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**Dr Sanjit Kumar Agrawal**  
**Senior Consultant, Department Of Breast Oncosurgery**  
**Tata Medical Center, Kolkata**  
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### Academic Qualifications

- **MBBS, MS (General Surgery)**  
Patna Medical College, Patna — 2006–2009
- **Fellowship in Surgical Oncology**  
Tata Medical Center, Kolkata — 2012–2015
- **European Board of Surgery Qualification in Breast Surgery**  
Union Européenne des Médecins Spécialistes (UEMS), Europe — 2015
- **Fellow of the American College of Surgeons (FACS)**  
Awarded — 2024

### International Training and certificates

- **Fellowship in Breast Oncosurgery (UICC)**  
Helsinki University Central Hospital, Finland
- **Fellowship in Breast Oncosurgery (IACA)**  
Breast Services, Cleveland Clinic, USA
- **Observership in Breast Oncosurgery**  
Breast Unit, Champalimaud Clinical Center, Portugal
- **Observership in Reconstructive Breast Surgery**  
Memorial Sloan Kettering Cancer Center, USA
- **Certificate in Applied Biostatistics**  
The Harvard Clinical and Translational Research Center

### Employment Details

- **Senior Consultant, Breast Oncosurgery**  
*Tata Medical Center, Kolkata — June 1, 2015 – Present*
- **Academic Officer, Faculty Academic Council**  
*Tata Medical Center, Kolkata — May 1, 2024 – January 31, 2025*
- **Registrar, General Surgery**  
*Tata Main Hospital, Jamshedpur — July 1, 2010 – March 1, 2012*

- **Senior Registrar, Neurosurgery**

*Safdarjung Hospital, New Delhi — November 5, 2009 – May 1, 2010*

- **Senior Registrar, General Surgery**

*Sardar Vallabh Bhai Patel Hospital, New Delhi — June 12, 2009 – November 4, 2009*

### Professional Summary

Dr. Agrawal is an accomplished breast oncosurgeon with over a decade of specialized experience in oncoplastic surgery, sentinel lymph node biopsy (SLNB), and breast reconstruction. Currently serving as Senior Consultant at Tata Medical Center, Kolkata, he has performed more than 3,500 breast cancer surgeries, with a strong focus on adapting advanced surgical techniques to the Indian clinical context. He holds multiple international fellowships, including training at Helsinki University Central Hospital (Finland), Cleveland Clinic (USA), Champalimaud Clinical Center (Portugal), and Memorial Sloan Kettering Cancer Center (USA). He earned the prestigious European Board qualification in breast oncosurgery and is an examiner for the European Breast Surgery Qualification. Dr. Agrawal has led and contributed to over 25 research projects and published more than 50 peer-reviewed articles. His main academic interest lies in implementing and optimizing SLNB in low- and middle-income countries (LMICs), with impactful research contributions that have improved surgical practice across Asia. He has received numerous awards for his academic and clinical contributions and actively mentors fellows and junior surgeons across India, Asia and Africa.

### Core Expertise

- Oncoplastic breast surgery (Level I, II & II)
- Sentinel lymph node biopsy (ICG-guided and dual tracer)
- Breast conservation and whole body reconstruction (CWPF, LD flaps, implant-based)
- Breast cancer health economics and surgical outcomes research
- Clinical mentorship, protocol development, and surgical education
- Multidisciplinary cancer care and capacity building

### Breast cancer Surgery done(2015-2023): 3500 patients experience

<u>Type of surgeries</u>	<u>Number</u>	<u>Remarks</u>
Modified Radical mastectomy	>1500	Developed techniques to reduce dog ears and seroma
Axillary Lymph node dissection	>1500	Using a Harmonic energy device to reduce complications in selected case
Sentinel Lymph node biopsy	>1000	Established ICG as an alternative to radioactive dye
Breast conservation surgery(Simple, level 1 ( Round block, Batwings, Tennis racquet, V and J plasty, Grisotti) Oncoplastic surgeries, Wire localised excision	>1000	Optimal use is selected patients
Level 2 oncoplastic breast surgeries( Chest wall p[erforator flaps and Therapeutic mammoplasty )	>500	Tailored the techniques for Indian breast cancer patients.

Conservative mastectomies(skin and Nipple sparing) with Breast reconstruction ( LD, Extended LD, Goldilocks, Implant with or without ADM)	>500	A wide variety of reconstruction techniques to offer reconstruction
B/L risk-reducing mastectomy	>30	In HBOC patients and BRCA carrier

### Axillary staging by SLNB in developing countries: Challenges and solutions

My one of the research interest lies in improving access to and quality of **Sentinel Lymph Node Biopsy (SLNB)** for eligible breast cancer patients in low- and middle-income countries (LMICs). Over the past 10 years, I have led and co-authored **six key publications** addressing the unique challenges and solutions surrounding SLNB in these settings. This research has addressed critical gaps in knowledge and practice, and has influenced both policy and surgical protocols in LMICs. The following research questions were explored through prospective studies, practice surveys, and large cohort analyses:

1. **Quality Indicators of SLNB**  
Defined benchmarks for SLNB performance in **non-screened breast cancer populations** typical of LMICs.
2. **Barriers to SLNB Adoption**  
Conducted a national **survey of Indian surgeons** to identify key barriers preventing the use of SLNB in eligible breast cancer patients.
3. **SLNB Feasibility Post-Lumpectomy**  
Designed and implemented a **prospective interventional study** evaluating SLNB in patients diagnosed after prior lumpectomy—an LMIC-specific challenge.
4. **ICG vs. Radioisotope Tracers**  
Demonstrated the clinical feasibility of **Indocyanine Green (ICG)** as a **cost-effective, non-radioactive alternative** to traditional SLNB tracers.
5. **Applicability of the Z0011 Trial**  
Evaluated the relevance of the **Z0011 trial findings** in unscreened breast cancer cohorts in LMICs, contributing to tailored axillary management strategies.
6. **SLNB Outcomes in 1,500 Patients**  
Reported **one of the largest Southeast Asian cohorts**, analyzing oncological safety and outcomes of SLNB in 1,500 breast cancer patients.

