making complex tumour resections safer. Dr. Mohit Sharma (*Professor & Head, Surgical oncology*) explains that



the 3D vision “*significantly enhances surgical precision... allowing surgeons to identify finer structures... If you can see it, you can do it*”. In practice, this has translated to measurable efficiency gains.

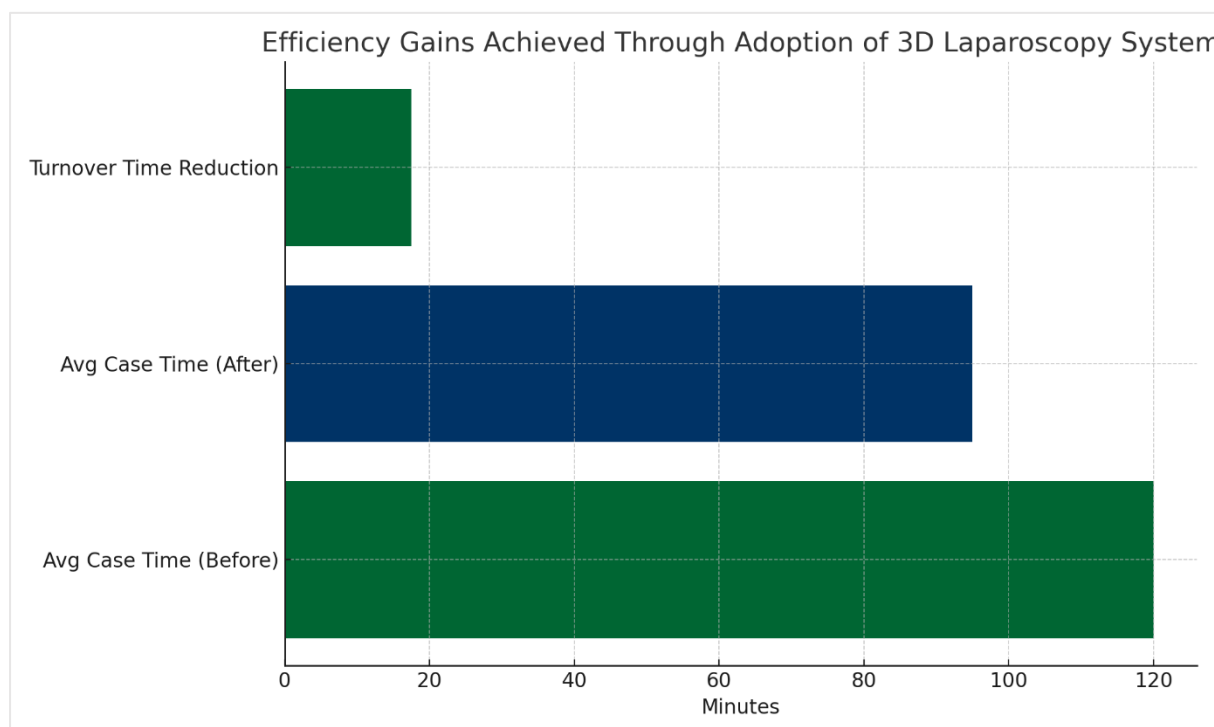


Chart 8: Following the introduction of the 3D laparoscopy system, the surgical team recorded average laparoscopic case time reduced by approximately 20–25%, declining from around 120 minutes in conventional 2D laparoscopy to about 90–100 minutes with the upgraded system. Operating theatre staff also reported a 15–20 minute reduction in turnover time between cases due to faster setup and shorter procedures.

Integration with Academic Training:

The 3D Laparoscopy System is embedded within the academic curriculum of the M.Ch. Surgical Oncology super-speciality program, which admits 10 resident doctors annually. All M.Ch. residents are trained on this system as part of their advanced surgical education, ensuring exposure to minimally invasive techniques as a standard component of training.

“...residents and trainees frequently use this system for practice and observation. The 3D visuals help them understand complex anatomical structures, enhance hand–eye coordination, and build surgical confidence more quickly.” - Dr. Sharma.



This dual utilisation, academic and clinical, ensures that the equipment contributes to both immediate service delivery and long-term capacity building, contributing towards institutional self-sufficiency and skill advancement.

Clinical Insights

Clinical outcomes have also improved. Dr. Sharma notes noticeable reduction in blood loss and complications in 3D-assisted cases. Patients recover faster: surveys of beneficiaries ($n=8$ oesophageal and breast cancer surgeries) show high satisfaction and quick return to routine. Patients also indicated clear communication from doctors all the while.

