



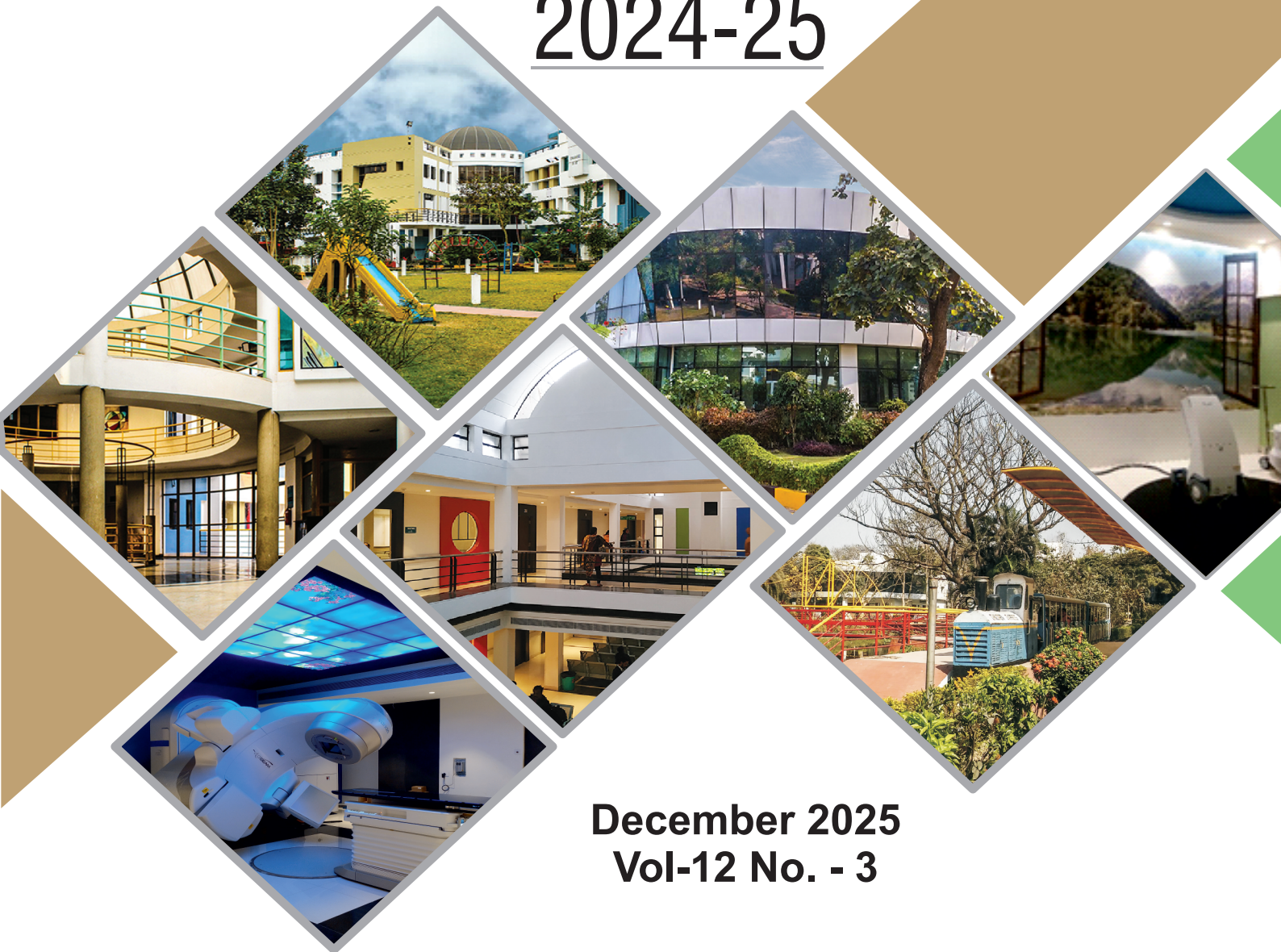
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-A Visionary,
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**Saroj Gupta Cancer Centre &
Research Institute**



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WEEKLY CME 2025



Dr. Anupam Chakrapani (09.01.2025)



Dr. Aparna Natarajan (29.05.2025)



Dr. Chandrakant MV (second from left) 25.09.2025



Dr. Paulomi Basu (Left) 25.09.2025



Dr. Saraswati Sukumar (20.02.2025)

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4..	Journal Scan- Thyroidectomy with or without postoperative radioiodine for patients with low-risk differentiated thyroid cancer in the UK (IoN): a randomised, multicentre, non inferiority trial. Mallick U, Newbold K, Beasley M, et al. Lancet .Dr Samir Bhattacharyya ((Department of Surgical Oncology & Research)	39
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Editorial Committee

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Editorial 2025

No axillary surgery for low-risk breast cancer – are we there yet?

Prof. Samir Bhattacharyya

Dept of Surgical Oncology
Saroj Gupta Cancer Centre & Research Institute

In earlier days, most of the breast cancer patients presented with larger primary tumors and clinically involved axillary lymph nodes. Axillary lymph dissection (ALND) was the standard option to address the issue. The aims of ALND were manifold, viz., to provide local control, to prognosticate the disease, and to guide adjuvant therapy, etc. the NASBP B-04 trial was the first study to question the role of ALND in the curative context. With the introduction of population-based mammographic screening and better patient awareness, axillary lymph node involvement rates underwent a significant change. A prospective study reported that 69% of the screen-detected breast cancer patients were node-negative (1). The procedure of axillary sentinel lymph node biopsy (SLNB) was developed to identify those patients who had metastasis in the axillary nodes. The landmark NSABP B-32 trial established the role of SLNB as compared to ALND in patients with cN0. It demonstrated no significant differences seen in disease-free survival (82.4% v 81.5%) or OS (91.8% v 90.3%) rates (2). The Milan trial on SLNB also reported a similar outcome (3). For SLNB-positive patients, completion ALND was the therapy of choice. The next development was the examination of the role of omitting completion ALND in limited SLNB + axilla. The American College of Surgeons Oncology Group (ACOSOG) Z0011 trial demonstrated the safety of omitting ALND in low-risk patients undergoing breast conservation therapy with 1-2 positive SLNB nodes (4). The AMAROS Trial showed that axillary radiotherapy was non-inferior to completion ALND in patients with cT1/2N0 breast cancer with one to two positive sentinel lymph nodes (5). The OTOASOR trial had a similar design to the AMAROS trial and reached a similar conclusion (6). These trials established the role of no further axillary surgery in a select group of low-risk breast cancer patients with a limited SLNB positivity.

The next development was the consideration of no axillary surgery in elderly patients with early breast cancer. In a randomized clinical trial, it was shown that axillary surgery did not improve 5-year overall survival or breast cancer-

specific survival in patients over 70 years with cN0 operable breast cancer (7). The CALGB 9343 trial reported that ER+HER2- stage I breast cancers in patients >70 years of age, the omission of axillary surgery was non-inferior ALND (8). Chunget al, in a retrospective analysis, reported that SLNB may be safely omitted in patients over 70 years (9). The American Board of Internal Medicine Foundation launched a national initiative called Choosing Wisely to prompt provider discussion about the appropriate use of tests, treatments, and procedures based on evidence-driven medicine. In conjunction with the Society of Surgical Oncology in 2016, 5 recommendations were released. The first recommendation stated, "Don't routinely use sentinel node biopsy in clinically node-negative women >70 years of age with early-stage hormone receptor-positive, HER2-negative invasive breast cancer" (10).

In the SOUND trial, a phase 3 randomized controlled trial, stage I (clinical and imaging – USG), predominantly ER+HER2-, breast cancer patients were randomized to SLNB or no axillary surgery. The 5-year distant DFS rates were similar between the groups (11). The recently published INSEMA trial with a similar patient population (cT1-2, N0) reported that omitting surgical axillary staging was noninferior to SLNB in T1-2, N0 (clinical and imaging) after a median follow-up of 6 years (12).

These trials support the notion that in clinically node-negative patients with favorable tumor biology and negative axillary imaging, SLNB might safely be avoided without compromising oncologic outcomes. Many centers across the world have adopted these protocols, especially in women older than 50 years with hormone receptor-positive, human epidermal growth factor receptor 2 (HER2)-negative tumors undergoing up-front breast-conserving surgery. This shift away from routine SLNB in cN0 breast cancer patients has led to a broader agreement with the modern trend towards treatment de-escalation, and resultant better quality of life and avoidance of overtreatment (13). Moreover, omitting SLNB in appropriately selected patients is cost-effective and

minimizes the burden healthcare infrastructure (14).

Although the de-escalation of axillary surgery in low-risk patients is an exciting development, several important considerations need to be taken into account while translating it into real-life practice.

Importance of USG Imaging: Both the SOUND and INSEMA trials selected patients based on the absence of suspicious axillary lymph nodes on preoperative ultrasound, highlighting the importance of imaging accuracy in determining eligibility for SLNB omission. However, the accuracy of axillary ultrasound is highly operator-dependent, and false negatives are a matter of concern, especially in low-volume centers. may occur, particularly outside of high-volume centers. The negative predictive value of axillary ultrasound in detecting lymph node metastasis in primary breast cancer is $\approx 80\%$, which means that, in approximately 20% of patients, axillary nodal involvement may remain undetected (15). Whether that can be detrimental has not yet been defined in real-life studies.

Endocrine Therapy compliance: Compliance with long-term endocrine therapy is the cornerstone of treatment for HR-positive breast cancer. In real-world settings, adherence is lower than in clinical trials. This introduces a layer of uncertainty when SLNB is omitted based on the premise of systemic therapy sufficiency. Perceived low risk of recurrence and age extremes can be associated with nonadherence to systemic therapy.

SLNB has a low-morbidity with a high staging value: SLNB has a general complication rate of $<5\%$ in breast-conserving surgery, and lymphedema rate of 2%-3% (16). Knowledge of accurate axillary nodal status is important in making adjuvant treatment decisions. Thus, strong evidence is required before SLNB is omitted across the board.

Impact on radiation therapy considerations: all patients in the INSEMA trial, and 80% of patients in the SOUND trial received whole breast radiation, which usually covers a significant part of the node-bearing region of the axilla. This is important for patients who could be candidates for partial breast irradiation (PBI). Omission of SLNB challenges this option, as all trials with patients with PBI had SLNB as part of routine staging. Conversely, patients with positive SLNs may be candidates for axillary radiation, as per ASMAROS trial.

Impact on systemic therapy: The patients that are typically considered for omission of SLNB (cT1, grade 1-2, HR+HER2-, no axillary nodes on imaging) are unlikely to qualify for ribociclib according to the NATALEE trial (17). However, for T1 grade 3 tumors, SLNB may still be informative. Another important point for consideration is the relatively short follow-up period in both the SOUND and the INSEMA trials. Longer-term data are required before a definitive decision is taken regarding generalized omission of SLNB.

Special considerations for resource-limited settings: The prerequisites for SLNB omission include a dependable axillary imaging facility, genomic testing (eg, Oncotype DX), and long-term surveillance, which are not available in many parts of the world. In such situations, SLNB is the safest and most widely available staging tool.

In conclusion, efforts at de-escalation of treatment in low-risk breast cancer are continuing, and omission of SLNB is a welcome step in this direction. Many high-volume centers have taken up this protocol. Still, widespread implementation should be considered in the light of the infrastructure, patient adherence, radiation planning, and systemic therapy implications. We should bear in mind that, in resource-constrained situations, SLNB is still the best option. Individualized care, patient safety, and global applicability should not be overshadowed by enthusiasm for progress.

Reference:

1. Ranaboldo CJ, Mitchel A, Royle GT, Theaker GM, Taylor I. Axillary nodal status in women with screen-detected breast cancer. *Eur J Surg Oncol* 1993;19:130-133
2. Krag DN, Anderson SJ, Julian TB, et al: Sentinel-lymph-node resection compared with conventional axillary-lymph-node dissection in clinically node-negative patients with breast cancer: Overall survival findings from the NSABP B-32 randomised phase 3 trial. *Lancet Oncol* 11:927-933, 2010
3. Veronesi U, Paganelli G, Viale G, et al. Sentinel-lymphnode biopsy as a staging procedure in breast cancer: update of a randomised controlled study. *Lancet Oncol* 2006;7:983-90
4. Giuliano AE, Ballman KV, McCall L, et al. Effect of axillary dissection vs no axillary dissection on 10 year

overall survival among women with invasive breast cancer and sentinel node metastasis: the ACOSOG Z0011 (Alliance) randomized clinical trial. *JAMA*. 2017;318(10):918-926

5. Donker M, van Tienhoven G, Straver ME, et al. Radiotherapy or surgery of the axilla after a positive sentinel node in breast cancer (EORTC 10981-22023 AMAROS): a randomised, multicentre, open-label, phase 3 non-inferiority trial. *Lancet Oncol*. 2014;15:1303-1310

6. Savolt A, Peley G, Polgar C, Udvarhelyi N, Rubovszky G, Kovacs E, et al. Eight-year follow-up result of the OTOASOR trial: the Optimal Treatment of the Axilla - surgery or Radiotherapy after positive sentinel lymph node biopsy in early-stage breast cancer: a randomized, single-centre, phase III, non-inferiority trial. *Eur J Surg Oncol* 2017;43(4):672-9

7. Martelli G, Boracchi P, De Palo M, et al. A randomized trial comparing axillary dissection to no axillary dissection in older patients with T1N0 breast cancer: results after 5 years of follow-up. *Ann Surg*. 2005;242:1e6;discussion 7e9

8. Hughes KS, Schnaper LA, Bellon JR, Cirincione CT, Berry DA, et al. Lumpectomy plus Tamoxifen with or without Irradiation in Women Age 70 Years or Older with Early Breast Cancer: Long-Term Follow-up of CALGB 9343. *J. Clin. Oncol*. 2013, 31, 2382-2387

9. Chung A, Gangi A, Amersi F, Zhang X, Giuliano A. Not performing a sentinel node biopsy for older patients with early-stage invasive breast cancer. *JAMA Surg*. 2015;150:683e684

10. Society of Surgical Oncology. Choosing Wisely. Published July 12, 2016. Updated July 21, 2021. <https://www.choosingwisely.org/clinician-lists/ssosentinel-node-biopsy-in-node-negative-women-70-and-over/>

11. Gentilini OD, Botteri E, Sangalli C, Galimberti V, Porpiglia M, et al. Sentinel Lymph Node Biopsy vs. No Axillary Surgery in Patients with Small Breast Cancer and Negative Results on Ultrasonography of Axillary Lymph Nodes: The SOUND Randomized Clinical Trial. *JAMA Oncol*. 2023, 9, 1557-1564

12. Reimer T, Stachs A, Veselinovic K, Kühn T, Heil J, et al. Axillary Surgery in Breast Cancer — Primary Results of the INSEMA Trial. *N Engl J Med* 2025;392(11):1051-1064

13. Gentilini OD, Cardoso MJ, Senkus E, et al: De-escalation of loco-regional treatments: Time to find a balance. *Breast (Edinburgh, Scotland)* 73:103673, 2024

14. Hrebinko KA, Bryce CL, Downs-Canner S, et al: Cost-effectiveness of Choosing Wisely guidelines for axillary observation in women older than age 70 years with hormone receptor-positive, clinically node-negative, operable breast tumors. *Cancer* 128:2258-2268, 2022

15. Upadhyaya VS, Lim GH, Chan EYK, et al: Evaluating the preoperative breast cancer characteristics affecting the accuracy of axillary ultrasound staging. *Breast J* 26:162-167, 2020

16. Langer I, Guller U, Berclaz G, et al: Morbidity of 0 (SLN) alone versus SLN and completion axillary lymph node dissection after breast cancer surgery: A prospective Swiss multicenter study on 659 patients. *Ann Surg* 245:452-461, 2007

17. Hortobagyi GN, Lacko A, Sohn J, et al: A phase III trial of adjuvant ribociclib plus endocrine therapy versus endocrine therapy alone in patients with HR-positive /HER2-negative early breast cancer: Final invasive disease-free survival results from the NATALEE trial. *Ann Oncol* 36:149-157, 2025

Articles

An Observational Study to Assess Local Control and Neurocognitive Functions after Fractionated Stereotactic Radiosurgery for Intracranial Metastasis

Dr. Nigam Shankar Rana, Dr. Gautam Bhattacharjee, Dr. Soumadip Panda
Dept of Radiotherapy

Abstract

Background:

Brain metastasis is a frequent complication of solid tumors, particularly lung and breast cancer, and historically associated with poor prognosis. Advances in treatment have shifted management from whole brain radiotherapy (WBRT) to focal stereotactic radiosurgery (SRS), offering improved local control with reduced neurocognitive decline. Fractionated SRS (fSRS) has emerged as a potential strategy to optimize tumor control while minimizing toxicity.

Objective:

This study aimed to evaluate local control and neurocognitive outcomes in patients with 1-5 brain metastases treated with fractionated SRS (27 Gy in 3 fractions).

Methods:

A prospective, single-arm observational study was conducted between December 2023 and December 2024. Thirteen patients with 1-5 brain metastases and good performance status were enrolled. Immobilization, CT/MRI fusion-based planning, and treatment were performed with Vital Beam™ linear accelerator. Patients received 27 Gy/3 fractions (80-90% prescription isodose). Follow-up was done every 2 months with neurological examination and MRI. Tumor response was evaluated using RECIST 1.1 guidelines. Neurocognitive function was assessed with the Mini-Mental State Examination (MMSE).

Results:

Of 13 patients (<50 years: 5; ≥50 years: 8), 7 had solitary lesions and 6 had multiple metastases. Median GTV was 1.2 cc and median PTV 3.8 cc. Local control rates were 100%, 84.6%, 46.1%, and 7.7% at 2, 4, 6, and 8 months respectively. No neurocognitive decline was observed at 2 and 4 months. At 6 months, 7.7% developed mild impairment and 7.7% moderate impairment. At 8 months, 30.8% showed mild impairment. No severe cognitive decline occurred.

Conclusion:

Fractionated SRS (27 Gy/3 fractions) is feasible for patients with intracranial metastases, achieving good short-term local control with preservation of neurocognitive function. Limitations include small sample size and limited follow-up, necessitating further accrual for robust outcomes.

N.B. This paper was presented as an 'oral presentation' in the AROICON 2025 (45th Annual National Conference of Association of Radiation Oncologists of India) by Dr. Anwesh Mukherjee.

136 Successful Bone Marrow Transplantation

Thirteen Years Journey of Autologous Haematopoietic Stem Cell Transplant Program of Saroj Gupta Cancer Centre & Research Institute

Dr P P Gupta, In Charge, Bone Marrow Transplant Program

Dr Kaushik Paul, Consultant Hematologist, Hematooncologist and Transplant Physician

Dr Sonal Paul, Consultant Hematologist, Hematooncologist and Transplant Physician

Introduction:

Bone Marrow Transplant (BMT) also known as Haematopoietic Stem Cell Transplant (HSCT) is a procedure that involves the intravenous infusion of healthy haematopoietic cells to reestablish normal haematopoiesis in patients with dysfunctional or depleted bone marrow. First explored in humans in the 1950s by Dr Thomas, haematopoietic stem cell transplantation is now used worldwide in the treatment of many malignant and non malignant haematologic conditions and in the treatment of various solid tumors. In India, the first successful BMT was done at Tata Memorial Hospital on March 20, 1983 on a nine year old girl with acute myeloid leukemia. The availability of hematopoietic stem cell transplant facilities in our country is grossly inadequate to the demand due to lack of expertise and infrastructure. With the commencement of DM courses in clinical haematology in India, the number of qualified and trained BMT physicians is on the rise. As a result, in recent years the number of BMT centres is rapidly increasing throughout the country, though this is far away from what is actually required for our country at this moment. HSCT is of two types; i) Autologous Transplant in which patients own stem cell is infused to reestablish bone marrow function following high dose therapy (HDT) and ii) Allogeneic Transplant where stem cell is obtained from a HLA matched healthy donor to restore normal haematopoiesis in patients whose bone marrow function is defective. Multiple Myeloma is the most common indication for autologous stem cell transplantation (ASCT) followed by Non Hodgkin's and Hodgkin's Lymphoma and Acute Myeloid Leukemia, solid tumors like Neuroblastoma and Germ Cell Tumor and certain non malignant diseases such as Autoimmune Disorders like SLE and Multiple Sclerosis.

At our centre, the Autologous Transplant Programme has been started since January 2013. We are hereby giving a brief update of the 136 Autologous HSCT done so far at our centre for various Haematological Malignancies.

Material and Method:

Total of 136 patients, of which 109 patients had Multiple Myeloma; eleven patients had Relapsed Non Hodgkin's Lymphoma and thirteen patients with relapsed Hodgkin Lymphoma and one each with Plasma Cell leukemia, Acute Promyelocytic leukemia and AL amyloidosis. Table 1, 2 and 3 show the baseline

Table 1: Baseline characteristics of ASCT patients

Sl.No.	Characteristics	Patients
(1)	Total Numbers (N)	136
(2)	Age (median)	54
(3)	Gender (male:female)	2:1
(4)	Indication Multiple Myeloma Hodgkin Lymphoma Non Hodgkin Lymphoma Acute Promyelocytic Leukemia Plasma Cell Leukemia AL Amyloidosis	109 13 10 1 1 1
(5)	Stem Cell Source Peripheral Blood for all patients	
(6)	Stem-cell dose (median cell dose) 5.7X10 cells/kg of body weight	

Table 2: Baseline characteristics of Multiple Myeloma patients (N 109)

Multiple Myeloma subtypes	
IgG Kappa	29
IgG-Lambda	25
IgA Kappa	15
IgA Lambda	10
Light Chain only	3
Unknown	27

Table 3: Baseline characteristics of Multiple Myeloma patients (N 109)

ISS Stage	
Stage I	25 (24.74%)
Stage II	50 (45.36%)
Stage III	34 (29.90%)

Central venous access devices

Central venous line was done in all patients. Either a peripherally inserted central catheter (PICC) or a subclavian/ jugular venous line was done for IV access for the peritransplant period except for one patient, who had a chemoport inserted during salvage chemotherapy. For those patients who had a PICC done for IV access for peritransplant care, Peripheral Blood Stem Cell apheresis was done through a femoral line. This femoral catheter was inserted on the day before the apheresis procedure and was removed on day 0, following infusion of stem cells through this line.

Stem cell mobilization, apheresis and storage

Our peripheral blood stem cell (PBSC) mobilization protocols were 1) G-CSF alone 2) G-CSF plus plerixafor and 3) G-CSF plus chemotherapy plus plerixafor. Mobilization strategy used was G-CSF 5 microgram per kg per dose twice daily for 4 days following which, on the 5th day after the morning dose of G-CSF, patients underwent peripheral blood stem cell (PBSC) apheresis using either COBE spectra or Spectra Optia auto PBSC Apheresis System. When plerixafor was used, it was given along with G-CSF at the recommended dose of 0.24

mg/kg, 11 hours before the start of apheresis procedure. The target cell dose was 2.5×10^6 /kg. Patients not achieving the target cell dose were continued on mobilization with G-CSF plus plerixafor and underwent apheresis on the second day as well.

After apheresis, the PBSC products were stored at 4 °C in a blood bank refrigerator up to 48 h for multiple myeloma patients.

The PBSC products were cryopreserved and stored at -90 °C freezer for all patients of lymphoma and the APL patient because the administration of BEAM and BuCy conditioning chemotherapy requires 6 days and 4 days respectively.

24 hours post conditioning chemotherapy, the entire PBSC product was infused to the patient using a regular blood transfusion set.

Depending on the volume, the infusion process was completed in one or two sittings to avoid volume overload.

Table 4: Mobilization protocol

G CSF alone	43
G CSF + Plerixafor	89
Chemo+G CSF + Plerixafor	3
Chemo+G CSF	1

Conditioning chemotherapy

The myeloablative conditioning regimen used for Multiple Myeloma patients was single agent melphalan in doses ranging from 200 mg/m², 140 mg/m² or 100 mg/m². Dose adjustment of Melphalan was done based on age of the patient, performance status (fit vs frail) and associated comorbidities esp. CKD at the time of transplant. BEAM was utilized as a conditioning chemotherapy for the majority of patients with NHL and Hodgkin Lymphoma and only one patient with HL received BACE conditioning chemotherapy, the Plasma Cell Leukemia patient received high dose melphalan @ 200 mg/m² and the APL patient received Busulfan-Cyclophosphamide (BuCy) conditioning chemotherapy.

Table 5: Conditioning Chemotherapy used for the majority of patients

Conditioning Regimen	Indications	Protocol
BEAM regimen	Non Hodgkin Lymphoma Hodgkin Lymphoma	Day -6: Inj Carmustine 300 mg/ m2 ay-5 to Day-2: Inj. Etoposide 200 mg/ m2 OD Inj Cytarabine 200 mg/ m2 BD Day-1 Inj Melphalan 140 mg/m2 Day 0: stem-cell transplant
Melphalan regimen	Plasma Cell Dyscrasia (Multiple Myeloma/Amyloid/ Plasma Cell Leukemia)	Day-1 Inj Melphalan 200 mg/m2 or Day-1 Inj Melphalan 140 mg/m2
BuCy regimen	APML	Days -7, -6, -5, -4: Busulfan: 3.2 mg/kg/day IV Days -3, -2: Cyclophosphamide 60 mg/kg/day Day 0: stem-cell transplant

Supportive care and Monitoring: All patients were admitted to an isolation room of our 4 room BMT unit. Each room has a terminal HEPA filter with positive air pressure facilities. Barrier nursing protocol was also followed strictly. Acyclovir and fluconazole were given as prophylaxis for HSV and fungal Infections respectively to all patients as per our protocol. No antibacterial prophylaxis was used routinely. To hasten recovery of neutrophil count, G-CSF was routinely started from Day +4. Neutrophil engraftment was defined as the first day of absolute neutrophil count (ANC>500) for three consecutive days. The date for platelet engraftment was considered the posttransplantation day of platelet achievement of $>20 \times 10^9$ /L for 3 days without component support.

