

Title:

Advances in Surgical Oncology for Organ-Preserving Techniques

Full Name:

Sakthi Vignesh D

Name of the Institution:

Government Kilpauk Medical College (GKMC), Chennai

State:

Tamil Nadu

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):

To train the surgeons adequately in organ preservation techniques.

Emphasis on neoadjuvant downstaging and organ preservation, enrolment in clinical trials wherever feasible.

Stricter guidelines and decentralized SOPs in all centers to achieve a uniform and meaningful benefit for the patient.

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):

Surgeons should be trained adequately in high volume centers, to improve their learning curve, by working in wet labs and hands on training in minimal access techniques and robotics.

Emphasis given to clinical trials, so vigorous standards maintained, patients get minimum standard of care treatment. Protocols designed to aim for organ preservation and pCR achieved with neoadjuvant therapy. Guidelines should be formulated to identify apt candidates for organ preservation techniques, care should be taken, not to overtreat patients and give unnecessary toxicity to the patients by following aggressive non beneficial therapies, leading to morbidity and mortality.

When planning for organ preserving techniques, it's better to process it through a dedicated organ preservation-oriented tumor board so that it always remains a collective and not a single persons decision. Solution taken after strict scrutiny, assessing the merits and patient compliance, financial and socioeconomic issues. Whether patient is fit to undergo NACT and organ preservation technique without any complication. Care should be taken that resources are not wasted unnecessarily.

There are instances where specialists and non-specialists are doing upfront surgery for newly diagnosed cases, without considering the option of NACT f/b organ-preserving surgery. They should be made aware of potential benefits of organ preserving procedures and efforts should be given to keep in mind the QoL of patients & not to hurry and do a morbid radical surgery

Full Name:

Foram Joshi

Name of the Institution:

Kidwai Memorial Institute of Oncology, Bengaluru

State:

Karnataka

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):

Advances in immunotherapy, precision medicine, molecular oncology, minimally invasive surgery, robotic surgery, and artificial intelligence have revolutionized the management of malignancies in the modern era. These advances have also introduced the possibility of organ preservation strategies in selected cancers.

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):

In daily oncology OPDs, we frequently encounter patients who are fearful of surgery and prefer palliative treatment even in early-stage cancers. Counselling such patients for definitive treatment is often very difficult. This highlights the need for the development of surgery-sparing cancer treatments and organ preservation strategies.

In today's era of immunotherapy, precision medicine, and minimally invasive surgeries, non-scalpel treatment approaches are becoming possible for certain malignancies such as MSI-high cancers and head and neck cancers involving the larynx and hypopharynx. Organ preservation strategies are also being explored in other malignancies including esophageal cancers, breast-conserving approaches, limb-sparing surgeries in sarcoma, bladder preservation strategies in carcinoma bladder, and sphincter preservation strategies in rectal and anal canal cancers.

The most important advantage of these approaches is improvement in quality of life along with reduction in morbidity and treatment-related mortality. However, one of the biggest challenges in resource-limited countries is the concept of active surveillance. The constant fear of cancer recurrence often pushes both physicians and patients toward surgical management.

As physicians, we ourselves must be confident while counselling patients regarding surgery-sparing strategies. At times, clinicians may hesitate because of fear of recurrence and the possible consequences of counselling patients against surgery. However, if a patient is motivated and willing for active surveillance, we should not deny such strategies when clinically appropriate.

The decision always depends on tumor type, stage, histology, and available treatment options. It must be a shared decision involving the patient, family members, and the multidisciplinary hospital team. An effective multidisciplinary team is extremely important in such settings and should include oncosurgeons, medical oncologists, radiation oncologists, molecular oncologists, radiologists, and patient assistants who can collectively discuss all possible options and formulate the best treatment strategy for the patient.

In today's era of precision medicine, molecular oncology, advanced radiological imaging, and AI-assisted surveillance, monitoring strategies have significantly improved. ctDNA has emerged as a highly important tool. It is not merely a biomarker but is reshaping how we define disease presence, recurrence risk, and even the need for treatment. ctDNA enables non-invasive assessment of minimal residual disease and treatment response and may help identify patients who can safely avoid surgery without compromising outcomes. However, larger validation studies are still required before widespread implementation.

