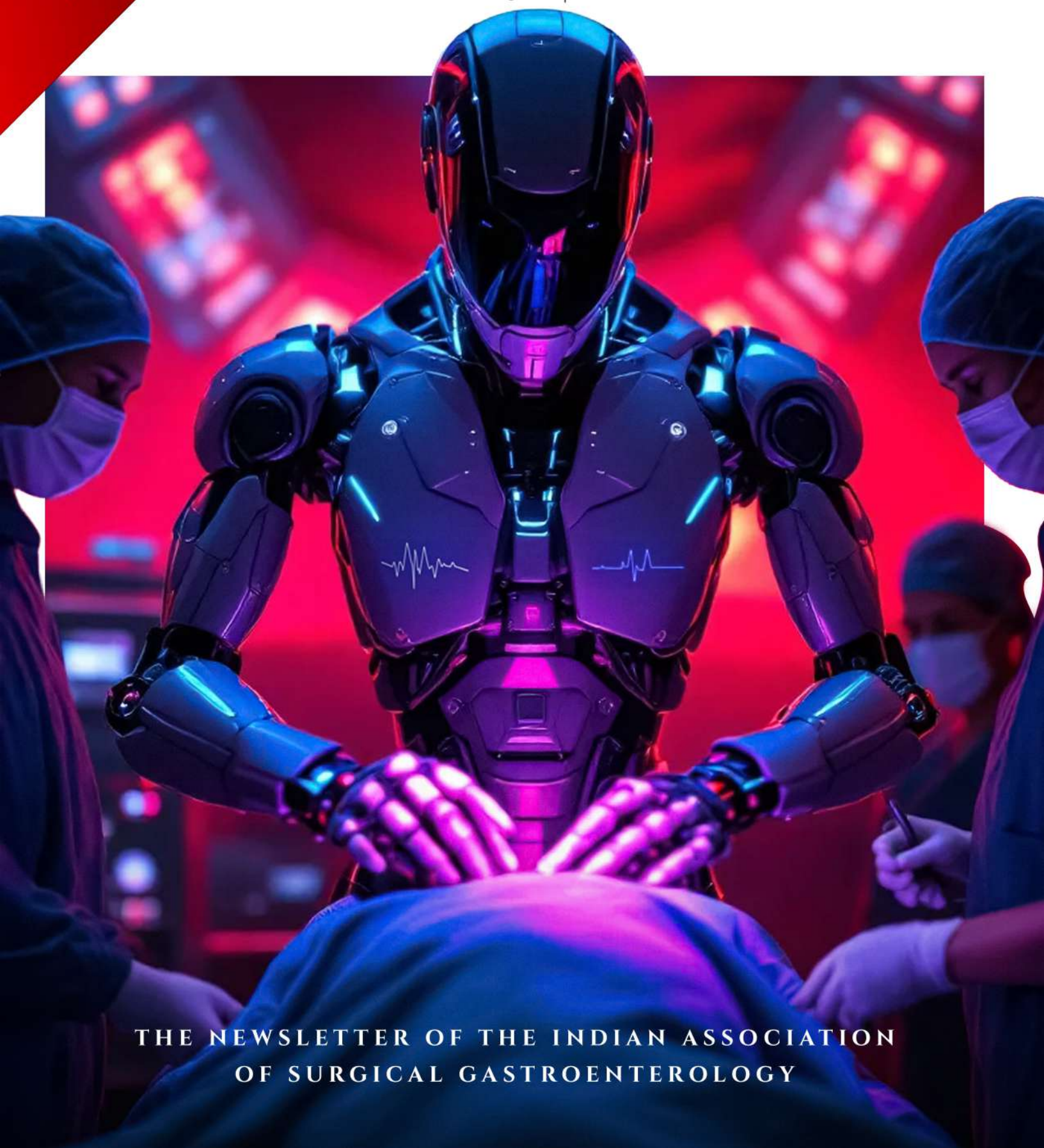


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THE NEWSLETTER OF THE INDIAN ASSOCIATION
OF SURGICAL GASTROENTEROLOGY

NAMAKARANA

WHY SUTRA?

The Many Threads of “Sutra”: A Sanskrit Word’s Rich Tapestry

The Sanskrit word “Sutra” literally means “thread”, “cord” or “string”, forms a foundational concept in Indian intellectual and religious traditions, weaving altogether meanings far beyond its simple material origin. Its significance unfolds across multiple dimensions:

Literal and Practical

At its most basic, a sutra is a physical thread used for sewing, binding, or measuring – the essential tool holding disparate elements together. This tangible sense underpins its profound metaphorical extensions.

Philosophical and Scientific Code

Most famously “Sutra” refers to an extremely concise aphorism or rule. These are dense, formulaic statements designed to encapsulate vast areas of knowledge – philosophy, grammar (like Panini’s Ashtadhyayi), law, ritual, Mathematics, or statecraft (e.g., Kautilya’s Arthashastra). Their brevity was mnemonic, aiding oral transmission. Think of them as “threads” upon which the pearls of complex knowledge were strung, requiring later commentary (bhashya) to unravel their full meaning.

Sacred Scripture

In religious contexts, particularly Buddhism and Hinduism, “Sutra” denotes a category of canonical scripture. Buddhist Sutra (Like the Lotus Sutra and the Heart Sutra) typically record discourses attributed to the Buddha, expounding doctrine and practice. Hindu Sutras (like Brahma Sutras, Yoga Sutras of Patanjali, or various Dharma Sutras) are often collections of those concise aphorisms systematizing theological, ritual, ethical, or meditative knowledge within specific schools.

Structural Principle

The concept of a “thread” implies connection and structure. Sutras serve as the core framework, the essential connecting threads, upon which larger bodies of commentary, explanation, and elaboration are built. They provide the skeletal structure holding the flesh of the tradition together.

Characteristic Brevity

The defining feature of a sutra text is the extreme conciseness. Authors aimed to express the maximum meaning in the minimum words, often omitting connectives and grammatical particles. This compression made the potent but also necessitated expert interpretation.

In essence, “Sutra” embodies the act of binding knowledge. From the literal thread, it evolved into the metaphorical thread connecting ideas, the compressed code preserving wisdom, the foundational text structuring religious paths, and the principle of brevity demanding deep engagement.

It represents the elegant, efficient “threading together” of complex thought into a portable, enduring form – a testament to the power of language to weave intricate tapestries of meaning from the simplest of beginnings.

Suggested by
Dr. Gayatri Balachandran

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Dr Patta Radhakrishna

Executive Editor, 'SUTRA'

Indian Association of Surgical Gastroenterology.

Season's greetings from 'Team Sutra'. The first issue of 'Sutra' was well received and the entire team which had worked towards it is immensely thankful to all the readers. This time we all had put the same amount of effort to make the 'Sutra2' a remarkable one as well as we had planned to bring it out in print medium and hand over to all the IASG members during the IASGCON 2025 annual conference in Chennai.

In this issue there is a certain bias towards liver transplantation as we get to see the way liver transplant has developed in the government sector and the armed forces of India. Thanks to Dr CH Madhusudhan and Surg-Cmdr- (Dr) Sudeep Naidu for penning these articles. The article from Dr Nundy's unit about the state of surgical gastroenterology courses in India is sort of eye opener for all of us. Dr Amitabh Yadav needs to be commended for that.

The interview with Dr Nundy is rather detailed and lengthy. As there are many take home points for the younger generation of GI surgeons and hence it was printed unedited. The 'jugaad' liver retractor designed by Dr Sanjiv Haribhakti needs special mention. Dr Ilango Sethu's Japanese excursion is rather interesting and eminently readable. Dr Avinash Supé's lucid replies to cheeky questions posed by Dr Deeksha Kapoor is definitely a highlight of this issue.

Dr Magnus, the editor-in-chief and the entire editorial board members namely Dr Gayatri Balachandran, Dr Deeksha Kapoor, Dr Shraddha Patkar, Dr Nisha, Dr Abhishek Agarwal and Dr Shravan Sarad Nadkarni have worked very hard to make this issue possible. I thank all of them wholeheartedly. I also thank Mr. Subash Ramalingam who has designed this entire issue as well as the previous one. Please take time to go through each and every article and write to us your suggestions for improvement.

Truly
Dr Patta Radhakrishna



Dr Magnus Jayaraj Mansard

Editor-in-Chief, 'SUTRA'

Indian Association of Surgical Gastroenterology.

Dear Readers,

The warm response from surgeons across the country for the first edition SUTRA has affirmed that our community values not just science and surgical skill, but also the stories, ideas, and shared spirit that hold us together. Encouraged by the success, we wanted this second issue to be something special — a collector's edition. An edition that is not only going to have an online version, accessible at the association's website, but also on offline printed version circulated among all the delegates and faculties attending IASGCON 2025.

Within these pages, you'll find a rich mix of stories and experiences that reflect the many sides of our profession. We showcase the work being done in leading departments across premier institutes, as well as the struggles and triumphs of performing complex surgeries like liver transplantation in the public sector. There are features on technical innovations, improvised instruments, and surgical creativity in resource-limited settings, alongside accounts of international travels, a Residents' Corner, a quiz, and discussions on the economics of surgical practice. You'll also find sections devoted to data analysis, reflections on past meetings, and the kind of personal insights that remind us why we chose this demanding but deeply rewarding field.

Our editorial team has also grown, welcoming two new members who bring fresh perspectives and energy to this evolving platform. Together, we've tried to weave a richer fabric — one that includes something for everyone: the resident eager to learn, the consultant refining their practice, and the senior faculty reflecting on decades of experience.

We warmly invite feedback from our readers — your thoughts help us refine and grow. And we welcome more contributions from members of the association for future editions — whether academic reflections, opinion pieces, artwork, or glimpses into the human side of surgery. We have space to accommodate articles from all strata. After all, SUTRA belongs to all of us. Here's to this edition — one we hope you'll treasure as a collector's issue.

Warm regards,
Dr Magnus Jayaraj Mansard

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Vice Admiral (Dr) Sudeep-Naidu VSM Former Prof & Head of the Department, AFMC, Pune.

All Armed Forces hospitals across the country are considered 'one state' for organ retrieval. This concept simplifies the transfer of organs between different regions within the country.

Liver Transplantation in the Indian Armed Forces



The Trained team with Mr. Mohammad Rela



Liver Transplant Centre - AHRR



State-of-Art Operation Theatres

The Indian Armed Forces Medical Services (AFMS) were toying with the idea of starting a liver transplant programme since 1996, but due to the low incidence of cases in the country at that time, kept deferring the programme. Finally, the idea took root and a high-powered fact-finding team toured France and UK to decide on training a comprehensive team. A 19

member multidisciplinary team consisting of surgeons, physicians, anesthesiologists, co-ordinators, an interventional radiologist, a pathologist and OT Matrons/ICU Sisters were dispatched for training at two centres in the UK in 2006 – Kings College, London and Queen Elizabeth Hospital at Birmingham where the two teams were fortunate to be mentored by Mr. Mohammad Rela and Mr. Darius Mirza

respectively.

The team reassembled in Delhi at Army Hospital R&R, where a turnkey project had been undertaken to construct a state-of-the-art Centre with 3 modular operation theatres, a 4 bed ICU and a 4 bed HDU with all the necessary equipment for liver transplantation. To date this centre is the showpiece of the hospital.



Use of IAF aircraft for organ retrieval & transport



First 6 Transplant Recipients
All Serving soldiers returned to duty

Right from the beginning, the stress has been on Deceased Donor transplants. The Armed Forces Organ Retrieval & Transplant Authority (AORTA) was created with the avowed aim of creating awareness in the Armed Forces and also retrieving organs in the far flung AFMS hospitals whenever available. A crucial amendment in the 2014 THOA rules established that all Armed Forces hospitals across the country are considered 'one state' for organ retrieval.

The Armed Forces was considered a "deemed state" for the purpose of organ sharing & the DGAFMS was permitted to share organs between states from the AFMS hospital pool. This was useful to needy soldiers who hail from all states in India but have the facility for organ transplant in only a few centres. This had the advantage of streamlined logistics: This "one state" concept simplifies the transfer of organs between different regions within the country. The Indian Air Force's 24/7 aircraft availability provides critical and rapid transport for organs, a significant advantage for saving



offtrack DELHI



Military Operation

The army's first nation-wide organ retrieval drive gives soldiers and civilians a new lease of life

By Sandeep Unnithan

In January, Brigadier Y.P. Bakshi was shot dead by unknown assailants in Meerut. Poignantly, his death has given new hope to five strangers. After the consent of his family, the war veteran's liver was transplanted into a terminally ill 14-year-old, his kidneys were transplanted to two soldiers, eyes were received by another and heart valves were given to a one-year-old infant. "I'm back from the jaws of death," says Lance Naik Sukhvinder Singh, who was bed-ridden two years ago.

This is just one of the miracles wrought by the two-year-old Army Organ and Retrieval Transplantation Organisation (AORTA). Operating from Delhi's Army Hospital (Research & Referral)—the hub of 140 military hospitals—AORTA aims at giving new life to not just army personnel, but civilians as well. It is the first nation-wide organ retrieval effort and clearly a tough task because even doctors are not adequately sensitised to organ donation.

The gap between demand and supply is enormous. Over three lakh people die in India every year because they do not get liver for transplants. The number of brain-dead cases as a result of brain injuries and strokes—the only condition in which organs can be removed—is even harder to come by.

Hospital authorities estimate that nearly 30 per cent of all neurological cases result in brain deaths—this is when the heart beats for 48 hours, but it allows the removal of organs.

"Organs are a national resource and should not be wasted," says Colonel A.K. Seth, Director, AORTA, underlining the criticality of the mission. It takes 72 hours for the completion of the whole process—from the time a family gives the go-ahead to the actual transplant and three surgeries (on the donor, the organ and the recipient)—involving over 100 personnel. Organs cannot be stored and have to be transplanted within 12 hours. Helping them are specially-trained patient aid and liaison officers who are in contact with the family at every stage of the operation. So far, nine out of 20 brain-dead cases here have led to organ transplants. The most heartening was the case of Major Sidharth Malik who donated the organs of his 18-month-old son, Shaurya, after he fell from a balcony and died. His eyes gave sight to two personnel, while his kidneys saved the life of a 31-year-old man.

"We plan to replicate the model generated at our hospital at eight other major army hospitals," says Major General O.P. Mathew, commandant of the hospital. AORTA has so far got pledges from only 1,000 personnel—a pointer to the daunting task before a million-strong organisation.

lives. This combined effort increases the chances of timely transplantation by overcoming geographical and logistical barriers, ultimately saving more lives.

March 08, 2007 will always be a red letter day for the AFMS, when the first successful liver transplant was done on a serving soldier. With the availability of deceased donor organs reflecting the average of the country, the transplant team was aware that soldiers were dying on the waiting list and embarked on living donor transplantation also.

The team also undertook split liver transplants to increase organ availability and had the unique honour of doing the country's first in-situ split liver transplant on 27 Aug 2008 whereby a serving soldier and a 14 month baby received split liver transplants.

To date, the AHRR team has conducted a total of 139 DDLT's and 46 LDLT's with very satisfying results. The team has retrieved livers and other organs from Pune, Bengaluru, Chandigarh, Goa, Lucknow and Jalandhar as well as multiple local centres in Delhi/

NCR.

Like other programmes in the Govt Sector, the AFMS has also suffered attrition in the form of transfers of team members due to service requirements as well as promotions/retirements. New team members are being regularly drafted in and have received invaluable mentorship from Mr Subhash Gupta and Mr AS Sooin who have hand-held the AFMS over the years.



TOP PANCREAS TRANSPLANT SURGEONS



DR. RAINER W. G. GRUESSNER

Dr. Rainer W. G. Gruessner is a world-renowned transplant surgeon recognized for pioneering advances in abdominal organ transplantation, particularly pancreas and combined kidney-pancreas procedures. He has performed numerous "firsts" in the field, including living-donor intestinal and pancreas transplants. As editor of the textbook Transplantation of the Pancreas, he has significantly shaped surgical education and practice worldwide. Dr. Gruessner has held leadership positions in leading U.S. transplant centers and contributed to the International Pancreas Transplant Registry. His work combines clinical excellence, innovation, and mentorship, making him one of the most influential figures in modern transplant surgery.



Dr Amitabh Yadav

Co-chairman and Unit Head,
Institute of Surgical Gastro, GI and HPB Onco-Surgery,
Sir Ganga Ram Hospital, New Delhi.

Surgical Gastroenterology in India has transitioned from its humble beginnings into a globally respected specialty. The past was shaped by pioneers and the establishment of IASG. The present reflects clinical excellence in HPB surgery and LDLT, competitive training programmes, and growing academic contributions.

Surgical Gastroenterology (SGE) Education in India

Amitabh Yadav, Parmanand Tiwari, Samiran Nundy

Co-Chairman and Unit Head | Senior Executive | Emeritus Consultant and Advisor

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Abstract

Background

Surgical Gastroenterology (SGE) in India has grown from a niche discipline into a recognized super specialty, encompassing the management of gastrointestinal cancers, Hepato Pancreato Biliary (HPB) disorders including liver transplantation, inflammatory bowel disease and other complex conditions. This evolution, from a sub-specialty of general surgery to one of the most sought-after branches for an evolving super specialty, reflects both the increased load of GI disease and the parallel

growth of specialized surgical expertise in the country.

Objectives

In this article we review the present clinical and academic landscape, training programmes and opportunities, challenges posed by subspecialty fragmentation, and the future roadmap of SGE in India.

Results

Since the late 20th century, the specialty has expanded significantly with the establishment of dedicated Gastrointestinal (GI) surgical units, the formation of

the Indian Association of Surgical Gastroenterology, development of liver transplant centres across the country and the development of structured MCh and DrNB training programs. India now performs the largest number of living donor liver transplantation in the world and has made important contributions to research in various GI diseases. Yet challenges remain, including regional maldistribution of expertise, variability in training exposure, and pressures from competing branches such as colorectal surgery, GI oncology, and HPB surgery. A critical evaluation suggests that premature fragmentation may dilute the

strength of core SGE in India.