Table 6: Antimicrobial prophylaxis used for ASCT

Antibiotics	Dose	Duration
Trimethoprim-Sulfamethoxazole	1 tab twice daily Stops on day-2 and is after engraftment and continued	for three days/week restarted for 6 months
Tab fluconazole	200 mg twice	Starts on day-7 daily till 15 days after discharge
Tab Levofloxacin	500 mg once daily	Starts on day-7 till discharge
Tab Acyclovir	200 mg twice daily	Starts on day-2 and continued for 3 months after discharge

Result:

The age of the patients ranged from 15 years to 69 years (median 54 years) with male:

female ratio of 2:1. Median peripheral blood stem cell dose was 5.7×10^6 CD34+ve cells/kg (range 2.34-56.9 $\times 10^6$ CD34+ve cells/kg). Adequate peripheral blood stem cell mobilization was possible with G-CSF alone in 43 patients, chemotherapy followed by G-CSF in one patient, chemotherapy plus G-CSF plus plerixafor in three patients and for the remaining 89 patients, plerixafor along with G-CSF was used as the mobilization protocol for apheresis of desired minimum stem cell dose. Ninety percent of patients had one sitting and the remaining 10% of patients had to undergo another sitting of apheresis on the second day to achieve target stem cell dose. The median time to neutrophil engraftment was 11 days (range 9 - 13) and the median time to platelet engraftment day was 14 days (range 11 -17). Table 1 shows the patients characteristics and minimal outcome data of our transplant patients.

Outcome:

Regimen related toxicity was seen in all patients. The most common toxicity was mucositis with grade I mucositis was seen in 100% of patients but only around one fifth of them had severe grade III mucositis, necessitating TPN support for 5 to 6 days. Diarrhea, anorexia and vomiting were the other regimen-related toxicities. The major adverse event related to myeloablative conditioning chemotherapy was febrile neutropenia requiring broad spectrum intravenous antibiotic therapy in almost three fourth of all patients. Serial blood and urine cultures and monitoring of inflammatory markers were routinely done during febrile episodes. The most common isolates were Gram negative organisms (Klebsiella Sp. and E

coli). Staph aureus was the most common Gram positive organism. The growth of MDRO was not seen any of these patients. Though all patients received oral fluconazole prophylaxis, requirement for the use of intravenous antifungal therapy was minimal and were limited to IV fluconazole, caspofungin and amphotericin B deoxycholate (conventional Ampho. B). The median duration of peri-transplant hospital stay was 29 days (range 23-84 days) and median duration of post-transplant hospital stay was 19 days (range 15-70 days).

Among the Multiple Myeloma patients, 94 (86%) are newly diagnosed (NDMM) patients taken up for ASCT consolidation after frontline induction and the remaining 15 (14%)

patients were relapsed /refractory (RRMM) patients who received ASCT after 2nd or subsequent lines of therapy. 75 of 94 NDMM patients are alive, 62 of them do not have significant progression of disease and they are on maintenance therapy. The data of our lymphoma patients show that 9 of 13 (69%) Hodgkin Lymphoma patients and 8 of 11 (72%) NHL patients are in complete remission. Table 7 shows the status of our ASCT patients at last follow up visit

Table 7: Status at last follow up of ASCT patients

Disease	Non Progressive	Progressive	Relapsed & died	Died during transplant	Died due to other Status	States unknown
Multiple Myeloma (N109)	67	19	10		1	12
NDMM (N 94)	62	13	6		1	12
RRMM (N 15)	5	6	4			
NHL (N 11)	8		1			2
HL (N 13)	9		2	2		
PCL (N 1)			1			
APL (N 1)	1					
Amyloid	1					

NDMM- newly diagnosed multiple myeloma, RRMM- relapsed/refractory multiple myeloma, NHL-non hodgkin lymphoma, HL-hodgkin lymphoma, PCL- plasma cell leukemia, APL- acute promyelocytic leukemia.

Discussion:

Saroj Gupta Cancer Centre and Research Institute is one of the major transplant centre of Eastern India. Around 650 to 700 new patients with haematologic malignancies get registered each year to this Institute. Autologous Stem Cell Transplant is a very important modality of treatment for certain haematologic malignancies. In multiple myeloma, ASCT not only contributes an overall survival benefit of 3 to 4 years but also improves quality of life significantly. Majority of them remain well only on oral maintenance therapy. In our multiple myeloma cohort, overall 78% (86 of 109 patients) are alive as per our last follow up data. In relapsed Hodgkin and Non Hodgkin Lymphoma patients, ASCT remains the only curative option of treatment if the disease is chemosensitive and patient is in CR following second or subsequent lines of chemotherapy prior to ASCT. The disease has to be chemosensitive because it is now firmly established that the probability of cure is low for patients with lymphoma if the disease is chemorefractory. The ASCT data of our lymphoma patients show that 8 of 11(72%) NHL patients and 9 of 13 (70%) patients with Hodgkin lymphoma are in remission signifying the role of autologous transplant in this setting

In our Institute, the first successful autologous transplant was performed on January 23, 2013 in a patient of multiple myeloma. The full fledged transplant activities started from 2014 onwards. In 2022, 19 transplants were done which is the highest number of transplants done so far in a calendar year (Figure1).

Another highlight of our transplant program is that we have achieved the important milestone of one hundred consecutive successful transplants in April 2023.

The major challenge for many of our patients, particularly the economically weaker section of our society to undergo ASCT is the prohibitive cost of the procedure. Keeping this in mind, we are providing this facility at much lower cost so that the patients from the lower middle income group can also avail the benefit of this much needed modality of treatment. We are also doing ASCT under the Swastha Sathi scheme of the Govt of West Bengal.

Table 8: Year wise transplant activities

Year	Number
2013	1
2014	12
2015	9
2016	9
2017	12
2018	7
2019	10
2020	4
2021	11
2022	19
2023	18
2024	13
2025 (till October)	11
Total	136

Conclusion:

Autologous stem cell transplant remains a necessary component of therapy in various haematologic disorders, especially in the management of Myeloma and Lymphoma patients. In Multiple Myeloma, even in the era of novel agents, ASCT adds to the benefit obtained from proteasome inhibitors and immunomodulatory drug based induction therapy in terms of both PFS and OS. The use of HDT with autologous rescue remains very important in the treatment of R/R Lymphoma. Our limited follow up data is really encouraging and supports the importance of ASCT in patients of Myeloma and Lymphoma. We need more mature and longer follow up data to substantiate overall survival benefit in our cohort. We hope to continue our services for patients of Eastern India and neighboring countries.

Reference:

- 1 History of Transplantation,” Fred Hutchison Cancer Research Center, 2013, <http://www.fredhutch.org/en/treatment/long-term-follow-up/FAQs/transplantation.html>.
- 2 BARNES DW, CORP MJ, LOUTIT JF, NEAL FE. Treatment of murine leukaemia with X rays and homologous bone marrow; preliminary communication. *Br Med J*. 1956 Sep 15;2(4993):626-7. [PMC free article] [PubMed] [Reference list]
- 3 Multiple Myeloma: ESMO clinical practice guidelines- *Ann Oncol* 2013; 24 (Suppl 6):
Authors: P. Moreau, J. San Miguel, H. Ludwig, H. Schouten, M. Mohty, M. Dimopoulos, M. Dreyling
- 4 The impact of ASCT on patients with newly diagnosed multiple myeloma who receive RVD induction: Marlise R. Luskin, Federico Campigotto, Paul G. Richardson, John Koreth, Irene M. Ghobrial, Robert L. Schlossman, Nikhil C. Munshi, Edwin P. Alyea, Robert J. Soiffer, Diane Warren, Muriel Gannon, Kathleen Finn, Kenneth C. Anderson, Edie A. Weller, Jacob P. Laubach
- 5 Have drug combinations supplanted stem cell transplantation in myeloma?
Antonio Palumbo¹ and Federica Cavallo¹¹ Myeloma Unit, Division of Hematology, University of Torino, Torino, Italy
- 6 Reversibility Of Renal Failure In Newly Diagnosed Multiple Myeloma Patients Treated With High Dose Dexamethasone-Containing Regimens And The Impact Of Novel Agents
Efsthios Kastritis, Athanasios Anagnostopoulos, Maria Roussou, Dimitra Gika, Charis Matsouka, Despina Barmparousi, Irini Gapsa, Erasmia Psimenou, Aristotle Bamias, Meletios Athanasios Dimopoulos
Haematologica April 2007 92: 546-549; Doi:10.3324/haematol.10909
- 7 deLeval L, Hasserjian RP. Diffuse Large B-Cell Lymphomas and Burkitt Lymphoma. *Hematol Oncol Clin North Am*. 2009;23:791–827. [PubMed]
- 8 High-dose chemotherapy and autologous stem cell transplantation for hodgkin's lymphoma in the kingdom of saudiarabia: king faisal specialist hospital and research center experience. Akhtar s¹, abdel salam m, elweshi a, al husseini h, janabii, rahal m, maghfoori.

Artificial Intelligence in Cancer Treatment

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Artificial Intelligence, refers to computer systems designed to perform tasks that typically require human intelligence, such as learning, problem-solving, decision-making, and pattern recognition. By using data and complex algorithms, AI enables machines to simulate human cognitive abilities and execute complex functions like understanding language, analyzing data.

Cancer continues to be one of the leading causes of death worldwide, with millions of new cases diagnosed each year. Traditional cancer treatment relies heavily on the expertise of oncologists, diagnostic tools, and clinical trials. However, the complexity of cancer, its varied genetic mutations, and the unique response of patients to therapies demand more advanced approaches. In recent years, Artificial Intelligence (AI) has emerged as a revolutionary tool in the fight against cancer, offering new possibilities in early detection, personalized treatment, and overall patient care.

One of the most significant contributions of AI in oncology is early and accurate diagnosis. Cancer is often treatable when detected in its initial stages, yet many cases are diagnosed late due to vague symptoms or limitations of conventional diagnostic tools. AI-powered imaging systems, trained on vast datasets of X-rays, CT scans, and MRI images, can detect abnormalities with remarkable accuracy. For example, AI algorithms can highlight subtle patterns in mammograms that may be overlooked by human eyes, thereby improving breast cancer detection rates. Similarly, in pathology, AI tools can analyze tissue samples to classify cancer types and predict their aggressiveness.

Another crucial area where AI is making an impact is personalized treatment planning. Every cancer patient is unique, and their response to chemotherapy, radiation, or immunotherapy can differ widely. AI systems can analyze genetic information, lifestyle factors, and treatment history to recommend the most effective therapies for individual patients. Machine learning models are increasingly being used to identify potential drug targets and predict how patients will respond to specific drugs, reducing trial-and-error in treatment. This not only improves survival rates but also minimizes unnecessary side effects.

AI also plays a key role in drug discovery and development. Traditionally, developing a new cancer drug can take over a decade and cost billions of dollars. By analyzing massive biological datasets, AI can identify promising compounds, simulate their effectiveness, and predict possible side effects much faster than conventional methods. This accelerates the discovery pipeline and brings new, life-saving drugs to patients sooner.

In addition, AI contributes to treatment monitoring and follow-up care. Wearable devices and AI-driven mobile applications can track patients' vital signs, side effects, and overall health in real time. This allows doctors to make timely interventions, adjust dosages, or change treatment plans as needed. Predictive models can even forecast potential relapses or complications, helping to prevent emergencies.

Uses:

- ♦ **Diagnosis and Imaging:** AI algorithms can analyze large volumes of medical images (like mammograms and biopsy slides) to detect tumors, assess their growth, and predict long-term risks with greater speed and accuracy.
- ♦ **Drug Discovery:** AI can help identify new cancer drugs and understand how cancer cells become resistant to treatments, which informs drug development and use.

- ♦ **Personalized Treatment:** AI analyzes large genomic datasets to identify specific mutations and characteristics of a tumor, enabling oncologists to tailor treatments, such as targeted therapies and immunotherapies.
- ♦ **Treatment Planning:** For radiation and chemotherapy, AI can assist in mapping target areas, automatically planning treatment programs, and predicting patient tolerance to drugs to optimize regimens.
- ♦ **Prognosis:** AI tools are being developed to predict a patient's long-term survival and risk of recurrence, helping to guide treatment decisions.

Challenges and Future Considerations

- ♦ **Data Requirements:** AI models require large, high-quality datasets for training, and biases in these datasets can lead to inequities in performance.
- ♦ **Ethical Concerns:** Issues of patient trust, the role of human professionals, and equitable access to AI technologies need to be addressed.
- ♦ **Integration into Practice:** Further clinical trials and validation studies are needed to ensure safe and effective integration of AI algorithms into clinical workflows.

Conclusion:

In conclusion, Artificial Intelligence is transforming cancer treatment by making diagnosis faster, therapies more personalized, and drug discovery more efficient. While challenges remain, the synergy between AI and human expertise offers great hope for reducing cancer-related mortality and improving patients' quality of life. As technology continues to evolve, AI will likely become an indispensable ally in the global fight against cancer.

Reference: Hassan et al. Exploring the role of artificial intelligence in chemotherapy development, cancer diagnosis, and treatment: present achievements and future outlook. Front Oncol. 2025 Feb.

Modified LICAP Technique for Oncoplastic Reconstruction of Outer Quadrant Breast Defects: Experience at Tertiary Care Centre in Eastern India.

Authors:

Dr. Maaz Ahmed Khan, Dr. Aditya N. Sen, Dr. Mainak Chakraborty, Dr. Arnab Gupta

Abstract

Background:

The Lateral Intercoastal Artery Perforator (LICAP) flap is a robust flap used for reconstructing outer quadrant breast defects following oncoplastic breast surgery. However, expert plastic surgery knowledge is required for perforator identification and dissection. This study explores a modified LICAP technique that simplifies the procedure by identifying the perforator with Doppler guidance and omitting full dissection of the perforators, thus aiming to make it more reproducible by onco-surgeons, simultaneously maintaining optimal aesthetic outcomes. In this study, we have included 43 patients who underwent partial mastectomy with immediate reconstruction using modified lateral chest wall perforator flaps in the period from June 2023 to December 2024

Methods:

A cohort of 43 patients with breast cup sizes A, B, and C, and tumors located in the outer quadrants, requiring type 2 oncoplastic surgery, underwent the oncoplastic breast surgery using the modified LICAP technique. Key parameters evaluated included operative time, duration of hospital stay, short-term complications, cosmetic outcomes, and patient satisfaction.

Results:

The modified LICAP technique demonstrated significantly reduced surgical times compared to standard LICAP, with a minimal complication rate and high aesthetic satisfaction, with 89.8% of patients achieving breast symmetry. Radiation therapy did not affect cosmetic outcomes.

Conclusion: The modified LICAP technique provides a simpler, effective alternative to traditional LICAP, offering reduced surgical complexity and improved accessibility for general oncosurgeons, with comparable aesthetic and oncologic outcomes.

Introduction

Oncoplastic breast surgery aims to combine oncologic safety with aesthetic considerations, enhancing the quality of life for breast cancer patients post-surgery. Perforator flaps are one of the volume replacement oncoplastic techniques that can be used after BCS to reconstruct challenging defects in a relatively large tumor-to-breast ratio [1]. These are fasciocutaneous flaps that spare muscle function and decrease the morbidity compared to the traditional latissimus dorsi (LD) flap [2]. Among the various perforator-based flap, the LICAP (Lateral Intercoastal Artery Perforator) flap is a well-established option for covering defects in the outer quadrants of the breast. The classic LICAP flap technique and the anatomy of lateral intercoastal artery perforators were well described by Hamdi et al. [3]. This flap utilizes perforators from the intercoastal arteries of the lateral chest wall, and it has gained

popularity due to its versatility and aesthetic outcomes. However, the careful dissection and skeletonization of perforators required by the classic LICAP procedure has a longer learning curve and requires a high degree of competence and experience that is normally found in specialized plastic surgeons. As a result, general oncosurgeons might not be able to perform this treatment, particularly in non-tertiary hospitals where resources and experience might

be few. If a plastic surgeon is needed, it also raises the overall cost of the procedure. The improved LICAP technique presented in this work is intended to make the surgery easier for general and onco-surgeons to execute in a much shorter amount of time and at a lower cost while still producing good aesthetic results.

Materials and Methods

This is a prospective cohort study that includes 43 patients with early-stage breast cancer located in the outer quadrants who underwent BCS and immediate partial reconstruction with modified LICAP procedure. Data was recorded from June 2023 to December 2024

Patient Selection

The inclusion criteria for the study were breast cup sizes A, B, and C, with T1 or T2 or T3 tumors in the outer aspect of the breast where BCS was expected to leave them with a large defect requiring volume replacement with or without skin loss; patients needed to have adequate (at least an inch) lateral chest wall skin and subcutaneous fat for flap harvesting. Exclusion criteria included tumors in the central or inner quadrants, grade 3 ptosis or cup size D or larger, and a history of previous breast surgery or radiation therapy that could compromise flap quality. Patients underwent full history, physical examination, standard mammography and ultrasound, core biopsy for diagnosis, digital mammography, and staging investigations were performed whenever indicated. Treatment decisions were made by the multidisciplinary team (MDT). All patients were informed about the modified LICAP procedure and provided written informed consent.

Surgical Procedure

The key modification in this study was the use of a handheld Doppler to identify the dominant perforators supplying the lateral chest wall. Unlike the traditional LICAP, where the perforators are meticulously dissected and skeletonized, in the modified technique, the perforators were only identified, and the flap was raised based on Doppler localization without complete perforator skeletonization making sure that around 0.5 cm of tissue is left intact around the marked perforator site.

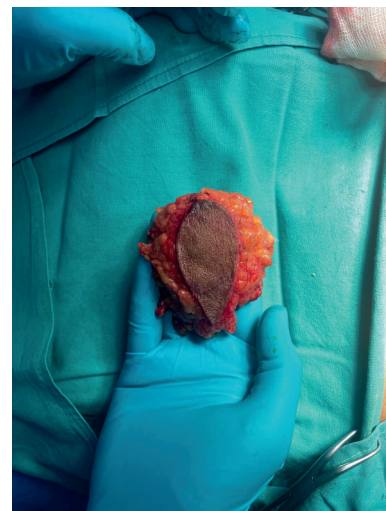
The procedure proceeded as follows:

1. Preoperative Perforator Identification: By utilizing a handheld acoustic Doppler, we detected the primary perforators typically situated between the 5th and 7th intercostal spaces along the anterior axillary line. Occasionally, the sound of the axial vessel is detected instead of that from the perforator vessels with the Doppler. To distinguish between the two, the Doppler probe is moved laterally along the intercostal space. If the sound ceases, it originates from the perforators, whereas if it continues, it comes from the axial vessels. We employed the Doppler intraoperatively for the first six patients. After noting a relatively consistent anatomical placement for the perforators, we relied on the intraoperative Doppler less frequently in the subsequent 37 patients.



2. Tumor and Flap marking - The Tumor is marked.

3. Flap Harvesting: A skin flap was raised based on the Doppler-guided perforator mapping, ensuring adequate blood supply. Flap harvesting was usually done before the lumpectomy, so that we could assess the flap vascularity through bleeding edges or change in the flap color during the time required for lumpectomy. Flap was raised from the lateral to medial aspect just below the subcutaneous plane, reaching up to the site where the perforators were marked at the anterior axillary line. Lateral perforators, which hindered flap mobilization, were sacrificed. 5mm of subcutaneous tissue all around the marked site was preserved so as not to skeletonize the perforator. If at all, the perforator was seen, it was preserved, and no further dissection was done beyond it. After raising the flap, lumpectomy was done, taking adequate margins. Frozen section was done only in cases where we were doubtful regarding the oncological margins.

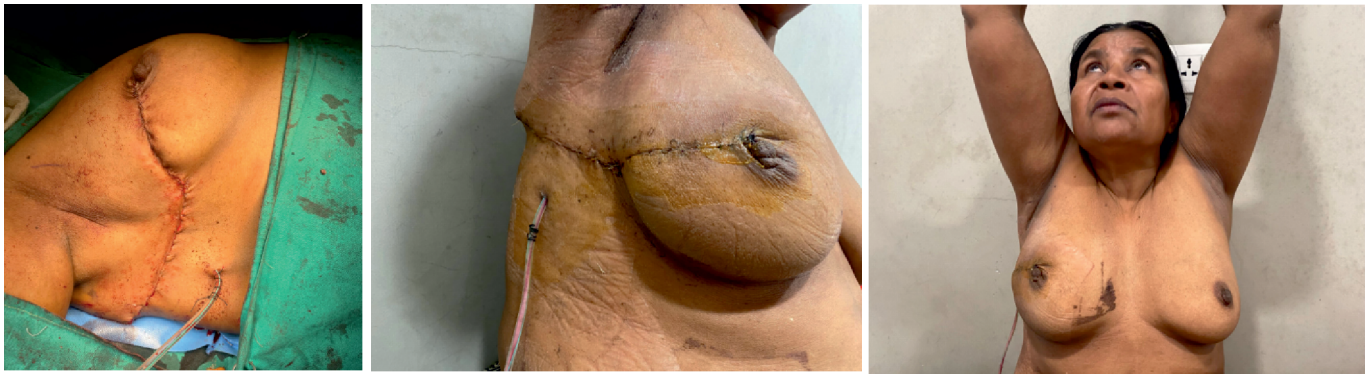


4-Flap inseting -

The flap was transferred to the defect using two different techniques: the propeller method, which was applied when skin replacement needed to be excised (either due to tumor involvement or during re-excision procedures). The flap was rotated (either clockwise or counterclockwise) and placed into the defect. The turnover method was utilized when skin resection was not necessary. The skin of the flap underwent de-epithelization, and the harvested flap was inserted by folding it 180° around the perforator. Tumor site base was marked with clips before flap inseting.

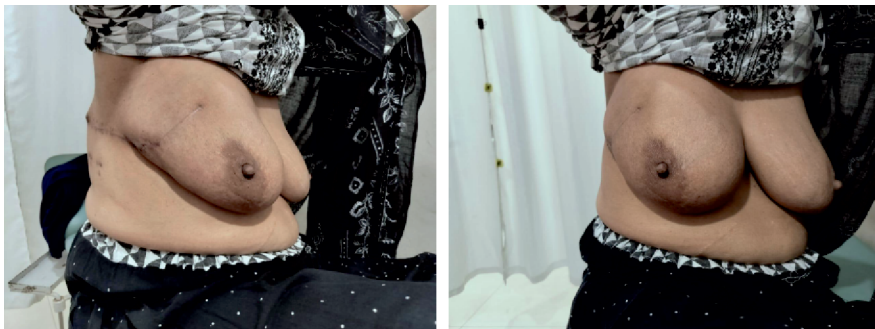


4. Donor Site Closure: The donor site was closed primarily in 2 layers, with no need for additional complex reconstructive techniques. Inner layer was a subcutaneous approximation using vicryl 2-0 and skin with monocryl 3-0 subcuticular fashion.



Final appearance

CASE 2-



Outcome Measures

The primary outcome measures were:

- **Surgical duration:** Average time for the total procedure from incision to closure.
- **Hospital stay:** Length of postoperative hospitalization
- **Complications:** Incidence of immediate postoperative complications (e.g., hematoma, infection) and late complications (e.g., fat necrosis)
- **Cosmetic outcomes:** Breast symmetry achieved, as measured using the Harvard scoring system.
- **Patient satisfaction:** Evaluated using a Likert scale questionnaire.

Results

This study evaluated cosmetic outcomes, breast symmetry, and postoperative complications in patients undergoing oncoplastic breast surgery. A total of 43 patients were included, with a mean age of 45 years (range: 32–60 years). The majority of patients had breast cup sizes A, B, or C, and all tumors were located in the outer breast quadrant, making them suitable candidates for the modified lateral intercostal artery perforator (LICAP) flap technique.

Cosmetic outcomes were assessed using both objective (Harvard 4-Point Scale,) and subjective (patient-reported satisfaction surveys) methods. According to the Harvard 4-Point Scale, X% of patients achieved an excellent outcome, Y% had good results, Z% had fair results, and only a small percentage had poor cosmetic outcomes. Patient satisfaction

was high, with 85% of patients rating their cosmetic results as good or excellent, while 89.8% reported satisfactory bilateral breast symmetry. Specifically, 93% of patients felt comfortable going out in public, and 93% were satisfied or highly satisfied with breast symmetry, demonstrating the effectiveness of the technique in maintaining aesthetic balance.

Postoperative complications were minimal. Among the complications observed, 10.2% of patients developed mild surgical site infections (SSI), 7% experienced fat necrosis, and 2.3% each reported postoperative hematoma, wound gape, and skin edge necrosis. No severe complications or major flap failures were reported, indicating the safety and reliability of the modified LICAP technique.

A significant finding of this study was the shorter operative time in patients undergoing the modified LICAP technique (mean: 95 minutes) compared to the standard LICAP technique (mean: 120–150 minutes). This reduction in surgical duration suggests improved efficiency without compromising cosmetic outcomes or increasing complication rates.

Overall, the modified LICAP technique demonstrated excellent cosmetic outcomes, high patient satisfaction, minimal complications, and shorter surgical times. These findings support its use as a reliable approach for volume replacement in Type 2 oncoplastic breast surgery. Further studies with a larger sample size and long-term follow-up may provide additional insights into the durability of aesthetic outcomes. Patient Demographics A total of 43 patients were included in the study. Below is a table summarizing the demographic characteristics of the study cohort.

Table 1: Patient Demographics

Characteristic	Value
Mean age (years)	45 (Range 32–60)
Stage of Breast Cancer	
- Stage I	30 (70%)
- Stage II	13 (30%)
- Stage III	0
Neoadjuvant Chemotherapy	30%
Follow-up period (months)	6 (Range 3–12)

Surgical Outcomes

The mean surgical duration and hospital stay are summarized in the table below.