Organ preservation strategies are usually based on multimodality treatment approaches involving radiotherapy, chemotherapy, immunotherapy, or combined chemoradiation. In most cases, organ preservation is achieved through a combination of treatment modalities rather than a single therapy alone. However, every treatment modality carries its own toxicity, and combined multimodality strategies may increase overall treatment-related adverse effects. Therefore, careful assessment of the risk-benefit ratio is essential before offering such approaches.

Patients must also be counselled regarding the possibility of requiring salvage surgery in the future if recurrence occurs. Because of this concern, organ preservation strategies still remain controversial in many settings. Regardless of the chosen treatment approach, the primary goal should always remain improved quality of life, reduced morbidity, and better survival outcomes.

With advances in minimally invasive surgery, robotic techniques, and artificial intelligence-assisted precision surgery, radical surgery itself has also become more refined, with minimal cosmetic disfigurement, faster postoperative recovery, and improved surgical outcomes. Therefore, many cancer survivors still prefer definitive surgery to avoid the constant fear of recurrence.

However, for patients preferring organ preservation strategies, clinicians must be confident in counselling, sharing available clinical data, and discussing the possibility of salvage surgery with similar outcomes in selected malignancies. Ultimately, the decision must remain a shared one between the patient, relatives, and the multidisciplinary team, and the patient's wishes and preferences should always be respected.

Full Name:

Shashanka K S

Name of the Institution:

Manipal hospital, Bangalore

State:

Karnataka

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):

Goals of the surgeries have evolved to "maximum function preservation with oncologic safety "approach. Organ-preserving strategies now dominate modern management of Head and neck especially in larynx, rectal, breast, bladder, sarcoma and gynecologic malignancies. Loss of functional ability adds to significant morbidity.

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):

I. Mechanism to improve adoption of minimally invasive techniques.

Major challenges lies in skill gap, lack of Expertise, infrastructure gap, fear of compromise of oncological safety, fragmented referral systems.

Solutions:

1) Training and skill building:

- a) Fellowships programmes and certificate programmes: from centers of excellence and regional cancer centers to enhance the skill of surgeons in minimally invasive technique like laparoscopic, robotic, endoscopic procedures. Establishment of stimulation labs for larger training.
- b) Creation of national oncosurgical society guidelines, journals to navigate the real world technical challenges in minimally invasive procedures.
- c) Validation and evaluation: Development of videographic audits / AI platforms for evaluation of the techniques and providing constructive feedback and tips to improve techniques and clinical decisions.

2) Awareness of OPS and MIS among doctors:

- a) Emphasizing the benefits of organ preservation techniques, morbidity differences through case series help more doctors choose MIS.
- b) Bringing out real world data of recurrence rates and outcomes from high volume center and centers of excellence in India helps to address the safety concerns.
- c) Encouragement of prompt referrals and recognition of same, in difficult and challenges cases than suboptimal treatments.

3) Infrastructure development:

- a) Encouraging private/ government investment in minimally invasive surgical tools and infrastructures.
- b) Industry partnership/ local manufacturing: helps to bring down the cost of equipments/ robotics/ radiation equipments.
- c) Advocacy for inclusion of MIS methods in private insurance schemes and state health schemes to reduce the burden on patients.

4) Patient education: and awareness:

- a) Development patient guidelines/information sheets similar to NCCN, NCI providing a standard of care options in Indian context in regional languages to enhance the reach.
- b) Open conversations with patient regarding risks vs benefits of OPS, current standard of care options, financial burdens, recovery differences. In certain challenging cases, multidisciplinary discussions with patient and relatives helps to bring clarity regarding the plan of care.

II. Integration of Neoadjuvant Therapies as Standard of Care

Neoadjuvant therapy is central to organ preservation because it downstages tumors, eradicates micro metastatic disease early, and increases complete pathological or clinical response rates.

Challenges to Neoadjuvant therapies (NAT):

- a) Lack of awareness of benefits across country in oncologist, due rapid evaluation of the field.
- b) Cost and resources: many NAT strategies especially immunotherapy & targeted therapy adds to out of pocket expenditures and overall cost of treatment.
- c) Fear of toxicities and adverse events.
- d) Fear of losing the case or opportunity to treat amongst doctors.

Solutions:

- a) Use of Imaging based staging before the surgical decision is made, incorporation of molecular studies/genomics wherever necessary to identify patient who benefit from NAT.
- b) localized guidelines and consensus development by central bodies to establish the standard of care helps to update the changes and advances occurring in neoadjuvant therapy, outcomes.
- c) Generic alternatives to bridge the gap in resources and finances for immunotherapy and targeted therapies in integration of NAT Eg: Anti her 2 therapy, NSCLC, TNBC.
- d) CMEs, symposiums, panel discussions and educational activities for practicing clinicians for intragradation of NAT advances to practice.