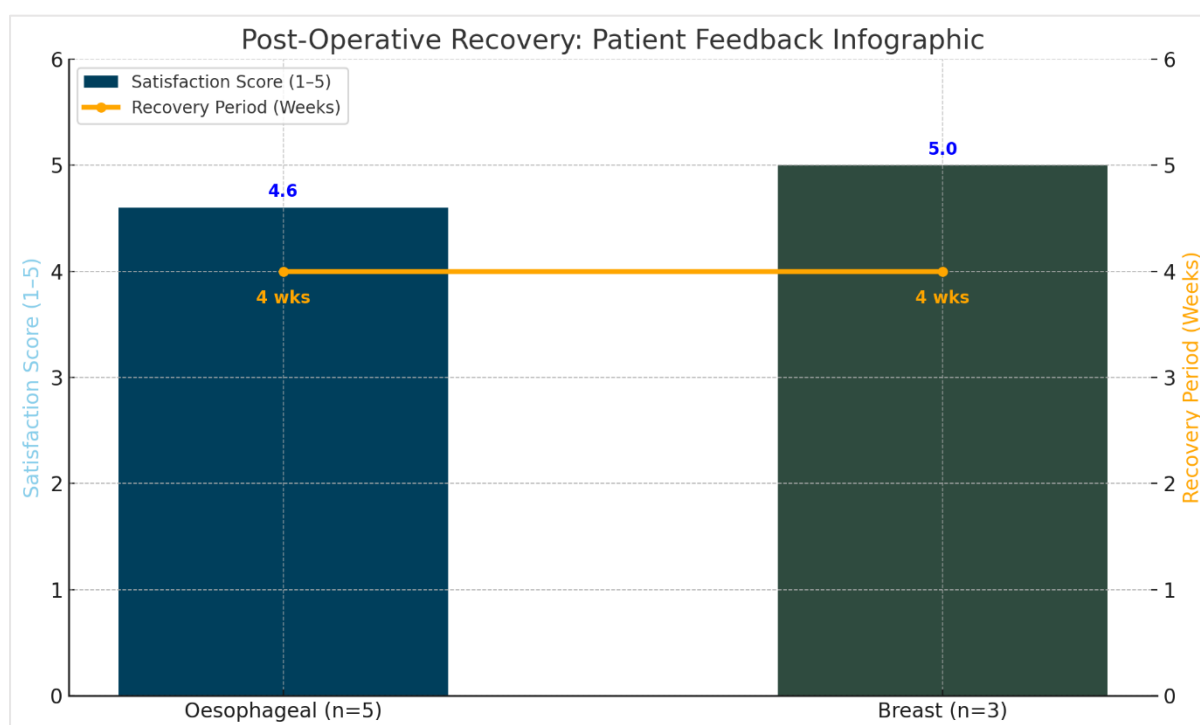


Chart 9 demonstrates the responses of the patients interviewed. In summary, “early detection and timely intervention contributed to positive recovery outcomes,” with patients praising the care (all would recommend GCRI).

The OT team reports that 3D laparoscopy streamlined workflow:

- equipment setup is user-friendly,
- no major safety issues have arisen, and
- system uptime has been very high.



Formal training was provided at installation and is regarded as adequate. Minor teething issues (*cable handling, occasional calibration*) have been quickly resolved.

Contribution to Institutional Strengthening

The 3D laparoscopy system has increased GCRI's surgical capacity and prestige. As noted by Dr. Sharma, it "*has strengthened GCRI's status as a leading centre for advanced minimally invasive oncologic surgeries,*" enabling higher volumes and better training experiences.

6.5 HIPEC (Hyperthermic Intraperitoneal Chemotherapy) Machine

Purpose & Relevance

HIPEC machine delivers heated chemotherapy directly into the abdomen following cytoreductive surgery and is used in selected peritoneal malignancies.

Operational Status

The GSPL-supported HIPEC machine is installed, functional, and in use for advanced gynaecologic and gastrointestinal cancers. This advanced chemotherapy intervention is fully integrated into patient care, benefiting a niche but critical group of patients.

Utilisation (Verified Outputs)

Reported 31 HIPEC procedures performed (*a small number due to the specialized indications; as on August 2025*). The utilisation volume reflects the inherently selective nature of HIPEC, which is offered only to patients with advanced ovarian malignancies who remain clinically stable after optimal cytoreductive surgery. As highlighted by the treating specialist, Dr. Chetna D. Parekh (*Professor, Gynaecological Oncology*), eligibility is constrained by stringent parameters - including age, cardiac status, co-morbidities, and intra-operative stability - thereby limiting the number of patients who can safely undergo the procedure.