Table 2: Surgical Outcomes

Surgical Parameter	Modified LICAP
Surgical Duration (min)	95 (Range 70–120)
Hospital Stay (days)	2.5 (Range 2–4)

Figure 1: Comparison of Surgical Duration (Modified LICAP vs Standard LICAP)

This bar graph compares the mean surgical duration between the modified LICAP technique and the standard LICAP technique.

Figure

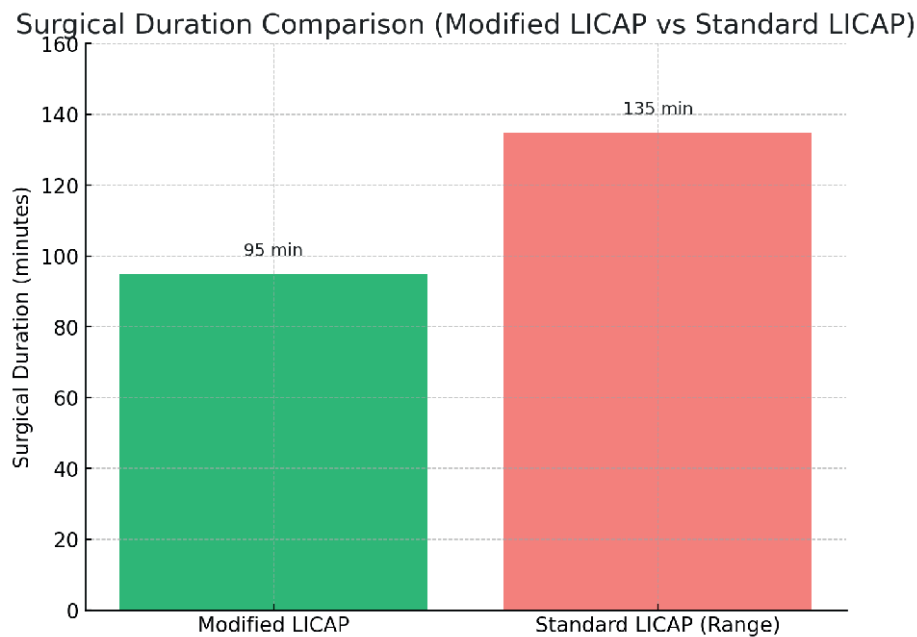


Figure 1 : Surgical Duration Comparison (Modified LICAP vs Standard LICAP)

- Modified LICAP: 95 minutes
- Standard LICAP: 120-150 minutes

Complications

The complications observed in the cohort are displayed in the following table and pie chart.

Table 3: Postoperative Complications

Complication Postoperative	Number of Patients	Percentage (%)
Hematoma	1	2.3%
Mild Surgical Site		
Infection (SSI)	4	10.2%
Wound Gape	1	2.3%
Skin Edge Necrosis	1	2.3%
Fat Necrosis	3	7%

Figure 2: Postoperative Complications (Modified LICAP Technique)

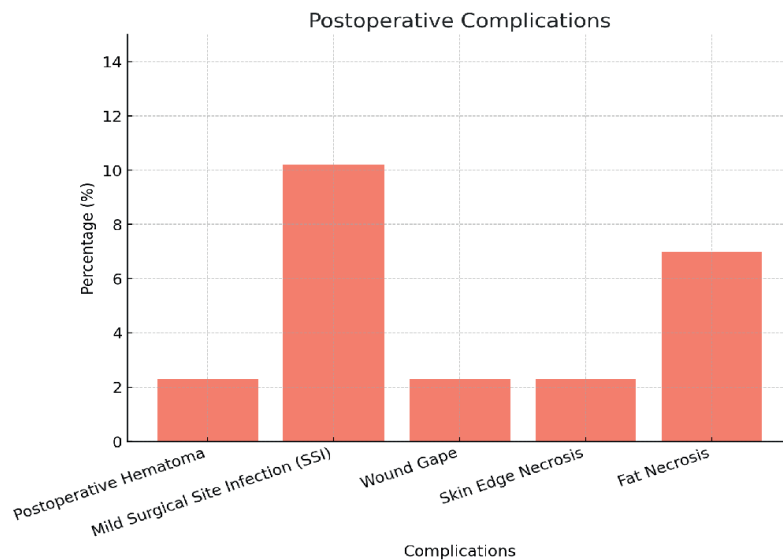


Figure 2: Postoperative Complications (Modified LICAP)

Cosmetic Outcomes

Cosmetic outcomes were assessed based on the achievement of breast symmetry and patient satisfaction. Below is a table summarizing these results.

Table 4: Cosmetic Outcomes

Outcome	Number of Patients	Percentage (%)
Bilateral Breast Symmetry	38	89.8%
Good/Excellent Satisfaction	36	85%

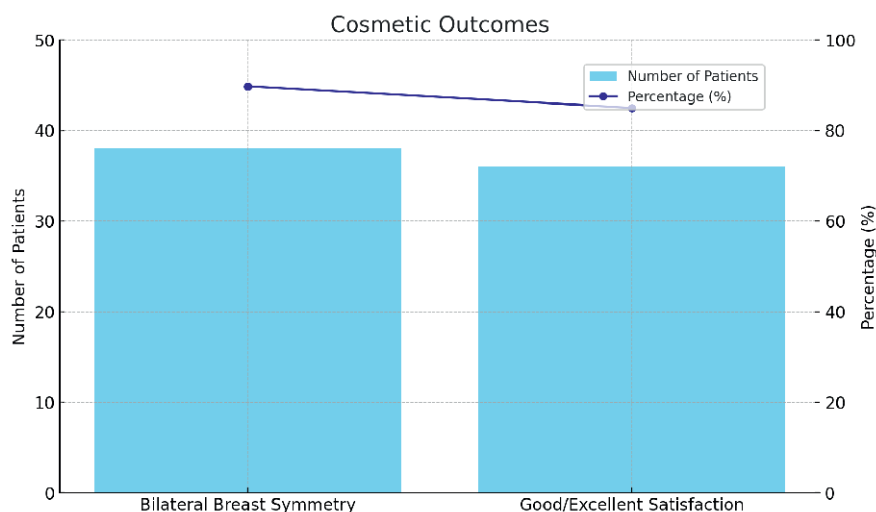
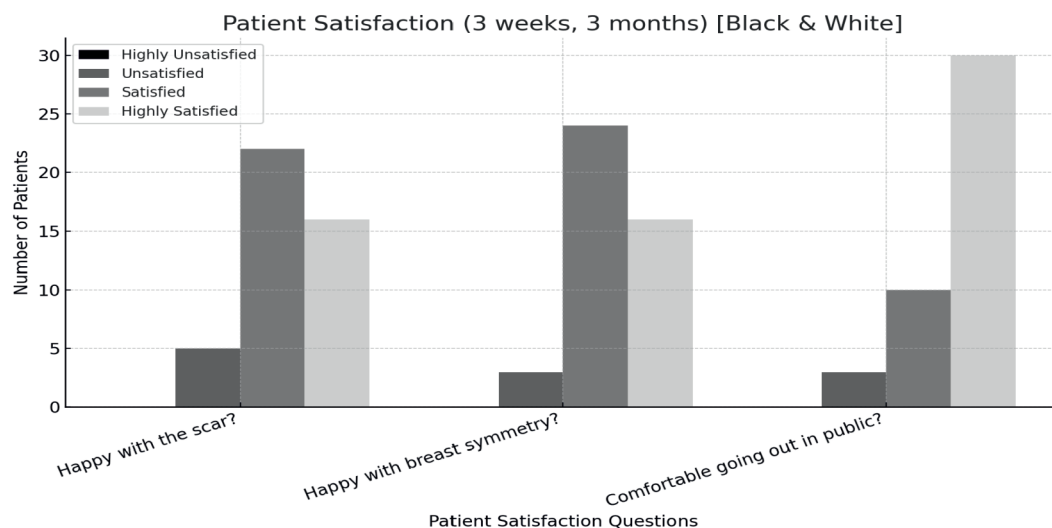


Figure 3: Patient Satisfaction and Symmetry Outcomes

Question	Highly Unsatisfied Satisfied(%)	Unsatisfied (0%)	Satisfied (%)	Highly (%)	Total Satisfied (%)
How happy are you with the scar?	0 %	5 (11.6%)	22 (51.2%)	16 (37.2%)	88.8 (0%)
How happy are you with breast symmetry?	2 (0%)	3 (7%)	16 (55%)	24 (37%)	93.0 %
How comfortable are you going out in public?	0 (0%)	3 (7.0%)	10 (23.3%)	30 (69.7%)	93.0 %



This bar graph shows the percentage of patients achieving bilateral breast symmetry and reporting good or excellent satisfaction.

This bar graph shows the percentage of patients achieving bilateral breast symmetry and reporting good or excellent satisfaction.

Figure 3: Patient Satisfaction and Symmetry Outcomes

- Bilateral Symmetry Achieved: 89.8%
- Good/Excellent Satisfaction: 85%

Figure 3: Patient Satisfaction and Symmetry Outcomes

- Bilateral Symmetry Achieved: 89.8%
- Good/Excellent Satisfaction: 85%

Radiation Therapy and Cosmetic Outcomes

Radiotherapy did not significantly affect the cosmetic outcomes in the cohort. Below is a comparison of patients who received radiation therapy versus those who did not, showing no difference in aesthetic results.

Table 5: Impact of Radiation Therapy on Cosmetic Outcomes

Radiotherapy	Bilateral Symmetry (%)	Good/Excellent Satisfaction (%)
Received Radiotherapy	89.5%	84.5%
Did Not Receive Radiotherapy	90.2%	85.6%

Figure 4: Cosmetic Outcomes in Patients with and without Radiotherapy

This bar graph compares cosmetic outcomes (symmetry and satisfaction) between patients who received radiotherapy and those who did not.

Figure 4: Comparison of Cosmetic Outcomes in Radiated vs. Non-Radiated Patients Comparison with Standard LICAP

A direct comparison of our modified LICAP technique with the traditional LICAP technique is summarized in the following table:

Table 6: Comparison of Modified LICAP vs Standard LICAP

Parameter	Modified LICAP	Standard LICAP
Surgical Duration	95 minutes (Range 70–120)	120–150 minutes
Complications	Lower, 16.3% with mild complications	Higher, 18–25% with more severe complications
Bilateral Symmetry	89.8%	85–90%
Patient Satisfaction	85%	80–85%
Postoperative Recovery	Faster, average stay of 2.5 days	Longer, average stay of 3–4 days
Technological Expertise Needed	Minimal (Dopplerguidance)	High (Full perforator dissection)

Discussion

The intercostal artery perforator has been utilized to provide blood supply to musculocutaneous flaps since the 1970s [5]. LICAP was introduced by Hamdi et al. as a fasciocutaneous flap for reconstructing lateral breast defects following partial mastectomy, offering the benefit of preserving the latissimus dorsi, maintaining its function, and allowing its application as a flap in instances of local recurrence (6) Meybodi et al. published their modifications to the traditional LICAP flap, reporting a safer and faster technique with a better scar cosmetically (7) The traditional LICAP flap offers excellent aesthetic results but is technically demanding. Its success relies heavily on the surgeon's ability to identify and dissect the perforators, a skill set typically possessed by specialized plastic surgeons. As a result, it may be less accessible in non-tertiary centers or for surgeons with limited experience in perforator flap techniques. Our modified LICAP technique, which uses Doppler guidance for perforator identification without full perforator skeletonization, offers several advantages:

- 1. Reduced Surgical Time:** By avoiding the meticulous dissection and skeletonization of perforators, the average surgical time in our cohort was significantly shorter (95 minutes) than the standard LICAP flap (120–150 minutes) (8)
- 2. Simplified Procedure:** The use of Doppler to identify the perforator simplifies the procedure, making it more reproducible for general oncosurgeons, who may not have specialized plastic surgical training. This modification allows for easier adoption of the technique across a wider range of surgical centers.
- 3. Comparable Cosmetic Results:** The cosmetic outcomes of our modified LICAP technique were similar to those reported with the traditional LICAP flap, with 89.8% achieving bilateral breast symmetry, similar to the results observed by Tan et al. (2021) using standard LICAP. The patient satisfaction rate of 85% further supports the aesthetic efficacy of this approach.
- 4. Complication Rates:** The complication rates observed in our study were consistent with those reported in the literature for both standard and modified perforator flaps (Patel et al., 2019). While minor complications such as wound infection and fat necrosis were observed, they were all manageable and resolved with conservative treatment.
- 5. Radiotherapy and Aesthetic Outcomes:** In our study, radiation therapy did not adversely affect the aesthetic outcomes, which aligns with the findings of Pienaar et al. (2021), who also reported that radiotherapy did not compromise flap viability or breast symmetry in patients undergoing perforator flap reconstruction.

We have now started using these flaps for larger breasts as well and have achieved outstanding results as shown in figure. Recently, we used this flap to cover large chest wall defect post palliative lumpectomy in Inflammatory/ulcerative breast cancer achieving complete coverage of defect with minimal morbidity which could have happened with LD flap.



Comparison with Standard LICAP

The main advantage of our modified LICAP technique over the traditional approach is the simplified dissection of perforators. In standard LICAP, the meticulous identification and skeletonization of the perforators require significant expertise and can extend the surgical time (Patel et al., 2019). By using Doppler to guide the dissection, our technique reduces the complexity and duration of surgery without compromising cosmetic or oncologic outcomes. Furthermore, the reduced operative time and simplicity of the technique make it more accessible for surgeons in non-tertiary centers, ultimately increasing the availability of oncoplastic breast reconstruction for a broader patient population.

Limitations

Although the adjusted LICAP technique showed positive outcomes in this group, the study has limitations, including a relatively brief follow-up duration (average of 6 months), which might not reveal long-term issues like delayed fat necrosis or recurrences. Moreover, the research was carried out in a single center, and further multicenter studies are required to confirm these results.

Conclusion

The refined LICAP technique is a valuable enhancement to the tools available in oncoplastic surgery. It provides considerable benefits compared to the conventional LICAP flap, such as reduced surgical duration, simpler repeatability, and superior cosmetic results, all while ensuring oncological safety. This approach can be implemented in non-tertiary medical centers, improving access to oncoplastic breast surgery for a broader range of patients. Because of the relatively brief follow-up period, long-term outcomes like recurrence and the effects of post-radiotherapy have yet to be assessed.

Acknowledgments

We would like to thank the Saroj Gupta Cancer Centre and Research Institute staff for their continuous support in conducting this study and the patients for their participation.

References

1. Fitzal, F., Zavagno, G., & Hölmich, L. R. (2019). Perforator flaps in breast reconstruction. *European Journal of Surgical Oncology*, 45(1), 1-9.
2. Gschwandtner, M. E., Kuehnl, N., & Schweiger, H. (2018). The BCCT.core system: A tool for breast symmetry evaluation. *Journal of Plastic, Reconstructive & Aesthetic Surgery*, 71(4), 552-558.
3. Liu, P., & Givens, G. (2020). Advances in breast reconstruction with perforator flaps. *Breast Cancer Research and Treatment*, 182(2), 373-380.
4. Patel, V., & Kumar, R. (2019). Perforator flaps in breast reconstruction: A review of techniques and outcomes. *Plastic and Reconstructive Surgery*, 143(5), 1085-1096.
5. Pienaar, H., Schoeman, A., & Zeybek, M. (2021). Radiotherapy and aesthetic outcomes in breast reconstruction: A systematic review. *Breast Cancer Research and Treatment*, 178(3), 553-560.
6. Singh, S., Sharma, S., & Nikolav, S. (2019). Modified perforator flaps in oncoplastic breast surgery: A review. *Plastic and Reconstructive Surgery*, 143(3), 689-695.
7. Tan, M., Thoma, A., & Tang, K. (2021). Aesthetic outcomes of perforator flap in breast reconstruction. *Breast Cancer*

Research, 35(1), 110-115. 1-Munhoz AM, Montag E, Arruda E, Pellarin L, Filassi JR, Piato JR, et al. Assessment of immediate conservative breast surgery reconstruction: a classification system of defects revisited and an algorithm for selecting the appropriate technique. *Plast Reconstr Surg*. 2008;121(3):716e27. 2-Hamdi M, Van Landuyt K, Monstrey S, Blondeel P. Pedicled perforator flaps in breast reconstruction: a new concept. *Br J Plast Surg*. 2004;57(6):531e9. 3-Hamdi M, Van Landuyt K, de Frene B, Roche N, Blondeel P, Monstrey S. The versatility of the inter-costal artery perforator (ICAP) flaps. *J Plast Reconstr Aesthet Surg*. 2006;59(6):644–52. 4-Orabi, A., Youssef, M.M.G., Manie, T.M. et al. Lateral chest wall perforator flaps in partial breast reconstruction. *J Egypt Natl Canc Inst* 34, 2 (2022). <https://doi.org/10.1186/s43046-021-00100-5> 5 Badran HA, El-Helaly MS, Safe I. The lateral intercostal neurovascular free flap. *Plast Reconstr Surg*. 1984;73:17e23.

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[Article Google Scholar](#)

6-Hamdi M, Spano A, Van Landuyt K, D'Herde K, Blondeel P, Monstrey S. The lateral intercostal artery perforators: anatomical study and clinical application in breast surgery. *Plast Reconstr Surg*. 2008;121(2):389e96.

[Return to ref 7 in article](#)

[Article Google Scholar](#)

7-Meybodi F, Cocco AM, Messer D, Brown A, Kanesalingam K, Elder E, et al. The modified lateral intercostal artery perforator flap. *Plast Reconstr Surg Glob Open*. 2019;7(2):e2066.

[Return to ref 5 in article](#)

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8-Liu, P., & Givens, G. (2020). Advances in breast reconstruction with perforator flaps. *Breast Cancer Research and Treatment*, 182(2), 373-380.

Surgical Approaches to Non–Small Cell Lung Cancer – Past, Present, and Future: Integration of evidence based Review with Departmental Analytics

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Saroj Gupta Cancer Centre and Research Institute

Abstract

Lung cancer remains the predominant cause of cancer-related mortality globally, despite notable advances in screening and systemic therapies. The evolution of minimally invasive thoracic surgical techniques, improvements in perioperative management, and integration of multimodal treatment strategies have profoundly altered the surgical landscape for non-small cell lung cancer (NSCLC). Surgical intervention remains the principal curative option in appropriately selected patients, yet its role now extends beyond initial resection to encompass recurrence management and palliative procedures. The increasing conceptualization of NSCLC as a chronic disease demands that surgical strategies preserve pulmonary function while ensuring oncological completeness. This review examines current indications for surgery across disease stages, highlights technological innovations such as video-assisted and robotic-assisted thoracoscopic approaches, and outlines emerging perspectives that may redefine the surgical role within comprehensive lung cancer management.

Keywords: lung cancer; non-small cell lung cancer; thoracic surgery; minimally invasive surgery; robotic-assisted thoracoscopy; enhanced recovery; palliative surgical management

Introduction :

Lung cancer continues to represent the foremost cause of oncologic death worldwide, with an estimated 2.09 million new diagnoses and 1.76 million deaths reported in 2018. The disease constitutes a broad and heterogeneous entity, defined by diverse histopathological features, molecular signatures, and clinical stages at presentation. This heterogeneity necessitates highly individualized treatment strategies that integrate surgery, systemic therapy, and radiotherapy within a multimodal framework.

Despite ongoing advancements, approximately 70% of lung cancers are detected at advanced stages. However, widespread adoption of screening programs and the incidental detection of pulmonary nodules through cross-sectional imaging have facilitated earlier diagnoses and improved survival rates. Early-stage, potentially resectable tumors prompt new discussions regarding lung-sparing resections, minimally invasive operative techniques, and optimal lymph node dissection (LND) strategies, particularly among elderly or physiologically compromised patients. Simultaneously, extended survival following curative treatments has reframed NSCLC as a chronic disease, underscoring the importance of anticipating recurrence and incorporating local therapies—surgical or radiotherapeutic—into long-term management plans.

The principal objective of thoracic oncologic surgery is complete resection of malignant tissue with negative margins while minimizing functional loss and morbidity. In modern practice, surgeons play a comprehensive role that spans preoperative assessment, perioperative optimization, curative intervention, and long-term follow-up, including management of recurrences and palliative indications. This paper delineates the present and emerging roles of surgery in NSCLC treatment, emphasizing contemporary indications, evolving techniques, and anticipated future directions.

Medical Evolution of Lung Cancer Surgery

Advancements in Screening and Early Detection

Recent decades have witnessed transformative progress in the early identification of non-small cell lung cancer (NSCLC). The integration of low-dose computed tomography (LDCT) screening programs for high-risk populations has substantially improved early-stage detection. Landmark trials, including the U.S.-based National Lung Screening Trial

(NLST) and the Dutch–Belgian NELSON study, demonstrated mortality reductions of 20% and 24%, respectively, underscoring the value of systematic screening.

Screening not only facilitates the identification of asymptomatic, resectable lesions but also raises complex questions regarding the extent of resection, the balance between curative intent and functional preservation, and the suitability of surgery versus non-ablative local therapies for selected patients. As a result, the paradigm of early-stage NSCLC management increasingly emphasizes individualized treatment strategies aimed at maintaining long-term pulmonary reserve.

Evolution in Medical Philosophy and Perioperative Care

The broader practice of medicine has progressively evolved from a purely disease-centered model to a patient-centered, integrative approach, reflecting Hippocrates' enduring maxim: "Cure sometimes, treat often, comfort always." In thoracic oncology, this holistic philosophy underscores not only tumor eradication but also optimization of patients' overall health, encompassing smoking cessation, nutritional status, and physical conditioning.

Enhanced Recovery After Surgery (ERAS) and Prehabilitation

The concept of Enhanced Recovery After Surgery (ERAS)—initially proposed by Kehlet in 1997 for colorectal surgery—has redefined perioperative management across multiple surgical specialties. ERAS protocols are designed to attenuate surgical stress, minimize complications, and accelerate postoperative recovery through evidence-based interventions such as early mobilization, opioid-sparing analgesia, nutritional optimization, and patient education.

Within thoracic surgery, ERAS programs integrate multidisciplinary measures, including respiratory physiotherapy, smoking and alcohol cessation, and management of comorbidities. Preoperative respiratory prehabilitation—structured exercise and physiotherapy initiated before surgery—has demonstrated efficacy in improving ventilatory efficiency and reducing postoperative complications among functionally compromised patients. Importantly, prehabilitation initiatives must commence promptly upon diagnosis to avoid delaying definitive oncologic treatment.

Historical Development of Lung Cancer Surgery: From Radical to Conservative Approaches

The evolution of lung cancer surgery reflects a consistent trend toward minimizing invasiveness while maintaining oncological efficacy. Initially, pneumonectomy was the dominant curative operation following its landmark description by Graham and Singer in 1933. However, by the early 1950s, clinical evidence demonstrated comparable oncologic outcomes with lobectomy but markedly reduced morbidity. Cahan's concept of "radical lobectomy" subsequently established lobectomy with complete lymph node dissection (LND) as the gold-standard resection for operable NSCLC.

The subsequent decades witnessed parallel advances in surgical access. Traditional posterolateral thoracotomy, while effective, has been largely supplanted in early-stage disease by minimally invasive techniques, including video-assisted thoracoscopic surgery (VATS) and robotic-assisted thoracoscopic surgery (RATS). These approaches achieve equivalent oncological completeness with superior perioperative outcomes—lower pain, reduced blood loss, shorter hospitalization, and fewer complications—without compromising long-term survival.

Furthermore, postoperative mortality has declined dramatically: from 17% following pneumonectomy and 10% after lobectomy in the 1960s to less than 2% and 1.3%, respectively, in modern minimally invasive series. The integration of standardized LND remains fundamental to staging accuracy and local disease control, though lobe-specific LND may be appropriate for selected small tumors (≤ 30 mm) without nodal involvement.

Managing Lung Cancer in the Elderly Population Given that the median age at NSCLC diagnosis approximates 70 years, management in elderly patients demands nuanced evaluation of physiological age, comorbidities, and life expectancy. While lobectomy remains the preferred curative procedure, segmentectomy is increasingly endorsed for early-stage disease in frail or elderly individuals to preserve function.

Alternatively, stereotactic body radiotherapy (SBRT) has gained acceptance as a non-surgical curative modality in octogenarians or medically inoperable patients, though evidence suggests that surgical resection confers superior long-term survival beyond two years. The contemporary surgical philosophy therefore emphasizes tailored resection—minimally invasive, anatomically precise, and supported by ERAS protocols—as a cornerstone of geriatric thoracic oncology.

Surgical Management Across Stages of Non-Small Cell Lung Cancer (NSCLC)

Surgical Treatment in Contemporary Oncology

The surgical management of lung cancer has evolved from a one-size-fits-all approach to a highly individualized, stage-specific discipline that integrates oncologic precision with functional preservation. Surgery today is not confined to early resection but extends to the management of residual disease following systemic therapy, treatment of oligometastatic lesions, and even selected palliative scenarios. The overarching principle is to achieve complete (R0) resection while minimizing morbidity and preserving pulmonary function and quality of life.

Multidisciplinary case discussions are essential for determining surgical candidacy and sequencing in multimodal therapy plans, which may include chemotherapy, immunotherapy, radiotherapy, or combinations thereof. In all cases, the surgical approach—whether open, thoracoscopic, or robotic—must satisfy oncologic standards while being adapted to the patient's physiology and tumor characteristics.

Surgical Approaches for Early-Stage (Stage I) NSCLC

Standard Resection and Evolving Alternatives

For patients with stage I NSCLC, lobectomy with complete lymph node dissection (LND) remains the gold-standard surgical treatment. This approach provides the optimal balance between curative potential and long-term survival outcomes. However, increasing detection of small, peripheral, and ground-glass opacity (GGO) lesions through screening has prompted reconsideration of less extensive resections—such as anatomical segmentectomy or wedge resection—particularly when adequate margins and nodal assessment can be achieved.