III. Mechanism for multidisciplinary collaboration for decision making in surgical oncology

- a) MDT team should have surgical oncologist, radiation oncologist, medical oncologist, reconstruction surgeon, pathologist, radiologist, Nutritionist, rehabilitation physicians/team, psychooncologist.
- b) MDT boards should be made mandatory for oncological care units through central medical regulatory authorities.
- c) Setting up MDT boards are difficult in for centres of smaller infrastructure, smaller towns. Virtual MDT can be conducted with association and leadership regional cancer care centers.
- d) In corporation of specialties like speech therapist, physiotherapist, rehabilitation physicians, nutritionist, plastic surgeons. psychooncologist in patient care to provide wholistic care.
- e) AI based tools and surveys needs to be developed to identify the areas of deficiencies and periodic review of complications, recurrence patterns, functional outcomes, and adherence issues, need to make strategic plans to address the issues on this assessment.
- f) Integrated electronic records containing, imaging, pathological clinical findings, operative plans and findings, treatment timelines, nutritional status, functional status, helps to guide all the members of multi-disciplinary team to access the clinical course of a given patient.
- g) Mandatory MDT in teaching institutions - to train oncology students in MDT discussions. Student MDT forum, virtual student MDT meetings, and MDT discussion competitions helps students to inculcate the habit of MDT and emphasizes its importance.

Full Name:

Habeeb K A

Name of the Institution:

VPS Lakeshore Hospital, Kochi

State:

Kerala

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):

- Expand safe and evidence-based adoption of minimally invasive surgical oncology techniques
- Promote organ preservation through neoadjuvant and response-adapted treatment strategies
- Deliver personalized, multidisciplinary, and patient-centered cancer care
- Improve oncologic outcomes while preserving function, quality of life, and recovery
- Strengthen standardized workflows, training, and technology integration in cancer surgery
- Enhance accessibility of advanced oncology care in resource-limited healthcare settings
- Encourage continuous quality improvement through audits, registries, and outcome-based decision making
- Shift cancer treatment from radical removal toward precision, preservation-focused oncology care.

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):

1. Mechanisms to improve adoption of MIS

- Establish dedicated MIS oncology training programs with fellowships, simulation labs, and mentorship.
- Develop regional centers of excellence for hands-on workshops, live surgeries, and standardized protocols.
- Improve access to affordable laparoscopic and robotic systems through government support and public-private partnerships.
- Integrate minimally invasive surgery into MDT discussions and national oncology guidelines.
- Use tele-mentoring, AI-assisted surgery, and digital learning platforms to support surgeons in remote areas.
- Conduct regular audits and publish outcome data to build confidence in oncologic safety and effectiveness.
- Promote patient awareness regarding benefits such as less pain, shorter hospital stay, and faster recovery.
- Create cost-adapted MIS pathways suitable for Indian and resource-limited healthcare settings.

2. Integrating Neoadjuvant Therapy as Standard Care

Treatment often begins before surgery. Neoadjuvant therapy enables tumour downstaging, early systemic control, and treatment de-escalation.

Patients undergo standardized staging and risk stratification, followed by appropriate preoperative therapy. After treatment, structured reassessment guides management:

Complete response → active surveillance

Partial response → organ-preserving surgery

Poor response → definitive treatment

This response-adapted strategy maximizes organ preservation without compromising oncological safety.

Strict surveillance protocols ensure early detection of recurrence and timely salvage intervention.

3. Multidisciplinary, Patient-Centered Decision Making

Cancer care is directed by a multidisciplinary team (MDT) integrating surgical, medical, radiation, radiology, and pathology expertise. Cases are presented using structured clinical summaries to ensure comprehensive evaluation.

Decisions follow a logical sequence: curability, feasibility of organ preservation, and optimal treatment sequencing. Patient preferences are incorporated early, aligning treatment with functional priorities and lifestyle considerations. Continuous audit, registry-based tracking, and quality improvement systems create a learning framework that refines decision-making.

Conclusion

Organ preservation is achieved through precision surgery, adaptive therapy, and collaborative decision-making, shifting cancer care from radical removal to intelligent, evidence-based, patient-centered preservation.