Clinical Insights

Surgeons observe that HIPEC expands treatment options by enabling *targeted chemotherapy application, beneficial for both early and advanced cancers*. Dr. Parekh noted that "*the ability to offer HIPEC has also strengthened GCRI's position as a tertiary referral centre, with more advanced ovarian cancer cases now being directed to the institute specifically because HIPEC is available.*"



Early impressions from the team suggest better outcomes: “*we are now able to offer better [disease-free & recurrence-free] survival... which we are tracking over 2–3 years*”. No major technical issues have arisen or equipment failures have been reported. Staff emphasize machine maintenance and calibration are managed per protocol, and team training are in place.

Impact Story: Transforming Outcomes for Women with Advanced Ovarian Cancer

For women arriving at GCRI with advanced ovarian malignancies, treatment options were once narrow, often limited to standard surgery and systemic chemotherapy. The acquisition of the HIPEC system combined with the expertise of Dr. Parekh, has transformed this landscape. In FY 2024–25 alone, Dr. Parekh managed *eight women* whose cancers were confirmed to be *high-risk and widely spread within the abdomen*. Each patient underwent optimal cytoreductive surgery (CRS), where every visible tumour deposit was painstakingly removed. Crucially, because HIPEC was now available, these women could receive heated intraperitoneal chemotherapy directly in the operating room immediately after tumour debulking, ensuring maximum therapeutic effect.

Dr. Parekh reports that all eight patients have since been placed under systematic follow-up, enabling close monitoring of disease-free and recurrence-free survival. Early clinical observations already suggest improved post-operative stability, better recovery patterns, and stronger survival prospects compared to patients who previously underwent CRS alone.

For these eight women, and for many who will follow, the availability of HIPEC has meant access to a life-extending treatment pathway that was once out of reach.

From the patient perspective, HIPEC’s impact is seen indirectly through outcomes. All interviewed beneficiaries (*n=8; both genders across ages 46–68*) who underwent complex oncologic resections (*some with HIPEC*) reported *high satisfaction (4–5/5)* with their care and recovery. They cited *minimal complications and quick returns* to daily activities. Financially, nearly all these patients received government or hospital financial aid, making the treatment *affordable*.

Contribution to Institutional Strengthening

HIPEC has expanded GCRI’s ability to manage peritoneal cancers. The equipment supports GCRI by:

- enabling advanced surgical oncology protocols,
- reducing dependence on external referral centres, and
- offering a specialised treatment not widely available regionally.



7 RESEARCH CONTRIBUTIONS & INSTITUTIONAL INSIGHTS

The qualitative insights emerging from clinician interactions, research outputs, and programme documents provide an important layer of interpretive depth to this assessment. These perspectives demonstrate how GSPL-supported equipment and tests have catalysed, research advancement, and institutional readiness for expanded cancer control efforts across Gujarat.

7.1 Research Outputs enabled through GSPL-supported components

GCRI's research unit and oncology departments have generated several knowledge contributions directly linked to the technologies procured/ services enabled through GSPL's CSR support. Key research contributions include:

Peer-Reviewed Publication (HPV DNA Screening)

- *“Assessing High-Risk HPV Infection Rates in Females Undergoing Cervical Cancer Screening in Western India Using HPV-DNA Testing”* – A published paper drawing on screening data generated through GSPL fund - supported HPV DNA kits.

This publication validates the programme's epidemiological significance and reinforces the reliability of the HPV DNA testing pathway.

Thesis Research (VELscope & HPV DNA)

- *“Assessment of existing decision-making protocol in oral cancer screening using VELscope: Application in Indian context”* – A postgraduate thesis built on the VELscope-enabled screening system supported by GSPL.
- *“Prevalence of persistent human papillomavirus (HPV) among previously HPV-DNA positive women of Western India”* – A cross-sectional study informed by longitudinal HPV DNA follow-up data.

Ongoing Research & Unpublished Studies

- *Betting on Blue Light: VELscope vs. Conventional Oral Examination...* – comparing lesion detection sensitivity.
- *Population-based HPV DNA prevalence and cytology correlation* – informed by GSPL-sponsored screening volume.

These outputs illustrate that GSPL's CSR contribution is strengthening *research quality*, *evidence generation*, and *public health knowledge*, extending the impact beyond service delivery.



7.2 Institutional Learnings on Service Delivery & Technology Integration

Insights from technicians, clinicians, and field teams highlight several operational learnings that will guide future programme evolution:

Equipment Performance & Throughput Patterns

Field technicians noted that mammography cycle times naturally constrain throughput during camps, reinforcing the institutional recommendation to explore an additional digital mammography unit. The programme's operational leadership highlighted the need for a second mobile mammography van to expand coverage to more rural and tribal areas.