These studies form the backbone of an ongoing effort to **de-escalate axillary surgery**, improve resource utilization, and expand evidence-based surgical oncology in under-resourced healthcare settings. You can access the articles using the pubmed link : <https://www.ncbi.nlm.nih.gov/sites/myncbi/1RWSayhWK-wAI/collections/62077579/public/>

### MEMBERSHIP

1. Association of surgeon of India (ASI)
2. Association of Breast Surgeons of India (ABSI), Director of Education(East)
3. Indian Association of Surgical Oncology(IASO)
4. Asian Society of Mastology(ASOMA)
5. Union International Cancer Control (UICC)
6. Association of Breast Surgeons(UK)

## **Awards & Recognitions**

1. **MBBS – Gold Medalist**  
Honoured for academic excellence during undergraduate medical training.
2. **Best Poster Award – ABSICON 2014**  
Awarded for outstanding poster presentation at the Annual Breast Surgery Conference.
3. **Case Presentation – ESO-ESSO Masterclass in Breast Oncosurgery**, Eramington, Switzerland (2014)  
Selected with the **Breast Research Fund Grant** to present a clinical case at this prestigious European masterclass.
4. **Wellcome Trust Bursary – NCRI Conference**, Liverpool, UK (2014)  
Supported presentation of research abstract at the **National Cancer Research Institute Conference**.
5. **UICC-ICRETT Fellowship – Union for International Cancer Control (2015)**  
Awarded for a clinical observership in Breast Oncosurgery at University Central Hospital, Helsinki, Finland.
6. **ESSO Travel Award – ECCO Congress**, Vienna, Austria (2015)  
Received for poster presentation at the **European Cancer Congress**.
7. **ESMO Travel Award – BCY 3**, Lugano, Switzerland (2016)  
Supported participation in the **Breast Cancer in Young Women Conference**.
8. **Travel Award – AIBCC**, Padova, Italy (2016)  
For oral presentation at the **Advanced International Breast Cancer Congress**.
9. **Indo-American Cancer Association Fellowship (2017)**  
Completed a 1-month observership at the **Cleveland Breast Clinic**, Ohio, USA.
10. **Mastermind Winner – European Society of Oncology (2017)**  
Recognized as the top performer in an international academic competition.
11. **ACORD Fellowship Grant – 2018**  
Selected for the **Australia and Asia Pacific Clinical Oncology Research Development Workshop**.
12. **EMBO Research Leadership Course – March 2019**  
Received **Educational Grant** from the **European Molecular Biology Organization**.
13. **WHO-IARC China–ASEAN Fellowship – Nov 2019**  
Awarded **Educational Grant** for the **Cancer Prevention and Control Fellowship**, organized by **WHO-IARC**.
14. **Examiner – European Breast Surgery Qualification (Nov 2021)**  
Appointed as an examiner for the prestigious European breast surgery certification

## **Publications (48 articles, 3 book Chapters )**

<https://www.ncbi.nlm.nih.gov/sites/myncbi/1RWSayhWK-wAl/bibliography/public/>

1. Gupta A, Bhardwaj S, Ghorai S, Ahmed R, Agarwal S, Mukherjee G, et al. Potential applications of gene expression profiles obtained from circulating extracellular vesicles in breast cancer. *The Journal of Liquid Biopsy*. 2025 Jan 19;100287.
2. Agrawal\* Sanjit Kumar, Mahajan\* Shagun, Ahmed Rosina, Shruti Neela, Sharma Abhishek (2024) Chest wall perforator flap partial breast reconstruction: a retrospective analysis of surgical, cosmetic and survival outcome *ecancer* 181683
3. Patel, Dimple Dilipbhai; Sharma, Abhishek; Ahmed, Rosina; Agarwal, Sanjit. Study of lymphatic drainage patterns in patients undergoing SLNB with fluorescent dye using ICG in

breast cancer patients—LYPIC. *Breast Global Journal* 1(2):p 65-71, April-June 2023. | DOI: 10.4103/bgj.bgj\_5\_23