Full Name:

Dr Mohamed Thanish

Name of the Institution:

Stanley Medical College, Chennai

State:

Tamil Nadu

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):

To outline a framework for integrating minimally invasive surgical techniques and neoadjuvant systemic therapy into standard oncology practice, supported by robust multidisciplinary decision making, to maximise organ preservation without compromising oncological outcomes.

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):

Organ preservation in surgical oncology isn't a compromise in the right patient, selected through the right process, it is the superior oncological and quality of life choice. The challenge is that too many institutions still default to radical surgery because it feels safer or because the infrastructure to do anything else doesn't exist. Expanding adoption of minimally invasive techniques laparoscopic and robotic surgery requires three things simultaneously i.e. training, credentialing, and volume. Surgeons cannot develop or maintain proficiency in complex minimally invasive oncological procedures unless they are performing them regularly. This means that low volume centres need to be honest about their limitations and develop formal referral pathways to high volume centres rather than attempting procedures they cannot perform safely. Proctorship programs, simulation-based training, and VATS/robotic fellowships embedded in surgical oncology training are the mechanisms for building this capacity sustainably. Neoadjuvant therapy has transformed what is surgically achievable across multiple tumour types, and its integration as standard of care needs to be institutionally formalised rather than left to individual physician preference. In breast cancer, neoadjuvant chemotherapy converts mastectomy only candidates to breast conservation in a meaningful proportion of patients. In rectal cancer, total neoadjuvant therapy (TNT) for MSS tumors and ICI based therapies for MSI-H tumors leads to watch and wait in complete clinical responders is now supported by strong evidence (OPRA, NO CUT trials). In gastric (FLOT 4, MATTERHORN) and esophageal cancers (SANO), perioperative chemotherapy has become the standard rather than the exception. Neoadjuvant Systemic therapy with ADC+ICI (Enfortumab vedotin + pembrolizumab) is now becoming standard of care in Muscle invasive Bladder Cancer (MIBC) especially in cisplatin eligible and ineligible patients and achieving an impressive PCR rates of 55-60%. Each of these represents a fundamental shift in the surgical paradigm that cannot be implemented by surgeons working in isolation from their medical oncology colleagues. This is where multidisciplinary collaboration is not just good practice but operationally necessary. Decisions about surgical timing, resectability thresholds, and organ preservation eligibility must be made jointly ideally in a dedicated pre-operative MDT before any patient is taken to theatre. Institutional protocols should define these decision pathways explicitly, so that the quality of the decision doesn't depend on whether the right person happened to be in the room that day.

Full Name:

Monish Balaji S

Name of the Institution:

Kilpauk Medical College, Chennai

State:

Tamil Nadu

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):

To make organ sparing approaches in surgical oncology the norm and not the exception

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):

Advances in Surgical Oncology for Organ-Preserving Techniques

Organ-preserving surgical oncology integrates minimally invasive approaches, multimodal therapy, and coordinated decision-making to optimize oncologic control while preserving function and quality of life.

Mechanisms to improve adoption of minimally invasive techniques:

Screening for Early diagnosis so as to ensure eligibility for minimally invasive and organ sparing procedures

Standardized training programs and surgical simulation platforms to reduce learning curves for laparoscopic and robotic surgery.

Investment in high-volume centers of excellence to concentrate expertise and improve outcomes.

Use of AI-assisted preoperative planning and intraoperative navigation systems.

Policy incentives and reimbursement models supporting minimally invasive procedures.

Continuous outcome auditing using registries to refine minimally invasive surgical indications and benchmarks.

Tele-mentoring and remote proctoring to expand access in resource-limited surgical centers.

Emphasis on functional preservation, cosmetic outcomes, and faster recovery timelines improves patient-centered care.

Integration of Neoadjuvant Therapies as Standard of Care:

Early multidisciplinary assessment to identify patients suitable for neoadjuvant chemotherapy, immunotherapy, or radiotherapy.

Protocol-driven treatment pathways linking medical oncology and surgical oncology from diagnosis.

Use of real-time imaging and biomarker response evaluation to guide surgical timing.

Embedding clinical trial enrollment into neoadjuvant treatment decision frameworks.

Standardized consent processes highlighting risks, benefits, and organ preservation expectations.

Early integration of palliative care consultation to optimize functional outcomes and decision quality.