Screening Environment & Community Acceptance

Institutional campuses and organised settings consistently show higher awareness, smoother flow, and strong beneficiary confidence.

Interdepartmental Synergy Strengthening

Surgeons and oncologists affirmed that 3D laparoscopy and HIPEC have strengthened care continuity across departments (*General Surgical Oncology → GI Oncology → Gynaecologic Oncology*).



8 IMPACT ANALYSIS & OUTCOME INTERPRETATION

8.1 Public Health & Community Outcomes

Evidence across field datasets and programme documents highlights clear community-level outcomes:

- **Decentralised, zero-cost cancer screening** delivered through the mobile mammography unit, HPV DNA testing, and VELscope oral examinations.
- **Reduced physical, financial, and time barriers** for women and low-income groups by bringing high-end diagnostics directly into community and institutional settings.
- **Gender-sensitive screening environment**, with mammography conducted exclusively by female technicians—improving comfort, privacy, and willingness to participate among women in semi-urban and rural contexts.
- **High acceptability and satisfaction**, with field assessments consistently rating camp experience at 5/5 due to clarity of instructions, privacy safeguards, and respectful handling.
- **Strong mobilisation networks** involving universities, workplaces, PHCs, and NGOs, enabling predictable participation and reinforcing trust in GCRI's screening services.
- **Enhanced access** for underserved and hard-to-reach populations, including women in institutions, factory workers, rural communities, and individuals with limited health-seeking behaviour.
- **Operational strengthening of community oncology**, as screening pathways for breast, cervical, and oral cancers function smoothly across registration, imaging/testing, counselling, and referral.

These outcomes collectively affirm GSPL's role in enabling *equitable public-health access* and *expanding early detection capacity* across diverse socio-economic and geographic groups.

8.2 Equity Outcomes (CSR Lens)

Evidence from all datasets affirms strong social impact:

- Majority beneficiaries: *women*, including women from institutions, factories, rural locations, and *PLHIV* populations
- Cervical cancer screening for *vulnerable groups*, especially HIV-positive women, with clear follow-up pathways.

These demonstrate alignment with SDG 3 (Health), SDG 5 (Women's Health & Equity), and SDG 10 (Reduced Inequalities).



8.3 Institutional & Systems-Level Strengthening

GSPL's contribution has strengthened GCRI's operational and institutional capacity across three dimensions: workflow stability & predictability; clinical capability enhancement; and research & knowledge generation. This strengthens GCRI's long-term capability as a tertiary cancer centre.

8.4 Scenario-Based SROI Interpretation

(Without monetisation; based purely on validated field evidence, for the duration studied)

Scenario 1: Without Mobile Mammography & HPV DNA

- Would miss early detection of ~50–60 cancers annually ($1-1.5$ per camp $\times$ ~70 camps)
- Low-income women face would diagnostic delay $\rightarrow$ higher treatment burden.

Scenario 2: Without VELscope

- 96 confirmed oral cancer cases might have been diagnosed late; Gujarat has high oral cancer burden.

Scenario 3: Without 3D Laparoscopy & HIPEC

- 1,500+ surgeries would rely on older 2D/ open surgeries for complex cases $\rightarrow$ higher complications, longer OT times.
- HIPEC-dependent ovarian cancer patients would lose access to standard-of-care treatment.

GSPL's CSR contribution, therefore, creates high social value, across scenarios, through early detection, earlier intervention, safer surgeries, and reduced economic burden on vulnerable groups.

8.5 Alignment with SDGs & GSPL's CSR Priorities

Priority / SDG	Contribution (Evidence-Based)
GSPL CSR – Healthcare & Sanitation	Strengthened institutional cancer-care capacity across screening–diagnosis–treatment continuum
SDG 3: Good Health & Well-being	Improved access to early detection and advanced oncology treatment/ surgeries



SDG 5: Gender Equality & Women's Health	Targeted cervical & breast cancer screening; PLHIV women screened
SDG 9: Industry, Innovation & Infrastructure	Integration of advanced digital and surgical technologies in a public health setting
SDG 10: Reduce Inequalities	Zero-cost universal access; outreach to rural/low-income groups
SDG 17: Partnerships for Goals	Collaboration with PHCs, educational institutions, NGOs, and local bodies