Conclusions

Indian Surgical Gastroenterology is now a globally recognized entity for its clinical excellence and academic productivity. The future requires consolidation of broad based SGE, integration of advanced technologies with artificial intelligence, expansion of training and services to underserved regions and carefully structured fellowship-based subspecialty training.

Introduction

Gastrointestinal diseases represent a major component of India's public health burden. According to the Global Burden of Disease 2019 study, digestive disorders accounted for nearly 10% of disability-adjusted life years (DALYs) in India. Colorectal, gastric, and hepatocellular carcinomas are among the leading causes of cancer-related mortality, while chronic liver disease affects over 30 million people.¹ Pancreatitis, liver disease, Inflammatory Bowel Disease (IBD) and GI cancers are also on the rise, reflecting both lifestyle transitions and unique regional disease patterns. These epidemiological trends have highlighted the need for a focused discipline capable of addressing the complexity of GI problems and interventions.

Surgical Gastroenterology (SGE) emerged as India's response to this challenge. Unlike many Western countries, where colorectal surgery, Hepato Pancreato Biliary (HPB) surgery evolved as separate tracks, India developed a broad-based super specialty model. This integrated approach ensured that

one specialty could manage the entire spectrum of diseases in the GI tract, including cancers, benign diseases, emergencies, and transplantation. Such a model has proven invaluable in a country which has limited resources and an uneven distribution of healthcare expertise accompanied by a huge burden of diseases.

Past: foundations of the specialty

The foundations of SGE in India were laid in the late 20th century, when few visionary surgeons recognized the limitations of general surgery in addressing complex GI diseases while the same was practiced abroad. Dedicated GI surgical units were established at pioneering institutions such as the All India Institute of Medical Sciences (AIIMS), New Delhi, Madras Medical College, Chennai, Sanjay Gandhi Postgraduate Institute of Medical Sciences (SGPGI), Lucknow and the Post Graduate Institute of Medical Sciences and Research (PGI), Chandigarh. These centres became hubs for advanced procedures including pancreatic resections, oesophagectomies, and complex hepatobiliary operations.²

A transformative milestone was the formation of the Indian Association of Surgical Gastroenterology (IASG) in 1988. IASG gave the specialty an academic identity, provided a forum for collaboration, and championed its recognition by national medical regulators. Through its annual conference (IASGCON), IASG established a platform for continuous upgradation of current knowledge and practice, live operative workshops, resident training, and consensus statements on best practices. Over the years,

IASG has been instrumental in shaping curriculum, promoting research, and mentoring young surgeons.³

Unlike Western models where subspecialties evolved independently, India retained an integrated model, combining HPB, luminal and oncological work within SGE. This pragmatic approach ensured that surgeons trained in SGE were equipped to handle the diverse spectrum of GI pathology across the country.

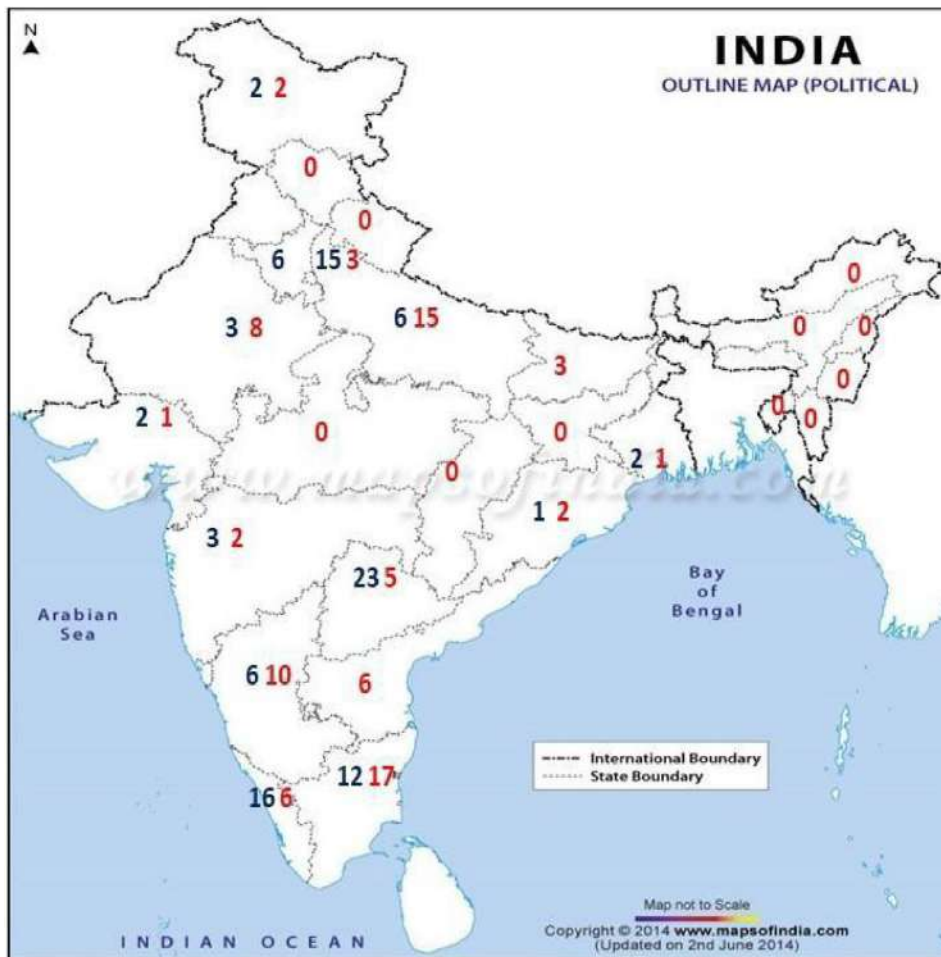
Role of IASG

IASG has been central to the growth of SGE. IASGCON, its annual meeting, has evolved into one of the largest GI surgical conferences in Asia. Through live operative demonstrations, paper presentations and panel discussions, IASG has standardized educational practices and fostered multi-institutional collaborations. Consensus guidelines on various GI disorders published under IASG's leadership are widely cited and have influenced clinical practice nationally. IASG's mentorship initiatives have also created opportunities for residents and early-career surgeons to engage in research and training beyond their parent institutions.³

Present: clinical practice and academic growth

Infrastructure/Distribution and Available seats

The distribution of SGE services in India remains uneven. Advanced centres are concentrated in metropolitan cities. Public institutions handle large volumes of complex cases, often at a low cost, while private centres lead in



DrNB (blue color = 97) and MCh (red color = 95) seats in India

adopting advanced technologies such as robotics and transplantation. However, Eastern and North-Eastern India remain underserved, forcing patients to travel long distances for care. Addressing these inequities requires deliberate policy measures to expand training and infrastructure into underserved regions.

The number of super specialty seats in surgical gastroenterology has increased many folds in the past two-three decades but still there is a huge shortage of these specialists across the country. The opportunities are numerous SGE is one of the most sought-after branch amongst the existing super specialty courses. India produces around 192 superspecialists in

Surgical Gastroenterology each year through MCh (95) and DrNB (97) pathways.^{4,5}

- Population vs. Specialists: Super-specialty seats have increased from 1,850 in 2017 to 4,997 in 2023 across all available super specialties in the country. India has 2.21 per million super specialty seats vs 19.37 per million seats in USA.^{6,7,8}
- Urban-rural disparity: Most SGE surgeons are concentrated in metropolitan centres (Delhi, Chennai, Hyderabad, Mumbai, Kolkata, Lucknow), leaving tier-2/3 cities and rural regions underserved.
- Clinical demand: The rising incidence of colorectal cancer, IBD, pancreatic cancer, and liver failure requires a steady pipeline

of trained GI surgeons.

- Training bottleneck: Seat numbers remain limited by NMC/NBEMS accreditation, faculty shortages, and infrastructure constraints.

Education and Training

The majority of the residents have reported overall satisfaction with the super specialty training programme in India.⁹ Figure 1 shows the distribution of DrNB (Doctor of National Board) and MCh (Master of Chirurgiae) seats across various states in India, with a total of 192 seats including 97 seats of DrNB and 95 seats of MCh. Tamil Nadu has the highest number of total seats (29), with 12 DrNB seats and 17 MCh seats, followed by Telangana (28 seats), where DrNB seats are significantly higher (23) compared to MCh seats (5). Kerala (22 seats), Uttar Pradesh (21 seats), and Delhi (NCT) (19 seats) also have a relatively higher number.^{4,5}

Several states have zero or very limited representation in one or both categories. In terms of low representation, states like Bihar having 4 seats, Odisha, West Bengal, Uttarakhand and Gujarat show minimal seat counts having 3 seats, Odisha and West Bengal each having 3 total seats, while Madhya Pradesh and Chhattisgarh offers just 1 MCh seat.^{4,5}

These regional disparities highlight the variation in medical education infrastructure across India, while eastern and central states, in particular, have lower representation in both DrNB and MCh categories.^{4,5}

Clinical Practice and Current Status in India

The clinical spectrum of SGE today encompasses GI cancers, HPB surgery, liver transplantation, advanced minimally invasive surgery, and emergency GI care. Major centres in multiple major cities are now performing high volumes of luminal and HPB cancers with outcomes increasingly comparable to global benchmarks. Minimally invasive techniques including laparoscopy and robotics are being applied to these surgeries though access is still limited by cost and technology distribution. Improved anaesthesia, critical care, and perioperative management have significantly enhanced outcomes.¹⁰ The induction of neo-adjuvant treatment in various cancers has improved the outcomes and disease-free survival.

The number of liver resections, portal hypertension surgeries and liver transplant has increased in last 3-4 decades. In 2022, 3,920 liver transplants were done in India across 183 registered centers ranking third globally after the USA (9,528) and China (6,053).¹¹ Remarkably, India performed 3,183 living donor liver transplants (LDLTs), the highest worldwide.¹¹ This achievement highlights the technical innovation of Indian surgeons and reflects cultural and systemic barriers to deceased donation. The specialty now is the cornerstone for managing trauma, diverticulitis, pancreatitis, IBD, perforations, GI haemorrhage, and other emergencies, and is increasingly serving as tertiary care referral hubs. Its dual role in elective and emergency surgery underscores the comprehensive scope of the specialty. The introduction of state-of-the-art laparoscopic instruments, including the latest energy devices

and robotic technologies, has expanded the scope of surgical field and these approaches are increasingly practiced in luminal, bariatric, and HPB surgery, though access remains inequitable. Nevertheless, the limited availability of the highly specialized equipment and expert personnel restrict widespread adoption.

Research and Publications

Indian GI surgeons contribute significantly to global research and high-volume centres have published landmark series on procedures such as Frey's operation and LDLT outcomes, which are cited internationally.¹² Multi-institutional studies, often incubated through IASGCON, have led to consensus statements and guidelines tailored to Indian patient populations. Despite these achievements, challenges persist, including limited access to research funding, lack of national registries, and inadequate research training in many residency programs. Expanding collaborative research networks and integrating India into global clinical trials would enhance the country's academic visibility further.

Data maintenance and Electronic Medical Records (EMR)

Data maintenance in clinical practice is vital for improving patient care, establishing an accurate diagnosis and treatment, and producing good quality medical research. It also ensures regulatory compliance and allows better collaboration among healthcare providers. Inaccurate and incomplete data can lead to serious consequences including misdiagnosis, incorrect treatment and various medicolegal

implications. Robust data is required to ensure patient safety and advancement of medical science. A further step ahead than data maintenance is the EMR, which helps in maintaining accurate and comprehensive information, reduction in medical errors, enhanced coordination among medical workers, support public health initiatives and medical research.¹³ Unfortunately, only few centres promote these activities, and the data maintenance across institutions is very scarce in our country.¹⁴

Structured Training (MCh/DrNB) vs Institutional Fellowships: A Debate

India currently has a dual system of structured super specialty training in Surgical Gastroenterology through MCh (NMC-regulated)/DrNB (NBEMS-regulated) and institutional fellowships. MCh/DNB entrance exams are highly competitive, require a common NEET-SS entrance, and culminate in standardized exit examinations.

Their strengths include:

Uniform entry and exit criteria, ensuring transparency and quality. Mandatory thesis/dissertation, encouraging academic research. Structured logbooks and defined curricula, recently updated to competency-based formats. National recognition, facilitating employment in both public and private institutions.

In contrast, institutional fellowships have increased significantly over the past decades, particularly within high-volume private hospitals and by stalwarts in the field. These

fellowships are typically individually structured by each institutions, lacking standardized entry or exit examinations; nevertheless, they have played a substantial role in addressing the ongoing shortage of specialists.¹⁵

Their advantages include:

Opportunities to train in niche subspecialties (e.g., HPB, colorectal, transplant, advanced MIS). Hands-on exposure in procedure-rich centres, often beyond what is feasible in traditional MCh/DrNB curricula.

Shorter duration (1–2 years), appealing to surgeons seeking focused training after general surgery or super specialty. However, the drawbacks of institutional fellowships are significant.

Lack of standardization in curricula, evaluation, or certification. Variable quality, highly dependent on faculty and institutional ethos. Limited national/international recognition, with some fellows facing career progression barriers. Risk of manpower exploitation, with fellows functioning as service providers rather than structured trainees.

Impact on SGE in India:

MCh/DrNB ensure a baseline of quality and uniformity, but remain limited in number and geographic spread.

Competing Branches & Subspecialties – A Critical Appraisal In recent years, there has been increasing debate on whether Surgical Gastroenterology should fragment into narrower

subspecialties such as colorectal surgery, GI oncology, HPB surgery, and liver transplantation. While such divisions mirror Western trends, their suitability for India is questionable given the country's healthcare realities.

Colorectal Surgery: Advocates highlight its importance in pelvic oncology and IBD. Yet in India, colorectal cases are already competently managed within SGE. Establishing separate departments could weaken training, especially in small centres. Core colorectal procedures should stay within SGE, while specialized fellowship can be offered at major centers.

GI Oncology: Gastro-intestinal cancers, including HPB malignancies, constitute a core focus of the three-year training programme in SGE, where trainee receive specialized education exclusively in GI diseases and associated cancers. In contrast, a surgical oncology programme incorporates GI cancers as one component of their curriculum; during the same period, trainee also gain exposure to the cancers of the other domain such as head & neck, breast and gynaecological malignancies. Consequently, time and experience dedicated to GI cancers are limited within surgical oncology. The volume of GI cancer cases managed by SGE specialists surpasses those handled by surgical oncologists, which is reflected in each specialty's respective training emphasis. Furthermore, HPB cancers remain predominantly within the purview of SGE rather than surgical oncology. The potential overlap and duplication resources between these specialists may lead to fragmented patient care. An optimal

approach would be to formally recognize oncological training within the SGE and promote cross training that facilitate collaboration between both the specialties.

HPB Surgery: While specialization improves outcomes in select centers, creating a standalone HPB specialty in India would undermine the breadth of SGE training. Instead, HPB should remain integral to SGE, with advanced training available through fellowships.

Liver Transplantation: India is a world leader in LDLT, but transplant surgery is resource-intensive, and outcomes are volume-dependent. It should remain a fellowship-level program post-SGE, restricted to accredited centers with strict auditing. Separating it as an independent specialty risk compromising both donor safety and surgical quality.

Future directions

The future of SGE in India depends on consolidating its core strengths while adapting to emerging technologies and healthcare demands.

The strategic priorities include: Data maintenance, EMR and Research - Push for maintaining a national medical registry for GI diseases and compulsory data maintenance and promote multicenter trials supported by ICMR

Distributional inequities - Even if training output doubles in the next decade, distributional inequities will persist unless incentives are created for practice in underserved regions. Enhancing workforce - There is an

urgent need to expand accredited training seats and deploy GI surgeons strategically to match the disease burden. IASG and policy makers must push for workforce modelling, aligning training capacity with projected national needs. Develop surgeon-to-population benchmarks and incentivize deployment to tier-2 and tier-3 cities.

Fragmentation of SGE - Premature fragmentation of SGE into various sub-specialties risks duplication, dilution of expertise, and inefficiency. India's healthcare needs are better served by a broad-based SGE specialty supplemented by targeted fellowships in high-volume institutions.

Standardized Curriculum - National adoption of competency-based training with uniform logbooks and objective assessments across all MCh and DrNB seats

Fellowship programme - To evaluate current fellowships, determine their accreditation status where applicable, and establish new programmes as needed to address supply and demand gaps.

Equity in Access - Establish SGE units and training programs in underserved regions, particularly in Eastern and North-Eastern India
Advanced technology Integration - Expand robotics, fluorescence-guided surgery, and AI-assisted endoscopy into training and practice. Invest in skills labs, e-learning platforms, and tele-mentorship for residents.

Policy Adoption - Collaborate with NMC, NBEMS, and government ministries for funding, infrastructure, and structured workforce development

Conclusion

Surgical Gastroenterology in India has transitioned from its humble beginnings into a globally respected specialty. The past was shaped by pioneers and the establishment of IASG. The present reflects clinical excellence in HPB surgery and LDLT, competitive training programmes, and growing academic contributions. The future demands curriculum standardization, equitable access to services, accredited subspecialty fellowships, emphasis of data maintenance and integration of advanced technologies. India is uniquely positioned to emerge as a global leader in GI surgery, provided it resists premature fragmentation and consolidates its broad-based SGE identity.

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Dr Anu Behari
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The department was one of the few surgical departments of SGPGIMS to realize the future potential of Robotic surgery, and Robotic Gastro-Intestinal (GI) surgery was adopted wholeheartedly right at the inception of the Robotic surgery program in SGPGIMS in 2019.

Dept. Of Surgical Gastroenterology SGPGIMS, Lucknow

Since its inception in 1988, with the vision to become one of the best Surgical Gastroenterology centers in India, at par with the best in the world; the department has remained true to its mission to provide safe pre-, intra- and post-operative care to patients with complex gastrointestinal (GI) and hepato-pancreatico-biliary (HPB) diseases; to teach and train GI and HPB surgeons and to conduct clinically important and locally relevant research. The motto of the department has always been “we

are committed to serve our patients; while serving our patients we gain experience; the experience, thus gained, helps us to serve our patients better”. Standing tall on these guiding principles the department has taken major strides in the field of Surgical Gastroenterology to reach the current status of a well-established center of excellence for management of complex HPB and GI diseases.