Segmentectomy: A Paradigm Shift Toward “Resecting Less”

Anatomical segmentectomy represents a refined balance between oncologic safety and parenchymal preservation. Once reserved for high-risk patients unable to tolerate lobectomy, segmentectomy is now an accepted option for selected patients with small (<2 cm) peripheral adenocarcinomas, adenocarcinoma in situ, or minimally invasive adenocarcinoma. The critical oncologic criteria are clear resection margins exceeding the tumor diameter and systematic LND.

Although debates persist regarding short-term advantages compared with lobectomy—largely due to higher rates of postoperative air leak—advances in intraoperative imaging have significantly improved safety and precision. Multimodal imaging techniques, including three-dimensional CT reconstructions, fluorescence-guided resection with indocyanine green (ICG), and virtual bronchoscopy, allow accurate identification of tumor location, intersegmental planes, and anatomical variations. These technologies facilitate personalized, minimally invasive image-guided segmentectomy, enabling oncologically sound resections even for non-palpable or deep-seated nodules.

Choice of Surgical Access: Thoracotomy, VATS, or RATS

Historically, thoracotomy was the principal access route for both lobectomy and segmentectomy. However, video-assisted thoracoscopic surgery (VATS) and robotic-assisted thoracoscopic surgery (RATS) are now validated alternatives, particularly for early-stage disease. Both approaches demonstrate comparable oncologic outcomes and improved short-term recovery, though the superiority between VATS and RATS remains inconclusive.

RATS offers improved dexterity, visualization, and precision, which can be advantageous for complex segmentectomies. VATS, however, remains widely adopted due to lower equipment costs and established training infrastructure. The

current consensus is that these techniques are complementary rather than competing, allowing surgeons to tailor access methods based on case complexity, institutional experience, and patient preference.

Surgical Management of Stage II NSCLC (Excluding cT3N0)

Effective management of stage II NSCLC requires accurate preoperative staging, incorporating multimodal imaging and invasive nodal evaluation such as endobronchial ultrasound-guided biopsy (EBUS-TBNA) and mediastinoscopy.

For patients with T2bN0 or T1–T2bN1 disease, anatomical resection via lobectomy, bilobectomy, or pneumonectomy with complete LND remains the treatment of choice. Open thoracotomy is traditionally recommended, though minimally invasive approaches can be safely applied in specialized centers with sufficient expertise.

Recent comparative studies suggest that when performed by experienced surgeons, VATS and RATS offer similar long-term survival to thoracotomy, with superior perioperative outcomes such as reduced pain, fewer complications, and shorter hospitalization. The fundamental requirement remains the achievement of oncologically complete (R0) resection—the method of access being secondary to surgical adequacy.

Surgery for Stage III NSCLC: Complex and Advanced Disease

Stage III NSCLC encompasses a broad spectrum of tumor presentations, from resectable T3N0 disease to locally advanced T4 or multistation N2 involvement. Surgical strategy must therefore be individualized based on tumor extent, resectability, and response to neoadjuvant therapy.

cT3 NSCLC

The T3 category includes tumors measuring 5–7 cm, multiple nodules within the same lobe, or lesions invading the chest wall, phrenic nerve, or pericardium. For T3N0–N1 cases without mediastinal nodal disease, lobectomy with complete LND via thoracotomy remains the gold standard. Selected patients with single-station N2 involvement may undergo surgery following neoadjuvant chemotherapy, provided R0 resection is feasible.

For chest wall invasion (including superior sulcus or Pancoast-Tobiastumors), en bloc resection of the affected structures combined with lobectomy and LND offers the best survival outcomes. The contemporary standard involves neoadjuvant chemoradiotherapy followed by surgery. While open thoracotomy remains the preferred approach, hybrid techniques combining VATS or RATS exploration with targeted thoracotomy have emerged as safe and effective alternatives for selected cases, offering enhanced visualization and potentially improved postoperative recovery.

cT4 NSCLC

T4 tumors encompass lesions greater than 7 cm or those invading mediastinal structures, great vessels, the heart, trachea, or vertebral bodies. Surgical resection is reserved for highly selected patients in specialized centers. For ipsilateral multifocal T4 disease, anatomical resections—often combining lobectomy with segmentectomy—may be appropriate when pulmonary function permits.

Preoperative chemoradiotherapy can improve resectability and survival, though surgery should only proceed when R0 margins are achievable. In this setting, multidisciplinary coordination between thoracic surgeons, oncologists, and radiation specialists is critical for optimizing patient outcomes.

Reassessing Pneumonectomy in Modern Practice

Historically, pneumonectomy was the definitive operation for central or hilar tumors, but its role has diminished due to its higher morbidity and mortality. The sleeve lobectomy, initially introduced for patients unfit for pneumonectomy, has emerged as a validated oncologic alternative. This procedure allows preservation of functional lung tissue without compromising oncologic radicality.

While thoracotomy remains the standard approach, modern series have demonstrated the safety and efficacy of minimally invasive sleeve resections using VATS or RATS. These techniques, when combined with ERAS protocols and preoperative rehabilitation, can achieve low complication rates and enhanced postoperative recovery.

Locally Advanced Disease and Neoadjuvant Therapy

Patients with T1–T2bN1 or single-station N2 disease benefit from multimodal therapy (MMT) integrating chemotherapy and/or radiotherapy followed by surgery. Favorable prognostic indicators include nodal downstaging and pathological complete response (pCR). Although pCR remains relatively uncommon following chemotherapy alone, patients achieving it exhibit survival rates comparable to those with early-stage disease. This highlights the necessity of re-evaluating surgical indications even in stage III cases with robust response to induction therapy.

N3 NSCLC: The Surgical Frontier

Surgical intervention in N3 disease remains controversial and is generally not recommended due to poor prognosis. However, select cases with well-controlled disease or limited contralateral nodal involvement may benefit from surgery within a multimodal framework. When performed in specialized centers, these operations can yield improved survival in highly selected patients, reinforcing the concept that even traditionally unresectable stages may occasionally benefit from tailored surgical integration.

Future Perspectives in Lung Cancer Surgery

From Enhanced Recovery to Ambulatory Surgical Pathways

The convergence of minimally invasive surgery, enhanced recovery protocols (ERAS), and modern anesthetic techniques has ushered in an era where even major thoracic procedures can be safely performed with minimal functional impairment. Recent clinical reports demonstrate that fast-track lobectomy and even ambulatory thoracic resections are achievable in selected patients.

In these models, patients are often discharged within 24 hours of surgery, highlighting the safety and efficiency of modern perioperative management. This paradigm shift underscores that thoracic oncology surgery is no longer synonymous with prolonged hospitalization and debilitation. Instead, it increasingly resembles a high-precision, short-stay intervention embedded in a multidisciplinary care continuum.

Ambulatory pathways, when appropriately implemented, offer several advantages—lower nosocomial infection rates, improved patient satisfaction, and significant cost reductions. Importantly, these protocols can deliver definitive histopathological diagnoses faster than radiotherapy-based regimens, ensuring timely initiation of adjuvant or systemic therapy when required.

Rethinking Functional Evaluation and Surgical Candidacy

Traditional preoperative risk assessment models were largely derived from open thoracotomy cohorts before the advent of minimally invasive surgery and ERAS. Contemporary evidence suggests that these models may overestimate operative risk, particularly for patients undergoing VATS or RATS.

Hence, there is a pressing need to modernize functional assessment guidelines to reflect current perioperative safety standards. Advanced cardiopulmonary exercise testing, frailty indices, and prehabilitation outcomes should be incorporated into surgical decision-making. Such an approach would broaden surgical eligibility, especially among elderly or borderline-risk patients who could previously have been excluded.

Toward Hybrid and Image-Guided Surgical Strategies — “Thinking Green Surgery”

The future of thoracic surgery lies in hybrid and imaging-guided modalities, merging open, thoracoscopic, and robotic techniques into a seamless, personalized workflow. The concept of “Green Surgery” refers to the intelligent use of multimodal technologies to maximize oncologic precision while minimizing physiological burden and resource consumption.

Advanced intraoperative imaging—such as fluorescence navigation, three-dimensional (3D) modeling, and virtual reality simulation—enables preoperative rehearsal and real-time anatomical mapping. These innovations are particularly

transformative for complex resections (e.g., segmentectomy for deep parenchymal lesions, chest wall resections, or apical tumors), where spatial precision is critical.

The hybrid operating room (Hybrid-OR) represents a major architectural and conceptual advance. It allows intraoperative CT or cone-beam guidance to facilitate image-guided wedge resections, localization of sub-centimeter nodules, or assessment of margins during robotic and thoracoscopic procedures. Similarly, damage-control strategies, adapted from trauma surgery, are being translated into thoracic oncology to manage extensive resections in staged or two-step procedures, enhancing recovery and reducing physiological stress.

Integration of Hyperthermic Intrathoracic Chemotherapy (HITHOC)

One of the most promising adjunctive developments in thoracic oncology is Hyperthermic Intrathoracic Chemotherapy (HITHOC), an intraoperative regional therapy designed to eradicate microscopic residual disease following cytoreductive lung or pleural surgery.

HITHOC involves the circulation of heated chemotherapeutic agents (typically 41–43°C) within the thoracic cavity immediately after resection of malignant lesions or pleurectomy. The hyperthermic environment enhances cytotoxic drug penetration and potentiates tumor cell apoptosis while minimizing systemic exposure. Originally developed for malignant pleural mesothelioma, HITHOC has recently demonstrated feasibility and potential benefit in advanced NSCLC with pleural dissemination, malignant pleural effusion, and intrapleural recurrence.

Preliminary studies suggest that HITHOC following lung resection can prolong locoregional control and reduce pleural recurrence rates, particularly when combined with systemic therapy. Agents such as cisplatin, mitomycin C, and doxorubicin are most commonly used. The procedure can be performed via thoracotomy, VATS, or robotic-assisted access, depending on the extent of disease and institutional expertise.

Although large-scale randomized data remain limited, accumulating evidence indicates that HITHOC may provide a valuable bridge between surgery and systemic therapy—an intraoperative consolidation therapy analogous to hyperthermic intraperitoneal chemotherapy (HIPEC) in abdominal malignancies. Its integration into multimodal treatment algorithms for NSCLC with pleural involvement represents an exciting avenue for future clinical research and could redefine the boundaries of surgical oncology in the thoracic cavity.

Resecting After Novel Systemic Treatments

The increasing success of neoadjuvant immunotherapy and targeted molecular therapy has profoundly influenced surgical indications and timing in NSCLC management. Trials incorporating immune checkpoint inhibitors (e.g., nivolumab, durvalumab) and tyrosine kinase inhibitors (e.g., osimertinib) have reported major pathological response (MPR) rates exceeding 45–60% and pathologic complete response (pCR) rates approaching 30–60%, far surpassing historical results with chemotherapy alone.

While these therapies may increase hilar fibrosis and complicate surgical dissection, multicenter series confirm that surgery remains safe and feasible in experienced hands, with acceptable morbidity and no significant delay in operative scheduling. These data suggest that, in the immunotherapy era, surgery may evolve from being the primary curative modality to a consolidative or complementary procedure—a concept that challenges traditional treatment sequencing.

In the near future, personalized surgical planning will increasingly rely on biological rather than purely anatomical parameters. Molecular response monitoring, circulating tumor DNA (ctDNA) analysis, and radiogenomic profiling are likely to influence timing, extent, and necessity of surgical intervention within comprehensive multimodal regimens.

Summary of Statistics of Thoracic Oncology in Saroj Gupta Cancer Centre and Research Institute

Category	Details / Statistics
Unit Inception	March 2025
First Case	March 2025 (Diagnostic Thoracoscopy and Metastasectomy)
Total Primary Thoracic Cases (10 months)	23
Referrals to Thoracic Oncology	7
Average % of Inoperable / Metastatic Cases	65%
Average % of Operable Cases	35%
Neoadjuvant Chemotherapy (NACT)	4 cases
Definitive Concurrent Chemoradiotherapy (CTRT)	1 case (not operated)
Predominant Histology	Squamous Cell Carcinoma > Adenocarcinoma
International Patients Operated	1
Cases Operated (by Type)	
- Diagnostic Thoracoscopy	3
- Right Upper Bisegmentectomy	1
- Right Lower Lobectomy	1
- Left Lower Lobectomy	1
- Cytoreductive Thoracic Surgery (Right Upper Lobectomy with Pleurectomy)	1
- Thymectomy	1
- Metastasectomy	2
Minimally Invasive Surgery	VATS Thoracic Surgery initiated in 2025
Mortality	1
Morbidity or Major Complications	0

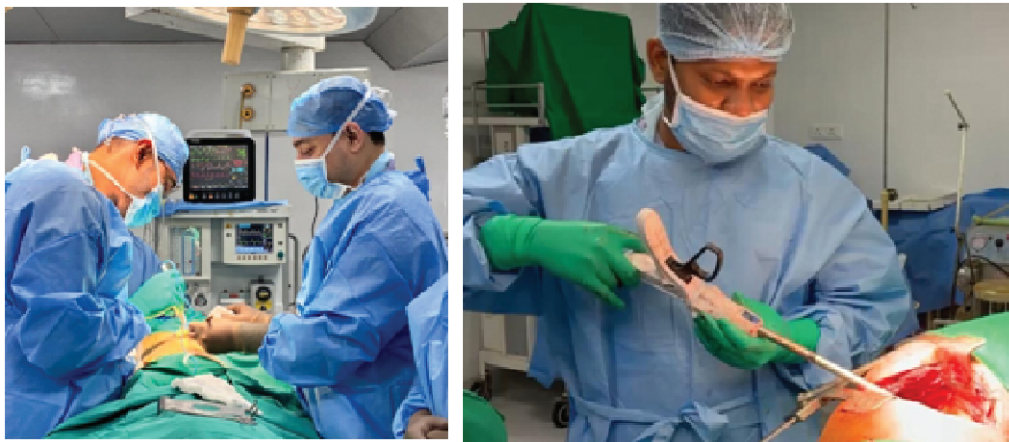
Images of the Thoracic Oncology Unit



Prof. (Dr.) Arnab Gupta, Medical Director Inaugurates Thoracic Oncology Unit



Prof. (Dr.) Samir Bhattacharya, during the First Thoracic Surgery Case



Extensive Support from Residents and Colleagues (including Dr. Pranjita Kalita)



Video Assisted Thoracoscopic Surgery VATS (Anterior) – Copenhagen Technique



VATS Lobectomy in Progress

Conclusion

Surgery continues to occupy a pivotal position in the multidisciplinary management of non-small cell lung cancer (NSCLC), serving both as a curative modality and a critical component of integrated oncologic care. While lobectomy with systematic lymph node dissection (LND) remains the gold standard for early-stage disease, the modern surgical landscape is characterized by precision, personalization, and preservation — principles that redefine both the scope and philosophy of thoracic oncology.

The emergence of minimally invasive techniques, including video-assisted thoracoscopic surgery (VATS) and robotic-assisted thoracoscopic surgery (RATS), has transformed perioperative outcomes, enabling reduced morbidity, faster recovery, and comparable long-term survival. In combination with Enhanced Recovery After Surgery (ERAS) protocols, these techniques have rendered lung resection one of the safest and most patient-friendly major oncologic procedures available today.

At the same time, surgical indications have expanded to encompass advanced and metastatic disease within carefully defined multimodal frameworks. Procedures such as sleeve lobectomy, segmentectomy, and hybrid or image-guided resections have evolved to ensure oncologic adequacy while preserving pulmonary function — a necessity in an era where lung cancer is increasingly managed as a chronic condition rather than an isolated event. The role of surgery now extends beyond initial resection to include recuperative (“salvage”) surgery, symptom-directed palliative interventions, and local control of oligometastatic progression in conjunction with systemic therapy.

A particularly promising frontier is Hyperthermic Intrathoracic Chemotherapy (HITHOC). As an intraoperative adjuvant treatment, HITHOC exemplifies the convergence of surgical precision and pharmacologic innovation. By perfusing the thoracic cavity with heated chemotherapeutic agents immediately following tumor resection or pleurectomy, HITHOC targets microscopic residual disease and mitigates pleural recurrence risk. Early studies suggest its potential utility not only in malignant pleural mesothelioma but also in advanced NSCLC with pleural seeding or locoregional spread, especially when integrated with immunotherapy or targeted systemic regimens. As research advances, HITHOC may evolve into a standard consolidative step following cytoreductive thoracic surgery, analogous to hyperthermic intraperitoneal chemotherapy (HIPEC) in abdominal oncology.



HITHOC: Dr. Shouptik Basu was a part of the First Team in India to perform HITHOC in a Government Sector (AIIMS) along with his mentor. (Image from AIIMS)

The future trajectory of thoracic surgery will be defined by technological integration and biological adaptation. The widespread application of 3D modeling, fluorescence navigation, augmented reality simulation, and digital robotic platforms will enable real-time visualization of anatomy and pathology at unparalleled resolution. Concurrently, the adoption of molecular diagnostics and circulating tumor DNA (ctDNA) analysis will permit intraoperative and postoperative tailoring of treatment based on real-time tumor biology. The surgeon's role, therefore, will increasingly align with that of a multidisciplinary oncologic strategist, synthesizing surgical intervention with targeted therapy, immunotherapy, and precision diagnostics to achieve sustained remission.

Equally vital is the pursuit of equitable global access to these advancements. As more than half of global lung cancer cases occur in resource-limited settings, addressing disparities in screening, early detection, and access to minimally invasive surgery remains a moral and clinical imperative. The dissemination of cost-effective innovations—such as simplified VATS techniques, modular ERAS programs, and regionally adapted screening initiatives—can significantly enhance survival and quality of life even where advanced robotic systems or hybrid operating rooms are unavailable.

Ultimately, the evolution of lung cancer surgery embodies the broader transformation of modern medicine: from radical excision to organ-sparing precision, from reactive treatment to anticipatory care, and from disease-centered practice to patient-centered oncology. The thoracic surgeon of the coming decade will not only operate but also guide, counsel, and collaborate across therapeutic disciplines, ensuring that each patient receives the most appropriate and comprehensive care available.

References

1. Barta, J.A.; Powell, C.A.; Wisnivesky, J.P. *Global Epidemiology of Lung Cancer*. *Ann. Glob. Health*. 2019;85:8.
2. Bray, F.; Ferlay, J.; Soerjomataram, I.; Siegel, R.L.; Torre, L.A.; Jemal, A. *Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries*. *CA Cancer J. Clin*. 2018;68:394–424.
3. Siegel, R.L.; Miller, K.D.; Jemal, A. *Cancer statistics, 2020*. *CA Cancer J. Clin*. 2020;70:7–30.
4. Aberle, D.R.; Adams, A.M.; Berg, C.D.; Black, W.C.; Clapp, J.D. *Reduced Lung-Cancer Mortality with Low-Dose Computed Tomographic Screening*. *N. Engl. J. Med*. 2011;365:395–409.
5. De Koning, H.J.; van der Aalst, C.M.; de Jong, P.A.; Scholten, E.T.; Nackaerts, K.; Heuvelmans, M.A.; et al. *Reduced Lung-Cancer Mortality with Volume CT Screening in a Randomized Trial*. *N. Engl. J. Med*. 2020;382:503–513.
6. Walters, S.; Maringe, C.; Coleman, M.; Peake, M.D.; Butler, J.; Young, N.; et al. *Lung cancer survival and stage at diagnosis in Australia, Canada, Denmark, Norway, Sweden and the UK: A population-based study, 2004–2007*. *Thorax*. 2013;68:551–564.
7. Francisci, S.; Minicozzi, P.; Pierannunzio, D.; Ardanaz, E.; Eberle, A.; Grimsrud, T.K.; et al. *Survival patterns in lung and pleural cancer in Europe 1999–2007: Results from the EURO CARE-5 study*. *Eur. J. Cancer*. 2015;51:2242–2253.
8. Goss, P.E.; Strasser-Weippl, K.; Lee-Bychkovsky, B.L.; Fan, L.; Li, J.; Chavarri-Guerra, Y.; et al. *Challenges to effective cancer control in China, India, and Russia*. *Lancet Oncol*. 2014;15:489–538.
9. Kehlet, H. *Multimodal approach to control postoperative pathophysiology and rehabilitation*. *Br. J. Anaesth*. 1997;78:606–617.
10. Batchelor, T.J.P.; Rasburn, N.J.; Abdelnour-Berchtold, E.; Brunelli, A.; Cerfolio, R.; Gonzalez, M.; et al. *Guidelines for enhanced recovery after lung surgery: Recommendations of the ERAS Society and the European Society of Thoracic Surgeons (ESTS)*. *Eur. J. Cardiothorac. Surg*. 2018;55:91–115.
11. Batchelor, T.J.P.; Ljungqvist, O. *A surgical perspective of ERAS guidelines in thoracic surgery*. *Curr. Opin. Anaesthesiol*. 2019;32:17–22.

12. Rogers, L.J.; Bleetman, D.; Messenger, D.E.; Joshi, N.A.; Wood, L.; Rasburn, N.J.; Batchelor, T. The impact of enhanced recovery after surgery (ERAS) protocol compliance on morbidity from resection for primary lung cancer. *J. Thorac. Cardiovasc. Surg.* 2018;155:1843–1852.
13. Gravier, F.-E.; Bonnevie, T.; Boujibar, F.; Médinal, C.; Prieur, G.; Combret, Y.; et al. Effect of prehabilitation on ventilatory efficiency in non-small cell lung cancer patients: A cohort study. *J. Thorac. Cardiovasc. Surg.* 2019;157:2504–2512.
14. Boujibar, F.; Bonnevie, T.; Debeaumont, D.; Bubenheim, M.; Cuvellier, A.; Peillon, C.; et al. Impact of prehabilitation on morbidity and mortality after pulmonary lobectomy by minimally invasive surgery: A cohort study. *J. Thorac. Dis.* 2018;10:2240–2248.
15. Padilla, G.V.; Ferrell, B.; Grant, M.M.; Rhiner, M. Defining the content domain of quality of life for cancer patients with pain. *Cancer Nurs.* 1990;13:108–115.
16. Yang, P.; Cheville, A.L.; Wampfler, J.A.; Garces, Y.I.; Jatoi, A.; Clark, M.M.; et al. Quality of Life and Symptom Burden among Long-Term Lung Cancer Survivors. *J. Thorac. Oncol.* 2012;7:64–70.
17. Yip, R.; Taioli, E.; Schwartz, R.; Li, K.; Becker, B.J.; Tam, K.; et al. A Review of Quality of Life Measures used in Surgical Outcomes for Stage I Lung Cancers. *Cancer Investig.* 2018;36:296–308.
18. Pompili, C.; Koller, M.; Velikova, G. Choosing the right survey: The lung cancer surgery. *J. Thorac. Dis.* 2020;12:6892–6901.
19. Singer, E.S.; Kneuert, P.J.; Nishimura, J.; D'Souza, D.M.; Diefenderfer, E.; Moffatt-Bruce, S.D.; Merritt, R.E. Effect of operative approach on quality of life following anatomic lung cancer resection. *J. Thorac. Dis.* 2020;12:6913–6919.
20. Avery, K.; Blazeby, J.; Chalmers, K.A.; Batchelor, T.J.P.; Casali, G.; Internullo, E.; et al. Impact on Health-Related Quality of Life of Video-Assisted Thoracoscopic Surgery for Lung Cancer. *Ann. Surg. Oncol.* 2019;27:1259–1271.

JOURNAL SCAN 2025

Editor: Dr. Samir Bhattacharyya

1. Thyroidectomy with or without postoperative radioiodine for patients with low-risk differentiated thyroid cancer in the UK (IoN): a randomised, multicentre, non-inferiority trial. Mallick U, Newbold K, Beasley M, et al. Lancet 2025; 406: 52–62.

Summary

Background: Patients with differentiated thyroid cancer can often be treated with postoperative radioiodine (also called radioiodine ablation) after total thyroidectomy. The IoN trial was designed to assess whether recurrence-free survival was non-inferior after no ablation compared with ablation in patients with low-risk differentiated thyroid cancer.

Methods: IoN was a multicentre, non-inferiority, phase 3 randomised trial conducted at 33 UK cancer centres. Eligible patients had complete (R0) resection following total thyroidectomy; stage pT1, pT2, pT3 (according to Tumour, Node, Metastasis staging version 7 [TNM7]), or pT3a (according to TNM8) disease; and N0, Nx, or N1a disease. Participants were randomly assigned (1:1) by minimisation, using a central electronic system, to have either 1·1 GBq ablation or no ablation, following thyroidectomy. Stratification factors were centre, age, T stage, and nodal status. Patients had annual neck ultrasound scans and 6-monthly serum thyroglobulin measurements. The primary endpoint was 5-year recurrence-free survival, defined by the absence of locoregional recurrent or persistent structural disease, distant metastases, or death from thyroid cancer. Non-inferiority was assessed with a margin of 5 percentage points. Per-protocol and intention-to-treat (ITT) analyses were done for the primary endpoint, and safety was analysed in the per-protocol population. The trial is registered with ClinicalTrials.gov (NCT01398085), ISRCTN (ISRCTN80416929), and EUDRACT (2011–000144–21), and is still in active follow-up.

Findings: We recruited 504 patients (including 390 [77%] female patients and 114 [23%] male patients) between June 26, 2012 and March 18, 2020 and randomly assigned 251 to receive no ablation and 253 to receive ablation (ITT population). 249 patients in the no ablation group did not have ablation and 231 in the ablation group had ablation (per-protocol population). Median follow-up was 6·8 years (IQR 5·6–8·6) in the no ablation group and 6·6 years (4·8–8·5) in the ablation group; 17 recurrences (eight in the no ablation group and nine in the ablation group; ITT population) occurred during follow-up. 5-year recurrence-free rates were 97·9% (95% CI 96·1–99·7) in the no ablation group versus 96·3% (93·9–98·7) in the ablation group in the ITT analysis, and 97·9% (96·1–99·7) versus 96·9% (94·7–99·1) in the per-protocol analysis. The 5-year absolute risk difference was 0·5 percentage points (95% CI –2·2 to 3·2, $p(\text{non-inferiority})=0·033$; ITT analysis), showing that non-inferiority was reached. The observed recurrence rate was higher among patients with pT3 or pT3a tumours (four [9%] of 46 patients overall with pT3 or pT3a tumours vs 13 [3%] of 458 with pT1 or pT2 tumours), or N1a tumours (six [13%] of 47 with N1a vs 11 [2%] of 457 with N0 or Nx), but they were similar among those who did not receive ablation. Adverse events were similar between the groups, the most common being fatigue (63 [25%] of 249 in the no ablation group vs 65 [28%] of 231 in the ablation group), lethargy (34 [14%] vs 32 [14%]), and dry mouth (24 [10%] vs 21 [9%]), and there were no treatment-related deaths.