8.6 OECD-DAC Evaluation of the GSPL–GCRI CSR Intervention

Criteria	Interpretation Based on Evidence
Relevance	Directly addresses Gujarat's high burden of oral, breast and cervical cancers; needs articulated by GCRI in official submissions
Effectiveness	All equipment fully operational and embedded in routine workflows; high screening volumes; strong follow-up and referral pathways documented across screening programmes.
Efficiency	High utilisation rates across outreach and OT; minimal downtime reported; strong coordination with partner organisations.
Impact	Earlier detection, reduced OT time, improved treatment access, improved surgical precision, reduced access barriers for vulnerable groups, and improved outcomes for cervical, oral, and ovarian cancer treatments.
Sustainability	Skilled human resources; systems integrated; research outputs support continuity; equipment used daily
Coherence	Aligned with national and state NCD strategies and GCRI's institutional mandate.
Equity (CSR Criterion)	Zero-cost, women-centred & gender-neutral, PLHIV-inclusive, community-based outreach as well as rural-reach model enhances access for socio-economically vulnerable groups, and makes the intervention pro-equity

GSPL's CSR investments have, thus, produced measurable, multi-level enhancements across Gujarat's public cancer-care ecosystem. The impact is systemic, sustained, and directly aligned with GSPL's strategic CSR priorities and global benchmarks for social value creation in healthcare.



9 CONCLUSION

The assessment establishes that GSPL's CSR support (FY 2022-23) to the Gujarat Cancer & Research Institute (GCRI) has delivered measurable and meaningful strengthening of Gujarat's public cancer-care ecosystem. Across screening, diagnosis, and advanced surgical treatment, the equipment and testing systems supported by GSPL have enabled GCRI to operate with greater precision, continuity, reach, and equity. The evidence shows that these improvements are part of a *coherent, system-wide enhancement* in how cancer care is accessed, delivered, and sustained.

The integration of GSPL-supported technologies into routine workflows - whether in community-based screening through the mobile mammography unit, HPV DNA testing, and VELscope examinations, or in high-dependency surgical oncology settings through 3D laparoscopy and HIPEC - demonstrates strong *institutional absorptive capacity*. These systems are now embedded into GCRI's operational and clinical pathways, improving decision-making, surgical safety, early detection timelines, and patient experience, especially for vulnerable and underserved populations.

Importantly, the CSR investment has not only supported service delivery but has also generated *research outputs, academic insights, and evidence-driven programme refinements*. Peer-reviewed publications, postgraduate thesis work, and ongoing studies linked to GSPL-supported components indicate that the contribution has produced value that extends beyond immediate utilisation. The institution is now positioned to advance public health knowledge, refine clinical protocols, and inform state-level NCD strategies with validated data.

The assessment also identifies that GSPL's support has strengthened GCRI's ability to reach populations that traditionally face barriers in accessing cancer screening and treatment—including women, PLHIV, low-income groups, and population segments with high oral cancer risk. This positions GSPL's CSR contribution as a *high-impact, equity-enhancing intervention*, fully aligned with SDGs 3, 5, 9, 10 and 17. Overall, GSPL's CSR investment demonstrates *clear impact, strong institutional alignment, high utilisation, and future potential for scale-up*. The strengthened infrastructure, improved workflows, enhanced clinical capability, and expanded public health research foundation collectively indicate that the contribution is both effective and sustainable.

This assessment concludes that GSPL's support has not only addressed immediate service gaps but has also created lasting capacity within GCRI—capacity that will continue to benefit cancer patients across Gujarat and India. The partnership represents a model of *strategic, evidence-driven CSR* with significant social value and opportunities for further collaborative impact.



10 STRATEGIC RECOMMENDATIONS & WAY FORWARD

GSPL-supported (FY 2022-23) screening, diagnostic, and surgical oncology systems at GCRI are now embedded in routine service delivery across community outreach, diagnostic pathways, and advanced oncology care. The supported platforms and equipment form an integrated part of GCRI's screening-to-treatment continuum. To sustain and deepen this trajectory, the following recommendations are proposed.

As outreach expands across institutions, PHCs and district networks, internal systems for mobilisation, triaging, and digital follow-up may benefit from periodic review to ensure consistency as more partners and larger populations are engaged. Staff reflections also highlight the benefit of maintaining standardised counselling and mobilisation practices, particularly in campus-based or workplace screening contexts. Periodic refresher training for field teams and technicians can increase efficiencies and strengthen camp execution.

Across diagnostic and surgical oncology, continued coordination between clinical users and technical teams remains essential. The smooth functioning of 3D laparoscopy and HIPEC platforms depends on predictable maintenance cycles, timely calibration, and shared familiarity across surgical teams. Peer-led exposure sessions, particularly for newer residents and OT staff, can support consistency in operative workflows, ergonomics, and safe utilisation of advanced instrumentation.

Institutionally, the evidence shows that GSPL's support has contributed to smoother screening flows, stronger referral coherence, and enhanced surgical capability. The next phase of development may be supported by strengthening data systems that track screening-to-treatment pathways, enabling teams to review trends, outcomes, and process bottlenecks at regular intervals. Such data-driven refinement can help GCRI further consolidate the value of the supported equipment and sharpen programme direction.