Right from the first years, the founding members- Dr. SP Kaushik,

Dr. Rajan Saxena, Dr. Vinay K Kapoor and Dr Sadiq S Sikora laid a strong foundation of commitment to excellence in patient care, teaching, training and research. Immense hard work and dedication was put into meticulous record keeping- all admissions, operations, discharges, deaths and histopathology reports were recorded prospectively and preserved. The bound volumes of these occupy pride of place in the departmental library. The record keeping has now become largely digital. Great emphasis was put



State of art modular Operating rooms for advanced minimal-invasive procedures

on trying to obtain good follow-up with phone calls, and postal questionnaires right from the initial years.

In 1991, the Department was the first in the country to offer

periods of 1-3 months from various parts of the country as well as from abroad. Several surgeons from Bangladesh, Malaysia, Sri Lanka and USA have spent time as observers in the department. International collaboration has been fostered both

students all over the country.

The faculty members of the department have earned several accolades and national and international awards (Padma Shree, Dr B C Roy award) and prestigious



Advanced mentor lounge with live telecast for monitoring

an MCh program in Surgical Gastroenterology on a national basis. The number of seats in the program has progressively increased from just one in the earlier years to the current ten seats. The program attracts students from all over the country. With a well-defined all-round curriculum for their development, including extensive ward round teachings, unit rotation, excellent exposure and hands-on training in routine and complex surgical procedures, regular case presentations, seminars, faculty lectures, inter-departmental case discussions and virtual sessions that include multiple SGE departments across the country, SGPGIMS delivers the most holistic training in Surgical Gastroenterology at the national level. Our alumni hold revered positions in several premium institutes across the country and abroad.

The department also receives a large number of observers/trainees for

in the form of collaborative research as well as with several luminaries in the field of SGE spending time in the department as visiting Professors.

A new concept in continuing medical education (CME) program was initiated by the department in 1991 in the form of annual Surgical Gastroenterology (SGE) Weeks- a brainchild of the then HOD, Prof. SP Kaushik. A restricted number of selected postgraduates, young faculty and practicing surgeons from all over the country were invited to spend a week in the department and participate in all the regular, structured teaching sessions, ward rounds, inter-departmental sessions, and operative surgery to give them an immersive experience of surgical care at a tertiary care teaching institution. Though now in a reduced form of a 3-4 day CME or workshop, SGE Week remains a signature academic activity of the department which continues to remain popular with postgraduate



Well-equipped Lecture theatre

fellowships (Commonwealth fellowship, UICC fellowship, Fulbright Fellowship, FACS, FRCS etc), thanks to their dedication and hard work. They have held leadership positions in national and international societies and they continue to represent the department at national and international conferences as well as examiners for MCh exit examinations.

Over the years departmental work has increased manifold-nearly 1600 operations including elective and emergency procedures being done annually and close to 15000 patients being seen in the OPD every year, taking care of patients who present not only with complex or advanced stage of diseases but who also often have severe uncontrolled comorbidities. The department's experience with gallbladder cancer and post-cholecystectomy bile duct injury is one of the largest in the country.

The department has kept pace with the developments in the field of Advanced Minimally Invasive surgery. Starting with laparoscopic difficult cholecystectomy in the initial years, the department now boasts of advanced laparoscopic surgeries for gastric, esophageal, colonic, rectal, liver and pancreatoduodenal cancers as well as a multitude of benign gastrointestinal diseases with

precision and meticulousness as a routine.

The department was one of the few surgical departments of SGPGIMS to realize the future potential of Robotic surgery, and Robotic Gastro-Intestinal (GI) surgery was adopted wholeheartedly right at the inception of the Robotic surgery program in SGPGIMS in 2019. As of September 2025, 230 major

Robotic Gastro-Intestinal Surgery procedures have been carried out by the department spanning the entire spectrum of benign and malignant Gastrointestinal diseases. Research papers in Robotic surgery from the department have won top awards in prestigious national Robotic Surgery meetings.



TOP PANCREAS TRANSPLANT SURGEONS



JOHN J. FUNG, MD, PHD

Dr. John J. Fung, MD, PhD, is an internationally recognized transplant surgeon and scientist with expertise in liver, kidney, pancreas, and islet transplantation. Currently at the University of Chicago Medicine, he has played a pivotal role in advancing immunosuppressive therapies and improving long-term outcomes for transplant patients. Dr. Fung has authored hundreds of scientific publications and co-edited leading textbooks in transplantation. A dedicated mentor and educator, he has trained generations of transplant surgeons worldwide. His leadership extends beyond the operating room, shaping global standards in transplant medicine and earning him a reputation as a visionary in the field.



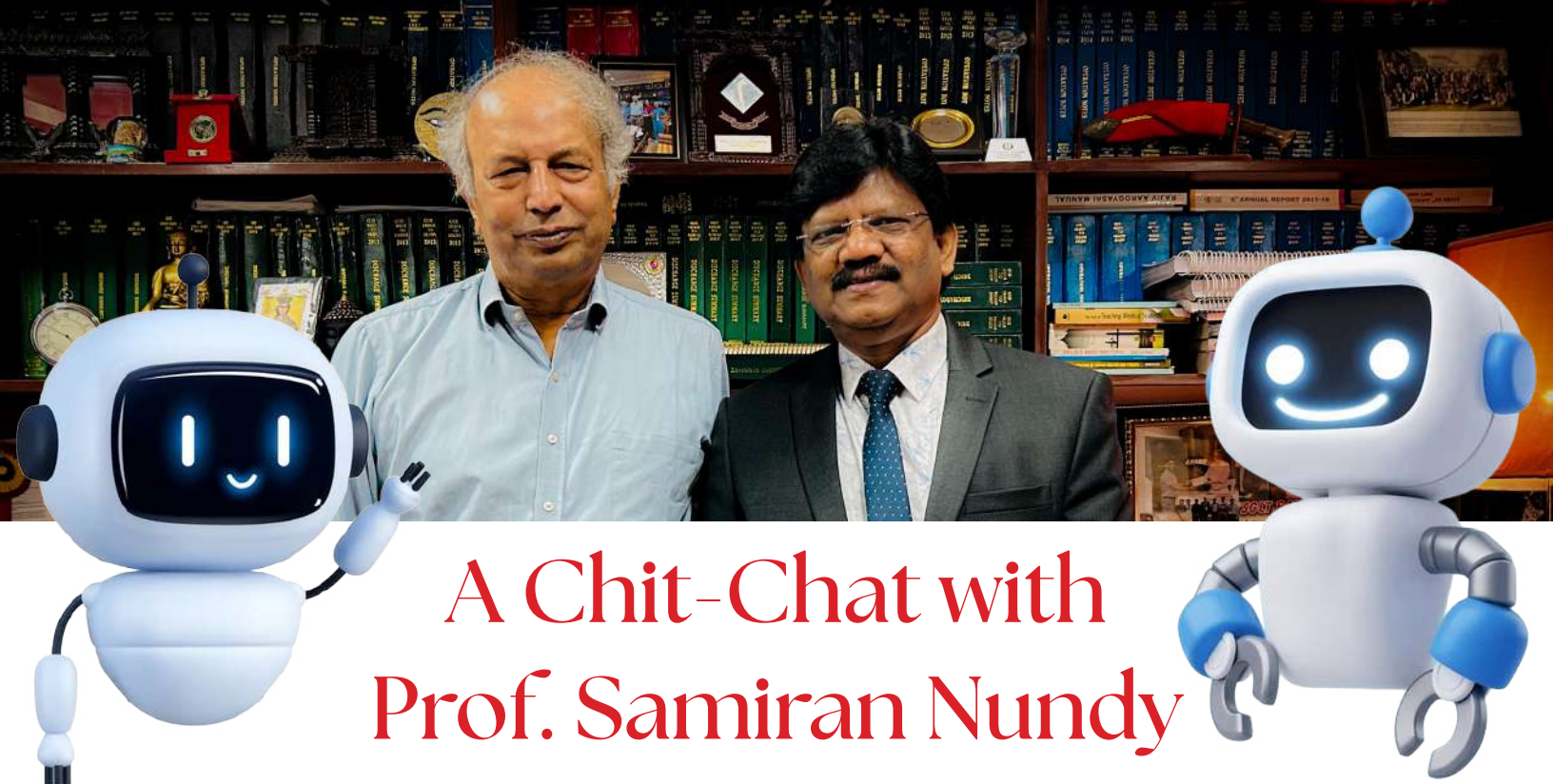
LUIS A. FERNANDEZ, MD

Dr. Luis A. Fernandez, MD, FACS is a transplant and general surgeon who currently serves as Division Chief of Intra-Abdominal Transplantation at Loyola Medicine in Maywood, Illinois.

He is known for his expertise in pancreas, liver, renal, and islet-cell transplantation.

Before joining Loyola, he directed the Liver Transplant Program and co-directed the Islet Cell Transplant Program at the University of Wisconsin Hospital.

Dr. Fernandez has received NIH funding for research on optimizing donor organ use and islet transplantation for diabetes treatment.



A Chit-Chat with Prof. Samiran Nundy

Dr Patta Radhakrishna (PRK) : I consider it an absolute privilege to be seated in front of the legend, Prof. Samiran Nundy. In the post-independent India, very few surgeons have reached the heights Dr. Nundy has reached and I thought it is very apt to for me to spend some time with him when I come to Delhi and I consider this opportunity as an absolute privilege. Welcome sir to this chit-chat show.

Dr Samiran Nundy (SN) : I am very pleased to be with my old trainees, one of my most successful trainees who has done such a great job not only in surgery but in spreading the world of surgery, of high class surgery. It is a privilege for me indeed.

PRK : Which place do you originate from, which part of Bengal?

SN: I don't actually originate from Bengal. Because my father was a surgeon in the Indian Medical Service which is very prestigious and he served in the Second World War and after that he became Professor of Surgery and he was a

legend surgeon in Rangoon and had served as Professor of Surgery there and I was born in Rangoon but I was sent to a very expensive Indian boarding school in Darjeeling which is called St. Paul's which was all staffed by English headmasters and one of the things I remember from my headmaster called Mr. Gowdard said that you people are all privileged and you should do something for people who are less privileged than you and that stuck to me all my life. I was a very idealistic young man.



PRK: Do you have any remembrance of your grandparents, your early childhood?

SN: Yeah, my grandfather was a very eminent. My mother's family was very eminent and they were called

Talukdars and they were landowners in East Bengal, now Bangladesh and he was a Rai Bahadur and lawyer and when I was in school one of the Chief Justices called Sir Thomas Ellis used to take me out and said that my grandfather was well known for misquoting Shakespeare all the time in court. He was a great Anglophile. I became an Anglophile too after him.

PRK: So you had a very privileged background.

SN: Yeah, I had a privileged background because after school I went to Cambridge at the age of 17 and a half and my mother's family was much more prominent than my father's and they wanted me to join the foreign service but one day I heard my mother and father arguing.

I had gotten to Cambridge and much easier those days and I said well I did everything for my mother, I became very Anglicized and all that but I'll do something for my father. So instead of going into foreign service I decided to do medicine.

PRK: How much did your father influence you, your life and how close were you to your father?

SN: I think my father influenced me in that he was very academic and he was Honorary Fellow of the American College of Surgeons. He was one of the only five people who were so privileged and he said the American College sent a plane for him to go to Los Angeles for the investiture with a general N.... from Honolulu and I remember all that but he was very hardworking and all the people have been trained by him and he used to prepare lectures I remember till about two in the morning and he travelled all over the world giving lectures. So whatever I have achieved has been much less than my father in fact because I was privileged but he came from an underprivileged family but he I think achieved much more than I did.

PRK: Did you have conversations with him?

SN: Very little because being in boarding school from the age of 7 or 8 you get a bit alienated from your parents and we were in school for 9 months of the year and it was very difficult to bond with the family and that's why my parents always thought that and my children would never send their children to boarding school because it makes you a different kind of person much more hard because you have to survive with other children who are bullies and this and the other.

PRK: You were very close to your mother?

SN: Yeah I was close to my mother, very close to my mother and she and my grandfather were very

disappointed that I became a doctor because in those days doctors were not very high up socially. It was civil servants and in fact people who worked with foreign firms and all this and doctors were kind of second class. Now it's changed completely and when I was in Cambridge there was someone who did a study of the intelligence quotient of the people who were undergraduates and the people who did medicine were the lowest and the people who did Greek and Latin were the highest but a friend of mine contemporary who became director of studies of St.



John's College said that in about 10 years, 15 years it all changed because now to get into medicine was the most difficult of all, you not only had to get straight A's but you also had to do play cricket for the county or do long jump in the Olympics otherwise you just couldn't get in. The whole thing has changed.

PRK : Did you have siblings, brothers, sisters or you are the only child?

SN: No, I have two sisters, one was married to a well-known family, he was the MP for Birbhum and so she was married early, went

away. My younger sister was very talented, she came second in the All India Golf Championship and she had gotten to Oxford because Professor Butterfield who taught me in Cambridge had got her a place in Lady Margaret Hall but she got married instead, she got first class everywhere but marriage changed her life because she became the wife of a tea planter and stopped all education but continued to play golf till she died last year.

PRK: That was the period, of your youth when Bengal had the best of literary figures, best of music, best of movie makers, have you learnt Bengali, read, write, have you read literature and do you have any other extracurricular interests other than your schooling while you were young?

SN : Extracurricular activities? No, the Bengal at that point of time was very cultured, give it a go. I don't mind this, so we, my mother was a great singer and we used to have these people coming home and giving recitals and she used to play the piano and the great thing about my mother was that you know I have a handicapped niece who is spastic and my mother at the age of ****, my father went to Canada just before he retired and my mother went to university in Brandon, Manitoba at the age of 54 and she did special education and came back to Calcutta and she worked in the spastic school and she worked for mentally disadvantaged and physically disadvantaged children and she used to play the piano every morning for the morning classes and even when we went to Calcutte, we were very poor in All India Institute of Medical Sciences, Delhi and we had a grand house in Calcutta which is not so grand now

because it's all built long ago. Even when we went home for holidays she insisted on going to school herself as she was very dedicated and those were the best years of her life she said, looking after physically disadvantaged children so that was a influence on me because I don't think that we were ever brought up to think that we should be rich but we should not only from my school headmaster but from my mother and father I suppose we were brought up to try and help other people.

PRK: You weren't into Bengali literature?

SN: Studying literature. None. Zero and they used to laugh at me when I went to see my relatives in Calcutta they used to say you know I came back from England once in three years in those days it was very expensive so I couldn't afford every year and they used to say what is this Bengali son of Bengal he doesn't speak Bengali properly so I never learnt how to speak Bengali properly or Hindi properly may I say, even after being in India for so long.

PRK: So how was your medical school? How were your days in medical school?

SN: My medical school. I went to Cambridge and I did quite well and then in those days we did three years of undergraduation and three years in London in a hospital and I was the top I got the gold medal in medicine in Guys and the person who taught me medicine was Professor Butterfield who actually became Lord Butterfield and the Vice-Chancellor of Cambridge. He supported me and he was very happy that I went back to India considering that I had done quite well in as an undergraduate and he

supported me all the time and when I was very upset I couldn't adjust to All India Institute of Medical Sciences. He told my wife that if I was ever unhappy working in India, he would take me back to Cambridge and he will send me three tickets to fly back. So that was really something and I said this in a talk I gave in Rishikesh that if you work hard as an undergraduate your teachers will help you all the time.

PRK: Do you remember any contemporaries or class fellows who made it big in life from your undergraduate period?

SN: Lots of them. Lots I remember. A person called Irwin Zement who became professor of medicine in Los Angeles who is a great friend of mine and I used to stay with him when I went to America in a beautiful house and he did a lot of work on respiratory medicine and there were lot of them who did very well. So that has something to do with the institution. People becoming famous has to do with the institution where you studied in the atmosphere the mentorship etc. The Cambridge helped them build. I went to Gonville Keyes College Cambridge which was the most prestigious for medicine and where William Harvey who discovered the circulation of blood was a student as well as Sir Charles Sherrington and I think that the college had more Nobel Prize winners than Russia. When I was there, a person called Sir James Chadwick physicist who was the master who at first discovered the neutron and he was awarded the Nobel Prize. So there were lot of people like a person called Sir Joseph Needham who wrote 12 books on the science and civilization of China. So it was a very good background and I think

the great thing about going to a place like Cambridge was because I did very well in school and I thought that oh I was top dog and all that but when I went to Cambridge I found that there were people who were so much better than me and they not only were very good in studies they could play the piano well and they were very good cricketers.

It was quite amazing that one found that there were people you know you got a sense of not inferiority but reality that in India you were so great but when you went abroad and competed with the others it was much more tough.

PRK : Did you start your research activities during your under graduation?

SN: Not much but I did my first paper when I was a demonstrator in anatomy. After I finished you see, I always wanted to work in a village in India and because I was good in medicine I said I will try getting both MRCP and FRCS and that will help me to work in a village and I will deal with medicine as well as surgery. So luckily I passed MRCP fast and then I got a job with Lord Brock who was a cardiothoracic surgeon and then I was invited to teach anatomy in Cambridge and my first paper was with a friend of mine called Michael Edgar and we published a paper on the nerve supply of the spinal duramater which was published in the Journal of Neurosurgery and I got it up there and the story is that we went to the professor of pathology in Cambridge saying that could we dissect these corpses and to do this work. So Michael Edgar said why do you want to do it?

I said that I am very interested in how the duramater supplied by

nerves and then he asked me why do you want to do it? I said I want to see my name in print and because I said the truth that he told us that because Gandhi had said the truth I allowed you to do it. So we did it and we published the paper. That was my first paper.

PRK: How did you get into surgery?