Interpretation: The IoN trial shows that ablation (or postoperative radioiodine) can be avoided for patients with pT1, pT2, and N0 or Nx tumours with no adverse features. Many patients with low-risk differentiated thyroid cancer worldwide can safely avoid postoperative radioiodine and its related hospitalisation and side-effects, which in turn results in lower health-care costs.

Editorial comments: Low-risk differentiated thyroid cancers (T1 or T2, and N0 or Nx (negative on USG)) have a very low recurrence rate of < 5%, and a disease-specific mortality rate of < 1%. The ESTIMABL2 trial (2022) demonstrated

that no ablation was non-inferior to ablation for tumours ≤ 2 cm, and N0 or Nx. In the IoN trial, the inclusion criteria were expanded to include pT2 and pT3a, as well as N1a tumors. The 5-year absolute risk difference for recurrence was 0.5%. There were no thyroid cancer-related deaths in either of the groups. Secondary outcomes analysis showed no difference in quality of life, second primary malignancies, or postoperative abnormality in thyroglobulin levels. No ablation was associated with a significant cost saving. The IoN study provides high-level evidence in favor of the de-escalation of radioiodine therapy in low-risk differentiated thyroid cancer. However, the number of patients with T3 or N1a disease was low (17%), and thus, the applicability of the results in this subgroup is not established. This is a practice-changing publication with a potentially huge impact on thyroid cancer management. If employed across the world, it could mean that at least 400,000 low-risk differentiated thyroid patients will avoid radioiodine ablation therapy, with no deterioration of the outcome.

2. A phase III randomised trial on the addition of a contact X-ray brachytherapy boost to standard neoadjuvant chemo-radiotherapy for organ preservation in early rectal adenocarcinoma: 5-year results of the OPERA trial. Baron D, Pace Loscos T, Schiappa R, et al. Ann Oncol 2025;36(2):208-215.

Background: The OPERA trial has shown that a contact X-ray brachytherapy 50 kV (CXB) boost with neoadjuvant chemoradiotherapy (NCRT) can increase organ preservation (OP) rate for early rectal adenocarcinoma (ADK) of low-mid rectum. We report the results after 5 years of follow-up.

Patients and methods: OPERA was a multicentre, phase III trial that included operable patients (pts), with cT2-cT3b low-mid rectal ADK, tumours < 5 cm, cN0 or cN1 < 8 mm. All pts received external beam radiotherapy (EBRT): 45 Gy in 25 fractions with concurrent capecitabine. Pts were randomly assigned (1:1) to receive a boost of EBRT in group A (9 Gy/5 fractions) or a boost with CXB (90 Gy/3 fractions) in group B. The primary end point was OP rate.

Results: Out of 148 patients randomised, 141 were eligible. Between week 14-24, a clinical complete (or near) response was observed in 44 pts in group A (64%) versus 66 in group B (92%); $P < 0.001$. The 3-year OP rate was 59% in group A versus 81% in group B ($P = 0.003$). After update the median follow-up was 61.1 months [56.8-64.5]. The 5-year local regrowth was 39% in group A and 17% in group B ($P = 0.1$). The difference in OP was still highly significant between both groups: A 56% versus B 79% ($P = 0.004$). The difference was more significant if tumours < 3 cm, with an OP rate of 93% in group B compared to 54% in group A. Of the 28 local regrowths, 3 occurred after 3 years of follow-up. Rectal bleeding (grade 1-2), which was the most prevalent toxicity during follow-up, disappeared most of the time after three years. Bowel function was not worsened by the CXB boost. Conclusion: The OPERA trial was the first trial to demonstrate that CXB dose escalation increased the OP rate with good bowel function at 3 years. At 5 years, these results are sustained, especially in small early-stage tumours. The occurrence of some local regrowth after 3 years necessitates close surveillance of these pts during the 5-year period.

Editorial comments: Although total mesorectal excision (TME) surgery has long been the gold standard in the curative management of locally advanced rectal cancer, it is associated with significant morbidities, such as, the risk of permanent colostomy, and impaired anorectal, genitourinary, and sexual function that often adversely impact quality of life (QoL). The selective

nonoperativemanagement (NOM) approach for patients who achieve a clinical complete response (cCR) after preoperative chemoradiotherapy (CRT), introduced by Habr Gama and others, demonstrated the feasibility of organ preservation in a large proportion of these patients. Since then, various approaches have been investigated to increase cCR rates, including total neoadjuvant therapy (TNT). Endorectal Contact X-rayBrachytherapy (CXB) using the Papillon 50 KV machine is a recent addition that offers significantly higher rates of cCR and organpreservation. The limited tissue penetration (50 % depthdose at 5 mm) of the machine delivers very high doses of radiotherapy to the tissues, whileminimizing radiation-induced toxicity to adjacent structures. The very high cCR(79% at 5 years) and organ preservation rates,along with the favorable QoL parameters in the OPERA trial,are really impressive. It is to be noted that in a recent meta-analysis consisting of 5447 patients, Powell et al reported a pooled cCR rate of 82 %, and an organ preservation rate of 81 % with Chemoradiotherapy followed by CXB (1). They also reported a favorable QoL profile with CXB. Despite its advantages,endorectal CXB for organ preservation has certain issues. The availability of specialized equipment and expertiseis limited. Treatment protocolsneed to be standardized for broader implementation. The efficacyand safety of CXB in patients with more locally advanced tumorsare currently being explored in the OPAXX (Dutch trial register: NL75896.031.20) and the TRESOR (ClinicalTrials.gov: NCT06402864)randomized clinical trials. 1. Powell SG, Wyatt JNR, Rao C, Dhadda A. Contact X-ray brachytherapy in rectal cancer: a systematic review and meta-analysis. Eur J Surg Oncol 2025;51(Issue 7): 109976.

3. Perioperative camrelizumab plus rivoceranib versus surgeryalone in patients with resectable hepatocellular carcinoma atintermediate or high risk of recurrence (CARES-009):a randomised phase 2/3 trial. Wang Z, Fan J, Zhou S, Sun Y, Liang F, et al. Lancet 2025; 406: 2089–99

Summary

Background: Surgical resection is the preferred curative approach for patients with early-stage hepatocellular carcinoma, but recurrence remains a major challenge. Consequently, neoadjuvant and adjuvant therapies have been proposed to reduce tumour burden and mitigate the risk of recurrence. The CARES-009 trial aimed to evaluate perioperative camrelizumab plus rivoceranib in patients with resectable hepatocellular carcinoma at intermediate or high risk of recurrence.

Methods: This multicentre, open-label, randomised, phase 2/3 trial enrolled patients with hepatocellular carcinoma classified as China Liver Cancer Staging (CNLC) stage Ib–IIa without Vp4 portal vein tumour thrombosis(corresponding to Barcelona Clinic Liver Cancer stage A with tumour >5 cm, stage B, or stage C without Vp4involvement or extrahepatic metastasis) at 16 hospitals in China. Patients were randomly assigned (1:1) to receiveperioperative therapy or surgery alone and were stratified by CNLC stage and hepatitis B virus (HBV) infection status.The perioperative group received two cycles of neoadjuvant camrelizumab plus rivoceranib, followed by surgery andadjuvant camrelizumab plus rivoceranib. The primary endpoint was event-free survival (EFS) and was assessed byinvestigators (who were not masked to group assignment) in the intention-to-treat population. Safety was evaluated inthe as-treated population. This trial is registered with ClinicalTrials.gov (NCT04521153) and is ongoing.

Findings: Between March 25, 2021, and Jan 29, 2024, 294 patients (87% male; 99% Han

Chinese) were randomly assigned to the perioperative group (n=148) or surgery alone group (n=146). At a prespecified interim analysis, with a median follow-up of 21.3 months, median EFS was 42.1 months (95% CI 23.2–not estimable [NE]) in the perioperative group versus 19.4 months (14.9–NE) in the surgery alone group (hazard ratio 0.59, 95% CI 0.41–0.85; p=0.0040). Grade 3 or worse treatment-related adverse events occurred in 53 (38%) patients in the perioperative group and no patients in the surgery alone group. Two treatment-related deaths occurred during neoadjuvant therapy in the perioperative group: one due to hepatic failure, assessed as possibly related to treatment, and one due to combined hepatic and renal failure, with the causality deemed indeterminate. Interpretation: Perioperative camrelizumab plus rivoceranib significantly improved EFS compared with surgery alone in patients with resectable hepatocellular carcinoma at intermediate or high risk of recurrence.

Editorial comments: Systemic therapy has traditionally been considered ineffective in hepatocellular carcinoma (HCC) due to the multidrug resistance genes causing increased drug efflux. Later, the TKIs, sorafenib and Lenvatinib, were shown to be effective in HCC, and were approved. In 2020, the phase 3 IMbrave150 study showed that the atezolizumab plus bevacizumab combination was superior to sorafenib in patients with unresectable HCC. The randomised phase 3 CARES-310 trial (2023) demonstrated that the camrelizumab plus rivoceranib protocol led to better PFS and OS, compared with sorafenib, for unresectable HCC. The present CARES-009 study (a randomised phase 2/3 trial) is novel in concept in that it investigated the perioperative use of camrelizumab plus rivoceranib in contrast to surgery alone in patients with intermediate or high-risk HCC, and demonstrated an improved EFS in the perioperative therapy group. However, this study has several limitations, viz. a) absence of an adjuvant arm, b) most patients in both arms underwent adjuvant transarterial chemoembolization (TACE). The role of perioperative therapy in the absence of TACE remains uncertain, c) most of the patients in the trial had hepatitis B virus (HBV) induced HCC. The role in HCC due to other causes is not proven, d) the incidences of macrovascular invasion in both arms were low, e) the report did not include patient reported outcome measures. One other point needs to be raised – the IMbrave050 trial (2023), which investigated adjuvant atezolizumab plus bevacizumab for early-stage hepatocellular carcinoma (amenable to resection or ablation), reported a nearly recurrence-free survival (RFS) advantage, which was not sustained over time. In the CARES-009 study, the median follow-up period is 21.3 months, and it remains to be seen if the advantage is sustained over longer follow-up. The strength of the study is its concept of perioperative approach, and it should be congratulated.

4. Perioperative Chemotherapy or Preoperative Chemoradiotherapy in Esophageal Cancer. Hoepfner J, Brunner T, Schmoor C, Bronsert P, Kulemann B, et al. N Engl J Med 2025;392:323-35.

Background: The best multimodal approach for resectable locally advanced esophageal adenocarcinoma is unclear. An important question is whether perioperative chemotherapy is preferable to preoperative chemoradiotherapy.

Methods: In this phase 3, multicenter, randomized trial, we assigned in a 1:1 ratio patients with resectable esophageal adenocarcinoma to receive perioperative chemotherapy with FLOT (fluorouracil, leucovorin, oxaliplatin, and docetaxel) plus surgery or preoperative chemoradiotherapy (radiotherapy at a dose of 41.4 Gy and carboplatin and paclitaxel) plus surgery.

Eligibility criteria included a primary tumor with a clinical stage of cT1 cN+, cT2–4a cN+, or cT2–4a cN0 disease, in which T indicates the size and extent of the tumor (higher numbers indicate a more advanced tumor), and N indicates the presence (N+) or absence (N0) of cancer spread to the lymph nodes, without evidence of metastatic spread. The primary end point was overall survival.

Results: From February 2016 through April 2020, we assigned 221 patients to the FLOT group and 217 patients to the preoperative-chemoradiotherapy group. With a median follow-up of 55 months, overall survival at 3 years was 57.4% (95% confidence interval [CI], 50.1 to 64.0) in the FLOT group and 50.7% (95% CI, 43.5 to 57.5) in the preoperative chemoradiotherapy group (hazard ratio for death, 0.70; 95% CI, 0.53 to 0.92; $P = 0.01$). Progression-free survival at 3 years was 51.6% (95% CI, 44.3 to 58.4) in the FLOT group and 35.0% (95% CI, 28.4 to 41.7) in the preoperative-chemoradiotherapy group (hazard ratio for disease progression or death, 0.66; 95% CI, 0.51 to 0.85). Among the patients who started the assigned treatment, grade 3 or higher adverse events were observed in 120 of 207 patients (58.0%) in the FLOT group and in 98 of 196 patients (50.0%) in the preoperative-chemoradiotherapy group. Serious adverse events were observed in 98 of 207 patients (47.3%) in the FLOT group and in 82 of 196 patients (41.8%) in the preoperative-chemoradiotherapy group. Mortality at 90 days after surgery was 3.1% in the FLOT group and 5.6% in the preoperative-chemoradiotherapy group.

Conclusions: Perioperative chemotherapy with FLOT led to improved survival among patients with resectable esophageal adenocarcinoma as compared with preoperative chemoradiotherapy.

Editorial comments: *The CROSS trial demonstrated a lower response rate and also a lower OS rate, with preoperative chemoradiation in esophageal adenocarcinoma (EAC) as compared to squamous cell carcinoma (ESCC). The OS rate of the esophageal carcinoma in that trial, as a whole, was low at $\approx 38\%$, indicating there was room for improvement, especially for EAC. The ESOPEC trial investigated whether perioperative chemotherapy (FLOT) was superior to the CROSS protocol in EAC. The authors reported a better outcome with FLOT. Thus, it has established FLOT as the preferred regime for EAC. The NEO-AEGIS trial tried to answer the same question. It reported that both protocols resulted in similar survival rates. Unfortunately, it was terminated early and was underpowered (1). Another study that may be mentioned in this context is the CHECKMATE 577 trial (2). It showed that adjuvant nivolumab improved DFS in both EAC and ESCC. Hence, the question remains, which one is better for EAC, FLOT, or Nivolumab (singly, or in combination with chemotherapy)? Future studies should answer this question.*

1. Reynolds JV, Preston SR, O'Neill B, et al. Trimodality therapy versus perioperative chemotherapy in the management of locally advanced adenocarcinoma of the oesophagus and oesophagogastric junction (neo-aegis): an open-label, randomized, phase 3 trial. *Lancet Gastroenterol Hepatol*. 2023 Nov;8(11):1015–1027.
2. Kelly RJ, Ajani JA, Kuzdzal J, et al. Adjuvant nivolumab in resected esophageal and gastroesophageal junction cancer. *N Engl J Med*. 2021;384(13):1191–1203.
5. Perioperative Durvalumab in Gastric and Gastroesophageal Junction Cancer. Janjigian YY, Al-Batran SE, Wainberg ZA, Muro K, Molena D, et al for the MATTERHORN Investigators. *N Engl J Med* 2025;393:217-30.

Background: Perioperative FLOT (fluorouracil, leucovorin, oxaliplatin, and docetaxel) is a standard therapy for resectable gastric and gastroesophageal junction adenocarcinomas, but recurrence rates remain high. Immunotherapy plus chemotherapy may improve outcomes.

Methods: In a phase 3, multinational, double-blind, randomized trial, we assigned participants with resectable gastric or gastroesophageal junction adenocarcinoma, in a 1:1 ratio, to receive durvalumab at a dose of 1500 mg or placebo every 4 weeks plus FLOT for 4 cycles (2 cycles each of neoadjuvant and adjuvant therapy), followed by durvalumab or placebo every 4 weeks for 10 cycles. The primary end point was event-free survival; secondary end points included overall survival and pathological complete response.

Results: A total of 474 participants were randomly assigned to the durvalumab group, and 474 to the placebo group (median follow-up, 31.5 months; interquartile range, 26.7 to 36.6). Two-year event-free survival (Kaplan–Meier estimate) was 67.4% among the participants in the durvalumab group and 58.5% among those in the placebo group (hazard ratio for event or death, 0.71; 95% confidence interval [CI], 0.58 to 0.86; $P < 0.001$). Two-year overall survival was 75.7% in the durvalumab group and 70.4% in the placebo group (piecewise hazard ratio for death during months 0 to 12, 0.99 [95% CI, 0.70 to 1.39], and during the period from month 12 onward, 0.67 [95% CI, 0.50 to 0.90]; $P = 0.03$ by a stratified log-rank test [exceeding the significance threshold of $P < 0.0001$]). The percentage of participants with a pathological complete response was 19.2% in the durvalumab group and 7.2% in the placebo group (relative risk, 2.69 [95% CI, 1.86 to 3.90]). Adverse events with a maximum grade of 3 or 4 were reported in 340 participants (71.6%) in the durvalumab group and in 334 (71.2%) in the placebo group. The percentage of participants with delayed surgery was 10.1% and 10.8%, respectively, and the percentage with delayed initiation of adjuvant treatment was 2.3% and 4.6%.

Conclusions: Perioperative durvalumab plus FLOT led to significantly better event-free survival outcomes than FLOT alone among participants with resectable gastric or gastroesophageal junction adenocarcinoma.

Editorial comments: *The incorporation of anti-PD-L1 immune checkpoint inhibitors (ICI) is a logical step forward from the standard FLOT perioperative therapy approach, following the trial results that showed benefits from ICIs in metastatic gastric-gastroesophageal junction cancers (GC-GEJ Ca). This study tried to answer a very relevant question: Does the addition of ICI therapy to FLOT improve outcomes in resectable GC-GEC carcinoma? The trial design and the methodology were sound and straightforward, and the results showed an absolute 2-year EFS benefit of nearly 9%, and a 2-year OS benefit of 5%. The results were both statistically significant as well as clinically meaningful. The downstaging and pCR rates were also significant. This trial thus is a significant and practice-changing addition to the existing paradigm. However, a more biomarker-driven approach is warranted for a wider application considering the cost of the drug, especially for resource constrained situations.*

Pic. Ur. Quiz

Dr. Shouptik Basu, Dept. of Surgical Oncology

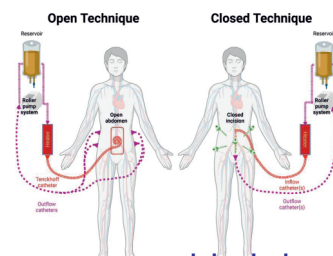
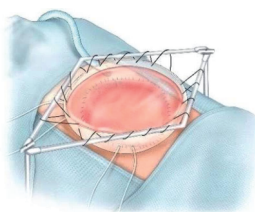
Question 1:

Identify this Flap and State its blood supply



Ans: Nasolabial Flap, Facial Artery

Question 3:



Two schematic diagrams compare an open abdominal technique versus a closed abdominal perfusion technique.

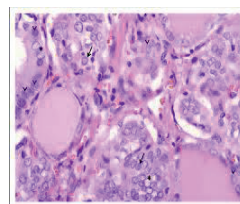
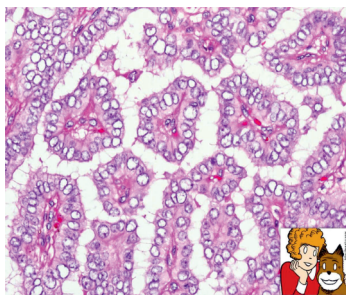
Quiz prompts:

1. Name the two HIPEC perfusion techniques shown.
2. Mention one advantage of the closed technique.
3. State one potential complication associated with HIPEC.

- ❖ Renal toxicity, anastomotic leak, bone marrow suppression
- ❖ Reduced heat loss and lower exposure risk to operating room staff
- ❖ Open (Coliseum) technique and Closed technique

Ans :

Question 4:



Histopathology of a thyroid nodule reveals cells with optically clear nuclei and nuclear grooves.

Quiz prompts:

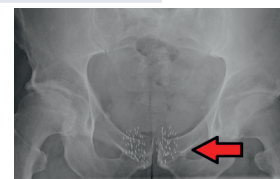
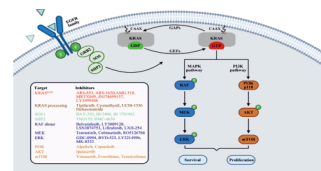
1. What is the classic nuclear feature called?
2. What is the most likely diagnosis?
3. Which genetic mutation is commonly associated with this malignancy?

- ❖ "Orphan Annie eye" nuclei
- ❖ Papillary thyroid carcinoma
- ❖ BRAF mutation

Ans:

Question 2:

KRAS Mutation



Pelvic imaging shows radioactive sources placed within applicators close to the tumor site.

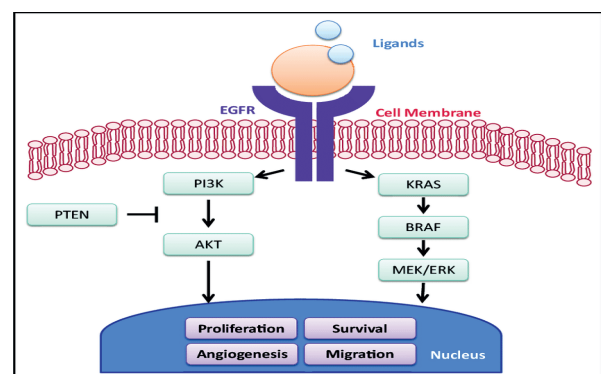
Quiz prompts:

1. Identify the radiation technique.
2. What is the key radiobiological advantage of this approach?
3. Name one cancer commonly treated using this technique.

- ❖ Cervical cancer
- ❖ High tumor dose with rapid dose fall-off to surrounding tissues
- ❖ Brachytherapy (intracavitary)

Answer

Question 5:



A molecular pathway diagram shows constitutive activation of downstream signaling despite EGFR inhibition.

Quiz prompts:

1. Which gene mutation is responsible for therapy resistance?
2. In which cancer is this mutation routinely tested before treatment?
3. Why do EGFR inhibitors fail in this setting?