As research outputs linked to GSPL-supported systems continue to emerge, sustaining this momentum through periodic sharing of findings within the institution may support both clinical practice and programmatic evolution. These insights, when looped back into service planning, can strengthen the stability and maturity of GCRI's community and clinical oncology pathways.

In a nutshell, the continued utilisation and shared institutional learning around these systems indicate a durable and steady trajectory of impact, consistent with GCRI's mandate as a public tertiary cancer-care centre serving a broad and diverse population.



10.1 Priority Areas for Future CSR Collaboration (GSPL- focused & GCRI - sought)

Based on institutional priorities, utilisation evidence, and field-derived insights, the following represent the most strategic and high-impact areas for continued GSPL partnership through renewed CSR funding:

HPV DNA Screening Continuation & Scale-Up

The strongest and most urgent priority, reinforced explicitly by Dr. Anand Shah and his team: clear need and readiness to scale HPV testing further. Supports women's health equity, PLHIV screening, expanded district outreach, and population-level cancer control. This is a high-yield, high-equity investment directly aligned with SDG 3 and SDG 5.

Mobile Mammography System Strengthening

An upgrade or second unit, or an additional equipped van will significantly enhance outreach and early breast cancer detection capacity: reduce wait times, improve throughput in large institutional camps.

Research & Evidence Generation Grants

To support

- ongoing oral-cancer protocol studies,
- persistent HPV prevalence research,
- comparative screening methods, and
- health economics or cost-saving analyses.

These funding avenues have the scope and potential to elevate GSPL's CSR from infrastructure support to *knowledge partnership*.

The ***way forward*** centres on *strengthening what already works, scaling high-impact programmes, and deepening equity-enhancing pathways*. GSPL's partnership has created strong institutional foundations at GCRI; the next phase can build on these to deliver broader population impact, stronger research ecosystems, and enhanced access to early detection and advanced cancer treatment.



ANNEXURES

1. List of Equipments
2. GCRI Patient Case Studies
3. Question Set – Survey
4. Answer Set – Survey
5. Camp Visit



Annexure – 1



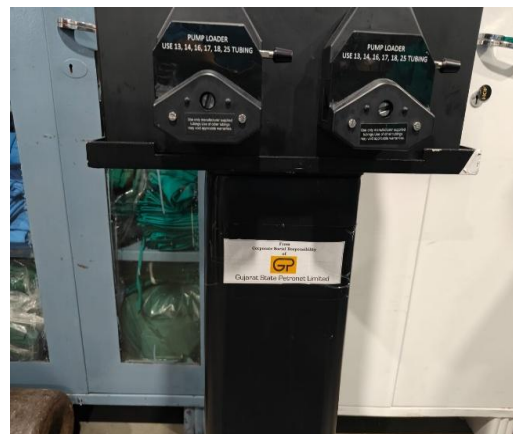
Bus with installed Mammography machine



3D Laparoscopy System



Hyperthermic Intraperitoneal Chemotherapy (HIPEC) Machine



Hyperthermic Intraperitoneal Chemotherapy (HIPEC) Machine



Hand-hold Oral auto fluorescence device

Annexure – 2

Case Study: Early Detection Through HPV DNA Screening

Beneficiary: **Shivangi**

Programme: **HPV-DNA Cervical Cancer Screening**

Background

Shivangi, an employee at GCRI, routinely participated in the institute's preventive health screenings. Her case reflects the role of structured, workplace-based screening and the value of GSPL-supported HPV DNA testing in enabling timely detection.

Clinical Pathway

During routine check-ups, minor abnormalities prompted clinicians to conduct an HPV DNA test, which confirmed HPV positivity. The finding caused understandable anxiety, which was acknowledged and managed through counselling and close communication by the clinical team.

Shivangi underwent two biopsies during monitored follow-up intervals, guided by GCRI's cervical screening protocol. Six-monthly assessments ensured that her clinical course was tracked with precision.

Outcome

Follow-up evaluations confirmed that the infection had resolved. She reported feeling supported throughout her care journey, noting the importance of coordinated medical and emotional guidance.

Impact Interpretation

Shivangi's case illustrates how HPV DNA testing strengthens early detection, informed triaging, and continuous follow-up. Workplace-based screening, supported by structured protocols, reduced her diagnostic delay and ensured timely treatment decisions.