SN: I did surgery because I wanted to come back to India. All my life I had wanted to serve the poor. I mean it sounds very odd now but my ambition in life was to give the best treatment in the world to the poorest of the poor. I failed but I tried. And so I did medicine first, passed the MRCP and after that I could get any surgical job.

For instance, I got a job in with Lord Block and then I went to Hammersmith which was the Royal Sports Graduate Medical School and as a house surgeon there was a person who had a duodenal fistula and leaking three or four liters a day and I used to chart the output and input and put it on the wall in you know, histograms. You had to draw them every day not like now on the computers and my boss was so impressed by all this. So he said after you pass the FRCS we'll give you a senior registrar job and true to his word the day I passed the FRCS his secretary rang me and said when do you want to join.

So I became a senior registrar at Hammersmith at the age of 29 which was the youngest by far but the interesting thing about the person who had the duodenal fistula was that he was dying and he was Roman Catholic and I asked him, his name was Norfolk and I asked him what do you do?, oh they wanted to bring the priest and give

him the last rites as he was almost dying. So the Roman Catholic priest came and saw him and said what would you like? So he said 'I want to have breakfast of porridge and scrambled eggs and bacon.'

For two months he hadn't eaten anything and beginning with dietary nutrition and he had porridge, scrambled eggs and bacon and the fistula healed and he went home and he gave me a gold Parker fountain pen but the story is I took the Parker fountain pen to the theatre someone stole it in one day in England.

PRK: How was your training in surgery because the younger generation is very keen on listening to your advice in terms of how should they study the theory how should they get the hands-on training how will they learn perioperative medicine etc.

SN: My training was not so good in that when I was a registrar in Cambridge there we got ten people with appendicitis for instance a day and when I worked in Hammersmith when I went for the interview they asked me what operations I had done so I said I had done one hernia assisted and piles one third of a piles and I hadn't done any more and he said well but he said what do you want to do in the future I said I want to go back to India and out of 130 people I got the job and they were all very high flyers but when I went to Admirals*, my house surgeon had done 30 appendicitis so he trained me how to do appendix but to tell you the truth when I went back I used to do the end of the operation after the professor mop up the bleeding and all that but except for emergencies I didn't have very good hands-on training and I operated a lot on monkeys and rats and I gave

this lecture also about my experience in portal hypertension and by the time I came back to India I wanted a job in India and the professor of surgery from AIIMS, Delhi came and the first group came from Chandigarh and offered me a job as associate professor in PGI but my wife didn't want to go to Chandigarh so when the All India Institute professor came and he offered me the job I resigned from my senior registrar job in Hammersmith and the job didn't come through and I was giving a lecture at the Surgical Research Society on one of my dog experiments and after the lectures a person came up to me he said my name is Gerald Austin I am head of surgery at the Massachusetts General and I would like to offer you a job of assistant professor in Harvard so I said this is wonderful and they got me a green card which is there within three months and I was going to stay there forever but my wife didn't like to live in America and she came and found that there was a job here assistant professor in All India Institute so they were very angry with me and they said why don't you go and have a look. I had no idea what it was like to work in India I came back and I found faeces on the floor in the casualty in All India Institute I said how can I get back here but I was staying with a friend of mine who was Mrs. Gandhi's press secretary who was a foreign service officer and he became Governor of Arunachal later but when I came down the stairs in the morning he was ringing up everyone on the selection committee saying I am Mrs. Gandhi's press secretary and a friend of mine is applying for job as assistant professor and I would be grateful if you could see that justice is done so I was shocked I said I don't want the job so he said

you will never get the job just like that because nobody wants you so I got the job and I hated it for first three or four years but managed to survive.

PRK: How did you get married? Where did you find your wife?

SN: My uncle who was secretary and an IAS officer, very glamorous type was married to my wife's aunt who was an actress Bengali films and so we knew each other for a long time since we were children and my wife went to New York to the World Fair and then she was a guide at the UN and on the way back she used to see me when I was in Guy's as an undergraduate and then I thought we should get married and I asked her to marry me and she rejected me but first she said she wanted to get to know me better. She became an air hostess for British Airways and after she got to know me better she decided she didn't want to marry me because I wasn't good enough and got engaged to an Englishman who was a publisher Oxford University Press in Calcutta but after some time my sister-in-law who had a spastic child rang me up when I was a house surgeon at Hammersmith and said that I know a person called Jack Tizard who was a professor of pediatrics because of a daughter who was handicapped and she said by the way my sister wants to get married to you and if you come within two weeks so I said well I'll ask I'd got the job in Cambridge and I asked can I go to get married they said no we've all planned our holidays you can only go in October so I went in October and got married.

PRK: Were you an ideal husband?

SN: I was a very bad husband in that we used to live in the servants quarters of the chaplain in a

beautiful house called Springfield in Sidgwick Avenue in Cambridge and we used to live at the back upstairs and I used to work very hard and my wife was very scatty and one day she put on the gas and lit a match and the whole thing blew up and singed her eyebrows. She was very very upset and then I got a call from the hospital to say there's a child with a ruptured appendix and could you come in and operate so I left her like that and I went to operate on the child and he never forgave me for that it was a problem of being a good family man and being a dedicated doctor and I think all doctors have this problem can't be only me you can't be I said you can't be a dedicated doctor to your patients as well as treat your family the way they want to be treated.

PRK: If you had to reinvent the whole thing would you be any different now? suppose you would have been a better husband in retrospect?

SN: In retrospect maybe I should have been a less hard as a person but it's been difficult because my background has been boarding school and living by myself and supporting myself and I expect everyone else to do the same which is probably not right if you are a family person.

PRK: Have you been a good parent?

SN: I think I have been a good parent. My wife brought up my children but and I was in the All India Institute. Very poor. I used to get 900 rupees a month when I came and we could never change our car tyres and my wife was a great believer in Sathya Sai Baba of Puttaparthi and even in spite of that she said that you were given a very privileged background. My wife went to London School

of Economics and I educated her because she wasn't educated before and she did very well but she said we had a very good education and you have to resign from All India Institute and make money in the private sector and that's why I know Dr. Sama who was the head of Ganga Ram hospital at that time came to meet about 2 years ago saying that we want to start GI surgery department in Ganga Ram and would you come? and what would you like? we will give you everything you want so I said I want lots of money I want to be able to choose who I work with I want to have security of tenure and I want to have an office so he said we will give you everything but we can't give you an office but when I came to Ganga Ram the only thing they did give me was a small little office that Dr. Rana who is the chairman of the trust had. I left AIIMS to join the private sector only to educate my children but my children did rather well in that my son got in did very well in Washington University I don't know yeah in St. Louis then he was recruited by Mass General and they wrote him in the no he went to Duke did a PhD and neurosurgery neurology mainly with computers and then he went to Mass General and he stayed in the same block of flats where we were Charles River Park in a different block and then he came back because my wife got sick she got cardiac amyloidosis and he is now making doing artificial intelligence and the application in medicine so he is getting a big firm. My daughter went to Cambridge and did well, got lots of prizes and now she is a lawyer and last year Time Magazine put her as one of the hundred most influential people in the world so I told her why didn't they ask me tell me rather than you so she went there and got the award

so she is very prominent lawyer in television every second day and she is very strong on feminism thanks to father

PRK: what is the father's role in the children coming to that level? Did you mentor them?

SN: No it's not my role I think it's my wife's role in that they didn't stay abroad although they did well and they came back to India one was because she was sick and second was because she told them all the time that you must come back to India and serve the country. She was very strong on that Mrs. Nundy herself was a celebrity and she has done very well on her own Mrs. Nundy, my wife started this spastic society do you remember in your day and she got a huge grant from the British and the government of Delhi gave them the land just in Gulmohar Park and they built a huge school which is very successful but my sister-in-law who had this spastic child she's got done fantastic things in Bombay in that they've got for handicapped children there were three different institutions and she got the Padma Shri and she's now branched out into I think 25 centres in India and I'm very pleased to say that I'm president of that ADAPT which is able, disabled all people together so they've done I think my wife's achievements especially my sister-in-law's achievements are much greater than mine because I was only a minor surgeon but they influenced a lot of people and I think people said that the index of civilization of a country is how they look after the disadvantaged and they've shown this.

PRK: Did you have good friends among medical people, among non-medical people?

SN: I have very good friends among mainly non-medical people medical people unfortunately my really good friends from abroad from England and America in non-medical people there are a lot of people who came back the same time as I did who became very prominent and Prannoy Roy who started NDTV and I used to appear on their program once every two or three weeks and people knew me then and I think it was the only it was a very popular program, do you remember it? The World This Week and I used to discuss different medical subjects and Prannoy then Arun Shourie who came back from the World Bank and Bimal Jalan who became Governor of the Reserve Bank, so all these are very good friends of mine, they are still very good friends of mine so we meet here rather you know fairly frequently.

PRK: I remember on Saturdays you used to spend time with your in-laws and DLF

SN: Oh yeah, that's right I used to go to DLF they had a house in DLF

PRK: You've been very close to your in-laws?

SN: Yeah, yeah I was and that I tell everyone the story of my experience of bribery and corruption because I helped them build that house in DLF and they were quite old and when the house was complete a person came for the completion certificate and he wanted 600 Rupees because he said there was something deficient, a bribe so my father-in-law was angry with them and rang me up saying that he wants 600 Rupees. My father-in-law was very straight and he would never think of bribing anyone, so he asked me what shall I do I said give him the 600 Rupees and that's my only

thing of bribery or experience of personal bribery but I thought that in the end poor things, he said that they would re-inspect the house 6 months later and they had already given up their old house, ruined house very complicated I think ethics in India is very complicated and what did you have done, what would anyone have done 600 isn't anything at all now.

PRK: What is the secret of your fitness and health, you are 80 plus and so fit and so energetic and working so hard is it your genes, your food your physical activity?

SN: I think genes and also I exercise every morning and also I think that I have been told that unless you work you either go up or you go down you don't remain the same and medicine has been my life and I don't want to give it up.

PRK: So you eat very little, very little and I had noticed that your lunch usually will be a sandwich

SN: That's right, lunch I have a banana apple and guava no and lassi and lassi or milk shake and I have it here that's enough yeah we have been even in old India street I used to have that you remember so I haven't changed dinner I have half Indian and half foreign you know.

PRK: Do you sleep well?

SN: Yeah and on Saturdays my grandchildren come home. On Tuesdays I go to my son's house for dinner with my grandchildren I have one grandson, granddaughter my son and grandson with my daughter and I on Saturdays we order food from outside Chinese or Thai also.

PRK: I remember in the mornings you wake up and go through your journal work and you are also open

to telephone calls from patients and that's been your routine.

SN: Yeah! I don't give my number anymore because there are too many people who ring me but I read the journals I either wake up at 5.30 because there is a class at 8 or operation or 6.30 on Tuesdays 6.30 and 6.30 on Tuesdays and Sundays.

PRK: How was your tenure as a surgeon in AIIMS? Who promoted you and who prevented you?

SN: I came back to AIIMS directly from America and I had no idea of what India was like but they had kept a little E-type quarters 700 square feet and my wife had a grand piano in Calcutta which was shipped and taken to my drawing room and the grand piano occupied half the drawing room in Delhi. I remember Prannoy and his wife slept for the first three weeks under the piano in our drawing room before they became famous and the problem with me was that I was a very bad surgeon and I had not much experience of surgery and although even by that time I had published about 12 or 15 papers quite not bad on thyroid lymphography nerve supply to spinal duramater and various other things and I had done research on pancreatic secretion and all that but I couldn't operate and oh yeah I had worked also on gastric acid secretion and I was very miserable and one day after a month or so Dr. B.N.Tandon who I should always be grateful to you, remember him was walking in the foyer in the All India Institute saying that he has a patient with portal hypertension who needs an operation, a shunt and I had never done one all my life. I had helped the great Linton and Mort do shunts two or three, never done a porto-caval shunt in my life and I didn't know what

to do. I couldn't sleep that night I didn't know whether to go to the mortuary practice but everyone will know but then I went and I did the shunt it wasn't that difficult and I filled in a form which they still have in the All India Institute and it was in April 1975 and the person did very well and after that they started sending me emergencies you know variceal bleeding and in those days I used to do a Crile's procedure which was thoracotomy and stitch up the varices from inside open the esophagus and people in the All India Institute never did all this and out of the first 11 patients 7 died and people used to say that he should have an 'L' plate and he should go back to America useless surgeon but then I started doing Lieno-renal shunts which started being successful and out of the first 47 patients mainly extrahepatic obstruction there was not a single mortality and I wondered why this was and I realized that it was because they were young and they had good liver function and for people for India where a person cannot have access to blood transfusion and have huge spleen and hypersplenism and all that it was much better to do a one-time procedure and I also learned that if you persist you can do what you want and I realized that Indian problems were very different from western and you should do what is appropriate for your country and we used to do between in your day you remember between 70 and 90 portal hypertension operations a year and sometimes at one night during the day and then another night and I tell these people that you know we used to be up 48-72 hours just operating and sleeping in between for one or two hours so it was very tough but it was a wonderful experience but what I didn't like was because I was

not kowtowing to the bosses I never got promoted and we lived in the in the E-type quarters for 12 years but then gradually we liked it and my children used to play around in the park in front and we used to watch them from the top and then you realize that after some time you can make do with what you have. We were always very poor but I had no desire to be rich neither was my wife but we were happy and gradually I think that because over a year after I came back there was a I'm giving you an anecdote which you can edit out there was a selection for senior resident in our department and one person who was way better than the others, the departmental interview, we selected him when he went to the director's interview where the head of the department was, he didn't get the job and his head of the department Chela got the job, so I went to the director and I said this is very unfair and he is much better and he said write me a letter so I wrote him a letter saying this one gave that he is much better and he should have got the job the next day there was an article in front page of the Indian Express that color blind surgeon does operations in our All India Institute and I was only partially color blind very little and they said that he takes very long time over his operations patients don't want to come to him and then the everyone said the anaesthesia person said he takes 17 hours over operations and it shouldn't be done and then they set up they wanted to set up a committee to look into my operative skills headed by the head of department but then my friend who wasn't my friend then Arun Shourie wrote an article in the Indian Express to say the responsibilities of a surgeon saying what a great background I had I already done all

these shunts and nobody else was doing them but they took a long time everywhere because it was a very difficult procedure so that was passed so all these things made me quite upset but my mother-in-law was staying with me at that time and my wife was in when this thing came out my mother-in-law said to me that why should you resign and go back to America this country is yours as much as anyone else's and the institution should be yours so I said I'll stick it out. My wife had gone to Cambridge and then Lord Butterfield told her that if he wants to come back you come back but I said I'll stick it out and I stuck it out and I think that gradually got used to the system and eventually I think that I have been very happy and looking back on my life I think that being a doctor in India was the best job in the world and I have to thank mainly my wife that she persuaded me to come back and my headmaster.

PRK: You are someone who will walk the talk and call a spade a spade. Have you toned down in that over the years?

SN: No I think the problem is that because I call a spade a spade I become very unpopular. I don't like all this corruption and politics and stuff and I've edited this big book on corruption which is a best seller and I've alienated a lot of doctors because of that but I'm pleased that not that it's made much difference but I think people for instance, we wrote an editorial in the BMJ and I wrote an editorial in the current medicine research and practice on corruption in medicine and it was taken up. The BMJ article editorial written with the present editor Kamran Abbasi was taken up by 50 newspapers and I think partly there

was a question in parliament and partly because of that the medical council of India was dissolved and national medical commission was taken up because of corruption and there's all this corruption so we try to expose it and I think there's no point in just accepting everything and you should. I'm quite pleased that I did call the spade a spade.

PRK: I don't know whether anyone has trained more surgeons than you have done in a very proper manner and most of your trainees are transplant surgeons. Every liver transplant surgeons in the country have been your trainees sometime or the other. Are you happy with the way you trained students

SN: When people ask me what I consider my greatest achievement in life I think the people who trained under me and I think that I am most proud of that and is really I'm very happy when people I have trained say people like you who've done such innovative things like YouTube things and getting propagating surgical knowledge and so many other people and I'm proudest of that and the second thing I'm proud of is helping formulate and do the rules for the transplantation of human organs act which has I think changed Indian medicine.

PRK: What is your take on the associations like Association of surgeons of India, Indian Association of Surgical Gastroenterology why are they not on par with some of the best societies in the world? What is your opinion?

SN: I think unfortunately the quality of medical education and the quality of research in India is very low and we've done a study of publications from Indian medical institutions and we found that

between out of 571 institutions 57% of them had not published a single cited paper in Scopus between 2005 and 2014 and I think the quality of research is really very poor and people get promoted not because of talent or achievement but because of either time bound seniority which is a very bad thing and secondly who they know and in All India Institute and one of the reasons I was never promoted in All India Institute was because I never went to a politician or a bureaucrat to help me get promoted and even Dr. BN Tandon told me that everyone is talking about you know and Dr. there was a person MP Dr. Bhoi who said that 60 to 70% he was on the institute body of faculty used to go to his house before selections and Dr. BN Tandon said that you operate on so many of these ministers and all that why don't you talk to them so I said if I talk to them then I'll never do that even my wife said that we are floundering around in this house why don't you go and talk to cabinet minister that who's loved me there was one cabinet minister who I'd operated on and after I operated on him he told me to sit down he told everyone to go out of the room and he said to me I'm very grateful to you. You saved my life and I want you to ask me for anything that you want and if I can't do it I'll get the prime minister who was Rajiv Gandhi to do it so I thought this was my great opportunity so then I thought what would I like you know what I asked him I said stop politicians interfering in All India Institute so that was the worst thing yeah so that was the end of my political affiliations.

PRK: Why are central institutions say even GI Surgery departments, aren't to the level that is expected

and there are so many private sector institutions that have overtaken them? What is ailing them?