4. **Agrawal Sanjit Kumar**, Patel Dimple, Shenoy Pradyumn, Ahmed Rosina, Arun Indu, Chatterjee Sanjoy (2023) Oncologic safety of breast conservation following NACT in women with locally advanced breast cancer *ecancer* 17 1554
5. **Kumar Agrawal Sanjit**, Sharma Himanshu, Priya Noopur, Saji Anoop P, Denchu Phom Hamyung, Sharma Abhishek, Arun Indu, Das Jayanta, Chandra Aditi, Ahmed Rosina (2022) Diagnostic performance and survival outcome following sentinel lymph node biopsy in breast cancer patients from a tertiary cancer centre in India *ecancer* 16 1398
6. **Agrawal Sanjit Kumar**, Ranjan Piyush, Priya Noopur, Nigam Shashank, Chatterjee Sumohan (2022) Teaching breast cancer surgery in India: challenges and opportunities *ecancer* 16 1403
7. **Agrawal, S. K.**, Kewlani, V., Priya, N., Sharma, A., Ghosh, J., Chatterjee, S., & Ahmed, R. (2021). Effect of non-sentinel metastasis on adjuvant treatment decisions and survival in Z0011 eligible non-screened detected breast cancer population. *Ecancermedicalscience*, 15, 1324. <https://doi.org/10.3332/ecancer.2021.1324>
8. **Agrawal, S.K.**, Priya, N., Agarwal, P., Sharma, A., Datta, S.S., Deo, S.V.S., Ahmed, R., 2021. Trends in Axillary Management of Early Breast Cancer: a Questionnaire-Based Pattern of Practice Survey for India. *Indian J Surg Oncol*. <https://doi.org/10.1007/s13193-021-01334-4>
9. **Agrawal SK**, Hashlamoun I, Karki B, Sharma A, Arun I, Ahmed R. Diagnostic Performance of Indocyanine Green Plus Methylene Blue Versus Radioisotope Plus Methylene Blue Dye Method for Sentinel Lymph Node Biopsy in Node-Negative Early Breast Cancer. *JCO Glob Oncol*. 2020 Jul;6:1225-1231. doi: 10.1200/GO.20.00165 [\(HI INDEX\)](#)
10. **Agrawal SK**, Shakya SR, Nigam S, Sharma A, Datta SS, Ahmed R. Chest wall perforator flaps in partial breast reconstruction after breast conservation surgery: an additional oncoplastic surgical option. *Ecancermedicalscience*. 2020;14:1073. Published 2020 Jul 17. doi:10.3332/ecancer.2020.1073 [\(HI INDEX\)](#)
11. **Agrawal SK**, Shenoy SS, Nalawade N, Datta SS, Roy S, et al. Quality Indicators for Sentinel Lymph Node Biopsy in Breast Cancer: Applicability and Clinical Relevance in a Non-screened Population. *Indian J Surg Oncol*. 2018 Sep;9(3):312-317. PubMed PMID: 30287989; PubMed Central PMCID: PMC6154378
12. **Agrawal SK**, Bansawal L, Arun I, Datta SS, Chatterjee S, Ahmed R. Sentinel Lymph Node Biopsy After Initial Lumpectomy (SNAIL Study)-a Prospective Validation Study. *Indian J Surg Oncol*. 2019 Jun;10(2):350-356. doi: 10.1007/s13193-018-0861-4. Epub 2018 Dec 18. PubMed PMID: 31168261; PubMed Central PMCID: PMC6527719.
13. **Agrawal SK**, Chatterjee S, Arun I, Ahmed R. Discordance in Immunohistochemical Status of Breast Cancer Post Neoadjuvant Chemotherapy. *Indian J Surg Oncol*. 2017 Jun;8(2):245-246. PubMed PMID: 28546731; PubMed Central PMCID: PMC5427038.
14. **Agrawal S**, Banswal L, Saha A, Arun I, Datta SS, et al. Progesterone Receptors, Pathological Complete Response and Early Outcome for Locally Advanced Breast Cancer - a Single Centre Study (PPLB - 01). *Indian J Surg Oncol*. 2016 Dec;7(4):397-406. PubMed PMID: 27872526; PubMed Central PMCID: PMC5097757.
15. Datta SS, Sharma V, Mukherjee A, Agrawal S, Sirohi B, Gyawali B. What constitutes meaningful benefit of cancer drugs in the context of LMICs? A mixed-methods study of oncologists' perceptions on endpoints, benefit, price, and value of cancer drugs. *ESMO Open*. 2024 Nov 1;9(11):103976.
16. Chakraborty Arunangshu, Agrawal Sanjit, Bose Shiladitya, Ahmed Rosina, Khemka Rakhi (2024) Can combined paravertebral and erector spinae block provide perioperative analgesia for mastectomy with LD flap reconstruction surgery? An observational study *ecancer* 18 1781

17. Asrar A, Gupta D, Sharma P, Agarwal SK, Shukla PC, Bagga N. Role of CRISPR/Cas9 based therapy in breast cancer: a future direction. *The Nucleus* [Internet]. 2024 Apr 30; Available from: <https://doi.org/10.1007/s13237-024-00484-4>
18. Datta Soumitra Shankar, Agrawal Sanjit, Jain Prateek, Kumar Jeevan, Bhattacharjee Arnab, Bansal Ayush, Mahajan Shagun, Podder Dibakar, Manikantan Kapila, Kumar Gaurav, Samanta Bidisha, Sarkar Sohini, Ghose Soumita, Ghosal Niladri, Guevera Mary, Burke Danny (2023) Conference report: Introducing oncology to undergraduate medical and allied health sciences students: reflections from 2nd ecancer TMC Oncology Congress 2023 at Kolkata, India *ECANCER* 17 1647
19. Gupta R, Das J, Sinha S, Agarwal S, Sharma A, Ahmed R, et al. Detection of Axillary Lymph Node Involvement in Early-Stage Breast Cancer: Comparison between Staging 18F-2-Fluoro-2-Deoxy-D-Glucose Positron Emission Tomography–Computed Tomography Scans, Mammography, and Sentinel Lymph Node Biopsy. *Indian J Nucl Med.* 2023 Sep;38(3):249.
20. Mukherjee, A. S., Bidisha; Sharma, Varuna; Shrestha, Aagon Krishna; Chattopadhyay, Shreshtha; Bhowmick, Chitralekha; Ghosh, Joydeep; Ganguly, Sandip; Agrawal, Sanjit Kumar; Datta, Soumitra Shankar. (2023). When Do Patients with Breast Cancer Seek Help from Psycho-oncology Services? A 3-Year Retrospective Study from India. *Indian Journal of Medical and Paediatric Oncology, EFirst*. <https://doi.org/10.1055/s-0043-1768048>
21. Chatterjee, S., Chakrabarty, S., Santosham, R., Saha, A., Mallick, I., Arunsingh, M., Bhattacharya, T., Achari, R., Agrawal, S., Ahmed, R., Das, J., Mahata, A., Mandal, S., & Ray, S. (2023). Alleviating morbidity from locally advanced breast cancer using a practical and short radiotherapy regime: Results of the HYPOR T palliative studies. *International Journal of Radiation Oncology\*Biological\*Physics*. <https://doi.org/10.1016/j.ijrobp.2023.02.008>
22. Glasbey JC, Abbott TE, Ademuyiwa A, Adisa A, AlAmeer E, Alshryda S, et al. Elective surgery system strengthening: development, measurement, and validation of the surgical preparedness index across 1632 hospitals in 119 countries. *The Lancet.* 2022 Nov 5;400(10363):1607–17.
23. Ganguly Sandip, Mukherjee Navonil, Mandal Sayan, Roy Somnath, Agarwal Sanjit, Biswas Bivas, Ghosh Joydeep (2022) Efficacy of cyclin-dependent kinase 4/6 inhibitors in patients with metastatic hormone positive breast cancer: a single institutional study from India *ecancer* 16 1450
24. Sharma A, Mahajan S, Agrawal SK, Ahmed R, Dey D. Assessment of skin response in T4b breast carcinoma patients post-neoadjuvant chemotherapy. *Ecancermedalscience.* 2021 Jul 28;15:1271.
25. Arun I, Venkatesh S, Ahmed R, Kumar Agrawal S, Leung SCY. Reliability of Ki67 visual scoring app compared to eyeball estimate and digital image analysis and its prognostic significance in hormone receptor positive breast cancer. *APMIS.* 2021 May 30. doi: 10.1111/apm.13156. Epub ahead of print. PMID: 34053140.
26. Ghosh, J., Chatterjee, M., Ganguly, S., Datta, A., Biswas, B., Mukherjee, G., Agarwal, S., Ahmed, R., Chatterjee, S., Dabkara, D., 2021. PDL1 expression and its correlation with outcomes in non-metastatic triple-negative breast cancer (TNBC) [WWW Document]. <https://doi.org/10.3332/ecancer.2021.1217>
27. COVIDSurg Collaborative, G.C., 2021. SARS-CoV-2 vaccination modelling for safe surgery to save lives: data from an international prospective cohort study. *British Journal of Surgery.* <https://doi.org/10.1093/bjs/znab101>
28. Timing of surgery following SARS-CoV-2 infection: an international prospective cohort study, n.d. . *Anaesthesia* n/a. <https://doi.org/10.1111/anae.15458>
29. Bakkach J, Pellegrino B, Elghazawy H, Novosad O, Agrawal S, Bennani Mechita M. Current overview and special considerations for second breast cancer in Hodgkin lymphoma survivors. *Critical Reviews in Oncology/Hematology.* 2021 Jan 1;157:103175.