- ❖ KRAS mutation
- ❖ Colorectal carcinoma
- ❖ Downstream signaling is constitutively active independent of EGFR

Answer

Weekly CME (December 2024-November 2025)

12/12/2024	Topic: Breast Cancer talk .	Speaker: Dr. Indranil Ghosh (Medical Oncologist, Apollo Hospital, Kolkata)
19/12/2024	Topic: Day to Challenges faced by the medical fraternity.	Speaker: Dr. Vidya Shetty (Medico Legal Expert)
26/12/2024	Topic: Challenging Cases in Pediatric Lymphoma/ Leukaemia	Speaker: Dr. Arnab Chakraborty
02/01/2025	Topic: Borderline Ovarian Tumor	Speaker: Dr. N.R. Mondal
09/01/2025	Topic: Optimizing treatment outcomes in unfit AML patients with BCL2 inhibition.	Speaker : Dr. Anupam Chakrapani (Senior Consultant & Head, Dept. of Clinical Hematology & BMT, Apollo Gleneagles Hospital, Kolkata)
16/01/2025	Topic: “ Malignant Pleural Effusion and Ascites”.	Speaker: Dr. Sumit Sharma (Lead Consultant Imaging and Interventions, HCG Cancer Centre, New Town, Kolkata, WB) .
23/01/2025	Topic: NABH SESSION	Speaker: Dr.Abhimanyu Bishnu
30/01/2025	Topic : PPTID a Case Report	Speaker : Dr. Sampuran Acharya
06/02/2025	Topic: Molecular Updates in Endometrial Cancer.	Speaker: Dr. Nihanthy Sreenath
13/02/2025	Topic: Modern Radiation therapy modalities in Lymphoma.	Speaker: Dr. Arundhati Mondal
20/02/2025	Topic: Automated analysis of methylated gene markers for early detection of Breast, Cervical, & Prostate Cancer.	Speaker: Dr. Saraswati Sukumar
27/02/2025	Topic: Pediatric medulloblastoma	Speaker: Dr. Arnab Chakraborty
06/03/2025	Topic: Pathophysiological interaction between chronic constipation & systemic co morbidities & its management.	Speaker: Dr. Debasish Roy

13/03/2025	Topic: Role of RT in Oncological Emergencies.	Speaker: Dr. S. Tarun
20/03/2025	Topic: NABH	Speaker : Dr. Abhimanyu Bishnu Dr. Sumanta Dasgupta Dr. Subhamoy Paul
27/03/2025	Topic: NABH	Speaker : Dr. Sumanta Dasgupta
03/04/2025	Topic: NABH: Clinical Audit	
17/04/2025	Topic: CPC- Dept of Pathology	Speaker: Dr. Soumendra Mishra Dr. Sunipa Ghosh
24/04/2025	Topic: Interesting Case of ITS	Speaker: Dr. Soma De
08/05/2025	Topic: Two interesting Cases of Pathology.	Speaker: Dr. Soumendra Mishra
15/05/2025	Topic: Interstitial brachytherapy in Gynaecological malignancies and Our Hospital experience.	Speaker: Dr. Arundhati Mondal
22/05/2025	Topic: Tumor Immunology	Speaker: Dr. Nihanthy Sreenath
29/05/2025	Topic: Application of NGS technology in Solid Tumors.	Speaker: Dr. Aparna Natarajan
05/06/2025	Topic: Optimizing treatment in recurrent /metastatic Squamous Cell Carcinoma	Speaker: Dr. Rakesh Roy
12/06/2025	Topic: Recent Updates of pain management in the treatment of Cancer.	Speaker: Dr. Rakesh Roy
19/06/2025	Topic: Journey from visible body to invisible energy.	Speaker: Ms. Payal Gupta Ms. Kavya Agarwal Ms Nishant Bhalotia
26/06/2025	Topic: Adcetris: Transforming front line treatment of Hodgkins Lymphoma	Speaker: Dr. Kaushik Paul

03/07/2025	Topic: Her2 Scoring and Interpretation in Her2 Low and Her2 Ultra Low Breast Cancer.	Speaker: Dr. Rakesh Roy Dr. Sunipa Ghosh
10/07/2025	Topic: Management of CUTI, HAP,VAP, present & future.	Speaker: Dr. Subhamoy Paul
17/07/2025	Panel Discussion Topic: Neuroendocrine tumors and the uses of Octreotide long sciting release as somatostatin inhibitor. Topic: ii) Training on Medical Records. (Online Programme)	Moderator : Dr. Rakesh Roy Chairperson: Dr. Arnab Gupta
24/07/2025	Topic: Role of Molecular Profiling in precision Oncology.	Ms. Yashodhara Bhattacharya (Product Manager & Sr.Genetic Counselor, 1 Cell .AI)
31/07/2025	Topic: Multidisciplinary Tumor Board	
07/08/2025	Topic: Parotid Maliganncy	Speaker: Dr. Mainak Chakraborty
14/08/2025	Topic: Harnesting nanoscale cellular communication for next-generation anticancer therapeutic.	Speaker: Dr. Tanmoy Saha
21/08/2025	Topic: Role of Radiation therapy in Non Small Cell Lung Cancer.	Speaker: Dr. Anwesh Mukherjee
28/08/2025	Topic: Pediatric Sarcoma	Speaker: Dr. Arnab Chakraborty
04/09/2025	Topic: i) Neo Adjuvant Chemotherapy Vs Chemoradiation in Esophagial Adeno Carcinoma.	Speaker: Dr. Prashant Sinha

25/09/2025	Topic: i) IO in Endometrial Cancer. Topic: ii) Targeted therapy in Ovarian Cancer.	Speaker: Dr. Chandrakant MV (Consultant Medical Oncologist, Naryana Hospital, Howrah) Speaker: Dr. Poulami Basu (Consultant Medical Oncologist, Netaji Subhas Bose Cancer Hospital)
09/10/2025	Topic: Fluid Cytology	Speaker : Dr. Sudipto Roy
16/10/2025	Topic: Management of GE Junction Cancers.	Speaker: Dr. Arnab Gupta Dr. Rupali Niraj
23/10/2025	Topic: Adaptive RT	Speaker: Dr. Sampuran Acharyya
30/10/2025	Topic: HPV Discuss Awareness	Speaker: Dr. Sandipan Chpudhury
06/11/2025	Topic: PICC Line & Chemoport	Speaker : Dr. Shouptik Basu
13/11/2025	Topic: Surgical management for FAP-Familial Adenosis	Speaker: Moinak Chakraborty
20/11/2025	Topic: Recent recommendations on Cytology reporting.	Speaker: Dr. Sunipa Ghosh Pradhan Dr. Sagarika Dr. Soumendra Mishra
27/11/2025	Topic: Surgery for locally advanced Rectal Carcinoma- Whats new.	Speaker: Dr. Samir Bhattacharyya
11/09/2025	Topic : Journal Club	Speaker: Dr. Rupali Niraj Dr. Siddharth Khemka
18/09/2025	Topic: Cancer Prevention Through tobacco control, a public health priority for West Bengal . Panel Discussion : Saving mankind from hazards of tobacco.	Speaker : Dr. Nirmalya Mukherjee (Chief executive of public health research at MANT) Moderator : Dr. Arnab Gupta

Panorama of Academic Activities

Dr Arnab Gupta (Jan- Dec, 2025):

- Examiner for online IASO PG Masterclass on Ca- Rectum in Jan, 2025.
 - Chairperson for a session on Gynaecological Cancer & Debate on Open Vs Robotic surgery for Ca- Ovary at NIOS (Annual Conference) of Netaji Subhas Cancer Institute, in Kolkata in Jan, 25.
 - Invited Lecture on `Molecular Targeted therapy in Cancer` at International Conference on Advances in Medical Biotechnology organized by Dept of Biotechnology of Heritage Institute of Technology, Kolkata in Jan, 25.
 - Master Video on Liver Resection at 14th East Zonal Oncology Symposium held in Kolkata in Jan, 25.
 - Chairperson for Breast Cancer session during MIDCON (Mid Term Conference of IASO) at Puri, in Feb, 2025.
 - Invited Lecture on Surgery for Ca Gall Bladder at Medical College, Kolkata in a Workshop on HPB Cancers in March, 2025.
 - Moderator for a Debate on Lateral Pelvic Node Dissection Vs RT, CT for Ca Rectum at Annual Conference of Oncological Society of Bengal held in Kolkata in April, 2025.
 - Examiner for DrNB Surgical Oncology held at SGCCRI, Kolkata in April, 2025
 - Chairperson for sessions on Borderline Resectable Pancreatic Cancer & Medical Ethics at the Mid Term CME of Oncological Society of Bengal, held at KPC Medical College in August, 2025.
 - Invited Lecture on `Surgical Management of GE junction Cancers` in `Precision Oncology` Conference during Golden Jubilee Celebration of Meherbai Tata Memorial Hospital, Jamshedpur in Sept, 2025.
 - Examiner for MRCS in Kolkata in Sept, 2025.
 - Program Director of a Workshop on Chemoportorganized by B Braun in Kolkata in Sept, 2025.
 - Invited Lecture on Surgical Management of Colo-Rectal Liver Metastases during SASICME held in Kolkata in Sept, 2025.
 - Panelist in a Session on Women Empowerment organised by Woman Times, Kolkata in Sept, 2025.
 - Examiner for MRCS Final Exam held in Cairo (Egypt) in Nov, 2025.
 - Chairperson for Panel Discussion on Soft Tissue Sarcoma in ASICON held in Kolkata in Dec, 2025.
 - Judge for Debate on ERCP with Lap Chole Vs Lap Chole with Lap CBD exploration & Lap Vs Open Unilateral Inguinal Hernia repair in ASICON held in Kolkata in Dec, 2025.
 - Co-Author:ORIGINAL ARTICLE Cancer Trends in West Bengal Over 25 Years: A Comprehensive Single Centre Study Shazia Absar1 • Samir Bhattacharyya2 • Arnab Gupta: Indian Journal of Surgical Oncology <https://doi.org/10.1007/s13193-025-02252-5>, Published on 1st March, 2025.
 - 1st Author:ORIGINAL ARTICLE Outcome of Level III Axillary Node Dissection in Breast Cancer: 20 years Single Unit Experience in a Comprehensive Cancer Centre in Eastern India: Arnab Gupta1 • Samir Bhattacharyya1 • Azam Ali Shaik1 • Maaz Ahmed Khan1 Indian Journal of Surgical Oncology <https://doi.org/10.1007/s13193-025-02278-9>, April, 2025.
 - Co-Author:Risk Factors for Positive Peritoneal Lavage Cytology in Stage I to III Colon Cancer: A Prospective Observational Study Radha Raman Mondal1 • Subrata Sahu2 • Sudip Halder3 • Samir Bhattacharyya2 • Arnab Gupta2 in Indian Journal of Surgical Oncology in September, 2025 <https://doi.org/10.1007/s13193-025-02416-3>
- Reviewed article for `British Journal of Translational Global Health`, `International Journal of Case Reports`, `Indian Journal of Surgery`, `Indian Journal of Surgical Oncology` & JIMA:

Dr Madhuchanda Kar

Conferences & Publications

Date	Topic	Venue	Name of Institute /Organization	Role
11/01/2025	Recent Updates & Advancement in Clinical Medicine -2025 Approach to Liver Cancer	Taki, West Bengal	Indian Association Of Clinical Medicine WB Chapter	Chairperson
24/01/2025	APICON-2025 Annual Conference of API Case Based discussion on Paraneoplastic Glomerulopathy	Kolkata	Association of Physician of India	Speaker
15/02/2025	IACMCON WB 2025 Approach to Lymphadenopathy	Durgapur, West Bengal	Indian Association of Clinical Medicine	Speaker
26/04/2025	IACM WB Satellite CME Approach to Monoclonal Gammopathy	Siliguri West Bengal	Indian Association of Clinical Medicine WB Chapter	Speaker
01/05/2025	Mid Term Update - CME Role of Magnesium in DM	Kolkata	Association of Physician of india WB Branch	Chairperson
08/06/2025	2nd Annual Conference Of Fellows of Royal college of Physician Edinburgh (RCPE) East & Northeast India	Kolkata	Fellows of Royal college of Physician Edinburgh (RCPE) East & Northeast India	Panellist
16/07/2025	Advance in Genito Urinary Cancer Care Introduction	Kolkata	Eastern Medical Association (EMA)	Speaker
28/07/2025	Kolkata Pancreas update - Management of Pancreas NET	Kolkata	Kolkata Pancreas Club	Speaker
17/07/2025	A New era in Lung and esophageal Cancer Immunotherapy	Virtual Platform		
01/11/2025	50th annual Scientific Conference & CME Approach to oncological cases	Sealdah West Bengal	Indian Railway Health Service Association	Chairperson
23/11/2025	Medicon International 2025 Interesting Clinical Vignettes in Oncology	Kolkata	Indian Association of Clinical Medicine West Bengal I	Speaker
13/12/2025	National Conference of AMWI Cancer Survivorship issues :- Myth and Reality	Kolkata	Association of Medical Women in India WB Chapter	Speaker

- 1) Tapu Shekhar Saha, Jhilam Mukherjee, **Madhuchanda Kar**, Amlan Chakrabarti, Krishnendu Guha, A LLM and Explainable AI Assistive Model for Improvement of User's Query in a Chatbot for Women Cancer Awareness for Indian Lay People, Proceeding Book, 20-22 January 2025, Organized by St. Xaviers College & Adamas University, Publisher- Springer Nature Singapore, Pages 211-226.
- 2) Jhilam Mukherjee, **Madhuchanda Kar**, Amlan Chakrabarti, Sayan Das, An Automated Methodology for Detection of Pulmonary Nodules in Chest X-rays Using Image Dimensionality Reduction and Hybrid CNN-SVDD, Proceeding Book, 20-22 January 2025, Organized by St. Xavier's College & Adams University, Publisher- Springer Nature Singapore, Pages 299-318
- 3) API Medicine, A-Clinical Compendium 2025. An Approach to a Case of Paraneoplastic Glomerulopathy-Page 258-260. Publisher- JAYPEE BROTHERS Medical Publisher, Delhi, India.
- 4) IACM Clinical Medicine Update 2025 - Chronic Lymphocytic Leukemia - Page 303, Publisher- JAYPEE BROTHERS Medical Publisher, Delhi, India

Dr Rakesh Roy

Achievements

- Completed Successfully Professional LLB from 'Madhusudan Law University' 2025.
- Appointed as Reviewer for the prestigious "ASCO IDEAAward in Palliative Care".
- Newly appointed NABH Assessor for Desktop and Onsite Assessments.
- Elected as President – IAPC WB Chapter for next 3 years.
- Appointed as Teaching Faculty in IAPC Conducted Palliative Care Courses.
- Selected as PI in A randomized Open Label Phase III Study of TDxDin Ovarian Cancer.
- Poster Acceptance at ISMPO 2025 – Is recurrent UTI a negative prognostic factor in metastatic bladder cancer?

Invited Speaker, Moderator, Panelist:

- Oncological Society of West Bengal - Invited Speaker on 'Medical Negligence'.
- AROICON 2025 – Invited for Lecture on "Guidelines in the Ethical Practice of Medicine".
- Workshop on 'Cancer Pain' 2025 at SGCCRI – Panelist in 'Managing Difficult Pain'.
- WBIAPCON 2025 – Session Moderator, Topic – Integrating Palliative Care in Oncology'.
- Delivered a lecture on Cancer Prevention & Screening at Rourkela Law College.
- Invited Speaker – MEDILEX 1.0 (A Medico-Legal Workshop), Kolkata.
- Participation in European Multidisciplinary Congress on Urological Cancers.

Dr Suman Meyur

- Awarded the "Professional Diploma in Clinical Research".
- Completed the certificate course on "Antibiotic Stewardship" from Stanford University School of Medicine.
- Authored a book chapter, "Chronic Lymphocytic Leukemia" in IACM Clinical Medicine Update 2025 (Jaypee Publishers).
- Guest Speaker at Indian Railway Medical Service Association. Topic-"Continuum of care in Breast Cancer".
- Speaker on DoctorsDay at Indian Medical Association Behala Branch (Topic: Management of Her2 positive Breast Cancer).
- Chairperson at 50th Annual Conference of Indian Railway Health Service Association. Session - "Oncosynergy: Cervical and Renal Breakthrough".
- Speaker at AROI 2025 National Conference, " Optimising treatment in Recurrent/Metastatic Head and Neck Cancer for better survival.
- Speaker at Oncological Society of Bengal - Midterm Conference 2025.

Dr Gautam Bhattacharjee

- Dr Gautam Bhattacharjee is the acting Faculty in IAPC Conducted Palliative Care Course.
- Dr Gautam Bhattacharjee has delivered a series of Lecture on 'ETHICS in CLINICAL PRACTICE' in various academic forums.
- Dr Gautam Bhattacharjee acted as the Honourable Chairperson in Palliative Care Discussion forum in WBIAPCON 2025 at TMC.

Dr Sumanta Dasgupta

- ♦ Attended WBSSPCON 2024 organized by West Bengal Society for Study of Pain at Central Hospital, South Eastern Railway, Kolkata on 27-28 April 2024 as FACULTY.
- ♦ Attended Annual conference of Indian Society of Anaesthesiologists, West Bengal state branch on 31st August-1st September 2024 at Taj Taal Kutir, Newtown, Rajarhat as FACULTY.
- ♦ Attended Global PGI Alumni Meet (under aegis of PCAAS) on Oct 25-27 2024 at PGI, Chandigarh as FACULTY.
- ♦ Attended 'SOAPC MEET ARUNACHAL 2024' organized by Society of Onco Anaesthesia & Perioperative Care at TRIHMS, Naharlagun, Arunachal Pradesh on 24th August, 2024 as FACULTY.
- ♦ Attended 'SOAPC Meet Kolkata 2024' organized by Society of Onco Anaesthesia & Perioperative Care on 29th Sept & 2nd Oct 2024 at CNCI, Rajarhat as FACULTY.
- ♦ Attended '14TH EZOS 2025' organized by SGCCRI at Hotel The Park, Kolkata on 25th January, 2025 as FACULTY.
- ♦ Organized 3rd state level hybrid annual conference of Society of Oncoanesthesia & Perioperative care, Kolkata city branch 'SOAPC Meet Kolkata 2025' as the ORGANIZING CHAIRMAN. The workshop was held at IPGMER & SSKM Hospital on 26th October 2025, and the CME was held at SGCCRI, Thakurpukur, Kolkata on 16th November 2025. More than 150 delegates attended physically, while about 40 delegates attended online.
- ♦ Attended 'WB IAPCON 2025' pre-conference workshop at SGCCRI as FACULTY, organized by Indian Association of Palliative care, WB state branch on 22nd November 2025.

Ms Sangeeta Das

- Ms Sangeeta Das successfully completed the prestigious Degree – MSW from Rabindra Bharati University.
- Ms Sangeeta Das also successfully completed 1 yr IFS Course from Maharashtra.
- Ms Sangeeta Das is the acting faculty for 2week course in Pain & Palliative Care for Nurses, Volunteers and Social Workers under the aegis of IAPC-WB Chapter.
- Ms Sangeeta Das delivered a lecture on Psycho-Oncology in WBIAPCON 2025.
- Ms Sangeeta Das is an acting Faculty – Nursing BSC Diploma, SGCCRI.

Dr. Shouptik Basu

S.No.	Category	Achievement	Details / Description	Year
1	Membership	Elected as Member, Royal College of Surgeons of Edinburgh	Achieved membership after successfully passing the MRCS Examination	2025
2	Membership	Elected as Member, Royal College of Physicians and Surgeons of Glasgow	Conferred membership in Royal College of Physicians and Surgeons of Glasgow	2025
3	Fellowship	Awarded Fellowship, Society of Surgical Oncology (USA)		2025
4	Fellowship	Awarded Fellowship, Association of Surgeons of India (FAIS)		2025
5	Fellowship / Award	IASO Award Fellowship, Gothenburg (Sweden)		2025
6	Governing Council	Governing Council Member – INDEPSO / Indian HIPEC Registry	Selected as Governing Council Member of the Society of Peritoneal Surface Oncology (INDEPSO / Indian HIPEC Registry).	2025
7	Publication / Contribution	Contributed Chapters to <i>Post Graduate Surgery</i> (Jaypee Brothers Publication)	Authored three chapters: <i>Head and Neck Cancer</i> , <i>Peritoneal Surface Oncology</i> , and <i>Career Prospects in Surgery</i> .	2025
8	Publication / Contribution	Contributed Chapter to <i>Sentinel Lymph Node Biopsy</i> (Springer Publications, Ed. Chintamani)	Authored the chapter titled <i>Anatomy of Axilla</i> .	2025
9	Publication / Research	Paper Published – <i>AI-Predict-BM</i>	Research titled <i>Artificial Intelligence to Predict Treatment in Head and Neck Cancers</i> published in a PubMed-indexed journal.	2025
10	Presentation / Congress	Oral Presentation – ESMO Digital and AI Congress	Paper titled <i>Artificial Intelligence in Head and Neck Cancer</i> accepted for oral presentation ; received travel grant .	2025
11	Presentation / Congress	Poster Presentation – 44th ESSO Congress	Presented poster on <i>Mobile Phone-based Predictive Model to Predict Outcomes of Interval CRS and HIPEC and Postoperative Complications</i> .	2025
12	Faculty Role	Faculty (Judge) – ASICON 2025	Served as Faculty Judge for evaluation of Clinical Poster presentations.	2025
13	Faculty Role	Faculty (Speaker) – ASICON 2025	Delivered faculty paper presentation during ASICON 2025.	2025

Dr. Ranojit Ghosh

Dept. of Radiation Oncology

E-poster Presentation at AROICON 2024-25

“AN OBSERVATIONAL STUDY TO QUANTIFY THE INTER-FRACTION VOLUMETRIC VARIATION OF THE URINARY BLADDER AND RECTUM AND ITS EFFECT ON PRIMARY TUMOUR COVERAGE DURING INTENSITY MODULATED RADIATION THERAPY OF LOCALLY ADVANCED CARCINOMA CERVIX.”

Background and Objective:

Concurrent chemoradiation is the standard of care in locally advanced cervical cancer. With IMRT, primary target (CTVp) coverage can be affected by interfractional changes in bladder and rectal volumes, potentially compromising dose distribution. This study evaluates the impact of bladder and rectal volume variations on CTVp coverage in patients receiving IMRT-based chemoradiation.

Materials and Methods:

Patients with locally advanced cervical cancer treated with concurrent chemoradiation using IMRT were monitored with onboard Cone Beam CT (CBCT)—daily for 3 fractions, then weekly. A bladder protocol was followed: complete voiding, then 500 ml water intake 30 minutes before planning CT and each treatment. Bladder, rectum, and CTVp were contoured on planning CT and CBCT. APTV margin of 2 cm (supero-inferior, antero-posterior) and 1 cm (lateral) was applied. CTVp coverage was assessed using D100 (dose received by 100% of volume), with adequate coverage defined as $\geq 95\%$ of the prescribed dose. Dose-volume data from planning CT and subsequent CBCTs were compared to determine the effect of organ volume changes on CTVp coverage.

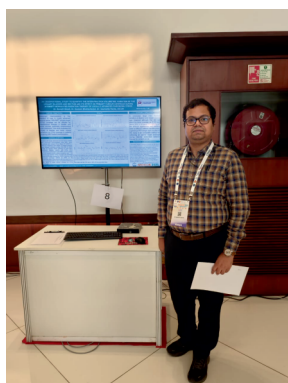
Results:

A total of 40 patients were recruited between 08/12/2023 and 30/11/2024 in this study. They varied in age (from 34 years to 68 years) and stage (FIGO stage IIB to IVA). The bladder volumes ranged from 34 cc to 999 cc. Mean bladder volume was 285 cc with a standard deviation of 190 cc. Rectum volumes recorded ranged from 23 cc to 193 cc. Mean rectum volume was 52 cc with a standard deviation of 24 cc.

The D100 of all the CTVs were $\geq 95\%$ of the prescribed dose.

Conclusion:

In conclusion large inter fraction variations in bladder and rectum volume was observed although with the PTV margin prescribed in this study, dose coverage of the primary target volume remained unaffected.



Dr. Nihanthy S

PRESENTATIONS

EMUC- November 2025, Prague, Czechia

Resource-responsive regimen: low-dose nivolumab with cabozantinib in metastatic renal cell carcinoma: a real-world case series from a resource-limited setting

ESMO - October 2025, Berlin, Germany

Sectional study of psychosocial distress and unmet needs in adolescent and young adult cancer patients

MASCC - June 2025, Seattle, USA

Comprehensive Evaluation of Psychosocial Distress and Unmet Needs in Adolescent and Young Adult Cancer Patients: A Cross-Sectional Study

Publications :

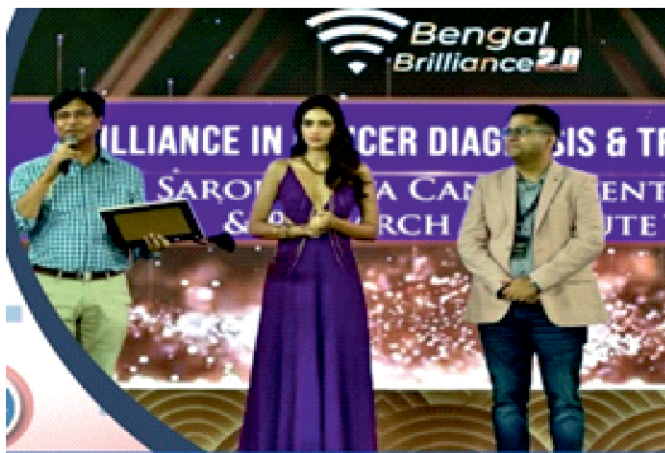
- 1) **International Journal of spine surgery & research - November 2025**
The Integration of Artificial Intelligence (AI) in Oncology: Transforming Cancer Care
- 2) **Aging & Cancer- November 2025**
Enhancing Oncological Care for India's Aging Population: Addressing the Complex Needs of Older Adults With Cancer
- 3) **The Lancet – November 2025**
Treatments for unresectable hepatocellular carcinoma: insights from Check Mate 9DW
- 4) **Journal of Case Reports Review in Medicine - November 2025**
Checkpoint Dilemma: KEYNOTE-564's Triumph Amidst the Failures of Its Rivals in Renal Cell Carcinoma?
- 5) **BMC Cancer-August 2025**
A comparative analysis of Palbociclib and Ribociclib in metastatic hormone receptor-positive, HER2-negative breast cancer: a prospective mid-term follow-Up study from an Indian cohort
- 6) **NJCO Global Oncology, August 2025**
Where the Borders Bleed: Festivals, Fragility, and the Footfall of a Young Soldier's Return
- 7) **New England Journal of Medicine, May 2025**
A Good Innings - A Tale of Hope, Heartbreak, and Healing
- 8) **JCO Oncology Practice, April 2025**
From Present to Future: The Shifting Paradigm of Advanced Hepatocellular Carcinoma
- 9) **Indian Journal of Neurosurgery, February 2025**
Efficacy of Cyber Knife Stereotactic Radiosurgery in Treating Trigeminal Neuralgia: A Single-Institution Study
- 10) **Indian Journal of Medical & Paediatric Oncology, February 2025**
Optimizing Oncological Care in Patients with End-Stage Chronic Kidney Disease on Dialysis: Indian Scenario

Palliative Care Departmental Milestones (2024-2025) :

- Dr Gautam Bhattacharjee is the acting Faculty in IAPC Conducted Palliative Care Course.
- Dr Gautam Bhattacharjee has delivered a series of Lecture on 'ETHICS in CLINICAL PRACTICE' in various academic forums.
- Dr Gautam Bhattacharjee acted as the Honourable Chairperson in Palliative Care Discussion forum in WBIAPCON 2025 at TMC.
- Dr Kuntal Ghosh delivered a lecture on 'Awareness in Palliative Care' at the prestigious IMA Forum.
- Dr Rakesh Roy was selected as Scientific Committee Advisor for the First WB-IAPCON 2025. He was also an acting Faculty in the "CANCER PAIN WORKSHOP" held at SGCCRI Auditorium on 22nd Nov as well as Main WBIAPCON held at TMC, Kolkata on 23rd Nov 2025.
- In the Annual GB Meeting held at TMC Dr Rakesh Roy was unanimously selected as "President" of State Chapter.
- Dr Roy is the acting referee cum reviewer for the prestigious "ASCO IDEAAward" in Palliative Care.
- Dr Roy has been invited as panellist in the IAPC Annual Conference, Hyderabad, 2026.
- Dr Roy is also a NABH Assessor. He has already completed 5 Onsite Assessments
- Dr Roy has successfully completed Professional LLB from Odisha in 2025.
- Ms Sangeeta Das successfully completed the prestigious Degree – MSW from Rabindra Bharati University.
- Ms Sangeeta Das also successfully completed 1 yr IFS Course from Maharashtra.
- Ms Sangeeta Das is the acting faculty for 2week course in Pain & Palliative Care for Nurses, Volunteers and Social Workers under the aegis of IAPC-WB Chapter.
- Students from the Dept. of Applied Psychology and Clinical Psychology – Christ University Bangalore, Banaras Hindu University and Sister Nivedita University, Kolkata successfully completed their rotatory internship at SGCCRI under Ms Sangeeta Das.
- Ms Sangeeta Das will be presenting her work on Psychosocial Issues in Oncology in the upcoming IAPCON 2026 (IAPC's Annual Conference).
- Ms Sangeeta Das delivered a lecture on Psycho-Oncology in WBIAPCON 2025.
- Ms Sangeeta Das is an acting Faculty – Nursing BSC Diploma, SGCCRI.
- Ms Smritikana Ray Barman successfully completed GNM Degree from Andhra Pradesh Nursing College.
- SGCCRI for the fourth time has been Re-accredited with the prestigious Award – ESMO Designated Centre of Integrated Oncology & Palliative Care 2025-2027.
- The 'WORLD PALLIATIVE CARE AWARENESS DAY' was celebrated on 11th Oct 2025 at SGCCRI Campus. The theme of this year was "Achieving the Promise – Universal Access to Palliative Care". Patients and their caregivers were educated on Palliative Care, Role of Narcotics in Pain, Myths about Palliative Care, Home Based Care by SGCCRI etc. The entire management Team with Team Palliative Care was present.