Mechanism for multidisciplinary collaboration in surgical oncology decision-making:

Establish weekly tumor boards including surgeons, medical oncologists, radiation oncologists, radiologists, and pathologists.

Use centralized digital platforms for case sharing, imaging access, and molecular data integration.

Assign care coordinators to ensure communication, follow-up, and treatment adherence.

Develop consensus-based decision algorithms incorporating patient preferences and quality-of-life outcomes.

Integrate patient-reported outcome measures into MDT discussions to guide personalized surgical planning.

Periodic audit meetings to evaluate adherence to MDT decisions and postoperative outcomes.

Full Name:

Jarfin I M

Name of the Institution:

Gleneagles Health City, Chennai

State:

Tamil Nadu

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):

To make cancer surgery safer, less mutilating and more functional, while never compromising cure.

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):

Organ preservation should be treated as a scientific goal, not a cosmetic luxury. Adoption of minimally invasive and function-preserving surgery needs structured training, mentorship, simulation labs, proctorship, outcome audits and referral networks. In Tamil Nadu, government medical colleges and regional cancer centres can become skill hubs for laparoscopic, robotic, breast-conserving, limb-sparing and sphincter-preserving techniques.

Neoadjuvant therapy must be integrated as standard wherever evidence supports it: breast cancer, rectal cancer, esophageal cancer, lung cancer, bladder cancer, sarcoma and selected head-neck cancers. Its value is not only tumour shrinkage, but also early systemic control, response assessment and better surgical planning. But it requires discipline—baseline staging, biopsy confirmation, molecular markers, response assessment and predefined surgical timing.

Every organ-preservation decision should pass through a surgical oncology MDT. The team must include surgical, medical and radiation oncologists, radiologists, pathologists, rehabilitation specialists, stoma therapists, fertility experts, nutritionists and palliative-care physicians. The question should not be “Can we remove it?” but “Can we cure this patient while preserving speech, swallowing, fertility, continence, limb function, body image and dignity?”

Tamil Nadu’s public insurance systems can support this by covering guideline-based neoadjuvant therapy, reconstruction, rehabilitation and stoma care—not just the operation. Roche can contribute through molecular testing support, neoadjuvant-treatment education, response-monitoring research and equitable patient-assistance programs.

The future surgical oncologist must be judged not only by margins achieved, but by the life the patient is able to return to after cure.

Full Name:

Dr. Chilamkurty Maitreyi

Name of the Institution:

Stanley Medical College

State:

Tamil Nadu

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):

Problem statement: Cancer surgery still too often defaults to organ sacrifice instead of organ preservation not because better options do not exist but because systems fails patients. Minimally invasive expertise is uneven, neoadjuvant therapies are inconsistently used, multidisciplinary decisions are delayed and treatment planning remains specialty oriented. As a result avoidable permanent stomas, loss of speech, fertility, swallowing, breast tissue, bladder function and quality of life.

Objective-To transform surgical oncology from a first resection model to response guided organ preservation improving oncologic outcomes while preserving function, dignity, appearance and Survivorship quality.

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):

Solution: SCOPE-ONC -Strategic Colloborative Organ Preservation Ecosystem in Oncology-

This framework enables real time multidisciplinary decision making for optimal patient centered outcomes.

S: Skill acceleration-establish organ preservation surgical academies using simulation labs, Surgical Mentoring, Live Tele proctoring, Adopt minimally invasive Techniques.

C: Convergence tumour board-A 48-hour MDT with surgical oncologist, Radiation Oncologist, Medical Oncologist, Pathologist, radiologist, reconstructive surgeon, Nutrition specialist, pyschologist to decide Organ preserving feasibility upfront.

O: Onco response protocol-standardized Neoadjuvant protocols for Breast, colorectal, esophageal, bladder, Head and neck cancers converting “operate first” culture into “response-guided preservation.”

P: Precision selection-AI integrates MRI/PET CT imaging, pathology, frailty, performance status, functional priorities and molecular risk stratification to identify who truly benefits from organ preservation versus radical surgery.(OPES-Organ preservation eligibility score).

E: Equity Navigation-Financial counselling, Treatment Navigation, reconstructive planning, Survivorship integration to ensure preservation not limited to affluent patients.

Problem case: A 36-year female diagnosed with Locally advanced low rectal cancer planned for permanent colostomy. SCOPE ONC triggers urgent MDT review, Total Neoadjuvant therapy (TNT), MRI reassessment and organ preservation scoring. Excellent response enables sphincter preserving minimally invasive surgery. Cancer controlled. Organ preserved. Family intact.