30. Khemka, R., Chakraborty, A., Agrawal, S., Ahmed, R., 2019. Is COMBIPECS the answer to perioperative analgesia for breast surgery? A double blinded randomized controlled trial. *Indian J Anaesth* 63, 530–536. [https://doi.org/10.4103/ija.IJA\\_222\\_19](https://doi.org/10.4103/ija.IJA_222_19)
31. Datta SS, Ghosal N, Daruvala R, Chakraborty S, Shrimali RK, van Zanten C, Parry J, Agrawal S, Atreya S, Sinha S, Chatterjee S, Gollins S. How do clinicians rate patient's performance status using the ECOG performance scale? A mixed-methods exploration of variability in decision-making in oncology. *Ecancermedicalsecience*. 2019;13:913. doi: 10.3332/ecancer.2019.913. eCollection 2019. PubMed PMID: 31123496; PubMed Central PMCID: PMC6467460.
32. Chatterjee S, Chakraborty S, Moses A, Nallathambi C, Mahata A, et al. Resource requirements and reduction in cardiac mortality from deep inspiration breath hold (DIBH) radiation therapy for left sided breast cancer patients: A prospective service development analysis. *Pract Radiat Oncol*. 2018 Nov - Dec;8(6):382-387. PubMed PMID: 29699893.
33. Agarwal N, **Agrawal SK**, Bhattacharya S, Datta SS, Chatterjee S, et al. Antibiotic Prophylaxis for Breast Oncosurgery in a Setting With a High Prevalence of Multidrug-Resistant Bacteria: Common Sense Infection Control Measures Are More Important Than Prolonged Antibiotics. *Infect Control Hosp Epidemiol*. 2018 Apr;39(4):498-500. PubMed PMID: 29436315.
34. Saha M, Arun I, Agarwal S, Ahmed R, Chatterjee S, et al. Imprint cytology-based breast malignancy screening: an efficient nuclei segmentation technique. *J Microsc*. 2017 Nov;268(2):155-171. PubMed PMID: 28654222.
35. Datta SS, **Agrawal S**. Can e-learning help you to connect compassionately? Commentary on a palliative care e-learning resource for India. *Ecancermedicalsecience*. 2017;11:ed72. PubMed PMID: 29104615; PubMed Central PMCID: PMC5659824.
36. Chatterjee S, **Agrawal S**, Nallathambi C, Ahmed R. Is the Current American Society of Clinical Oncology Guidance on Axillary Management Generalisable for Symptomatic or Unscreened Breast Cancers?. *Clin Oncol (R Coll Radiol)*. 2017 Oct;29(10):e172-e173. PubMed PMID: 28666763.
37. Banerjee S, Saha M, Arun I, Basak B, Agarwal S, et al. Near-set Based Mucin Segmentation in Histopathology Images for Detecting Mucinous Carcinoma. *J Med Syst*. 2017 Aug 10;41(9):144. PubMed PMID: 28799130.
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39. Chatterjee S, Arun I, Agrawal S, Arunsingh M, Mallick I, et al. Immunohistochemistry Heterogeneity in Reported Breast Cancer Demographics From India: Triple-Negative Breast Cancer Rates Could Be Lower Than Suggested in Pooled Meta-Analysis. *J Glob Oncol*. 2017 Apr;3(2):180-181. PubMed PMID: 28717757; PubMed Central PMCID: PMC5493280.
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42. Chatterjee S, Arunsingh M, Agrawal S, Dabkara D, Mahata A, et al. Outcomes Following a Moderately Hypofractionated Adjuvant Radiation (START B Type) Schedule for Breast Cancer in an Unscreened Non-Caucasian Population. *Clin Oncol (R Coll Radiol)*. 2016 Oct;28(10):e165-72. PubMed PMID: 27369459.
43. Chakraborty A, **Agrawal S**, Datta T, Mitra S, Khemka R. Hickman to central venous catheter: A case of difficult venous access in a child suffering from acute lymphoblastic leukemia. *J Indian*