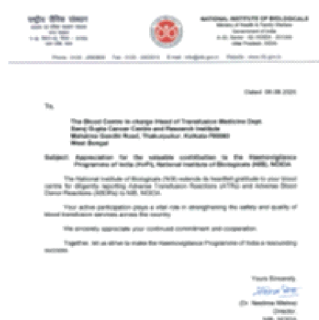
Hospital Achievements & Recognitions

- **Bengal Brilliance 2.0, a Fever 104 FM initiative (Tuesday, August 12, 2025)**
- Bengal Brilliance 2.0, a Fever 104 FM initiative 'bestowed the award for "Excellence in Cancer Diagnosis and Treatment" upon 'Saroj Gupta Cancer Centre & Research Institute', recognising our unwavering commitment to advancing cancer care. Dr. Arnab Gupta, our Director, accepted the honour on behalf of the Institute. This recognition further strengthens our mission to deliver hope, healing, and world-class



RECOGNITION:

- The Department of Scientific & Industrial Research (DSIR), Government of India recognizes this Institute as a "Scientific & Industrial Research organization (SIRO)". As a result of this recognition, donation to the scientific activities of this Institute qualifies for exemption u/s 35(i)(ii) of Income Tax Act, 1961.
- SGCCRI is a member of Star Alliance of National Institute of Biomedical Genomics (NIBMG), Kalyani – an Institute under Division of Biotechnology, Govt of India.
- SGCCRI has an MOU with IICB (Indian Institute of Chemical Biology) for active collaborative Research.
- The Institutional Ethics Committee of SGCCRI is registered with the CDSCO, Drug Controller General of India, Govt. of India and the registration is valid till 26th July 2030 and Government of India Ministry of Health & Family Welfare Department of Health Research till 5th October 2028
- SGCCRI has signed MOU with Swasthya Niketan Integrated Healthcare and Research Organization for active collaborative Research and Clinical Studies.
- This institute is an accredited member of the National Cancer Grid (NCG), an umbrella organization of all the major cancer centres in India, under the aegis of the Atomic Energy Commission, Govt of India. The purpose of NCG is collaborative research, development of guidelines suitable for Indian patients, and better teaching facilities. This institute is a very active member of it. Electronic Medical Record (EMR) is being introduced in the SGCCRI with the active support of the NCG.
- Blood Centre of our Institute is one of the few institutes to receive HaemoVigilance Certificate from National Institute of Biologicals, Ministry of Health & Family Welfare, Govt. Of India for our active participation which plays a vital role in strengthening the safety and Quality of Blood Transfusion services across the country.



Achievements of our Staff

Dr. ARNAB GUPTA

- Awarded Rotary Benevolence Excellence Award 2025 (Doctors Category) from Rotary Club of Kolkata, on June 22, 2025.



- Awarded Samajer Sera Purush Award from All Bengal Men's Forum on November 15, 2025.



Dr. ABHIJEET SARKAR

- Passed LLB from Madhusudan Law University in June 2025
- Editor of Medico Legal Society of India Journal

Dr. RAKESH ROY

- Completed Successfully Professional LLB from 'Madhusudan Law University' 2025.
- Appointed as Reviewer for the prestigious "ASCO IDEA Award in Palliative Care".
- Newly appointed NABH Assessor for Desktop and Onsite Assessments.
- Elected as President – IAPC WB Chapter for next 3 years.
- Appointed as Teaching Faculty in IAPC Conducted Palliative Care Courses.
- Selected as PI in A randomized Open Label Phase III Study of TDxDin Ovarian Cancer.



INTERNATIONAL POSTER PRESENTATIONS

- Low-Dose Nivolumab With Cabozantinib In Metastatic Renal Cell Carcinoma. Prague, EMUC 2025.
- A Real-World Case Series From A Resource-Limited Setting. Prague, EMUC 2025.

Dr. SUMAN MEYUR

- Awarded the "Professional Diploma in Clinical Research".
- Completed the certificate course on "Antibiotic Stewardship" from Stanford University School of Medicine.

Dr. SUMANTA DASGUPTA

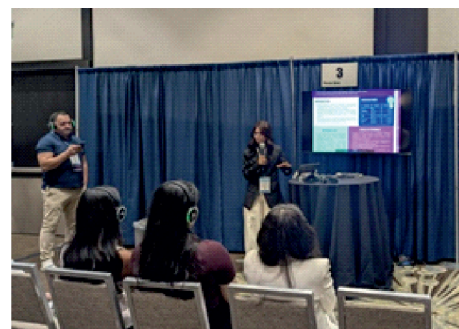
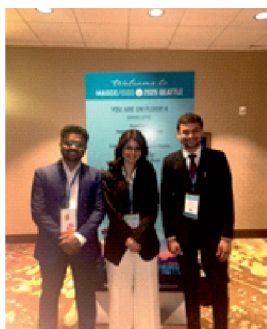
Organized 3rd state level hybrid annual conference of Society of Oncoanesthesia & Perioperative care, Kolkata city branch 'SOAPC Meet Kolkata 2025' as the 'Organizing Chairman'.

Dr. NIHANTHY S

- Appointed as a Sub-Editor for the Indian Journal of Medical and Paediatric Oncology (IJMPO), specifically in the sections of 'Art of Oncology' and Breast Oncology.

PRESENTATIONS

- **EMUC- November 2025, Prague, Czechia** Resource-responsive regimen: low-dose nivolumab with cabozantinib in metastatic renal cell carcinoma. a real-world case series from a resource-limited setting
- **ESMO - October 2025, Berlin, Germany** Sectional study of psychosocial distress and unmet needs in adolescent and young adult cancer patients
- **MASCC - June 2025, Seattle, USA** Comprehensive Evaluation of Psychosocial Distress and Unmet Needs in Adolescent and Young Adult Cancer Patients : A Cross-Sectional Study



Dr. SHOPTIK BASU

- Elected as Member, Royal College of Surgeons of Edinburgh
- Elected as Member, Royal College of Physicians and Surgeons of Glasgow
- Awarded Fellowship, Society of Surgical Oncology (USA)
- Awarded Fellowship, Association of Surgeons of India (FAIS)
- IASO Award Fellowship, Gothenburg (Sweden)
- Governing Council Member – INDEPSO / Indian HIPEC Registry
- Oral Presentation at ESMO Digital and AI Congress in Berlin, Germany
Presented the development of an artificial intelligence model to predict decision making in Head and Neck Cancers
- Oral Poster Presentation in European Society of Surgical Oncology, Sweden.
Presented a paper on developing a smart phone application based predictive model to predict complications after Cytoreductive Surgery and HIPEC in Carcinoma Ovary.



SANGEETA DAS

- Ms Sangeeta Das successfully completed the prestigious Degree – MSW from Rabindra Bharati University.
- Ms Sangeeta Das also successfully completed 1 yr IFS Course from Maharashtra.

Successful Candidates in Dr NB Final Examinations 2024-25

Dept. of Surgical Oncology



Dr. Azam Ali Shaik



Dr. Indrajit Malik



Dr. Pranjit Kalita



Dr. Pratap Kumar Deb

Dept. of Radiation Oncology



Dr. Ranajit Ghosh



Dr. Nigam Shankar Rana

Publications 2023 Onwards

Original work in form of presentation paper in various conferences.

- **Rana N S, Bhattacharjee G, Panda S.** An observational study to assess local control and neurocognitive functions after fractionated stereotactic radiosurgery for intracranial metastasis. An Abstract presented at AROICAN 2025.
- **Basu S.** iCRS Alert: A novel predictive model and smartphone application utilizing Inflammatory Biomarkers to predict postoperative complications in Carcinoma Ovary patients undergoing Interval Cytoreductive Surgery and HIPEC. Scientific Proceeding of NATCON IASO Abstracts & Case reports 2025. Indian J Surg Oncol (2024). <https://doi.org/10.1007/s13193-024-02168-6>

Original work published in journals

- **Sain B, Gupta A, Ghose A, Halder S, Bhattacharya S, Mondal R.R, Paul S, Are C, Boussios S.** Impact of COVID-19 on cancer services and patients outcomes: a retrospective single-center study. Ann Transl Med 2023 1 <https://dx.doi.org/10.21037/atm-22-5876>
- **Sain B, Gupta A, Ghose A, Halder S, Mondal RR, Sen A.N, Saha B, Roy S et al.** Clinico-Pathological Factors Determining Recurrence of Phyllodes Tumors of the Breast: The 25-Year Experience. at.a. Tertiary. Cancer.Centre..J.Pers.Med.2023,13,866.<https://doi.org/10.3390/jpm13050866>
- **DD Ghosh, RR Chowdhury, Dutta R, Mukhopadhyay I, Mukhopadhyay A, Roychoudhury S.** In-silico analysis of TCGA data showing multiple POLE-like favourable subgroups overlapping with TP53 mutated endometrial cancer: Implications for clinical practice in low and middle-income countries. <https://doi.org/10.1016/j.gore.2023.101209>
- **Halder S, Saroj DK, Dixit A, Sarkar B, Yadav S.** The Feasibility of Hybrid IMRT treatment planning for Left sided Chest Wall irradiation : A Comparative Treatment Planning Study. Iran J Med Phys 2023;20:31-41.10.22308/IJMP.2022.60694.2022
- **Halder S, Dixit A, Sarkar B.** Dosimetric Study of Hybrid Intensity Modulated Radiation Therapy Treatment Plan with Flattened Filter Free Photon Beam for Carcinoma of Breast: Treatment Planning Study. Turk J Oncol 2023;38(2):145-54 doi:10.5505/tjo.2022.3783
- **Halder S, Sarkar B, Dixit A.** Comparison of hybrid IMRT plans for breast cancer utilizing the variable ratio of 3DCRT and IMRT components to establish an optimal plan for target coverage with sparing lung and heart. doi10.22038/IJMP.2023.71357.2261
- **Halder S, Sarkar B, Dixit A.** Dose To Organ At Risk And Its Characteristic Variation With The Clinically Used Different Prescription Levels For Early Stage Left Sided Breast Cancer. 22 Nov 2023. <https://doi.org/10.1016/j.clon.2023.11.22>
- **Creutzberg, Carien L Barretina-Ginesta, Pilar et al** Clinical research in endometrial cancer: consensus recommendations from the Gynecologic Cancer InterGroup. The Lancet Oncology, Volume 25, Issue 9, 2024 e420 - e431.
- **McCormack M, Eminowicz G, D Gallardo, Diez P, Farrelly L, Kent C, Hudson E, Panades M, Mathew T, Anand A, Persic M, Forrest J, Bhana R, Reed N, Drake A, Adusumalli M, Mukhopadhyay A, King M, Whitmarsh K, McGrane J, Colombo N, Mak C, Mandal R, Roy Chowdhury R, Alamilla-Garcia A, Chávez-Blanco A, Feeney A, Vaja S, Hacker A M, Hackshaw A, Ledermann J A.** Induction chemotherapy followed by standard chemoradiotherapy versus standard chemoradiotherapy alone in patients with locally advanced cervical cancer (GCIG INTERLACE): an international, multicentre, randomised phase 3 trial. The Lancet, Volume 404, Issue 10462, 1525 – 1535. 2024.11.14
- **Absar S, Bhattacharyya S, Gupta A.** Cancer Trends in West Bengal Over 25 Years: A Comprehensive Single-Centre Study. Indian Journal of Surgical Oncology. <https://doi.org/10.1007/s13193-025-02252-5>. 2025.02.18
- **Sreenath Nihanthy D, Potharaju M, Chandrasekar S, Mangaleswaran B.** Efficacy of CyberKnife Stereotactic Radiosurgery in Treating Trigeminal Neuralgia: A Single-Institution Study. DOI <https://doi.org/10.1055/s-0044->

1801829. ISSN 2277-954X. 2025-04-02

- Kushwaha N K, **Sreenath Nihanth D**. From Present to Future: The Shifting Paradigm of Advanced Hepatocellular Carcinoma. DOI <https://doi.org/10.1200/OP-25-00198>. 2025.04.16
- **Gupta A, Bhattacharyya S, Shaik AA, Khan MA**. Outcome of Level 111 Axillary Node Dissection in Breast Cancer: 20 years Single Unit Experience in a Comprehensive Cancer Centre in Eastern India. <https://doi.org/10.1007/s13193-025-02278-9>. 2025.03.21
- **Mondal R R, Sahu S, Haldar S, Bhattacharyya S, Gupta A**. Risk factors for Positive Peritoneal Lavage Cytology in Stage I to III Colon Cancer: A Prospective Observational Study. Indian Journal of Surgical Oncology. 28 August 2025. <https://doi.org/10.1007/s13193-025-02416-3>.
- Paul R, Sinharay S, Dhar D, Sarkar P, Chakraborty P, **Ghosh S**, Roy A, saha A, **Roychoudhury S**, Nath S. A signature of correlated CDC20 and UBCH10 expression indicates poor prognosis in primary head and neck squamous cell carcinoma. Paul et al. BMC Cancer (2025)25:1458. <https://doi.org/10.1186/s12885-025-14773-x>
- **Sreenath Nihanth D** Sai Viksheth Raj, Mahadev P), et al. The Integration of Artificial Intelligence (AI) in Oncology: Transforming Cancer Care. Int J Spine Surg Res. 2025; 1(2): 1-6
- Rastogi S, **Sreenath Nihanth D**. Where the Borders Bleed: Festivals, Fragility, and the Footfall of a Young Soldier's Return. NJCO Global Oncology, August 2025. DOI <https://doi.org/10.1200/GO-25-00239>
- **Sreenath Nihanth D**, pandalangat S, Kapoor A, Govind R, Kausik M.R, Nair R, Bhuvu D, Rathore A, kumar M, and Mulajkar D. A comparative analysis of palbociclib and Ribociclib in metastatic hormone receptor –positive, HER2-Negative breast cancer :a prospective mid term follow –up study from an Indian cohort. BMC Cancer- August 2025.
- **Sreenath Nihanth D**, Kushwaha N K, Kaushik M R, Govind Rajath. Optimizing Oncological Care in Patients with End-stage Chronic Kidney Disease on Dialysis: Indian Scenario. Ind J Med Paediatr Oncol. February 2025
- Santhosh A, **Sreenath Nihanth D**. Treatments for unresectable hepatocellular carcinoma: insight from CheckMate9DW. The Lancet- November 2025.
- **Sreenath Nihanth D**. A Good Innings –A Tale of Hope, Heartbreak, and Healing. N ENGL J MED 392;17 NEJM.ORG May 1, 2025
- Santosh A, **Sreenath Nihanth D**. Checkpoint Dilemma: KEYNOTE -564's Triumph Amidst the Failures of Its Rivals in Renal Cell Carcinoma. J Case Rep Rev Med. 2025; 1(4):1-2 .doi :<https://doi.org/10.64978/jcrrm-0115>.
- Sreejith B R, Gupta P, Pothina S H, Kushwaha N K, Sarkar N, **Sreenath Nihanth D**. Gastrointestinal Stromal Tumours : Epitome of Variability. 18 November 2025. SN Comprehensive Clinical Medicine .
- **Basu S**. AI-Predict- BM: Artificial Intelligence to predict respectability and evaluate decisions for induction chemotherapy in treatment of buccal mucosa cancer.- A novel pilot study. Natl J Maxillofac Surg. 2025 May-Aug;16(2):256-262. doi: 10.4103/njms.njms_195_24

Original work in form of poster presentation

- Mukhopadhyay A, Ghosh T, Bhattacharjee D, Chakraborty D, Gupta , **Roy Chowdhury R**, Chatterjee P, Vernekar M, Chowdhury RR, Intermittent PARP Inhibitor Regimen In Ovarian Cancer (IPIROC): Origin and Feasibility Of Implementing A Proof –Of –Concept Exploratory Study. 18 October 2023 Abstracts.
- Asima Mukhopadhyay, Tanushri Ghosh, Daity Bhattacharjee, Dona Chakraborty, Rama Gupta, Indrani Roychowdhury, Puja Chatterjee, Manisha Vernekar, **Roy Chowdhury R**, Intermittent PARP inhibitor regimen in ovarian cancer (IPIROC): origin and feasibility of implementing a proof-of-concept exploratory study. and Ipiroc Study Group. 7 November 2023

Ph.D/ MD/ DNB/ MSc Thesis / Dissertation.

Year	Name of DNB Candidate	Thesis Topic	Guide/ Co-Guide
2020	Dr. Vishal Mukherjee	Pathological Complete Response After Neoadjuvant Chemotherapy In Locally Advanced Breast Cancer Subtypes – A Prospective Observational Study.	Prof. (Dr.) Arnab Gupta, / Prof. (Dr.) Saradindu Ghosh
	Dr. Radha Raman Mondal	Peritoneal Lavage Cytology in Colon Cancer: Association with Pathological Stage & Laterality – A Prospective Observational Study	Prof. (Dr.) Samir Bhattacharyya / Dr. Subrata Kumar Sahu,
2021	Dr. Pranjit Kalita	Histopathological Regression Grade After Neoadjuvant Chemotherapy In Locally Advanced Breast Cancer Subtypes- A Prospective Observational Study	Dr. Subrata Kumar Sahu
2021	Dr. Azam Ali Shaik	Comparison On Lymph Node Positivity In Patients Receiving Neoadjuvant Chemotherapy Vs Upfront Surgery In Resectable Stage 3 And Stage 4 Oral Cavity Cancers:An Observational Study	Dr. Arnab Gupta
	Dr. Pratap Kumar Deb	A PROSPECTIVE OBSERVATIONAL STUDY OF RESPONSE TO NEOADJUVANT CHEMOTHERAPY OF CARCINOMA STOMACH WITH RESPECT TO PRESENCE OR ABSENCE OF HER 2 OVEREXPRESSION	Dr. Samir Bhattacharyya
	Dr. Indrajit Malik	Pathological T staging and N staging relation in Gall Bladder Carcinoma and its relation to clinical outcome	Dr. Arnab Gupta

2022	Dr. Sushanta Sarkar	Comparison of Surgical and Histopathological Margins of Upfront Operable Oral Squamous Cell Carcinoma: An Observational Study	Dr. Saradindu Ghosh
	Dr. Tapas Ranjan Behera	Association of Body mass Index with Clinicopathological characteristics and Hormone Receptor status in Breast Cancer patients: A prospective observational study.	Dr. Arnab Gupta
	Dr. Piyas Sengupta	Correlation of Msi Status With Response To Neoadjuvant Chemoradiation in Locally Advanced Rectal Adenocarcinoma	Dr. Samir Bhattacharyya
2022	Dr. Khan Maaz Ahmed Wasim Ahmed	"A Comparative Prospective, Observational Study Of Short Term Outcomes of Laparoscopic Versus Open Surgery For Colorectal Cancer"	Dr. Subrata Kumar Sahu
2023	Dr. Namrata Majumdar	Correlation of HER 2 NEU Positivity and Response to Neoadjuvant Chemotherapy in Locally Advanced Gastric Carcinoma.	Dr. Samir Bhattacharyya
	Dr. Prashant Kumar Sinha	Comparative Study of Response of Induction Chemotherapy between Locally Advanced Tongue and Gingivobuccal Squamous cell carcinoma.	Dr. Saradindu Ghosh
	Dr. Subrato Mahakur	Clinico-Pathological Response evaluation of Single (ER or PR) versus Double (ER and PR) Hormone receptor positive Her-2 negative breast Cancer patients treated with Neoadjuvant chemotherapy	Dr. Arnab Gupta

	Dr. Siddharth	Comparative Analysis of Short-Term Surgical Outcomes: Proximal Gastrectomy vs. Total Gastrectomy for Proximal Gastric Adenocarcinoma.	Dr. Subrata Kumar Sahu
2024	Dr. Bajrang Sharma	Correlation Of Nutritional And Inflammatory Markers In Predicting Post-Operative Complications In Major Gi Cancer Surgeries	Dr. Subrata Kumar
	Dr. Jaydeep Mandal	Evaluation of Indocyanine Green (ICG), Blue Dye, and Combined Method in Sentinel Lymph Node Biopsy for Early Breast Carcinoma	Prof. (Dr.) Samir Bhattacharyya
	Dr. Himen Baidya	Comparative Analysis of Lymph Node Metastasis in Gingivobuccal Sulcus versus Tongue Squamous Cell Carcinoma: A Clinicopathological Study	Dr. Saradindu Ghosh
	Dr. Rupali Niraj	Safety And Morbidity Analysis Of Level Iii Axillary Lymph Node Dissection In Breast Cancer - An Ambispective Study	Prof. (Dr.) Arnab Gupta

Case presentations published in Journals

- **Deb P K, Roy R, Roy S, Roy S.** Epitheloid hemangioendothelioma of the urinary bladder: A case report of a rare entity. Indian J Case Reports 2023;April 05 (Epub ahead of print).
- **Deb P K, Roy R, Roy S, Roy S.** HCC masquerading as gluteal mass. A rare presentation. Indian J Case Reports 2023;March 27 (Epub ahead of print).
- **Sain B, Gupta A, Ghose A, Halder S, Mukherjee V, Bhattacharya S, Mondal RR, Sen A.N, Saha B, Roy S;** et al. Clinico-Pathological Factors determining Recurrence of Phyllodes tumors of the Breast: the 25-Year Experience at a Tertiary Cancer Centre. J.Pers.Med.2023,13,866 <https://doi.org/10.3390/jpm13050866>
- A rare presentation of Jejunal GIST: a Case Report : published in International Journal of Surgical Case Reports
- **Kalita P, Gupta A, Sengupta P, Bhattacharyya S,** Indian J Case Reports; December 2024 <https://doi.org/10.1016/j.ijscr.2023.109151>, Available online 12 December 2023
- ORIGINAL ARTICLE Cancer Trends in West Bengal Over 25 Years: A Comprehensive Single Centre Study Shazia Absar, **Samir Bhattacharyya, Arnab Gupta:** Indian Journal of Surgical Oncology <https://doi.org/10.1007/s13193-025-02252-5>, Published on 1st March, 2025.
- ORIGINAL ARTICLE Outcome of Level III Axillary Node Dissection in Breast Cancer: 20 years Single Unit Experience in a Comprehensive Cancer Centre in Eastern India: **Arnab Gupta1 • Samir Bhattacharyya1 • Azam Ali Shaik1 • Maaz Ahmed Khan1** Indian Journal of Surgical Oncology <https://doi.org/10.1007/s13193-025-02278-9>, April, 2025.
- Risk Factors for Positive Peritoneal Lavage Cytology in Stage I to III Colon Cancer: A Prospective Observational Study **Radha Raman Mondal1 • Subrata Sahu2 • Sudip Haldar3 • Samir Bhattacharyya2 • Arnab Gupta2** in Indian Journal of Surgical Oncology in September, 2025 <https://doi.org/10.1007/s13193-025-02416-3>
- **Sahu S K, Deb P K, Bhattacharyya S, Gupta A.** Superior mesenteric artery syndrome post-total proctocolectomy: A challenging post-operative dilemma. Indian J Case Reports 2023;October 29
- **Kalita P. Gupta A, Sengupta P, Bhattacharyya S, Mishra S, Dasgupta S.** Carcinoma of the axillary tail of Spence: A rare case report. <https://doi.org/10.1016/j.ijscr.2023.109151>
- **Kalita P. Gupta A, Sengupta P, Bhattacharyya S.** A rare presentation of jejuna GIST: A case report. Indian J Case Reports. 2024;December 29 (Epub ahead of print)
- **Deb PK, Sahu SK, Bhattacharyya S, Behera T.** Appendicular schwannoma: Case report of a rare differential of a right iliac fossa mass. Indian J Case Reports. 2024.July 08 (Epub ahead of print)

Book Chapter

- **Meyur S.** "Chronic Lymphocytic Leukemia" in IACM Clinical Medicine Update 2025 .Jaypee Publishers.
- **Basu S, Mukherjee R.** "Head and Neck Cancers" in Post Graduate Surgery. Jaypee Publishers
- **Basu S, Mukherjee R.** "Career Prospects after Post Graduation in Surgery" in Post Graduate Surgery. Jaypee Publishers
- **Basu S** "Peritoneal Surface Malignancies" in Post Graduate Surgery. Jaypee Publishers
- **Mukherjee R, Basu S, Mukhopadhyay G,** Anatomy of the Axilla:, Sentinel Node Biosy, Chintamani, Springer Singapore
- **Kar M,** API Medicine, A-Clinical Compendium 2025. An Approach to a Case of Paraneoplastic Glomerulopathy- Page 258-260. Publisher- JAYPEE BROTHERS Medical Publisher , Delhi, India.
- **Kar M,** IACM Clinical Medicine Update 2025 - Chronic Lymphocytic Leukemia - Page 303, Publisher- JAYPEE BROTHERS Medical Publisher, Delhi, India

EVENTS 2025

Christmas was celebrated at the Child Care Centre like previous years with great joy and festivity. Santa Claus and Mickey Mouse added to the excitement, delighting the children throughout the event. We express our sincere gratitude to Papri Saha, Jayanta Badya Majumder, and Anjan Saha for bringing the true spirit of Christmas to our little warriors. The parents, Management, Staff, and extended SGCCRI family joined the celebration, making the day truly memorable for everyone.