SN: I'm very sad about that. I'm very sad that I've always been an advocate of the public sector and I think that when both of us were in the public sector it was way ahead of the private sector and then I was one of the people responsible because Bimal Jalan I told you was a friend of mine who he was banking secretary or something at that stage and he said there was someone called Mr. Reddy who wanted to start a hospital and I said that yeah in the private sector big hospital so I said do you think we should allow them so I said yes they want a loan or something so I said yes because in AIIMS the private ward used to have a waiting list of about two months and people used to get bribed to get a room in the private ward so there was a great need for the private sector so the Apollo started in Chennai and then came to Delhi and it really has changed Indian medicine and 80% of urban Indians go to the private sector while 70% of rural Indians go to public sector and I have written an editorial in the BMJ British Medical Journal on the private health sector in India that people get bankrupt but the great advances are now done in the private sector it is very corrupt but still people go there because the government sector is so underfunded and people don't care about you at least in the private sector people are treated nicely and they don't mind paying and they get bankrupt but they prefer that than going to the government hospital. it is very sad.

PRK: What is the solution to improve the public sector?

SN: The solution is to have hospitals like Gangaram and others are not

for profit and you should have it run by the board of governors who don't take any money and there is no profit and I am saying because I am part of the trust that runs Gangaram and they have a mission to help and we have 20% of beds completely free and 35% subsidized so I think and we encourage academics and research and I am also the chairman of the ethics committee where we look into any complaint not that we have had many complaints because there must be lots of things going on but nobody complains about them and I think like America in the private sector the 80% of hospitals are not for profit and the very few for profit hospitals like corporates because the corporate hospital exists to make money for shareholders and not for profit hospitals there is no shareholders and I think it is much better I don't think the government can afford universal health care because it is too poor but I think not for profit hospitals should invest much more money in health care like America which spends 17%, Britain spends 9-11%, European countries spend 11% and India spends 2% or less than 2% on public spending health care.

PRK: You are the president of AIIMS Rishikesh and there are so many AIIMS that have come up and there are also complaints that lot of these AIIMS don't have qualified personnel. Do you think that AIIMS are doing good all over or is there any way to improve them?

SN: Yeah, that's the problem that most of the AIIMS don't have enough faculty and I think the answer would be to raise the pay of the people in AIIMS although they are much higher than other public hospitals but nobody, there is a study from Maharashtra that they looked

at 43 trainees not very big but it's published in British Journal of Social Sciences Research or something and most of them wanted to go to private hospitals and although they wouldn't get much hands-on training and it was not very ethical but they preferred that because they found that they could advance much more in liver transplant. 97-98% of liver transplants in this country are done in the private sector I have written a lot about this.

PRK: You are the father of liver transplantation in India. I remember the days when you ate, slept and dreamt liver transplantation for years together We used to meet on Friday but we used to think that liver transplant would be done mainly in the public sector with whole livers Now it's done mainly in the private sector with partial livers Now you are the father of the bill, you worked hard on that and I remember you visiting the parliament a number of times to get the bill going and you are the originator of many other transplant surgeons in India Are you happy with the way transplant is going on in India? Is it that your dream has come true?

SN: I think it is mixed. I think it's fantastic that there are 140 centres doing liver transplants in India at the moment and the best centres get 95% one year survival and India does about 1650 in 2021 and it's third in the world in numbers after America and China but I was talking to one transplant surgeon yesterday who would train with me in AIIMS and she was saying that all these corporate hospitals have representatives abroad Uzbekistan, Kyrgyzstan and they get patients and but they provide a service and she was saying that it is not completely unethical because they are providing

a service and in some hospitals in India 90% of the liver transplants are done on foreigners and also they have marginal donors so and although in the liver transplant in the transplant of human organs act we had a stipulation that the appropriate authority you must report all the indications and results of transplantation not only of liver but kidney everything to the appropriate authority but that's not being done so there are many centers which probably have very high mortality and there are very many centers which do much very unethical practice and I think the vast majority of hospitals which are very successful have these patient facilitators who make it easy for the patient to you know you get a donor who is your servant and the authorization committee just passes it over especially in certain states which can you know very lax about checking whether it is paid transplant, lot of these things happen but overall liver transplant has improved Indian medicine great deal it has improved quality of surgery, anesthesia, blood transfusion and hepatology but I don't think that it's improved ethics.

PRK: I remember you commenting on a number of times that for a vast country like India there are not enough doctors now you also wanted paramedical people also to get into some sort of medical training. Presently there is an overflow of doctors. So many MBBS seats have increased, post graduate seats have increased. Are you happy with that because this is resulting in institutions where there is inadequate staff and improper training and large numbers are coming out, but quality isn't there?

SN: Yeah but I think that you have

to look at a paper in science written by Banerjee who got the Nobel prize from MIT who looked into training of quacks and he found that 60% of people in Birbhum district in West Bengal went to quacks and they trained quacks for 6 months and 1 year the people who were trained for 1 year and attended the classes were as good as the so called doctors and you see nowadays also that the quality of medical education varies tremendously from different medical colleges and I think it is better to have a poorly trained doctor than no doctor at all and I think and I am a great believer in having a lot of medical schools and gradually they will come up slowly. There is no point at least they will see the thing about a patient doctor relationship is not that the doctor has to be reading the New England Journal of Medicine every week but they have to have a bond with someone who wants to help them so I am not that against expansion of medical colleges.

PRK: Sir, where do you get the time and energy for so much of prolific writing and writing books while something or the other keeps happening around you all the time? How do you keep up with your schedule? Don't you want to relax, watch Netflix and go for a walk in Lodi Gardens?

SN: I don't like to go for walks and all that, I find it very boring and I find television and all that very boring and I spend a lot of time in front of my laptop reading journals or reading interesting articles and I am now getting very interested in artificial intelligence and I look up myself every day in artificial intelligence, I found there is a lot of wrong information but people say that it will get better with time and it

is worrying that I think probably it is going to take over much of medicine and in fact I was going to write an article editorial on predatory medical journals, you know where you have to give a lot of money and they publish your paper within two days and I looked up some artificial AI thing, write me an editorial on predatory medical journals, it was a brilliant editorial so the journals that I am associated with now we have to have a clause at the end of the thing to say that you have not this is not copied from artificial intelligence so we have done lot of research in corruption in medicine Indian medicine as a matter of fact now.

PRK: What is that you got to tell the younger students so many medical students, surgical students, how to be less corrupt? what is that they shouldn't do? In other words how can they be more ethical?

SN: I think that at first you should do what your conscience tells you and you should go into medicine to help people get better rather than make money. Second is that you shouldn't compromise your principles, I know it is very easy to say so because everyone cuts their ethics just under me, like I bribed that fellow 600 rupees my father-in-law that you should be honest and do what you think is right and if you do what you think is right and work hard, I cannot see that you would not succeed.

PRK: It's been a long journey for you? Are you happy with your journey? Are you satisfied with your life and out of 10 how many marks will you give yourself?

SN: I would give myself 9 and a half. I am very happy with my life and I was thinking that at my age,

when I look back, I find that the main things that you should judge your life as a doctor are patient care, training, research and contribution to society. I think my patient care has been ok and in certain things like portal hypertension and all that I have tried to inculcate in others that you should do what is relevant to your patient and not on so called evidence-based medicine. Secondly, regarding trainees I think I am really happy that so many of my trainees have done so much better than I would ever be able to do and I feel very proud of that. Research,

I don't think I have done that much although not so well because although I have done a lot of papers, not all of them have been very high quality but contribution to society I think the main things have been books like you know, series of books and I think I have also published 40 books including things about corruption etc and transplantation of human organs act so I think with that and also I have become president of Rishikesh which I do quite a lot for and trust here and I have got these lifetime achievement awards and I think I couldn't have

wished for more in life and I repeat again that one of the greatest choices I made was that in spite of having a very expensive education, elite medical schools Cambridge, Harvard and all that I came back to India mainly to serve the poor and I didn't completely serve the poor but I had a very wonderful life.

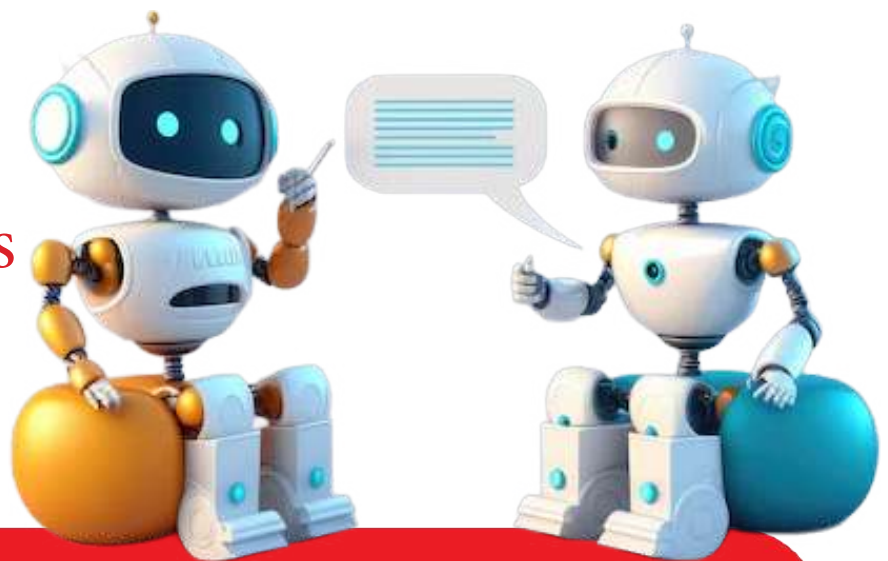
PRK: On that note thank you very much sir, it has been wonderful talking to you, I hope to get yet another session, another day for another recording with you. Thank you, thanks for your time.

TOP PANCREAS TRANSPLANT SURGEONS



ALEKSANDRA KUKLA, MD

Dr. Aleksandra Kukla, MD, is a distinguished transplant physician at the Mayo Clinic in Rochester, Minnesota, specializing in kidney and pancreas transplantation. She is recognized for her expertise in managing complex transplant cases, including patients with diabetes and multi-organ failure. Dr. Kukla's research focuses on improving graft survival, optimizing immunosuppressive therapies, and enhancing outcomes in kidney-pancreas recipients. She is actively involved in clinical trials and scholarly publications, contributing to advancements in transplant medicine. Known for her patient-centered approach, Dr. Kukla combines clinical excellence with research innovation, making her a respected leader in the field of abdominal organ transplantation.





Dr CH Madhusudhan

Prof & Head of the Department,
Osmania Medical College, Hyderabad.

Osmania Medical College, Hyderabad With a robust foundation in service, education, and innovation, the Department of SGE at Osmania General Hospital remains dedicated to delivering affordable, high-quality healthcare to the community.

Dept. of SGE and Liver Transplantation Osmania General Hospital & Medical College, Hyderabad



Osmania General Hospital

Establishment and Growth of the Department

The Department of Surgical Gastroenterology (SGE) and Liver Transplantation at Osmania General Hospital, Hyderabad, has emerged as a centre of excellence in managing complex gastrointestinal and hepato-pancreato-biliary diseases. As a tertiary referral unit within one of the oldest (More than 100 years old) and most respected government teaching hospitals in Telangana, the department has consistently upheld a commitment to patient care, clinical innovation, and academic growth. It is the teaching hospital

attached to Osmania Medical college, Hyderabad.

The SGE department was established in 2010 by bringing together all qualified surgical gastroenterologists into a dedicated unit within the General Surgery department. This unit was subsequently re-designated as the Department of Surgical Gastroenterology under the leadership of Professor R. Pratap Reddy. The core faculty includes Dr. Wasif Ali, Dr. DVL Narayan Rao, Dr. CH Madhusudhan and Dr. Ravimohan.

Founding Leadership and Early Challenges

Dr. Pratap Reddy joined Osmania General Hospital in 1995 after completing his MCh from GB Pant Hospital, New Delhi, while Dr. Wasif Ali joined the same year following his MCh from SGPGI, Lucknow. Both initially served in the General Surgery department, working diligently to establish the identity of surgical gastroenterology within the then-combined Andhra Pradesh state. Professor Pratap Reddy faced considerable resistance from the General Surgery department in his efforts to establish the SGE Department at Osmania. Initially we use to operate in General surgery operation theatres twice week.

Academic Programmes and Postgraduate Training

The MCh SGE super-speciality postgraduate course commenced in 2014, with Dr. Prashanth Koyyoda as the first postgraduate trainee. Since 2024, the annual intake has increased to five MCh postgraduate seats. The department offers specialised

services in hepato-pancreato-biliary (HPB) surgery, advanced gastrointestinal procedures such as portal hypertension surgery, hepatic resections, advanced laparoscopic surgery and surgery for corrosive stricture of the oesophagus.



has donated RS 5.6 crores CSIR funds to SGE department for Liver Transplant equipment. Now we have 3 operation theatres with fully equipped (Thompson, CUSA, TEG, FT10 Diathermy, Intra operative Ultra sound, TEE, Flow track, haemotherm, vascular



Department of SGE/Osmania did first successful Cadaver Liver Transplantation in Govt Hospitals on 9th June 2015

Milestones in Liver Transplantation

A structured liver transplant programme was introduced as a landmark achievement, providing life-saving treatment to economically disadvantaged patients in a state government hospital setting. The first cadaveric liver transplant was performed on 9 June 2015, and the recipient has enjoyed good health for the past decade and still alive. The department represented the Government of Telangana in advocating for the inclusion of the liver transplantation package in the state health insurance scheme (Arogya Sree) for below poverty line (BPL) patients, covering drugs and consumables. Initially approved as a pilot case, the government later introduced a package of ₹10.5 lakhs per case and, after five successful cases, provided lifelong free immunosuppression for post-liver transplant patients. Hindustan Aeronautical Limited (HAL), Hyderabad company

instruments, 4K Rubina laparoscope set, magnifying surgical loupes, Bayer hugger, Hotline etc) which runs 5 days a week. Prof Madhusudhan's family donated Rs 15 lakhs for renovations of interiors of OT complex in the memory of their late parents.

Team Formation and Training

To establish a competent liver transplant team, the department selected like-minded anaesthesiologists (Dr. Raghuram, Dr. Madhavi, Dr. Raghu), operating theatre nurses (Mrs. Thara, Mrs. Subba Laxmi, Mrs. Clauro), and OT technicians (Mr. Krishna and Mr. Surya Prakash). These team members underwent a 30-day orientation at Global Hospital, Chennai. The department developed liver transplant protocols and conducted awareness programmes on brain-dead donor declaration and donor optimisation. Continuing Medical Education

(CME) sessions and workshops on cadaver organ retrieval, benching, and implantation techniques were conducted prior to the first liver transplantation.

Dr. CH Madhusudhan, then Associate Professor with liver transplant training from UPMC, Pittsburgh, USA, performed the first successful liver transplant at Osmania. Following ten successful cadaveric liver transplants, the department completed its first live donor liver transplant (LDLT) in 2017 for a 20-year-old female patient with Wilson's disease. A WhatsApp group was created, including all post-liver transplant patients, SGE faculty, and postgraduate students, to provide ongoing support for health issues.



First SPK (simultaneous Pancreas and Kidney Transplantation) at Osmania in 2016.

The first paediatric liver transplant was performed in 2018 for congenital extrahepatic biliary atresia. In 2024, the department undertook the first ex situ split liver transplantation using HOPE machine perfusion. Other significant achievements include the first simultaneous pancreas and kidney transplantation (SPK) for a 26-year-old male with type 1 diabetes mellitus, chronic kidney disease, diabetic retinopathy, cataract, and autonomic neuropathy in 2016; the first cadaveric intestinal transplant for acute short gut syndrome due to SMA occlusion and massive bowel gangrene in

2025; ex vivo liver resections for hepatocellular carcinoma (HCC) with IVC/HV tumour thrombus and for chronic Budd-Chiari syndrome; and liver transplantation for the smallest baby (6 weeks old) with Abernethy malformation. The team holds the largest experience in paediatric liver transplantation among government institutions.



First Cadaver Intestinal Transplantation at Osmania in 2025.

Ongoing Services and Recognition Today, the SGE department regularly performs both deceased donor liver transplantation (DDLT), live donor liver transplantation (LDLT), and paediatric liver transplants for financially underprivileged patients, establishing itself as a beacon of hope. Professor CH Madhusudhan received the Best Doctor Award in 2017 from the Chief Minister of Telangana for his contributions to organ transplantation services in a government general hospital.



State excellence award from CM

We did first successful liver transplantation for rarest syndrome (NISCH syndrome) in India and 4th case in the world. Presented this case in International Living Donor Liver Transplantation conference at Seoul, South Korea.

Academic Contributions and Research

Beyond clinical services, the department has made significant strides in teaching and training. As a postgraduate teaching unit, it regularly organises academic sessions, seminars, workshops, and CME programmes. The department hosted the LTSI 2025 annual conference and an international symposium on “Paediatric Liver Diseases and Transplantation (PLDT 2023)”.



Post Liver transplant children and adults with Prof Mohmed Rela during LTSICON 2024

Faculty and trainees have presented over 80 scientific papers at national and international conferences (IASG, IHPBA, LTSI, ILTS, ILDLT, etc.), winning several best paper and video awards. Additionally, the department has published 46 research articles in indexed journals. Notably, research collaborations include work on tropical chronic pancreatitis with the Stem Cell Research Unit at Bangalore and an ongoing ICMR project on “Islet Cell Transplantation with Nano Encapsulation” in partnership with IIT, Hyderabad.

Support to Other Institutions

The department has extended its expertise to other government hospitals, assisting Gandhi Hospital (Secunderabad), ESI Hospital (Sanath Nagar), and Military Hospital (Secunderabad) in conducting their first multi-organ retrieval surgeries.

Mission and Commitment

With a robust foundation in service, education, and innovation, the Department of SGE at Osmania General Hospital remains dedicated to delivering affordable, high-quality healthcare to the community.

“Medicine advances through science, but matures through humanity—thanks to our patients.”

“Every patient is a living textbook—written in pain, courage, and resilience.”



Dr Shravan Sharad Nadkarni

Unit Head & Consultant Surgical Oncologist,
BALCO Medical Centre,
New Raipur, CG.

The most common and effective indication for HIPEC and cytoreduction surgery is Peritoneal metastases from epithelial ovarian cancer and pseudomyxoma peritonei (PMP).