- Assoc Pediatr Surg. 2016 Oct-Dec;21(4):202-204. PubMed PMID: 27695218; PubMed Central PMCID: PMC4980887.
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  45. Khemka R, Chakraborty A, Ahmed R, Datta T, Agarwal S. Ultrasound-Guided Serratus Anterior Plane Block in Breast Reconstruction Surgery. *A A Case Rep*. 2016 May 1;6(9):280-2. PubMed PMID: 26934607.
  46. Chatterjee S, Saha A, Arun I, Nayak SS, Sinha S, et al. Correlation of clinicopathological outcomes with changes in IHC4 status after NACT in locally advanced breast cancers: do pre-NACT ER/PR status act as better prognosticators?. *Breast Cancer (Dove Med Press)*. 2015;7:381-8. PubMed PMID: 26677343; PubMed Central PMCID: PMC4677657.
  47. Lamichhane D, **Sanjit Kumar Agrawal SK**, Mukhopadhyay S, Ahmed R.: *CASE REPORT PEER REVIEWED | OPEN ACCESS International Journal of Case Reports and Images (IJCRI) Axillary arch: Clinical significance in breast cancer patients*. 11/2017; 8(12):758-761., DOI:10.5348/ijcri-20171118-CR-10857
  48. Arunangshu C, Taniya D, Sanjit A. Indwelling Tunneled Epidural Catheter for Analgesia in a Terminal Cancer Patient: A Case Report. *J Anest & Inten Care Med*. 2017; 4(2) : 555632. DOI: 10.19080/JAICM.2017.04.555632

### **Book Chapter**

1. Monjoy Saha, **Sanjit Agarwal**, Indu Arun, Rosina Ahmed, Sanjoy Chatterjee, Pabitra Mitra, Chandan Chakraborty: Histogram Based Thresholding for Automated Nucleus Segmentation Using Breast Imprint Cytology. *ICAME-2015*; 01/2015, DOI:10.1007/978- 81-322-2256-9\_5
2. **Sanjit Agrawal**, Rosina Ahmed: “Recent Trials in Surgical Management of Breast cancer”: **Breast diseases, Guidelines for the management**
3. Ahmed, R., **Agrawal, S.K.** (2023). Management Approach to Recurrence Following Oncoplastic Breast Surgery. In: Deo, S. (eds) **Breast Oncoplasty and Reconstruction**. Springer, Singapore. [https://doi.org/10.1007/978-981-99-5536-7\\_34](https://doi.org/10.1007/978-981-99-5536-7_34)

### **Research Projects :**

### **Extramural Funding**

1. **Drug response profiling of patient-derived organoids to design personalised neoadjuvant chemotherapy for triple negative and HER2-enriched breast cancer patients**  
**Role:** Principal Investigator  
**Funding:** ICMR Intermediate Grant  
**Grant ID:** IIRPIG-2023-0000586
2. **Vascular remodelling in cancer patients: Role of BRAP gene in the vascular smooth muscle cells after chemotherapy-associated vascular dysfunction**  
**Role:** Co-Principal Investigator  
**Collaboration:** Joint project with IIT Kharagpur  
**Funding:** ICMR Small Grant
3. **IMIMA – Improving Breast Cancer Diagnosis and Prognostication: Automated Multimodality Image Analytics to Develop Easily Accessible Quick Throughput Solutions**  
**Role:** Co-Investigator  
**Funding:** ICMR Grant (Multicentre prospective study)



4. **MIRABeL – Multispectral SWIR Imaging for Surgical Augmentation of Non-Palpable Breast Cancer Lesions**  
**Role:** Co-Investigator  
**Funding:** USISTEF Fulbright Research Grant
5. **AASTHA – Artificial Intelligence Assisted Ultrasound-Guided Surgery of Non-Palpable Breast Cancer and Therapy**  
**Role:** Co-Investigator  
**Funding:** ICMR Grant  
**Grant ID:** IIRPSG-2024-01-04411

#### **Investigator-Initiated Projects (Intramural Funding)**

1. **Correlation of NHS Predict and Oncotype Dx Test in the Indian Breast Cancer Cohort**  
**Role:** Co-Investigator (Multicentric Study)
2. **A Prospective Single-Arm Diagnostic Study to Measure the False Negative Rate of SLNB in Node-Positive Breast Cancer Patients Post Chemotherapy**  
**Role:** Principal Investigator
3. **BIOTN-001 – Additional Biomarkers for Triple Negative Breast Cancer (TNBC)**  
**Role:** Principal Investigator
4. **SNAIL-01 – Sentinel Lymph Node Biopsy After Initial Lumpectomy (Validation Phase I/II Study)**  
**Role:** Principal Investigator
5. **Feasibility of ICG-Guided Localization of Clip (Marker) or Residual Lesion After NACT in Breast Cancer**  
**Role:** Co-Investigator
6. **PROM Evaluation Using BREAST-Q in Oncoplastic Breast Surgery Patients**  
**Role:** Co-Investigator
7. **PECS-B Study – Effectiveness of Preemptive USG-Guided Modified PECS Block in Breast Cancer Surgery**  
**Role:** Co-Principal Investigator  
**Design:** Randomized Controlled Trial
8. **HYPOR-T-B – Hypo-Fractionated Radiotherapy Schedule (26 Gy in 5 Fractions + 6 Gy Boost) in Advanced Incurable Breast Cancer**  
**Role:** Co-Investigator  
**Design:** Prospective Phase I/II Study
9. **LYPIC – Lymphatic Drainage Patterns in Breast Cancer Patients Undergoing SLNB with ICG Dye**  
**Role:** Co-Investigator  
**Design:** Prospective Single-Arm Study
10. **EVOCATION – Explaining Value and Cost of Cancer-Specific Treatment: Exploring Decision Making in Indian Patients**  
**Role:** Co-Investigator  
**Design:** Mixed-Methods Study
11. **ASABI – Affective Symptoms and Body Image in Breast Cancer Patients**  
**Role:** Co-Investigator  
**Funding:** Tata Medical Center Intramural Institutional Grant
12. **HYPOR-T Study – Hypo-Fractionated Radiotherapy (35 Gy/10 Fractions) in Advanced Incurable Breast Cancer**  
**Role:** Co-Investigator