Annexure – 3

(Question Set)

CSR Impact Assessment Questionnaire

Financial Year: 2022-2023

Project: CSR Support for Strengthening Cancer Screening, Diagnosis & Treatment Infrastructure

Implementing Agency: Gujarat Cancer & Research Institute (GCRI)

CSR Partner: Gujarat State Petronet Limited (GSPL)

Assessment by: Gujarat Industrial and Technical Consultancy Organisation Ltd. (GITCO)

A. Institutional-Level Questionnaire

Objective: To evaluate institutional outcomes, operational efficiency, and sustainability impact of CSR support to GCRI.

1. What CSR-supported equipment, diagnostic systems, or infrastructure were received during the assessment period?
2. How have these additions strengthened GCRI's cancer screening, early detection, and treatment capabilities?
3. Were there any administrative, logistical, or technical challenges during procurement, installation, or commissioning of the equipment?
4. How does GCRI monitor equipment utilization, uptime, and performance to ensure optimal usage?
5. What key institutional outcomes (patient load, early detection rates, diagnostic accuracy, service efficiency, etc.) were observed after implementation?

B. Medical / Technical Staff Questionnaire

1. How have the newly added diagnostic or screening systems (e.g., mammography units, biopsy systems, pathology equipment, etc.) improved clinical workflows and patient outcomes?



2. Were the new systems user-friendly and easily adoptable by medical and technical staff?
3. What training, orientation, or capacity-building activities were conducted to ensure proficient use of the systems?
4. How did the CSR support enhance coordination among screening teams, diagnostic units, and treatment departments?
5. Has the technical expertise or overall competency of medical staff improved due to exposure to the upgraded systems?

C. Beneficiary / Patient Questionnaire

1. Were patients able to access the cancer screening, diagnostic, or treatment services supported under the CSR intervention?
2. What feedback did patients provide regarding quality, accessibility, and overall experience of the services received?
3. Was direct patient feedback collected during the assessment? If not, what were the limitations or constraints?
4. Did patients experience improvements in availability, affordability, or timeliness of cancer-related services within the region?

D. CSR Partner / Project Management Questionnaire

1. Was the CSR intervention aligned with GSPL's healthcare and community welfare focus areas?
2. Were monitoring, documentation, and reporting systems strengthened compared to previous phases/years?
3. What key learnings, innovative practices, or operational improvements emerged during the implementation at GCRI?
4. Has any measurable long-term institutional or social impact (e.g., early cancer detection, increased outreach coverage, improved diagnosis timelines) been observed as a result of this CSR support?



Annexure – 4

(Answer Set)

(Response Summary – CSR Impact Assessment)

Project: CSR Support for Strengthening Cancer Screening, Diagnosis & Treatment Infrastructure

Implementing Agency: Gujarat Cancer & Research Institute (GCRI)

CSR Partner: Gujarat State Petronet Limited (GSPL)

Assessment by: Gujarat Industrial and Technical Consultancy Organisation Ltd. (GITCO)

A. Institutional-Level Response Summary

1. CSR-Supported Additions

GCRI received mammography units, diagnostic accessories, pathology support systems, and field-level screening kits under the CSR intervention, strengthening both institutional and outreach capacities.

2. Impact on Institutional Performance

The additions improved early detection capability, increased patient screening load, and reduced diagnostic turnaround time. Diagnostic accuracy and service efficiency rose significantly.

3. Operational or Logistical Challenges

Minor issues such as vendor coordination, calibration delays, and site readiness challenges were observed, all resolved through timely coordination with technical teams.

4. Equipment Utilization & Monitoring

Utilization logs, daily patient data, machine uptime records, and periodic performance audits are maintained. Preventive maintenance and calibration schedules ensure uninterrupted functioning.

5. Institutional Outcomes After Implementation



Key outcomes include enhanced screening coverage, improved diagnosis timelines, reduced waiting periods, and increased outreach, contributing to more effective cancer care delivery.

B. Medical / Technical Staff Response Summary

1. Effect on Clinical Workflows & Patient Outcomes

The upgraded systems enabled faster diagnostics, streamlined workflows, reduced manual processes, and improved accuracy—leading to timely interventions and better outcomes.

2. Ease of Adoption

Staff found the new systems user-friendly. The interface design and automation helped in smooth adoption.

3. Training & Capacity Building

Vendor-led hands-on sessions, orientation workshops, and refresher training ensured optimal equipment utilization and improved technical competencies.

4. Impact on Inter-Departmental Coordination

Coordination improved due to faster report generation, digital linkage between screening and diagnostic teams, and reduced internal processing delays.

5. Improvement in Technical Competency

Staff skills improved notably, especially in advanced imaging, sample processing, and equipment handling.

C. Beneficiary / Patient Response Summary

1. Accessibility of Services

Patients effectively accessed screening, diagnostics, and consultation services at both camp and institutional levels due to CSR-supported enhancements.