Full Name:

Anirudh

Name of the Institution:

SAIMS

State:

Madhya Pradesh

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):

To establish a multidisciplinary, organ-preserving cancer care model that increases the use of minimally invasive and function-preserving surgical techniques while maintaining equivalent oncologic outcomes, reducing treatment-related morbidity, improving quality of life, and integrating neoadjuvant therapies into standardized evidence-based treatment pathways.

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):

Advances in surgical oncology should focus on preserving organ function and quality of life without compromising oncologic outcomes. The proposed solution is to establish an “Organ Preservation Oncology Pathway” that integrates minimally invasive surgery, neoadjuvant therapy, imaging-guided decision-making, and multidisciplinary coordination into routine cancer care.

The first component is improving adoption of minimally invasive and function-preserving techniques through structured surgical training programs, simulation labs, mentorship networks, and standardized institutional protocols. Centers should promote laparoscopic, robotic, endoscopic, transoral, sphincter-preserving, breast-conserving, limb-salvage, fertility-preserving, and nerve-sparing approaches wherever oncologically appropriate. Outcome tracking systems should monitor margin status, complications, recurrence rates, and functional recovery to ensure quality assurance.

The second component is integrating neoadjuvant therapy as standard-of-care in selected cancers where tumor downstaging can improve organ preservation. Examples include rectal cancer with total neoadjuvant therapy, breast cancer with neoadjuvant chemotherapy or targeted therapy, laryngeal preservation protocols, bladder-preserving trimodality therapy, sarcoma downstaging, and immunotherapy-based neoadjuvant strategies in selected tumors. Standardized imaging, pathology response assessment, and biomarker-driven selection can help identify patients most likely to benefit.

The third component is establishing mandatory multidisciplinary tumor boards involving surgical oncologists, medical oncologists, radiation oncologists, radiologists, pathologists, reconstructive surgeons, rehabilitation specialists, nutrition teams, and palliative care experts. Decisions should be evidence-based and personalized according to stage, biology, patient preference, expected functional outcome, and resource availability. Digital MDT platforms and tele-oncology systems can extend these discussions to resource-limited regions.

Patient-centered outcomes must remain central to this model. In addition to survival, programs should evaluate speech, swallowing, continence, sexual function, cosmetic outcomes, return to work, mental health, and long-term quality of life. Public awareness and shared decision-making tools can further help patients understand organ-preserving options.

This proposal aims to shift surgical oncology from purely radical resections toward precision, multidisciplinary, biology-driven, and function-preserving cancer care.

Full Name:

Livin T

Name of the Institution:

Madurai Medical College, Kanyakumari

State:

Tamil Nadu

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):

We really have to mandate strict proctoring networks where high-volume regional centers directly mentor smaller surgical units

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):

Getting surgical oncologists to actually adopt minimally invasive approaches for organ preservation is notoriously difficult. You simply can't buy a robotic console and expect flawless outcomes overnight. We really have to mandate strict proctoring networks where high-volume regional centers directly mentor smaller surgical units. And looking at how the Japanese Cancer Guidelines carefully manage the intense learning curve for complex procedures like laparoscopic D2 gastrectomies provides a perfect blueprint for this.

But true organ preservation goes way beyond the specific instruments we handle in the OR. It completely depends on timing. Total Neoadjuvant Therapy has totally rewritten our approach to locally advanced rectal cases. If you break down the OPRA trial arms —specifically looking at the outcomes of induction versus consolidation chemoradiotherapy—the tumor often shrinks so drastically that we can safely just observe the patient. But making that watch-and-wait approach the actual standard of care requires an incredibly rigid safety net. You absolutely must run intense surveillance schedules with frequent MRIs so you can surgically salvage the situation immediately if the disease recurs.

And none of this actually functions if we operate in silos. A successful tumor board demands a harsh digital workflow. Cases have to be submitted days early so the medical oncologist is looking at the exact same data we are. And having an AI tool or an objective clinical referee cross-reference our proposed plans against strict NCCN or ESMO frameworks in real-time changes everything. It essentially forces the entire room to drop their clinical egos. We are forced to stick to the hard trial evidence before we ever finalize an organ-sparing strategy.