### Invited Oral Presentation

#### **2017(3)**

- SGPGI, Lucknow – (MDT early breast cancer) moderator
- KGMC, Lucknow – ABSI breast module – Early Breast cancer update
- SGCRI, Thakurpukur – Chemo port video

#### **2018(3)**

- ASOMA, AIIMS, New Delhi – Advanced breast cancer update
- Bengal breast meeting – SLNB video
- Durgapur oncology meeting – Breast Conservation Surgery in Eastern India

#### **2019(7)**

- Year in Review, Mumbai – Oncotype DX testing in India
- ICON 40 – Oral Presentation for lymphedema management
- NATCON 2019 – Panel discussion for Oncoplastic Breast surgery
- ASOMACON, AIIMS, Bhubaneswar – Oncoplastic breast surgery
- Lion's club, High court Auditorium, Saint Joseph School – Breast Cancer awareness program
- Controversy to consensus meeting, Kolkata - Sentinel Lymph node Biopsy post-chemotherapy
- E cancer conference, Kolkata - Breast cancer screening in India

#### **2020(11)**

- Association of Radiotherapy (WB chapter) – Early breast cancer update (p)
- MOSCON Imphal – Update on Breast Cancer Surgery
- ASI West Bengal chapter – Recent advances in axillary surgery in breast cancer
- Breast cancer awareness – IMA, Lucknow
- Mastology Clinic – Axillary staging in breast cancer
- Apollo Kolkata – Sentinel Lymph node biopsy in breast cancer
- ASOMACON – Chest wall perforator flaps
- Oncosurge PGIMER – Oncoplastic breast surgery(p)
- Stats class primer – Type of variables and dispersion of the data
- Endocrine therapy in breast cancer – Neoadjuvant endocrine therapy
- ASI – De-escalation of axillary surgery in breast cancer (p)

#### **2021(12)**

- AZPIRE Protocol development workshop: Protocol Development session (TMH, Mumbai)
- ASI West Bengal teaching Module: Targeted axillary dissection and Oncoplastic breast surgery (ASI West Bengal Chapter)
- ACORD protocol development work shop: Protocol Development session (MOGA, Australia)
- IASO state chapter: Early breast cancer – neoadjuvant therapy and surgical issues (IASO)
- West Bengal - Kerala collaboration: Improving treatment in HER2+Ve Early Breast Cancer (Roche)
- SASICON CME: SLNB program development in Eastern India (WBASI)
- Max hospital Monthly webinar: BIRAS 3 and BIRADS 4 A lesion management (Max Hospital, New Delhi)
- Perforator flap web series: Chest wall perforator flaps, Data from India (ABSI, India)
- Perforator flap web series: ICG use in breast cancer (ABSI, India)
- NATCON: LTAP flap breast reconstruction (IASO)
- ABSICON 2021: Moderator (Early breast cancer management in HER 2 positive breast cancer and ABSI consensus statement questionnaire), Debate: Role of surgery in metastatic breast cancer, Paper presentation – Outcome data of 1500 SLNB patients from Eastern India.

- ACORD 1 day Protocol development workshop: Statistical Consideration in Clinical Research (MOGA, Australia)

#### **2022(10)**

- ASOMA Phyllodes web series: Phyllodes - Institutional data presentation (ASOMA)
- BCS is superior then Mastectomy in EBC: SASICON CME (WBASI )
- Axillary Management post NACT: International women's day webinar (International association of Oncology)
- LICAP flap: FCIBC breast cancer conference(Breast Global)
- HER + EBC - Surgeons perspective, ICG use in Breast Cancer: ABSICON 2022(ABSI)
- Axillary management update : Oncosurge 2022(SSKM, Kolkata)
- LTAP and Wise Pattern Reduction Mammoplasty: ASOMACON 2022(ASOMA)
- BCS - Oncoplastic: MOSCON ABSI Module (MOSCON and ABSI)
- Neoadjuvant Treatment in Breast Cancer: SASI CME(WBASI)

#### **2023(23)**

- Breast Global: Breast Cancer in Elderly: Surgical Management
- ASOMA webinar: Patient Advocacy: Challenges and opportunities
- WBASI meeting: Oncoplastic Breast Surgery and Whole Breast Reconstruction
- ABSI midterm conference: Video presentation : Round Block and Grisotti Flap, Debate: Post NACT SLNB ( For)
- ASOMA Chest wall perforator web series: Chest wall perforator flap: an overview, institutional data presentation, Extended indications
- SASICON 2023: Therapeutic mammoplasty
- ABSICON 2023: Biostatistics workshop, panel discussion on adjuvant treatment decisions based on NACT, ICG use in breast surgery
- DNB central class webinar: Axillary management in breast cancer
- Enmed IIT Kharagpur: Biological subtype and computer added diagnostics in breast cancer
- KGMU breast update: Central excision and LICAP
- Breastics 2023: ICG use in breast surgery
- ORBS Nottingham: Therapeutic mammoplasty- Indian Experience
- E cancer Congress: Axillary Management in breast cancer, Interpreting clinical trial
- Breast cancer update SGCRI : Video demonstration: LICAP
- CME(SRM Institute Chennai) : Risk-reducing strategy and Implant breast reconstruction
- WBASI Skill development: Biostatistics, research and Publication
- ICC Mumbai 2023: Oncotype dx testing in Indian Breast cancer patients
- Breast Global Webinar: Implant + ADM whole breast reconstruction
- ASOMACON 2023: Moderator of cadaveric workshop, LICAP
- SASICME 2023: Live surgery workshop(MRM demonstration), Neo adjuvant systemic therapy in breast cancer
- ACORD 1-day workshop: Biostatistics for clinical trials
- Oncosurge 2023: Moderator- Live surgery workshop(MRM)
- ASICON 2023: Level 2 Oncoplastic breast surgery