Case in point

Pseudomyxoma Peritonei

Clinical History & Presentation

A 52-year-old lady presented to the outpatient department of Vedanta Medical Research Foundation (BALCO Medical Centre, Naya Raipur) on a wheelchair, unable to stand and walk without support due to a massively distended abdomen. Hailing from a small village near Raipur, Chhattisgarh, this lady had limited financial and social support. Already deemed incurable by some of the previous consultations, the patient and her relatives came with limited hope of survival. Her predominant complaint was the massively distended abdomen, which limited her daily activities of living. She was otherwise eating well and was not clinically obstructed.



Clinical photographs depicting the massively distended abdomen with right sided parietal wall hernia & midline scar of previous umbilical hernia surgery

On evaluation, a grossly distended abdomen was noted, which was unyielding, along with palpable nodularity per abdomen and an irreducible parietal wall hernia.

Diagnosis

A contrast-enhanced computed tomography scan was suggestive of a 6 x 8 x 6 cm solid- cystic lesion of the left adnexa with multiloculated fluid collection in the entire

abdomen and omental nodularity and caking. Cancer Antigen 125 level was within normal limits; however, Carcinoembryonic Antigen level was 42 ng/ml and Carbohydrate Antigen 19-9 level was 182 U/ml. Upper GI endoscopy and colonoscopy were normal. Ascitic fluid cytology, cell block and a USG-guided omental biopsy were reported as Pseudomyxoma peritonei with predominantly hypocellular mucinous material. Since the patient had significant abdominal symptoms due to the distension, she needed nutritional optimization and time for arrangement of adequate finances for a planned supra-major surgery, she initially underwent a mini-laparotomy and evacuation of mucin, followed by nutritional optimization.



CECT axial images depicting mucinous ascites extending from supra-mesocolic to infra-mesocolic compartments with a large adnexal mass extending from the upper abdomen to the pelvis

Multidisciplinary tumour board

A detailed discussion in the MDT with above findings was instituted and a treatment plan of Upfront Cytoreductive Surgery (CRS) with Hyperthermic Intraperitoneal Chemotherapy (HIPEC) was decided with a provision for a 2-stage CRS depending upon intraoperative findings, Peritoneal Carcinomatosis index (PCI) & hemodynamic stability.

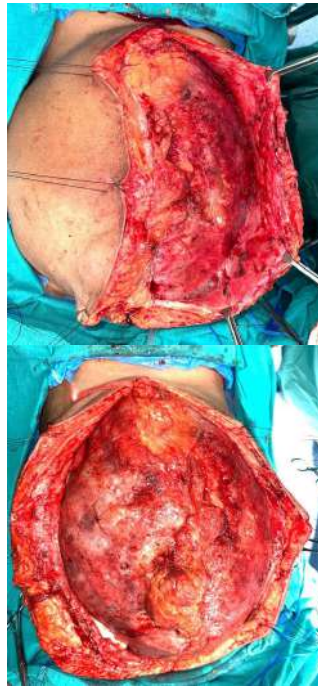
Preoperative workup & optimisation

The patient was put on a high protein diet with Chest Physiotherapy in the preoperative period and after nutritional optimization her serum

albumin was 3.5 g/dl. Her left ventricular ejection fraction was 55%. She had no other medical comorbidities. Splenectomy vaccine prophylaxis was given prior to surgery.

Surgical procedure

Approach – Extraperitoneal



Surgical approach showing the extraperitoneal dissection to separate underlying peritoneum from the abdominal wall up to the bilateral paracolic gutters

Intraoperative Findings – PCI of 32. Omental caking, Large Left adnexal mass, Mucinous deposits over the entire peritoneum (bilateral Subdiaphragmatic, parietal and pelvic), Glisson capsule, Lesser omentum, Lesser Sac, Gastric greater curvature, Splenic surface, entire colonic surface, Uterine fundus and pelvic peritoneum, Small bowel mesentery. However, the serosal surface of small bowel was relatively spared.



Intraoperative photographs depicting the large omental cake and mucinous adnexal mass

Procedure performed – Infra-mesocolic Cytoreductive surgery (Total peritonectomy including bilateral subdiaphragmatic, parietal and pelvic), Omentectomy, Total colectomy with end ileostomy, total abdominal hysterectomy with bilateral salpingo-oophorectomy with the retrograde parachute approach.



Retrograde parachute technique of bladder peritonectomy,

hysterectomy with bilateral pelvic peritonectomy, and pouch of dougласectomy



Completed infra-mesocolic cytoreduction with disease in the supramesocolic compartment planned for a staged cytoreduction

Since the patient developed intraoperative hemodynamic instability with a blood loss of 1200 ml, mucin loss of 5 L, insensible losses >500cc and fluid shifts, the supra-mesocolic cytoreduction was planned as a second-stage procedure which would entail lesser omentectomy, cholecystectomy, splenectomy and Glissonectomy along with platinum-based HIPEC. Operative Duration & Blood loss – 10 hours, 1800 ml (Approx 4-5L of mucin).

Postoperative course -

The stay in intensive care unit was 2 days with reducing vasopressor support. Patient was shifted for ward-based care on postoperative Day 3 on oral liquid diet and was discharged on the 8th postoperative day on soft oral diet with a functioning ileostomy.\



Postoperative photograph of the patient on Day 8, independently ambulatory and taking full oral diet

Final Histopathology

Mucinous neoplasm involving appendix-base and serosal surface of colon with high grade cytology. Ovarian mass suggestive of Mucinous neoplasm with high-grade cytology with surface deposits. Peritoneum positive for tumour deposits. On immunohistochemistry, tumour cells are positive for CK20 and SATB2 while negative for CK7 and PAX8 suggesting an origin from the lower gastrointestinal tract.

Discussion & Evidence -

For disease burden deemed to be too extensive for a single-stage complete cytoreduction, a 2-stage CRS has been proposed by Sgarbura et al in a proof-of-concept article published in 2020. Inclusion criteria for a 2-stage CRS were bulky PMP with PCI > 20, low-grade disease, easily detachable mucin implants, involvement of small bowel serosa or colon requiring at least 3 resection-anastomoses.

Trilling et al., also reported encouraging outcomes in a series of

8 patients with a median PCI of 33 where the 1st stage involved infra-mesocolic cytoreduction with colon resections, major omentectomy, lower abdominal peritonectomy including pelvic masses. The 2nd stage was performed with a median delay of 111 days (90-212 days) with complete cytoreduction followed by platinum-based HIPEC.

Preoperative systemic chemotherapy is generally not considered beneficial in resectable low-grade PMP with failure to enhance overall survival while complete cytoreductive surgery, HIPEC and pathologic grade had a positive impact (Ma R et al).

Therefore, for patients with significant disease burden, a higher PCI and multiple digestive tract implants, even if a CC-0 / CC-1 (completeness of cytoreduction score) is impossible, debulking surgery remains to be the only alternative and can be beneficial compared to palliative systemic chemotherapy but is obviously inferior to achieving a CC-0. This provides an opportunity for a 2nd stage CRS and HIPEC.

Inclusion criteria for 2-stage CRS + HIPEC so far, has focused predominantly on low-grade disease. In our case, multiple preoperative biopsies could not ascertain the tumour grade due to the absence of tumour cells and a higher mucin content, hence, we proceeded with surgery as planned & executed. Intraoperative hemodynamic instability due to blood, mucin and third- space fluid losses are difficult to manage, especially in peripheral centres negotiating the learning-curve in managing high-volume PMP and hence a case could be

made for specialized and focused training in this niche area to address challenges faced in the pre-, intra- & post operative management.

The final histopathology was of a high-grade morphology and the patient is currently on interim systemic chemotherapy with follow-up and is due for the 2nd stage cytoreduction with HIPEC depending on response to therapy. Most importantly, the patient is relieved of her symptoms, is eating well and is independently ambulatory and able to carry out all daily living activities. More focused research on this small subset of high-PCI PMP with respect to tumour grade is needed to ascertain the utility of a 2-stage CRS + HIPEC and its role in improving treatment outcomes.

Role of Govt-Sponsored Universal Health Care -

Our patient hailed from a lower socioeconomic stratum and could

not afford the high financial costs involved with the proposed surgery and HIPEC which can cost upwards of 3-4 Lakh INR. With the help of universal health scheme under Govt of India and Mukhamantri Sahayta Yojana from the Govt of Chhattisgarh, the treatment was availed with minimal out-of-pocket expenditure for the patient.

Take home message -

Pseudomyxoma peritonei usually requires extensive cytoreduction surgery with HIPEC with promising oncological outcomes. Disease burden with high PCI (>20) can be prohibitive in achieving a completeness of cytoreduction score of 0 along with intraoperative hemodynamic issues.

Meticulous technique with reasonable aggressiveness in achieving a CC-0 provides the best chance of survival in PMP. In high PCI, low-grade PMP, a 2-stage CRS with infra-mesocolic cytoreduction

in the first stage followed by Supra-mesocolic cytoreduction with HIPEC can be a life-saving treatment strategy with encouraging outcomes based on retrospective series.

In high-grade PMP, more research is needed to establish the role of a 2-stage CRS as against palliative systemic therapy with regard to oncologic outcomes.

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TOP PANCREAS TRANSPLANT SURGEONS

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Dr. Mark D. Stegall, MD, is a leading transplant surgeon at the Mayo Clinic in Rochester, Minnesota, specializing in kidney and pancreas transplantation. With decades of experience, he is renowned for advancing surgical techniques and improving patient outcomes in simultaneous kidney-pancreas transplants. Dr. Stegall's research centers on transplant immunology, antibody-mediated rejection, and strategies to prolong graft survival. He has published extensively and contributed to shaping modern immunosuppressive protocols. As an educator and mentor, he has trained numerous transplant professionals, reinforcing Mayo Clinic's reputation as a global leader in transplantation. His work bridges clinical excellence, research innovation, and compassionate patient care.



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'Women surgeons are not just keeping up—they're leading the way.'



WIGIL article

Female Surgeons Deliver Better Results — Time to Rethink Gender Roles in Surgery

In the high-stakes world of surgery, patients often assume that technical skill, experience, and hospital quality are the main factors influencing their outcomes. While those elements are undeniably important, growing evidence points to another surprising but consistent predictor of better surgical results: the gender of the surgeon.

Patients who undergo operations performed by female surgeons tend to experience better outcomes overall. These include fewer post-surgical complications, lower chances of being readmitted to the hospital, and a significantly reduced risk of death—both shortly after surgery and over the longer term. These findings apply across a broad range of surgical procedures, from routine operations to high-risk emergencies, and in both academic and community hospitals.

So why are these differences emerging?

Health experts suggest the answer lies not in superior technical skills, but in how female surgeons approach patient care. Compared to their male colleagues, female surgeons are more likely to follow evidence-based practices meticulously, spend more time communicating with patients, adopt a more patient-centred approach, and emphasize careful surgical planning. They may also be more collaborative within surgical teams, ensuring that care is coordinated and that patients receive closer attention throughout their recovery journey.

These subtle but important differences in behavior and approach can translate into meaningful improvements in outcomes. For instance, clear communication reduces the chances

of misunderstandings, medication errors, or missed follow-ups. Greater adherence to guidelines ensures consistency in care. A more cautious approach to surgical decisions can help avoid unnecessary procedures or complications. Together, these elements create a safety net that benefits patients both inside and outside the operating room.

Interestingly, some evidence in very impactful journals of the world (JAMA, 2018) also suggests that female patients may particularly benefit from being treated by female surgeons, potentially due to better communication and greater comfort in discussing health concerns. However, the positive outcomes linked to female surgeons extend to male patients as well, showing that their approach has universal value. In the above mentioned study the authors studying fifteen thousand patients concluded

that statistically significantly less complications occurred in hands of women surgeons while doing cholecystectomy when compared to their male counterparts including bile duct injuries. A giant of surgery Dr Christopher from Toronto quoting the paper of JAMA advised the male surgeons to pause and rethink why this cause be.

Despite these impressive results, women remain significantly underrepresented in the surgical field. They account for a small fraction of senior surgical positions and often face systemic challenges such as gender bias, unequal pay, and difficulties balancing work and family life. Many female surgeons report experiencing a lack of mentorship, reduced leadership opportunities, and subtle discrimination in the workplace.

This gap in representation not only affects the careers of talented women—it impacts patients as well. If female surgeons are consistently

delivering better outcomes, then increasing their presence in operating rooms across the globe could lead to improved overall healthcare quality.

The growing body of research in this area offers a powerful message: promoting gender equality in surgery is not only a matter of fairness or inclusion—it's a matter of patient safety and clinical excellence. Hospitals, training programs, and policy-makers need to recognize the value female surgeons bring and actively work to support their recruitment, development, and advancement.

The public also has a role to play. Patients should feel empowered to ask questions, understand who is providing their care, and support institutions that prioritize diversity, equity, and patient-centred practices because this will help them select better surgeons and genuine surgery costs.

There is another large data published in BMJ, a high impact journal in 2023 by Blohm et al which concluded that a high quality, well validated national register opened their eyes by analysing the data of one lakh fifty thousand surgeons which showed lower risk of severe complications among female surgeons as well as lower health care costs.

Ultimately, this shift in understanding challenges long-held assumptions about what makes a “good surgeon.” It turns out that empathy, communication, teamwork, and thoughtful decision-making—qualities often associated with female physicians—are just as vital as technical expertise. And when these elements come together in the hands of a skilled female surgeon, patients reap the rewards. In a profession long dominated by men, it's time to recognize and embrace the quiet revolution happening in operating rooms: women surgeons are not just keeping up—they're leading the way.

TOP PANCREAS TRANSPLANT SURGEONS

JOSEPH SUSHIL RAO, MD



Dr. Joseph Sushil Rao is a surgeon-scientist at the University of Minnesota, where he serves as the Surgical Director for Organ Cryopreservation, Exogenic Organ Development & Transplant Immunology. His impactful research focuses on sub-zero organ preservation, genetic engineering of porcine organs for xenotransplantation, and developing predictive models for living donor liver transplants.

He has produced over 30 research publications and received recognition such as a 2022 University of Minnesota Postdoc Award. In 2025, Dr. Rao will begin a four-year term as Co-Chair of the Young Investigator Committee of the International Pancreas and Islet Transplant Association (IPITA), honoring his commitment to advancing beta cell replacement therapies.



Dr Lakshminarayan Bhat

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Visiting consultant: Indiana Hospital, Mangaluru.

'Major Liver surgery can be performed safely in resource constrained centers if strict scientific principles are followed.'

Right Posterior Sectionectomy in Resource-Constrained Hospitals

Pragmatic, Safe, with comparable outcome.

Right posterior sectionectomy — the anatomical removal of segments VI and VII — is a technically demanding liver resection. In many low-resource hospitals, surgeons still encounter patients who require curative liver surgery. With the right approach, good outcomes are achievable by adapting techniques to local constraints, prioritizing careful patient selection, and fostering strong teamwork between the surgeon, anaesthetist, and other staffs. Several series have shown acceptable results even in low-volume or resource-limited settings when fundamental principles of perioperative care are applied [1,2]. Key problems in small setups: general considerations

Radiology: Advanced CT and MRI facilities are often unavailable, and even when a CT scanner is present,

it may be of lower configuration. An in-house radiologist is not always available for detailed discussion or for urgent postoperative bedside imaging.

Anaesthesia: The absence of a full-time, well-trained anaesthetist capable of handling complex liver surgeries is common. Many small hospitals and nursing homes now have only basic anaesthesia workstations. Lack of experience with low-CVP techniques can increase intraoperative bleeding. Without backup anaesthetists, prolonged or complicated cases are harder to manage.

Operating Theatre (OT): OTs in resource-limited setups frequently lack intraoperative ultrasound, advanced energy devices, proper abdominal retractors, DVT pumps, and body warmers. Space

constraints and inadequate lighting can further compromise exposure, especially for deep posterior segments. Instrument sets are often incomplete, and surgeons may have to work with untrained junior OT staffs.

Postoperative Care: Postoperative care is hampered by the absence of high-dependency or intensive care beds, with patients often monitored in general wards by staff unfamiliar with liver surgery-specific complications.

Key principles for small hospitals

Radiology: A good MDCT (16-slice or higher) with an appropriate liver protocol should be performed. If CT facilities are unavailable in-house, the scan can be done at the nearest scan centre. The anatomy must be carefully reviewed with the

help of imaging. In our practice, we examine the images directly on the console via a remote access link provided by the scan centre or from a CD. This serves like a “GPS” during surgery.

Patient selection: Choose patients with good baseline liver function (Child–Pugh A, adequate remnant liver) and avoid those with high cardiac, pulmonary, or renal risk who are more likely to develop postoperative systemic complications.

Simplify surgical steps: Use robust, low-technology techniques such as the Pringle manoeuvre for inflow control and clamp–crush parenchymal transection. These do not require expensive disposables, are well-studied, and have proven efficacy [3,4].

Teamwork and protocols over gadgets: A small “hepato-team” consisting of the surgeon, assistant surgeon, anaesthetist, and trained nurse, following a short, rehearsed checklist, can reduce errors more effectively than advanced monitoring alone. Additional support from a pulmonologist, cardiologist, or nephrologist can be arranged as needed.

Know referral thresholds: Establish clear criteria for transferring patients to higher centres — either within the same city where you can continue the treatment, or to the nearest city with the required facilities — when anticipated complications exceed the capacity of the current setup. How I perform right posterior sectionectomy in a small setup
Practical preoperative plan.

Preoperative evaluation: We follow a checklist including blood investigations (CBC, LFT, RFT, electrolytes, PT, INR, serology, RBS, BT, CT, blood grouping, tumour markers and additional tests if required) and imaging (triple-phase CECT of the abdomen and pelvis, and CECT chest). In selected cases, contrast MRI with a liver protocol or PET scanning is done. We assess the patient’s nutritional status, performance status, and overall systemic condition. Prehabilitation includes spirometry and a high-protein diet started one week prior to surgery, with the duration extended if needed. Additional optimization is done based on cardiac, respiratory, renal, or neurological evaluation.