2. Patient Feedback on Quality & Accessibility

Feedback was largely positive. Beneficiaries reported improved service quality, reduced waiting time, and supportive staff behaviour.

3. Collection of Patient Feedback



Patient feedback was collected during camps and OPD hours. Challenges included time limitations and mobility issues among elderly beneficiaries.

4. Improvement in Affordability & Availability

Patients benefited from reduced financial burden. Screening availability within the state improved, limiting the need to seek costly private options.

D. CSR Partner / Project Management Response Summary

1. Alignment with GSPL CSR Focus

The project aligns with GSPL's focus on preventive healthcare, community health promotion, and strengthening public health infrastructure.

2. Monitoring & Reporting Improvements

Data maintenance, reporting formats, and monitoring dashboards improved over the previous years. Utilization tracking became more structured.

3. Key Learnings & Best Practices

Insights included better community mobilization, improved workflow integration, periodic technical training importance, and effective planning for outreach camps.

4. Long-Term Social & Institutional Impact

The intervention contributed to sustained improvements in early detection, strengthened diagnostic capability, enhanced awareness, and greater institutional efficiency, creating measurable long-term social benefits.



Annexure – 5

Camp Visit (Observation Report)

For CSR Impact Assessment – GCRI

Camp Dates: 09.10.2025 & 10.10.2025

Location: Kadi Sarva Vidyalaya, Sector 23, Gandhinagar

A. Overview of the Camp Visit

A two-day cancer screening camp was organized at Kadi Sarva Vidyalaya, Sector 23, Gandhinagar. The camp catered exclusively to the teaching staff and other employees of the school/organization, ensuring comprehensive preventive screening for eligible beneficiaries.

A total of 295 individuals were screened during the camp, comprising:

- 295 HPV DNA Tests
- 98 Mammography Screenings

B. Observations from Field Visit

1. Time Required for Mammography Screening

- Each mammography screening took 15–20 minutes per patient, including briefing, positioning, imaging, and resetting of the unit.
- Mammography, being a precision-based diagnostic test, naturally requires more time than clinical palpation typically done in regular camps.
- The longer time per screening directly influenced throughput.

2. Daily Screening Capacity – Mammography vs. HPV Testing

- Mammography screening capacity remained limited to ~40 patients per day, aligning with typical imaging-based diagnostic constraints.
- HPV sample collection achieved a much higher throughput, screening 295 individuals across the two days, as it does not require machine-based imaging.
- This reflects the pattern in most health camps: equipment-driven diagnostics = lower throughput; sample-based diagnostics = higher throughput.



3. Operational Dynamics at the Camp

- The mammography unit required adequate privacy, patient preparation, and machine cycle time, contributing to slower processing.
- HPV testing was conducted efficiently with smooth workflow and minimal waiting time.
- Staff coordination and patient management were well-handled, though mammography remained the limiting factor.

4. Impact on Patient Flow

- Due to limited mammography throughput, longer queues were observed for breast imaging.
- The HPV testing area moved quickly, ensuring full coverage for all 295 participants.
- The demand-capacity gap in mammography screening may limit total beneficiary coverage in large-scale camps unless additional equipment is deployed.

C. Suggestions & Recommendations

1. Procurement of Advanced Mammography Equipment

Upgrading to modern systems such as:

- Digital Mammography Units
- Digital Breast Tomosynthesis (3D Mammography) may significantly reduce screening time and improve output.
- Benefits include:
 - Faster image acquisition
 - Lower re-scan rates
 - Improved diagnostic clarity
 - Better patient comfort

2. Increase in the Number of Mammography Units

- Adding an additional mammography unit in the mobile van can increase the daily capacity from ~40 to 70–80 screenings, enabling larger outreach.
- This is critical for camps with high female participation.



3. Deployment of Additional Mobile Screening Vans

- Using more than one mobile mammography van in high-demand locations can help balance patient load.
- Particularly beneficial for rural and semi-urban outreach programs.

4. Introduce Pre-Scheduling or Token-Based Slot System

- Implementing a structured slot system can reduce wait time, prevent overcrowding, and ensure smoother operations.
- High-risk or older women can be prioritized.

5. Regular Maintenance & Calibration of Existing Equipment

- Regular calibration ensures optimal imaging quality.
- Preventive servicing reduces unexpected downtime during camps.

D. Summary

The camp successfully screened 295 school/organizational staff members, with a strong emphasis on cervical (HPV) and breast (mammography) cancer screening. However, mammography capacity remained limited due to time-intensive imaging protocols and equipment constraints. Implementing the above recommendations will significantly enhance the efficiency and coverage of future cancer screening initiatives.