#### **2024(25)**

- Best of SBACS(MOC) 2024: Axillary management breast cancer: San antanio Update
- RIIMS , RANCHI 2024: Oncoplastic Breast surgery
- Changing Paradigms of Oncology, Assam cancer care foundation: Chest wall perforator flap, Tumor Board : real case example
- ABSI MIDCON 2024 : Lateral Intercostal artery perforator flap

- WCI TMH Mumbai 2024: LICAP, Implant-based WBR, Consensus guideline for breast cancer management
- Amay Cancer Hospital, Ahmedabad: Oncoplastic Breast surgery by chest wall perforator flap
- NCRI Kolkata: Breast cancer Surgery: Beyond Mastectomy
- Beyond the Scalpel, Ahmedabad Cancer Foundation and ABSI: Oncoplastic Breast Surgery: Optimizing cosmetic Outcome ensuring oncological safety, Post NACT SLNB: Debate: No
- CBCS, Apollo Delhi: Post NACT SLNB: Multicentric data audit
- Focused Studies in Breast Cancer : Genomic Assays, Indian Experience
- SASICON 2024: Phyllodes: survival outcome, Incision marking workshop
- Irrilic ICG Webinar: ICG use in Oncoplastic Breast Surgery
- IMA Kolkata: Oncotype Dx use in Indian setting
- ABSICON 2024: Oncoplastic Breast surgery Workshop, Breast Surgery Training in India
- Standard Practice in Breast Oncology, SRMS Bareilly : Oncoplastic Breast surgery Incision Marking, SLNB in resource-constrained set-up, Breast reconstruction options
- ABC of Breast Oncoplasty, IGMC, Shimla: Live surgery workshop, Chest wall perforator flap, case-based panel discussion
- MAXCON, Mumbai: Implant Whole Breast Reconstruction
- NATCON Bangalore: Implant Whole Breast Reconstruction, Panel discussion on Oncoplastic breast surgery and WBR
- Regional Refresher Course(RRC), ASI: Paget's disease of the breast: an overview
- Examiner: ASI TYSA(Final)
- Oncoplastic Breast Surgery Module 1, Ahmedabad: Six steps of OPBS, Central excision, MDT panel discussion
- SASICME 2024: Drs. Urmila and Anil Sensarma Memorial **ORATION**: Mastering Oncoplastic Breast Surgery Techniques for Breast Conservation
- Coinscon '24" Conference: Current Paradigms of Axillary Management in Breast Cancer
- 2<sup>nd</sup> Hope and heal Cancer Conclave: Surgical Oncology Updates in Breast Cancer
- ASICON 2024: Surgical video presentation of chest wall perforator flaps

## 2025

- Overview of chest wall perforator flap, CWPF surgical video: OPBS training workshop: Kolkata
- Perforator flaps of breast reconstruction: OM2 conference: Ahmedabad
- Master Video: TM: IASO north zone: AIIMS, Rishikesh
- Chest wall perforator Flap Breast recon: Breast Update: AIIMS, Delhi
- Axillary Management debate: Moderator: ABSI MIDCON, Udaipur
- ACORD one day protocol workshop: Background and rationale of protocol development
- Cancer Research Meeting, IIT Kharagpur: Overview of breast cancer research at Tata Medical Centre, Kolkata
- Masterclass on chest wall perforator flap: Chennai Breast Centre
- Molecular Oncology and Computer added diagnostics in breast cancer research: IISER, Kalyani Kolkata
- Delayed effects in Oncoplastic Breast Surgery: PROMS and objective assessment: BreastCON 2025: Focused Studies in Breast Cancer(FSIBC)
- Oncoplastic Breast Surgery training Module 3 : AIIMS, New Delhi: Whole Breast recon cadaveric workshop

### Mentoring and Proctorship (2022–2025)

Dr. Sanjit Kumar Agrawal has played a pivotal role in the training and mentorship of surgeons across India in the field of breast oncosurgery. Since 2022, he has mentored over 20 surgeons through observerships and proctorships, with a special focus on implant-based breast reconstruction, chest wall perforator flap (CWPF) techniques, and oncoplastic breast surgery.

In 2022, he served as a proctor in key hands-on workshops and institutional programs, including chemo port insertion at AOI Imphal and implant-based breast reconstruction at NH Howrah and Rinchi Trust Hospital, Ranchi. In 2023, he trained Dr. Jitin Yadav from Regency Hospital, Kanpur in ICG-guided sentinel lymph node biopsy (SLNB) and oncoplastic techniques, and also proctored advanced breast reconstruction procedures at NH Howrah.

Throughout 2024, Dr. Agrawal mentored multiple national-level surgeons and trainees through intensive observerships in Level 2 oncoplastic breast surgery, CWPF-based partial breast reconstruction, and whole breast reconstruction. This included Drs. Niharika Garach (Mumbai), Gomti Shankar and Ankit Jain (JIPMER), Shafeek Samsudeen (MVR, Kerala), and Mitchel Engineer (TMH, Mumbai), among others. He also proctored implant and ADM-based reconstructions at HCG Hospital, Ahmedabad, and supervised an ICMR-funded short-term surgical training.