OT preparation: With personal investment, I have procured abdominal wall retractors, clip applicators, bulldog clamps, and other basic instruments which are often not present in small hospitals or even in mid range setups. For parenchymal transection, devices such as the harmonic scalpel or Ligasure can be rented from local agencies, or the traditional crush-clamp technique can be used. A basic anaesthesia workstation is essential, and a standby ventilator — either in the same hospital or a nearby larger facility — should be ready in case of emergencies.

Team and coordination: We call an anaesthetist experienced in managing liver surgeries who can also assist with postoperative care. A general surgeon or senior nurse serves as the first assistant. Additional specialists — such as a cardiologist, nephrologist, pulmonologist, or physician — help is taken when needed. The day before surgery, all team members

are briefed on the surgical plan and their specific roles. Availability of all necessary instruments and equipment is confirmed, and blood products are reserved from the nearest blood bank based on anticipated needs.

Anaesthesia: safe low-resource strategies

Many small hospitals that perform general anaesthesia have only basic anaesthesia workstations. If additional monitoring — such as an arterial line or CVP pressure monitoring — is required, rental monitors can be arranged with prior planning. For major liver resections, including right posterior sectionectomy, we use general anaesthesia combined with epidural analgesia.

Low-CVP strategy: Maintaining a low central venous pressure reduces venous oozing and improves the operative field. In low-resource settings, this can often be achieved through judicious preoperative fluid restriction, reverse Trendelenburg positioning, brief use of vasodilators, and short periods of controlled hypotension — all under close monitoring [5,6].

Postoperative analgesia: We continue epidural infusion for 3–4 days for pain control, adding NSAIDs as needed. Oral intake and mobilization are started as tolerated [7,8].

Operative steps

Approach and exposure: The open approach — using a right subcostal, Makuuchi, or J-incision — is chosen based on patient body habitus.

Mobilization: The right triangular and coronary ligaments are divided

to roll the right lobe. In large tumours, an anterior approach may be preferred.

Inflow control: An umbilical tape or vascular loop is passed around the hepatoduodenal ligament through a small rent in the lesser omentum. Both ends are threaded through a short tube to create a tourniquet, allowing intermittent Pringle manoeuvre application.

Isolation of the posterior pedicle and ischemic demarcation:

A complete cholecystectomy is performed, with the cystic duct clipped and left cannulated for a cholangiogram if needed.

The right posterior pedicle is identified in Rouviere's sulcus (RS) in approximately 60–70% of patients [9]. In 20–25% of cases, the segment 6 Glissonean pedicle lies in RS; about 5% may contain the right Glissonean pedicle. A small proportion may have an accessory segment 6 vein.

The hepatotomy site and pedicle clamping depend on RS type (open or closed fig 1a,1b.) and the division pattern of segment 6 and 7 pedicle. In a closed-type RS or when a short posterior section pedicle common trunk is found, hepatotomy is performed near the trunk's origin.

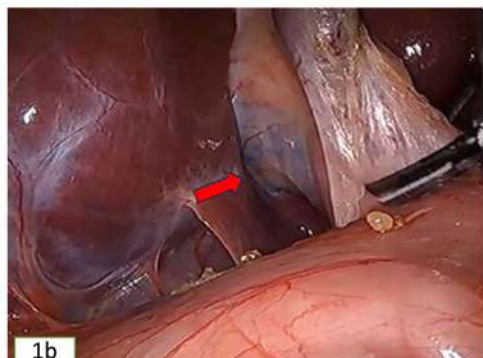
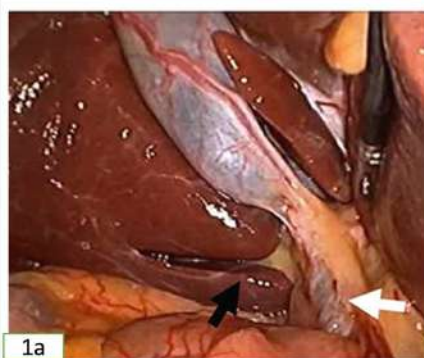


Fig 1a. Black arrow showing open typ RS, Fig 1b. Red arrow showing closed RS site of right posterior section pedicle

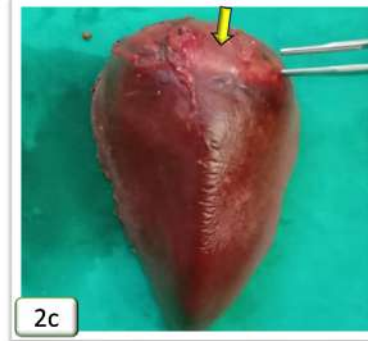
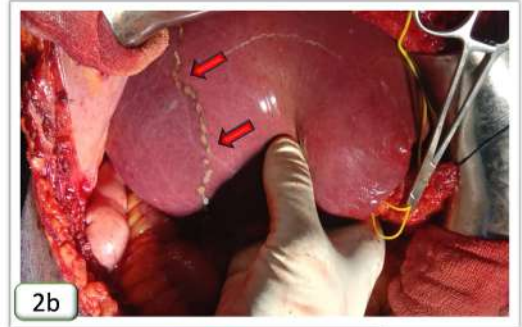


Fig 2a. Black arrow showing looped right posterior pedicle after hepatotomy. Pedicle is transacted and sutured at the intersection of parenchymal transaction line. **Fig 2b.** Red arrow showing ischemic demarcation line marked with diathermy. **Fig 2c.** Posterior sectionectomy specimen with arrow showing HCC in segment 7

In other cases, a more lateral hepatotomy is acceptable. These variations can usually be identified on preoperative cross-sectional imaging.

In our practice, for open RS, hepatotomy is done closely hugging the pedicle on either side with bipolar cautery to a depth of 5–10 mm. Minor bleeding at this stage can be controlled with pressure or bipolar cautery. If possible, the right posterior section pedicle is looped (Fig 2a). If difficulty arises,

we simply apply a straight bulldog clamp across the hepatotomy perpendicular to the pedicle and wait for ischemic demarcation (Fig 2b). The same approach is applied in closed-type RS, but with a more proximal hepatotomy near the pedicle origin. If these steps fail to produce a demarcation line, conventional dissection of the portal vein and hepatic artery at their origin may be required.

Alternatively, if intraoperative ultrasound is available, the demarcation line can be marked around the right hepatic vein [10].

Parenchymal transection: The demarcation line is marked with monopolar diathermy, and two stay sutures of prolene are placed on either side for traction. Intermittent Pringle manoeuvres are applied during transection to minimize blood loss this is optional and transaction can be done without using it. [3,11].

For large transection surfaces (e.g., right posterior sectionectomy), we use Harmonic or LigaSure devices rented from local vendors. For smaller surfaces, we use the clamp-crush technique, which is cost-effective, quick, and supported by evidence [4,12].

Transection proceeds in the plane of the right hepatic vein, with small hepatic veins and bile ducts clipped and divided.

Vascular management: The right hepatic vein is preserved if uninvolved. Segment 6 and 7 veins are clamped and sutured as encountered along the transection line. The posterior section pedicle is divided where it is encountered (Fig 2a). If sacrificing the right hepatic vein is necessary to achieve oncological margins, it is dissected at extrahepatic insertion site into the IVC at the beginning it self to

secure outflow control, or a right hepatectomy is performed.

Haemostasis and bile leak control: Parenchymal bleeding is managed with bipolar cautery; vascular bleeding is controlled with sutures or clips. Additional haemostatic agents (cellulose, fibrillar Surgicel, or collagen derivatives) may be applied.

Small bile duct leaks are sutured directly. If available, a cholangiogram can be performed via the cystic duct with distal CBD occlusion. Another option is the “white test” — injecting diluted propofol into the cystic duct to identify leaks [13] — we do not routinely perform this.

In right posterior sectionectomy, the cut surface of the liver lies almost horizontally against the posterior abdominal surface, allowing the liver's weight to aid haemostasis. If necessary, the surface can be covered with omentum. Usually, a single drain is placed in a dependent position.

Abdominal wall closure: The abdomen is closed in layers.

Postoperative care

Level of care: Stable patients are managed in the ward with basic vital monitors. Vital parameters, urine output, and drain output (including colour and volume) are monitored regularly, and necessary blood tests are performed at set intervals.

Fluid management: We aim for euvolemia, encouraging early oral intake once tolerated. Deep vein thrombosis (DVT) prophylaxis is given, and patients are encouraged to perform deep-breathing exercises and incentive spirometry.

Analgesia and mobilization: Epidural infusion is continued for 3–4 days for pain control, supplemented with NSAIDs when necessary. Early ambulation is initiated to promote recovery.

Complication monitoring: Patients are closely observed for signs of haemorrhage, bile leak, post-hepatectomy liver failure, and other systemic or wound-related complications.

Blood loss and transfusion

Prevention first: Meticulous surgical technique, low-CVP anaesthesia, and judicious use of the Pringle manoeuvre are essential in minimizing blood loss [3,5].

Transfusion strategy: Blood transfusion is reserved for hemodynamic instability or when haemoglobin drops below the institutional threshold.

When to operate locally vs refer

Operate locally when:

Liver function is preserved (non-cirrhotic, Child–Pugh A).

No major comorbidities are present. The basic arrangements described above can be met within the existing hospital setting.

Refer when:

The anticipated surgery exceeds the logistical capabilities of the hospital. The surgical team lacks experience in managing such cases.

Facilities for handling expected complications are unavailable.

The patient has a cirrhotic liver or significant cardiac/pulmonary risk factors.



Fig. 3. Regional newspaper coverage of a successful liver surgery, featuring the surgical team alongside the patient."

The decision should remain individualized, based on the available infrastructure, the team's expertise, and the patient's comorbid profile.

My experience in small setup

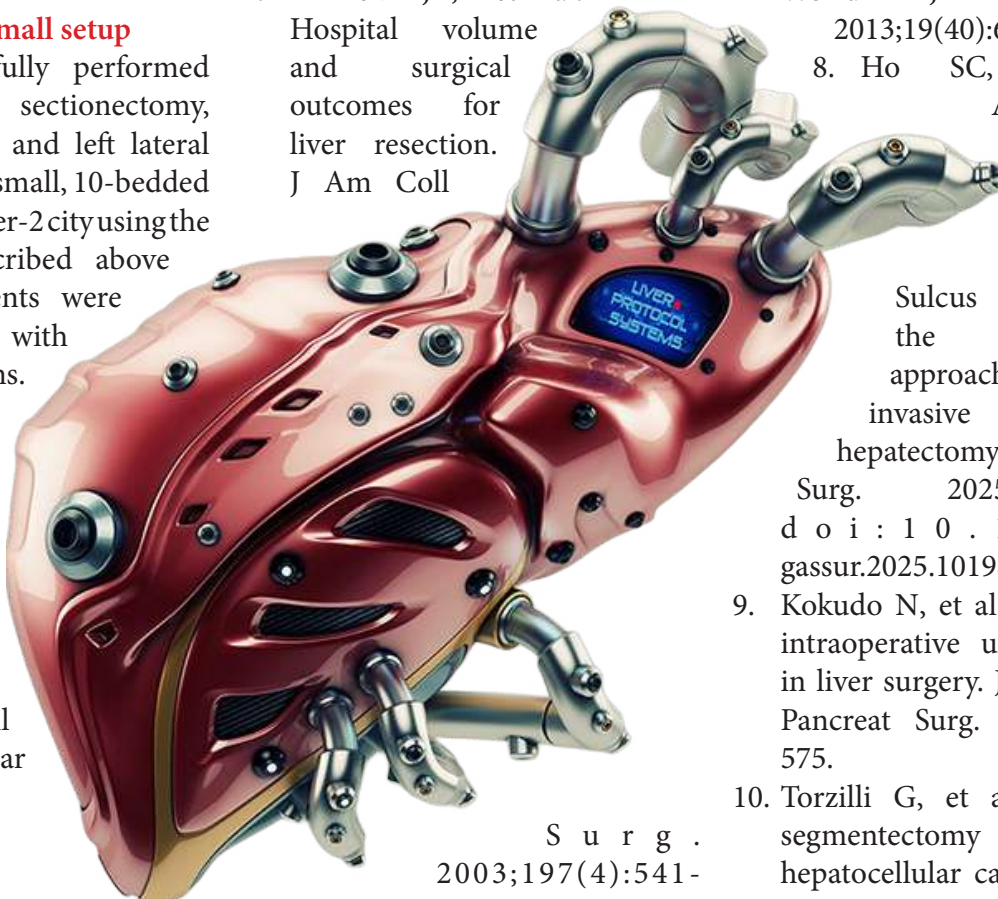
We have successfully performed right posterior sectionectomy, right hepatectomy, and left lateral sectionectomy in a small, 10-bedded nursing home in a tier-2 city using the arrangements described above (Fig 3). All patients were discharged safely with no complications. While we also operate in mid-range and high-end hospitals with better facilities, we continue to perform major gastrointestinal surgeries in small setups using similar protocols.

Conclusion

Right posterior sectionectomy can be performed safely in small hospitals if key principles are followed: careful patient selection, low-technology but reliable surgical techniques, disciplined anaesthesia strategies, and strong multidisciplinary teamwork. The objective should be safe, reproducible outcomes comparable to those in higher centres, even in resource-constrained environments.

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'The convergence of AI, robotics, 3D printing, and extended reality platforms like Apple Vision Pro will redefine operative care of the future.'

Minimally Invasive Gastrointestinal Surgery: Past to Future

Introduction

Minimally invasive surgery (MIS) has revolutionized gastrointestinal (GI) surgery, offering patients reduced trauma, less pain, shorter length of stay, and faster recovery compared to traditional open surgery. Since the first laparoscopic cholecystectomy in 1985, the field has expanded dramatically—from basic gallbladder operations to advanced resections of the esophagus, stomach, liver, pancreas, colon, and rectum. MIS has evolved from standard laparoscopy to single-incision techniques, NOTES (natural orifice transluminal endoscopic surgery), fluorescence-guided surgery and robotic surgery. Recent advances in artificial intelligence (AI) have further renewed interest among surgeons about the endless possibilities of AI-augmented surgery.

Historical Evolution & Early Adoption

The evolution of MIS spans over a century with early records of endoscopic evaluation dating back to the late 19th century. In 1868, Kussmaul performed rigid endoscopic visualization of the stomach¹. This paved the way for the development of flexible fiberoptic endoscopy by Hirschowitz in 1957². Another major milestone was the creation of pneumoperitoneum. In 1901, Georg Kelling introduced pneumoperitoneum in dogs³. Hans Christian Jacobaeus is credited with performing the first laparoscopy in human patients in 1910⁴.

The modern era of GI MIS began in 1985, with Mühe's pioneering laparoscopic cholecystectomy⁵. Though initially met with scepticism, MIS principles were rapidly accepted by surgeons and patients worldwide, leading to adoption of minimally invasive techniques

for other organs. In the 1990s and 2000s, MIS expanded through innovation in instrumentation, imaging, insufflation and surgeon training.

The turn of the millennium marked the era of robotic integration, with the FDA approval of the da Vinci surgical system in 2000, enhancing dexterity, three-dimensional vision, and precision for complex gastrointestinal procedures⁶. More recently, advances in AI have set the stage for integrating machine learning algorithms and image-guided navigation into intraoperative decision-making and surgical training⁷.

Cholecystectomy

Laparoscopic cholecystectomy marked the beginning of modern MIS in general surgery. It rapidly gained worldwide acceptance during the late 1980s and early 1990s, driven by clear advantages in postoperative pain, hospital

stay, and recovery time compared to open cholecystectomy⁸. Early observational studies were followed by randomized controlled trials confirming reduced morbidity and faster return to work without compromising safety⁹. Laparoscopic cholecystectomy has now become the standard of care and can be safely performed even in difficult situations such as gangrenous cholecystitis, empyema gallbladder and chronic cholecystitis with contracted gallbladders. Over time, refinements such as single-incision laparoscopic surgery and NOTES have been explored, though their benefits over standard laparoscopy remain debated¹⁰.

Appendectomy

Laparoscopic appendectomy, introduced in the early 1990s, demonstrated improved cosmesis, shorter hospital stays, and faster recovery compared to open surgery¹¹. Meta-analyses of randomized trials have supported its routine use, particularly for complicated appendicitis, although operative time and cost are generally higher¹².

Hernia Surgery

In hernia surgery, MIS approaches progressed from early laparoscopic transabdominal preperitoneal (TAPP) repairs to totally extraperitoneal (TEP) techniques, offering reduced chronic pain and faster return to activity in selected patients¹³. Large multicentre trials and registry data confirm equivalent recurrence rates to open mesh repair, with the added benefit of addressing bilateral or recurrent hernias through the same minimal access¹⁴. With growing experience, experienced surgeons can now tackle even huge inguinoscrotal

hernias through the TEP approach. Since the introduction of laparoscopic ventral hernia repair (LVHR) in 1993, the approach has been associated with reduced wound complications, shorter hospital stays, and faster return to normal activity compared with open repair^{15,16}. Earlier reports of laparoscopic intraperitoneal onlay mesh (IPOM) repair described direct placement of the mesh without suturing the defect, often resulting in persistent bulge or pseudo hernia. The laparoscopic IPOM plus technique, which we described, where defects are closed intracorporeally before mesh placement—improved functional outcomes by medializing rectus muscles. The laparoscopic IPOM plus technique became the standard for many years, though long term concerns regarding adhesions have made surgeons explore alternative options to exclude direct contact of the mesh with the bowel. Laparoscopic E TEP is the minimally invasive equivalent of the open retrorectus technique which has gained popularity. More recently, transversus abdominis release (TAR) and endoscopic component separation have extended the indications of MIS to complex and large hernias, with lower wound morbidity and durable outcomes^{17,18}. Robotic-assisted hernia repair, with its enhanced dexterity, is increasingly reported, though high-quality randomized data are still evolving.