Students & teachers of ICFAI (Institute of Chartered Financial Analysts of India) Business School, Kolkata conducted the New Year celebrations with Gifts & Magic Show at the Child Care Centre, SGCCRI (Saturday, January 4, 2025)



Star gazing with the Children at the rooftop of IMCH (Monday, January 6, 2025)

Mr. Saikat Bhadra and Prof. Dipankar Dey from the Sky Watchers' Association conducted an engaging stargazing session with the children. They also presented gifts to all the participants. Special thanks to Dr. Aniruddha Sengupta for connecting them with us.



14th East Zonal Oncology Symposium was held at The Park Hotel, Kolkata. Saturday, January 25, 2025

The **14th East Zonal Oncology Symposium**, organized by Saroj Gupta Cancer Centre & Research Institute (SGCCRI) under the aegis of IASO and the ASI WB Chapter, was held on 25th January at The Park Hotel, Kolkata.

The event witnessed an impressive participation, featuring 9 overseas experts, 9 national faculty members, and over 70 local specialists, along with more than 220 registered delegates. It proved to be an outstanding academic forum, enriched by insightful deliberations from eminent oncologists and distinguished scientists.

Two major highlights of the symposium were the **Dr. Saroj Gupta Oration**, delivered by the legendary surgeon **Dr. Paul Sugarbaker**, after whom several renowned surgical procedures are named, and the Henry Shaw Oration delivered by **Dr. S. V. S. Deo** (Past President, IASO & ABSI).

Young postgraduates, medical students, and junior researchers participated with great enthusiasm in the poster presentations and Oncoquiz, earning several awards for their contributions.

Our founder, **Dr. Saroj Gupta**, would have been immensely proud to witness such vibrant academic engagement and the coming together of distinguished experts at this annual event.

We extend our heartfelt appreciation to Team SGCCRI for their tireless efforts. Special thanks to Organizing Chairman Dr. Samir Bhattacharyya, Organising Secretary Dr. Arnab Gupta, Treasurer Dr. Saradindu Ghosh, and our dedicated Management and Office Staff for their invaluable support in making the symposium a resounding success.

Glimpses of the 14th East Zonal Oncology Symposium.



WORLD DIETETICS DAY Celebrated in the dietetics department of SGCCRI (Friday, January 10, 2025)



Inauguration of Genetic Clinic at OPD (Saturday, February 1, 2025)

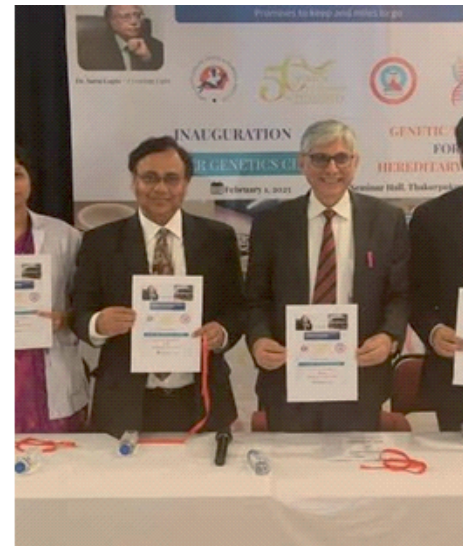
The Cancer Genetic Clinic at the OPD of Saroj Gupta Cancer Centre & Research Institute was inaugurated by Dr. Rajiv Sarin, Head of the Cancer Genetic Clinic, Tata Memorial Hospital, ACTREC. We are deeply grateful to Dr. Sarin for his invaluable guidance and for providing specialized training to our doctors and nurses at his centre.

This dedicated clinic has been established with the objective of offering specialized genetic counselling, risk assessment, and advanced diagnostic support

for individuals with a family history of cancer or hereditary risk factors. The initiative represents a significant step toward personalized medicine, early detection, and preventive oncology.

The Genetic Clinic will provide services such as genetic evaluation, counselling sessions, testing guidance, and customized surveillance plans—further strengthening SGCCRI's commitment to comprehensive cancer care with a strong focus on awareness, prevention, and improved patient outcomes.

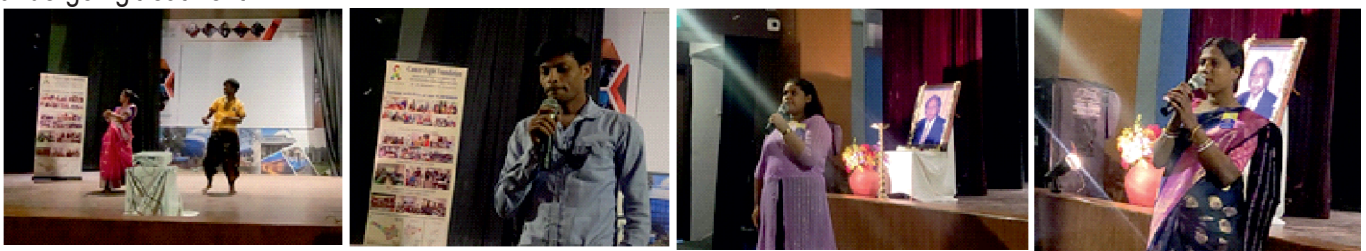
গত ক্যান্সার রুখতে কলকাতা জেনেটিক কাউন্সেলিং ক্লিনিক



World Cancer Day (Tuesday, February 4, 2025)

Glimpses of World Cancer Day

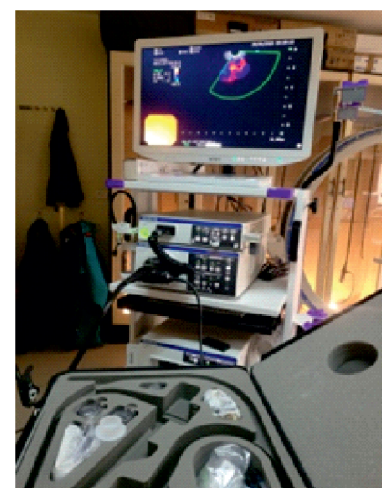
World Cancer Day was observed in our auditorium, where many cancer survivors and their families performed and shared their inspiring journeys. Their stories of resilience offered hope, strength, and encouragement to patients currently undergoing treatment.



The Endoscopy Department marked a significant advancement with the inauguration of a new state-of-the-art endoscopy machine.

The addition of Endoscopic Ultrasound (EUS) and Endobronchial Ultrasound (EBUS) with guided biopsy has further strengthened our diagnostic capabilities. These technologies allow safe and precise biopsies from areas that are difficult to access through conventional methods—ensuring accurate diagnosis while minimizing the risk of cancer cell spillage.

These advanced services are now being offered at subsidized rates, reinforcing our commitment to delivering comprehensive and affordable cancer diagnostics to our patients.



A drama was staged by the Belghoria Theatre Academy (Friday, April 25, 2025)

Chikitsa Sankat, a drama was staged by Belghoria Theatre Academy and directed by Dr. Amitabha Bhattacharya.

The performance offered an engaging and uplifting cultural experience, marking a meaningful start to the Bengali New Year and reflecting our collective hopes and prayers for peace across the world.



Inauguration of a Water Cooler, sponsored by Shree Kashi Viswanath Seva Samity in association with Sri Purushottam Beria, Organised by Jal Seva Trust. (Wednesday, May 7, 2025)



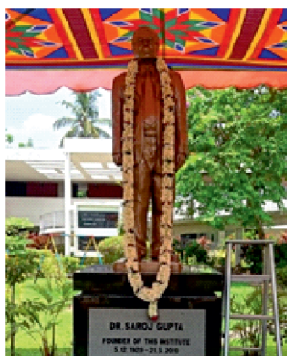
The occasion was graced by Sri Vivek Gupta, MLA, Jorasanko. Our heartfelt thanks to all who made this possible

15th Memorial Anniversary of Dr. Saroj Gupta (Wednesday, May 21, 2025)

Tribute to Our Founder – Dr. Saroj Gupta

On this day, the Institute paid heartfelt homage to its revered founder, **Dr. Saroj Gupta**, by garlanding his statue and organising a blood donation camp in his memory — a fitting tribute to a visionary whose life was dedicated to the service of humanity.

Through every act of service and each drop of blood donated, his legacy continues to inspire us. His spirit lives on in our unwavering commitment to carry forward his mission of hope, healing, and compassion.



The new age in critical care Nursing held on Friday, June 6, 2025

Some of our Senior Nursing Staff participated in the 3rd Edition of Nursing Conclave at the Bengal Chamber of Commerce and Industries

At SGCCRI, we strongly believe that continuous learning leads to compassionate, cutting-edge care.

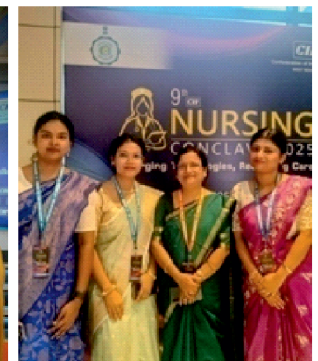
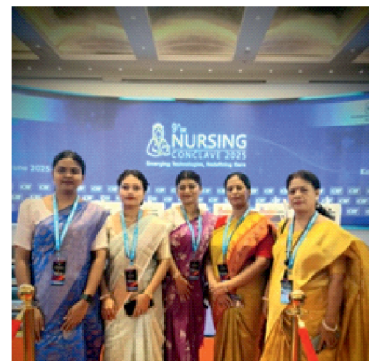


9th CII Nursing Conclave 2025 at ITC Sonar, Kolkata (Thursday, June 19 2025)

Some of our dedicated nursing staff recently participated in the 9th CII Nursing Conclave 2025 at ITC Sonar, Kolkata, arranged by Confederation of Indian Industry (CII) — a prestigious platform focusing on "Emerging Technologies, Redefining Care."

Workshops and events like these are a part of our commitment to empowering our nurses with the latest knowledge, best practices, and advanced skills to deliver patient-centered excellence.

We are proud to support and encourage our team on their journey of growth, learning, and innovation in healthcare.



The Lions Club Kolkata Grand inaugurated 2 infusion pumps, 1 projector, 1 screen at the child care centre (Monday, June 9, 2025)

Worlds Blood Donors day: Blood donation at blood center, SGCCRI (Saturday, June 14, 2025)



Our World Blood Donor Day Blood Donation Camp was a resounding success, made possible by the selfless individuals who came forward to donate blood and offer the gift of hope to cancer patients. Their generosity and compassion exemplify the spirit of community support that strengthens our mission of care.

Rath Yatra (Friday, June 27, 2025)



Some moments stay with us forever..... Our brave children celebrated Rath Yatra with heartfelt joy, reminding us of their incredible resilience. At Saroj Gupta Cancer Centre & Research Institute, we strive not only to treat but also to nurture hope and celebrate life. Their courage continues to inspire us every day.

Doctors day Spreading Smiles, Sharing Hope on (Tuesday, July 1, 2025)



Doctors were felicitated by the Rotary Club of Calcutta Sun City. They also gave gift hampers to our children. Their thoughtful contributions and heartfelt interaction brought immense joy and support to our little warriors. Together, we move one step closer towards a healthier, happier tomorrow.

Onco-Nutricon 2025: National Conference on Oncology Nutrition at HHI (Saturday, July 12, 2025)

The Saroj Gupta Cancer Centre & Research Institute (SGCCRI), in collaboration with the Indian Dietetic Association (IDA), Bengal Chapter, successfully hosted the second edition of Onco-Nutricon 2025 — a one-day national-level conference held on 12th July, 2025 at Hotel Hindustan International (HHI), Kolkata.

Focusing on “Personalized Nutrition in Critical Care Oncology – The Future of Cancer Care, Challenges and Opportunities,” the conference highlighted the vital role of nutrition in cancer prevention, treatment, and recovery.

Building on the success of its inaugural edition in 2024, this year’s event marked a significant milestone by expanding its reach to a national level. The Organising Committee comprised members from SGCCRI and IDA, including Chief Patron Mr. Anjan Gupta, Organising Chairman Prof.(Dr.) Arnab Gupta, Treasurer Dr. Gautam Bhattacharya, Organising Secretary Ms. Aditi Adhya, and IDA leaders Ms. Malabika Datta and Ms. Shaonli Majumdar.

Eminent speakers from across India shared their expertise, including Ms. Bhakti Samant (Kokilaben Dhirubhai Ambani Hospital, Mumbai) and Ms. Sunita Sahoo (Apollo Hospitals, Bhubaneswar), alongside leading local experts such as Ms. Sanghamitra Chakravarti, Ms. Tiash Sinha, Mr. Soumyendu Ghosh and senior doctors from SGCCRI. A special panel discussion focused on the role of nutrition in palliative cancer care.

The conference was attended by over 100 delegates, including professionals and students from various healthcare institutions. Poster and abstract presentations by MSc (Nutrition & Dietetics) students witnessed a 30% increase in participation compared to the previous year, reflecting the growing academic impact of the event.

The day concluded with the distribution of prizes and acknowledgement of all contributors, marking another successful step towards advancing knowledge and collaboration in the field of oncology nutrition.



Soft Skill Development Workshop hosted by NCRI Cancer Centre (Sunday, July 27, 2025)

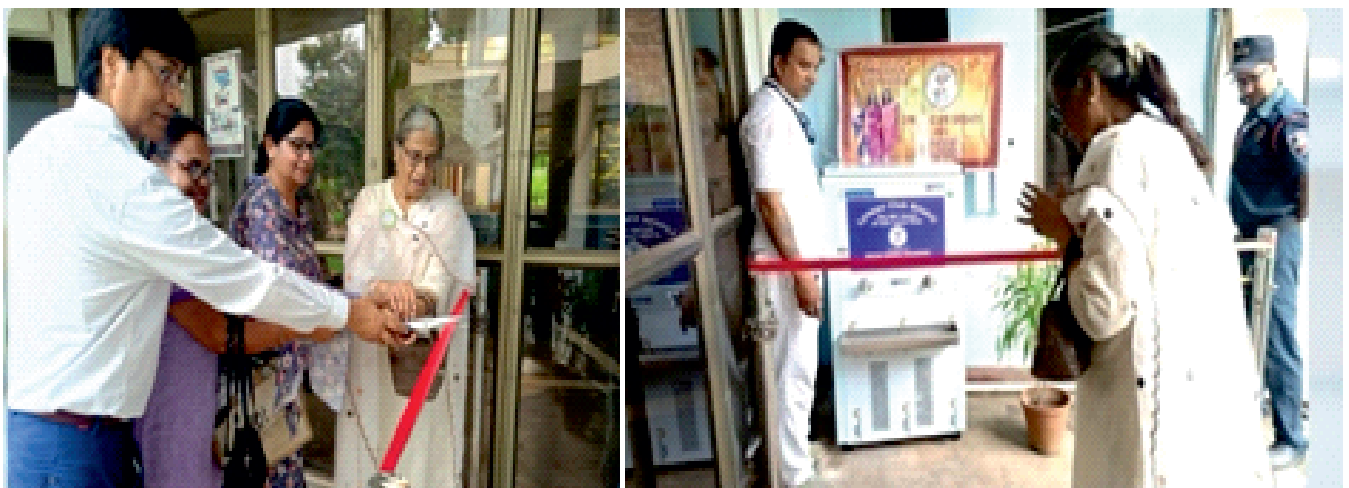
Our dedicated Nursing Team from Saroj Gupta Cancer Centre & Research Institute attended the Soft Skill Development Workshop hosted by NCRI Cancer Centre — and they shined bright!

Winning 1st Prize in both the Poster and Quiz Competitions, they showcased not just knowledge, but compassion, creativity, and communication — the true pillars of care giving. Congratulations to our nursing heroes — your excellence inspires us all!



Inauguration of Water Filter, Lyness Club, in memory of Shayam Sunderji Parasramika, year (Monday, August 4, 2025)

We extend our heartfelt gratitude to Lyness Club Srishti for donating a water purifier and dispenser for our patients at Saroj Gupta Cancer Centre & Research Institute. Clean drinking water is a vital support for those on their healing journey, and we truly appreciate this compassionate gesture. We are honoured to welcome the members of Lyness Club Srishti and thank them for helping us create a more supportive environment.



A day of joy, strength, and shared hope! (Thursday, August 7, 2025)

One of the brave cancer survivors from Sahas Cancer Centre graced the birthday celebration of a young warrior at our Pediatrics Ward.

With a heart full of compassion and a story of triumph, she lit the candle of hope for our little fighters—proving that cancer is not the end, but a battle that can be won.

Her presence turned the party into a powerful reminder: Survivors inspire, and hope heals.



Rakhi (Friday, August 8, 2025)

Children in our IMCH ward celebrated Rakhi Purnima in a truly special way—with beautifully handcrafted Rakhis made by our own young cancer warriors. The presence of our management, staff members, and the children's parents made the occasion even more memorable, as smiles, courage, and sibling bonds lit up the ward. These little hands don't just tie Rakhis—they tie hearts with hope.



Independence Day and the Rakhi Utsab, (Friday, August 15, 2025)

The children of our Institute filled the air with joy and hope on this special occasion under the gentle guidance of our music therapist, Mrs. Papri Saha. Wishing them strength, happiness, and a smooth and speedy recovery. Jai Hind! An NGO called Baranagar Ekanta Asha, Rotary Club of Calcutta Majestic & Tirthapati Institute Alumnus were a part of the Independence Day celebration providing Fruits to all our patients.



Rotary Club of Calcutta South Circle Donated Emergency Stretcher Trolley to Patients of SGCCR
(Saroj Gupta Cancer Centre & Research Institute)
Tuesday, August 19, 2025



Eastern India Women Association Donated Emergency Stretcher Trolley to Patients of SGCCR
(Saroj Gupta Cancer Centre & Research Institute)
(Thursday, September 18, 2025)



Durga Puja (Saturday, September 27, 2025)

At our Paediatric Ward, the spirit of Durga Puja came alive with the brightest smiles of our little warriors. Amidst the festive beats of dhak and joy of celebrations, our young patients fighting cancer showcased their strength through a beautiful cultural program. This event was nicely organized by Ms Papri Saha, our Music Therapist and her team. Their courage is our inspiration, their laughter our blessing, and their spirit the true essence of Durga Puja.



Shopping Festival (Tuesday, October 14, 2025)

A heartfelt thanks to Lions Club Kolkata for organizing a joyful Shopping Fest for our brave young cancer fighters and specially-abled children. From gifts to goodies and food for all — the day was filled with laughter, excitement, and unforgettable moments of happiness. "Because every smile counts, and every act of kindness heals".



Inauguration of Post Basic Diploma in Oncology Nursing (Friday, October 31, 2025)

We are proud to announce the commencement of the 'Post Basic Diploma in Oncology Nursing' at Saroj Gupta Cancer Centre & Research Institute.

The inaugural ceremony, held on 31st October 2025 on our campus, marked a significant milestone in our commitment to advancing cancer care education.

We were honoured to welcome Ms. Doli Biswas, recipient of the Florence Nightingale Award 2024, as our Chief Guest. Her inspiring words of wisdom and compassion encouraged our future caregivers as they embark on this noble journey.



Childrens Day Celebration (Friday, November 14, 2025)

An excellent cultural programme was presented by our child patients and survivors, under the direction and guidance of Ms. Papri Saha, our music therapist, as in previous years. The event was followed by a musical performance by Ms. Jojo Mukherjee, our Chief Guest. Mr. Vineet Jain, President, Lions Club of Howrah graced the occasion as Guest of Honour. Parents, staff members, and the management participated wholeheartedly in this colourful celebration. This event was sponsored by the Lions Club of Howrah.



Society of Onco Anaesthesia and Peri-operative Care (SOAPC) Meet, Kolkata (Sunday, November 16, 2025)

The 3rd State-Level Annual Hybrid Conference of the 'Society of Oncoanaesthesia & Perioperative Care', Kolkata City Branch, was held this year in two phases: the Workshop on 26th October at IPGMER & SSKM Hospital, and the CME on 16th November at Saroj Gupta Cancer Centre & Research Institute, Thakurpukur, Kolkata.

With the support and continuous patronage of Sri Anjan Gupta, Hony. Secretary, and Dr. Arnab Gupta, Director, SGCCRI, the Anaesthesia Department successfully organized the conference at our premises, with Dr. Sumanta Dasgupta, Medical Administrator & HOD, Anaesthesia & Critical Care, SGCCRI, serving as the Organising Chairman.

Around 70 delegates participated in the workshop, where various aspects of onco-anaesthesia practice were demonstrated hands-on using volunteers and mannequins for improved understanding. Approximately 150 offline delegates and 40 online delegates attended the CME.

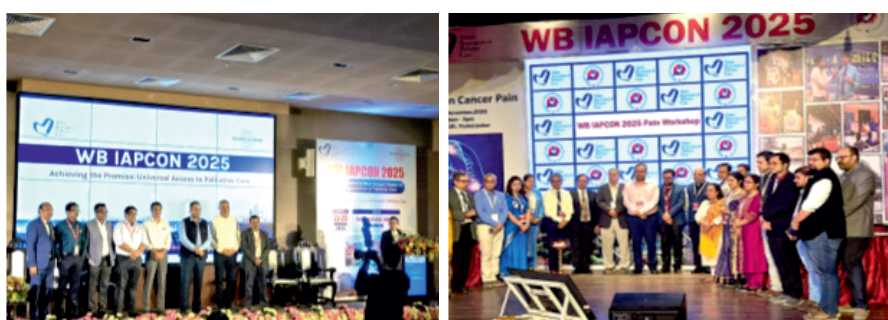


Indian Association of Palliative Care-West Bengal Chapter Conference workshop on Saturday, November 22, 2025 (Saturday)

First Conference of West Bengal Chapter of Indian association of Palliative Care WB IAPCON 2025 and Workshop on Cancer Pain management was hosted by Saroj Gupta Cancer Centre & Research Institute. Many renowned faculties and other experts from different Institution participated in this event. The event was a great success.

The inauguration was done by the Honorary Secretary SGCCRI Mr Anjan Gupta, HOD Radiotherapy and Pain - Palliative Care, SGCCRI Dr Gautam Bhattacharjee, President Of WBIAPC Prof Shyamal Sarkar, Medical Administrator SGCCRI Dr Sumanta Dasgupta. The seminar focussed on 'the concept of Total Pain' and 'holistic approach of cancer pain management'. Workshop also comprised of hands on training in Sonoanatomy, Intervention Pain approach, TENS, Acupuncture and Physiotherapy for pain control.

The National Faculties comprised of Dr Brajesh Ratte, AIIMS New Delhi, Dr Suvvari from Hyderabad, Dr Gaurav Kumar and Dr R Nandi from TMC, Kolkata.



96th Birth Anniversary of our Founders Late Dr Saroj Gupta and 52nd Anniversary of SGCCRI (Friday, December 5, 2025)

The day started with **Blood Donation Camp** by the Members of the Management & Staff for Cancer patients, especially the children. The members of Management & Staff staged a **drama 'Aboseshe'** after the Inaugural program with the direction of Dr Ramprasad Mondal & Dr Tanmoy Chatterjee. This was the 13th such drama paying tribute to the Founder on his birthday. Eminent Actor Ranjit Mallick was our Chief Guest who paid tribute to our Founder by garlanding his statue, along with the members of Management & Staff. This was followed by the **Inaguration of Pathology Lab**. The Cultural Programme started with the Inaugural song by the founder's grandchildren, followed by the welcome address by Anjan Gupta, Hony Secy.

'**Dr Saroj Gupta LifeTime Achievement Award**' was given to Mr Ranjit Mallick, an eminent actor. Dr Gautam Bhattacharjee, Head of the department of Radiotherapy & Palliative Care. He has been associated with this institute since 21.09.1981 & Ms Chhanda Das, OPD-In-charge, has been associated with this institute since 01.04.1987



WEEKLY CME 2025



Dr. Saraswati Sukumar (Extreme Left)



Dr. Sumit Sharma (2nd from left)



Dr. Sumit Sharma (16.01.2025)



Dr. Tanmoy Saha (Extreme Left 14.08.2025)

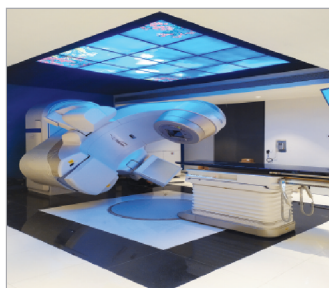


Ms. Yashodhara Bhattacharya (Extreme Left) 24.07.2025

Comprehensive **Cancer** Hospital with 52 Years of experience. Affordable to all classes of people

Recent Additions & Highlights :

- **All modern Diagnostic & Treatment facilities**
- **Surgeries** - LASER, Radio Frequency Ablation, CUSA, HD Laparoscopy & Operating Microscope for advanced surgeries
- **Radiotherapy** - LINAC machines (with SRS, SBRT, 3DCRT, IMRT IGRT, Rapid Arc.), Telecobalt with TPS Planning, Gamma Irradiator, Interstitial & Intraluminal Brachytherapy, C.T. Simulator
- **Medical Oncology** - International Protocols are followed here, in dedicated Day Care Ward and in Patients
- **Bone Marrow Transplant Unit**
- **Nuclear Medicine with Radioiodine Therapy**
- **PRRT, Alpha Therapy**
- **Paediatric Medical Unit**
With ICU, AC Wards, Toy Train & Library for Children & Music Therapy
- **Palliative Care** (for terminal disease) with Pain Clinic
- **Radiology** - PET CT (including PSMA DOTA, TOC), CT Scan, Mammography, MRI Unit, DEXA Scan (BMD)
- **Molecular Biology Laboratory** with RTPCR, FISH, Analysis & Flow Cytometer
- **Pathology with IHC, Frozen Section**
- **Therapeutic Endoscopy Unit**
- **Excellent natural ambience with Super Deluxe Cottages, Suites, AC Cubicles & General Wards.**
- **Cancer Genetic Clinic**



Saroj Gupta Cancer Centre & Research Institute



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Saroj Gupta Cancer Centre & Research Institute

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