Full Name:

Jagga Sankalp Harish

Name of the Institution:

Kidwai Memorial Institute of Oncology, Bengaluru

State:

Karnataka

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):

To promote the adoption of minimally invasive and organ-preserving surgical techniques that maintain oncological efficacy while improving functional outcomes and quality of life.

To integrate evidence-based neoadjuvant therapies into routine cancer care to enhance tumor downstaging, improve resectability, and increase opportunities for organ preservation.

To establish a structured multidisciplinary decision-making framework that facilitates coordinated treatment planning, optimal patient selection, and continuous evaluation of clinical outcomes.

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):

Organ-preserving cancer treatment aims to achieve effective tumor control while maintaining function, appearance, and quality of life.

1. Improving Adoption of Minimally Invasive Techniques

- Increase training through fellowships, workshops, and simulation-based learning.
- Improve access to laparoscopic and robotic surgical platforms.
- Develop standardized clinical guidelines and outcome monitoring systems.
- Encourage mentorship from experienced surgeons.
- Regularly audit surgical outcomes and share best practices.

2. Integrating Neoadjuvant Therapies as Standard of Care (SOC)

- Neoadjuvant therapies can reduce tumor size, improve resectability, and increase organ preservation.
- Discuss all eligible patients in multidisciplinary tumor boards before treatment.
- Use imaging and pathological response to guide surgery.
- Develop disease-specific protocols incorporating neoadjuvant treatment.

Important evidence supports this approach. The OPERA Trial demonstrated that intensified neoadjuvant treatment in locally advanced rectal cancer increased complete clinical response rates, allowing more patients to undergo a watch-and-wait approach and avoid radical surgery, thereby improving organ preservation. Similarly, the study by V. M. Patil in locally advanced unresectable oral cavity cancers showed that induction chemotherapy converted a significant proportion of unresectable tumors into resectable disease, enabling curative surgery and improving outcomes.

3. Mechanism for Multidisciplinary Collaboration

- Establish weekly multidisciplinary team (MDT) meetings involving surgeons, medical oncologists, radiation oncologists, radiologists, pathologists, nurses, and rehabilitation specialists.
- Use shared electronic medical records and standardized treatment pathways.
- Record MDT decisions and track outcomes through regular audits.

In my opinion, successful organ preservation depends on strong MDT coordination, early use of neoadjuvant therapies, and appropriate patient selection. Combining these approaches can maximize oncological outcomes while minimizing treatment-related morbidity and preserving quality of life.

Full Name:

Dr. Chirag Gajera

Name of the Institution:

JNMC, Belagavi

State:

Karnataka

Objective of your solution: (Briefly define the primary outcome of your solution to this challenge):

To promote the adoption of organ-preserving surgical approaches in oncology by integrating minimally invasive techniques, optimizing neoadjuvant treatment strategies, and strengthening multidisciplinary decision-making to achieve effective cancer control with improved functional and quality-of-life outcomes.

Describe your solution / proposal: Provide a detailed account of your solution/ proposal to this challenge. You could type your solution/ proposal here. (Disclaimer: Solution/proposal should not exceed more than 300 words.):

Adoption of minimally invasive and organ-preserving surgical techniques requires structured training programs, surgical skill development, simulation-based education, mentorship by experienced surgeons, and establishment of standardized protocols. Investment in advanced surgical infrastructure, quality monitoring, and outcome reporting can support safe implementation while ensuring oncological effectiveness.

Neoadjuvant therapies should be integrated as standard of care where evidence demonstrates improved outcomes. Preoperative systemic therapy, chemotherapy, immunotherapy, targeted therapy, or chemoradiation can downstage tumors, increase organ preservation opportunities, improve surgical outcomes, and identify treatment response. Standardized patient selection using clinical staging, molecular biomarkers, imaging response assessment, and multidisciplinary evaluation is essential.

Multidisciplinary collaboration is critical for successful organ-preserving strategies. Regular tumor board meetings involving surgical oncologists, medical oncologists, radiation oncologists, radiologists, pathologists, genetic counselors, and supportive care teams should guide individualized treatment decisions. Clear communication pathways, shared treatment protocols, and documentation of consensus recommendations ensure coordinated care.

Continuous audit of surgical outcomes, patient-reported quality-of-life measures, recurrence rates, and functional outcomes should be used for quality improvement. Combining innovation, evidence-based neoadjuvant approaches, and collaborative decision-making can expand organ preservation while maintaining cancer control and improving survivorship.