In 2025, he continues to advance oncoplastic surgical capacity-building by mentoring senior consultants and academic surgeons, including Dr. Debashri Shankar (Chennai Breast Center), Dr. Gopal Puri (AIIMS, New Delhi), Dr. Rajinder Kaur Saggu (Max Vaishali), and Dr. Ritika Bhandari (Susrut Cancer Center, Mumbai). His mentorship spans Type 2 oncoplastic procedures, whole breast reconstruction, and CWPF techniques, contributing to widespread dissemination of advanced breast surgery practices across India.

### Professional Training

1. **Cancer Prevention and Control Fellowship** – World Health Organization (IARC)  
*4 months online + 1 week in-person training*
2. **Statistical Reasoning for Public Health: Estimation, Inference, Interpretation, and Regression** – Johns Hopkins University (Online)  
*16 weeks duration*
3. **Protocol Development Workshop** – (ACORD), Australia
4. **Literature Search and Reference Management Workshop** – Christian Medical College (CMC), Vellore, India
5. **European Molecular Biology Organization (EMBO) Research Leadership Course**
6. **Sample Size Calculation Workshop** – Christian Medical College (CMC), Vellore, India
7. **Genetic Counselling Workshop** – Tata Memorial Hospital (TMH), Mumbai

### Leadership Roles, Academic Contributions & Institutional Engagements

1. **Fellowship Program Coordination – Surgical Oncology, TMC**  
Co-facilitating recruitment, coordinating interview panels across sub-specialties, managing surgical on-call rotas, and developing rotation schedules for fellows across departments (2015-2019).
2. **DNB Surgical Oncology Program**  
Led the application process for accreditation; member of the Scientific Review Committee

3. **Surgical Oncology Journal Club, TMC**  
Lead coordinator, organizing academic discussions and literature reviews.
4. **Research Support Directorate (RSD), TMC**  
Active member (SINCE 2019); contributed to the Annual Research Reports (2019, 2020, 2021).
5. **Institutional Review Board (IRB), TMC**  
Member (SINCE 2022), reviewing clinical and academic research protocols.
6. **TMC Biobank Committee**  
Member (SINCE 2022), supporting biospecimen-based translational research.
7. **NABH Accreditation Task Force**  
Active contributor (SINCE 2019), led revisions of patient consent forms for compliance.
8. **Breast Oncology Protocol Development**  
Key contributor to axillary management de-escalation strategies via audits, IRB-approved research, and protocol development.
9. **Reviewer**  
Union for International Cancer Control (UICC) Technology Transfer Grant Committee.
10. **Editorial Board Member**  
ECANCER MEDICAL SCIENCE JOURNAL
11. **Executive Committee Member**  
ASSOCIATION OF BREAST SURGEONS OF INDIA (ABSI) and WEST BENGAL ASSOCIATION OF SURGEONS OF INDIA (WBASI)

### Team Capacity Building & Mentorship

- **Mentored Breast and Surgical Oncology Fellows** in presenting research at major national and international conferences:
  - SGPGI Breast Health
  - ABSI Conference
  - British Bangla Surgical Meet
  - Controversies in Clinical Cancer
- **Cross-Departmental Academic Support:**
  - Assisted colleagues and residents from GI Surgery, Uro-Surgery, Gynecologic Oncology, Nuclear Medicine, Medical Oncology, and Anesthesia in:
    - Data analysis and statistical methodology
    - RedCAP database management
    - Research protocol design and IRB submissions
- **Notable Achievements by Mentees:**
  - Dr. Prafulla Sakya – Cleared the European Board Examination in Breast Surgery (2018); first from Nepal. (I was the first indian surgeon to clear this examination in 2015)
  - Dr. Izideen Hashlamoshun – Poster presentation at the European Society of Surgical Oncology Conference, 2019.
  - Dr. Shashank Nigam – Secured Oncoplastic Breast Surgery Fellowship, Oxford, UK.
  - Dr. Sudip Ratna Sakya – Awarded Asian Society of Mastology Travel Grant, 2019.
  - Dr. Pragati Singhal –
    - First Prize, IACON 2022 (Video Presentation)
    - Travel Fellowship (EBCC)
    - Selected for ACORD Protocol Development Workshop
  - Dr. Shagun Mahajan, Dr. Meenulocahani Annadurai, Dr. Jitendra Tolwani – Best Oral Presentation, ABSICON 2023



### Conference And CME Organised

1. **Course Director** – *ABSI Oncoplastic Breast Surgery Training Workshop (3 Modules) Association of Breast Surgeons of India (ABSI), 2024–2025*  
Led the conceptualization, curriculum design, and execution of a multi-module national-level training program in oncoplastic breast surgery.
2. **Organizer/Faculty** – *Tata Annual Biostatistics and Clinical Research Methodology Workshops, 2017–2023*  
Consistently contributed to annual workshops focused on research methodology, clinical statistics, and protocol development for young clinicians and researchers.
3. **Coordinator** – *TRAIN: Tata Research Academic Initiative*  
Designed and executed a structured monthly academic training module for clinical and research staff, fostering interdisciplinary learning.
4. **Organizer and Speaker** – *Webinar on ADM and Whole Breast Reconstruction, 2023*  
Curated content and delivered sessions on advanced reconstructive techniques for breast cancer surgery.
5. **Organizing Faculty** – *TMC Breast Surgery Workshop, 2022 & 2024*  
Participated in planning and facilitating workshops aimed at enhancing surgical skills in breast oncosurgery.
6. **Contributor** – *E-Cancer Breast Module, 2019, 2021, 2023*  
Delivered educational content and mentored participants through internationally accessible online learning platforms.
7. **Organizing Team Member** – *Masterclass in Surgical Oncology, 2019*  
Supported planning and execution of an intensive skill-building course for surgical oncology trainees.
8. **Organizer** – *Central Venous Access Device in Oncology Workshop, 2016*  
Spearheaded a hands-on workshop to improve vascular access techniques for oncology care providers.
9. **Organizing Committee Member** – *ABSICON (Association of Breast Surgeons of India Conference), Kolkata, 2021*

Dr Sanjit Kumar Agrawal