Esophageal Surgery

MIS is applied for both benign and malignant esophageal diseases. Laparoscopic fundoplication and Heller's cardiomyotomy have become gold standards for refractory gastroesophageal reflux disease (GERD) and achalasia cardia. It

is now possible to handle even recurrent cases laparoscopically. Minimally invasive esophagectomy (MIE) advanced from feasibility to standard practice on the strength of randomized evidence. The TIME trial showed significant reductions in pulmonary complications and faster recovery with totally MIE compared to open esophagectomy, with similar oncologic outcomes¹⁹. The MIRO trial demonstrated that a hybrid approach reduced major morbidity without compromising oncologic quality²⁰.

Robotic platforms extended MIE's precision. The ROBOT trial reported fewer complications and improved lymph-node yield compared with open surgery²¹. Meta-analyses suggest that totally MIE, hybrid MIE, and robot-assisted MIE achieve similar survival, with approach selection guided by surgeon expertise and center volume²².

Gastric Surgery

For early gastric cancer, multicentre RCTs established laparoscopic distal gastrectomy (LDG) as non-inferior to open surgery. KLASS-01 confirmed equivalent long-term survival and fewer postoperative complications²³. For locally advanced cancer, CLASS-01 (China) and KLASS-02 (Korea) demonstrated oncologic non-inferiority of LDG, consolidating its role in high-volume centers^{24,25}.

Robotic gastrectomy enhances dexterity and vision, reducing blood loss and improving lymph-node retrieval in some series, albeit at higher cost and longer operative times. Meta-analyses show comparable long-term survival to laparoscopy, with benefits most evident in obese patients or complex

reconstructions^{26, 27}.

Colorectal Surgery

The MIS era in colorectal surgery is anchored by landmark RCTs—COST, COLOR, and CLASICC—which showed laparoscopic colectomy is oncologically equivalent to open surgery with faster recovery^{28–30}. For rectal cancer, COLOR II and COREAN confirmed laparoscopic total mesorectal excision (TME) provides comparable circumferential margin rates and survival^{31, 32}. Two large trials (ALaCaRT and ACOSOG Z6051) did not meet non-inferiority for pathologic surrogates, but long-term follow-up found no survival disadvantage^{33, 34}.

Robotics has been evaluated extensively in rectal surgery. The ROLARR trial found no significant difference in conversion rates overall, though advantages may exist in obese or narrow-pelvis patients³⁵. Consensus now supports both laparoscopic and robotic TME as safe and effective in expert hands³⁶.

Hepatopancreatobiliary (HPB) Surgery

Laparoscopic liver resection (LLR) progressed from minor to anatomic hepatectomies, supported by international consensus statements in Louisville (2008) and Morioka (2014)^{37, 38}. The OSLO-COMET RCT provided level-I evidence that LLR for colorectal liver metastases reduced complications and hospital stay with similar oncologic results³⁹. In the pancreas, MIS distal pancreatectomy is now well-established. The LEOPARD and LAPOP RCTs showed faster recovery and shorter hospital stay versus open, with equivalent oncologic outcomes^{40, 41}. We conducted the first RCT

comparing laparoscopic and open pancreatoduodenectomy (PD)- the PLOT trial. The laparoscopic arm was associated with shorter hospital stay and less blood loss while the operative duration was longer. The R0 resection rate and the lymph node yield was similar in both the groups⁴². The LEOPARD-2 trial however was halted early for safety concerns during the learning curve, highlighting the steep technical demands and the need for structured training, proctoring and center volume before widespread adoption⁴³. Robotic techniques may ease technical hurdles, but definitive evidence of superiority is pending⁴⁴.

Apple Vision Pro in MIS GI Surgery

The Apple Vision Pro (AVP), a spatial computing mixed-reality headset launched in early 2024, is increasingly being trialled to enhance visualization, ergonomics, and intraoperative data access during minimally invasive GI surgery. Surgeons at UC San Diego have conducted over 20 MIS procedures—including paraesophageal hernia and obesity surgeries—using AVP to simultaneously view laparoscopic feeds, vital signs, and imaging (e.g., CT scans) in their field of vision, improving efficiency and posture while reducing physical strain. In India, GEM Hospitals are the first to utilize this technology across a wide variety of laparoscopic procedures including gallbladder, appendix, hernia surgeries and gastrectomies. We also demonstrated live surgeries using AVP delivering the same immersive field of vision to the audiences as well. Overall, these early implementations suggest that AVP has the potential to improve surgical outcomes by enhancing

immersive visualization and improving ergonomics. Still, its clinical role awaits further validation through robust trials.

In future, AVP could be integrated with laparoscopic camera without use of additional software/hardware to utilise the immersive vision during surgery. Or, a AVP app could be developed to give realtime feedback during laparoscopic / robotic surgery about lesions, cancerous / defective tissues, critical hidden anatomy. Eye tracking could be used to guide instruments in robotic surgery, as it is already built into AVP.

3D Printing in Surgery

Patient-specific 3D-printed models from CT or MRI improve surgical planning, anatomic understanding, and training. Hepatobiliary and pancreatic models improve operative confidence and shorten decision-making time⁴⁵. Custom 3D-printed meshes for complex abdominal wall reconstruction offer improved anatomical fit⁴⁶. 3D printing also aids surgical education and patient counseling⁴⁷. Bioprinting may eventually provide functional scaffolds for organ transplantation.

Artificial Intelligence in Surgery

AI applications in surgery span preoperative to intraoperative phases. AI-based image analysis enhances lesion detection and diagnosis, as in colonoscopy⁴⁸. Machine learning algorithms predict complications such as anastomotic leaks, enabling personalized care⁴⁹. Intra-operatively, AI augments robotic systems with real-time recognition, camera control, and workflow analysis, improving safety and training⁷.

The RECOVER system uses a large language model (LLM) to manage postoperative GI cancer care—offering conversation-based engagement with patients and dashboards for clinicians. arXiv. By combining radiomics (quantitative image analysis) with NLP-extracted insights from clinical texts and reports, AI enhances recurrence risk prediction, stratification, and tailored therapy in GI cancers.

AI's future in gastroenterological surgery lies in enhancing detection, streamlining decision-making, augmenting surgeon performance, reducing variability, and improving outcomes. From endoscopy to postoperative care, AI-robot systems and data-driven models will serve as trusted partners—empowering surgeons without replacing them.

Autonomous Surgery Robots

The future of GI surgical robotics is rapidly advancing—from early autonomous suturing and dissection to smart, contactless closure systems, mini- and nano-robots navigating the digestive tract, and enhanced AI-powered planning and training. While true end-to-end autonomy remains years ahead, current breakthroughs lay a strong foundation for safer, more precise, and more equitable GI surgical care. A 2025 research prototype for robotic cholecystectomy (gallbladder removal) uses real-time vision-based segmentation, tissue manipulation, and adaptive boundary tracking to dissect the gallbladder autonomously in ex vivo porcine models. Researchers have demonstrated a robot-assisted, contactless laser tissue soldering system for closing small bowel incisions in pigs, achieving leak-free healing—marking a novel direction

for automation in GI surgery.

Autonomous surgical robotics is projected to evolve through stages—starting with supervised autonomy (robots perform routine subtasks under human oversight), advancing to semi-autonomous steps, and ultimately aiming for fully autonomous procedures, all enabled by AI, advanced imaging, and tactile sensing. Innovations such as advanced real-time imaging, haptic/tactile feedback, miniaturized systems, along with AI-driven predictive analytics, are set to enhance precision and safety—particularly valuable in complex GI procedures like tumor resections and anastomoses.

Future Directions

The convergence of AI, robotics, 3D printing, and extended reality platforms like Apple Vision Pro will redefine operative care. AI-driven support may soon provide real-time anatomical mapping and automated guidance during surgery enhancing precision and safety. Autonomous, surgeon guided, surgical robots would become the norm in next 5-10 years. In the next 10-20 years, fully semi-autonomous GI procedures (e.g., segmental resections, cholecystectomies) with closed-loop control; widespread use of smart micro-robots; enhanced telesurgery infrastructure, end-to-end autonomous GI surgeries; nanorobotics performing diagnostics and therapy at cellular scales; standardization and global accessibility of advanced GI surgical care are going to be the real deal. From endoscopy to postoperative care, AI-robot systems and data-driven models will serve as trusted partners—empowering surgeons without replacing them.

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TOP PANCREAS TRANSPLANT SURGEONS



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"Reading medical journals is not a habit; it is a professional necessity for those who wish to stay relevant."
— Anonymous

Hot off the Press – 1

"An APRI+ALBI-Based Multivariable Model as a Preoperative Predictor for Posthepatectomy Liver Failure (PHLF)"

Santol et al., Annals of Surgery, Volume 281, Number 5, May 2025

Background

Posthepatectomy liver failure (PHLF) remains the most significant life-threatening complication following major hepatic resection. The incidence averages 10-15% across surgical centers, presenting substantial clinical and economic burden. Current preoperative risk assessment faces several critical challenges due to heterogeneity of underlying liver disease. Existing tools at predicting PHLF risk are limited by inadequate sensitivity or their greater cost and limited accessibility.

Core Issue addressed

The application of a multivariable model, combining the Aspartate aminotransferase-to-Platelet ratio index (APRI) with the Albumin-Bilirubin (ALBI) grade, to accurately predict PHLF.

Comparison of this model with established functional assessment tools such as ICG clearance, ALICE grade and FIB-4 index

Methodology

Study Design: International multicentre validation study utilizing a development cohort from the American National Surgical Quality Improvement Program (NSQIP) database and validation through independent international centres.

Study Cohorts

Model Development Cohort: Patients from NSQIP database undergoing elective hepatic resection with available preoperative APRI+ALBI scores.

International Validation Cohort: 2,525 patients from 10 international centers.

Direct Comparison Subcohort: 620 patients with comprehensive liver function test data for direct comparison analysis.

Patient Selection

Inclusion Criteria: Elective minor (≤ 3 segments) or major (≥ 3 segments) hepatic resection between 2000-2021; age ≥ 18 years; available preoperative APRI+ALBI scores.

Exclusion Criteria: Age < 18 years, pregnancy, decompensated liver cirrhosis.

Outcomes

Primary Outcome: Clinically significant PHLFB+C (International Study Group on Liver Surgery criteria).

Secondary Outcomes: PHLF grade C and 90-day mortality

Statistical analysis

Multivariable logistic regression to identify optimal predictive variables Performance assessment with Receiver operating characteristic Curve analysis and Direct head-to-head comparison of APRI+ALBI multivariable model against ICG-R15, ICG-PDR, ALICE grade, and FIB-4 index.

Results

A total of 12,056 patients were included from the NSQIP database. The various tumor types operated for included colorectal cancer metastases (43.4%), HCC (18.8%), cholangiocellular carcinoma (11.1%), benign tumors (10.5%), and other malignancies (13.8%).

The final multivariable model included five variables: APRI+ALBI score, age, sex, tumor type, and extent of resection, achieving an AUC of 0.77 (95% CI: 0.743-0.796) in the development cohort with comparable performance in the validation cohort (AUC: 0.74). The model demonstrated nonlinear risk increase with higher APRI+ALBI scores, with exponentially increasing PHLF B+C probability. In the 620-patient direct comparison subcohort, the APRI+ALBI multivariable model demonstrated equivalent or superior performance compared to established liver function tests, with an AUC of 0.725. A smartphone application (TELLAPRIALBI) was developed and made freely available, allowing real-time calculation of patient-specific PHLF B+C probability based on routine laboratory parameters and clinical characteristics.

Commentary

The study addresses a significant

challenge in hepatic surgery, the accurate preoperative prediction of PHLF, using a model built entirely on accessible, non-invasive laboratory parameters. The proposed MVM represents a pragmatic and potentially practice-changing contribution, particularly for centres without access to dynamic liver function testing.

The study's strengths are notable. The use of a large, diverse derivation cohort of over 12,000 patients from the NSQIP database enhances the robustness of the findings. Moreover, external validation in an international multicentre cohort strengthens the generalizability of the model. The inclusion of clinically relevant variables, tumor type and extent of resection, which allow for a more tailored risk assessment. The authors' effort to translate this work into a user-friendly smartphone application reflects a commendable focus on real-world clinical utility. That said, a few aspects merit cautious interpretation. The retrospective design inherently carries the risk of selection bias and data heterogeneity. Notably, the derivation and validation cohorts show markedly different incidences of PHLF (4.5% vs. 19.1%), which could affect the model's calibration when applied to new patient populations—especially since the generally reported incidence lies between 8–10% in the literature. Furthermore, while the APRI+ALBI MVM demonstrated performance comparable to more established tools like ICG clearance and ALICE grade, these comparisons were made in a relatively small subgroup (n=620). A prospective head-to-head study with balanced sample sizes would more definitively establish its clinical equivalence or

superiority.

It would have been beneficial if the authors had provided data on hepatic parenchymal characteristics such as the presence and degree of steatosis, fibrosis, or cirrhosis across all cohorts. Such information would offer valuable context about preoperative liver function and better explain the predictive performance of the model. Of note, the reported median preoperative serum bilirubin levels (in mg/dL) of 8.55, 8.6, and 10.26 in the derivation, validation, and comparison cohorts, respectively, appear unexpectedly high, especially considering that the other parameters like AST, albumin, and platelet count remain within normal limits. Furthermore, Figure 1 of the article illustrates a noticeable divergence between predicted and observed PHLF probabilities. While the authors attribute this discrepancy to the difference in the proportion of major versus minor hepatectomies across cohorts, this explanation may not fully account for the gap, especially given that the model is intended to be broadly applicable across surgical radicalities and institutional volumes. This raises concern about whether the predicted PHLF incidence truly reflects clinical reality in diverse patient populations.

It is worthwhile to note that although APRI and ALBI are composed of routine laboratory variables, these biomarkers can be influenced by factors not directly related to liver function. For example, platelet counts may be altered due to chemotherapy-induced bone marrow suppression or hematologic conditions, while albumin and bilirubin levels can fluctuate in response to systemic

illness or inflammatory states. Such confounders may impact the specificity of the model, particularly in patients with colorectal liver metastases, who form the largest subgroup across all cohorts in this study and often receive neoadjuvant therapy. Additionally, performance data in certain clinically important subgroups such as patients with non-alcoholic fatty liver disease (NAFLD)/non-alcoholic steatohepatitis (NASH), or those

undergoing re-do hepatectomies have not been separately addressed.

Implications for Practice

The study proposes a simple, cost-effective, and accessible tool for predicting PHLF.

This tool has potentially significant implications in patient selection and preoperative counselling.

Take-home points

The APRI+ALBI-based

multivariable model demonstrates equivalent predictive performance to expensive, time-consuming established liver function tests (ICG clearance, ALICE grade) for clinically significant PHLF, using only routine laboratory parameters. However, further prospective validation and refinement is necessary before widespread adoption.

Hot off the Press – 2

Consensus-based recommendations for optimizing perioperative nutritional support and muscle health in major surgery in India

Chaudhary Adarsh, Reddy B. Ravinder, Rao G. V., Raveendran Subhash, Mandal Sanjoy, Radhakrishna Patta, Dhar Puneet, Krishnamurthy Arvind, Doctor Nilesh, Shaikh Irfan, Deora Ankita
Frontiers in Nutrition, Volume 12 – 2025. DOI=10.3389/fnut.2025.1538161

Background

Perioperative malnutrition and sarcopenia may significantly impact recovery after complex abdominal surgery. Evidence-based protocols are needed to optimise perioperative nutritional practices and prehabilitation. These guidelines must be specific to the Indian context and provide recommendations that address both clinical effectiveness and practical feasibility.

Core Issue Addressed

Address the critical gap between evidence-based perioperative nutritional care and its practical implementation in Indian surgical settings.

Develop consensus-based guidelines for optimising perioperative nutritional support and muscle health in major surgical patients.

Methodology

Modified Delphi approach with a two-round iterative process, involving a panel of experts from the fields of oncosurgery, gastrointestinal surgery and hepatobiliary surgery.

Panel Size – 9 experts plus 1 moderator

Institutions - Nine major Indian surgical centres (Medanta Gurugram, AIG Hyderabad, Care Hospitals, SK Hospitals Trivandrum, Manipal Kolkata, MGM Chennai, Amrita Faridabad, Cancer Institute WIA Chennai, Jaslok Mumbai).

Consensus process -

A comprehensive literature review was conducted and available evidence was graded. Four broad topics were identified and consensus statements drafted

across these: Nutritional status of surgical patients, etiopathogenesis of sarcopenia, nutrition assessment, and benefits of nutritional intervention (preoperative and postoperative). Responses to a questionnaire were recorded and consensus levels were aggregated (high, moderate, and low, based on percentage of agreement). This was followed by a discussion on the topic areas and revision of statements where required. A final round of voting was then carried out and recommendations formulated.

Results

Nutritional Assessment

Subjective Global Assessment (SGA) is preferred over the Global Leadership Initiative on Malnutrition (GLIM) criteria for routine practice due to feasibility and resource considerations.

Alternative markers like albumin, mid-arm muscle circumference, BMI, cholinesterase, haemoglobin, neutrophil-to-lymphocyte ratio, and total lymphocyte counts can also be used.

Sarcopenia Screening and Diagnosis
The clinical features of sarcopenia include low L3 skeletal muscle index (SMI), low handgrip strength, and reduced gait speed.

Computed tomography (CT) scans can be used for muscle mass evaluation, particularly in patients with a high risk of sarcopenia.

India-specific cut-offs for muscle area and density should be adapted from international thresholds and validated.

There was strong consensus for integrating handgrip strength and 6-minute walk test as practical screening tools.

Prehabilitation Protocols

Multimodal approach to preoperative intervention through exercise, nutrition optimization, smoking and alcohol cessation and psychological stress reduction.

Preoperative nutritional supplementation

The use of High energy high protein drinks and immunonutrition was agreed upon.

Preoperative Carbohydrate Loading is more beneficial than keeping patients' nil by mouth: Systematic review evidence (17 RCTs, n=1,445) supported improved insulin resistance without aspiration risk. There is no high-quality evidence to support parenteral albumin infusion. **Personalized Strategy:** Risk stratification-based interventions

are preferred over universal protocols.

Postoperative Management

Early oral feeding is preferred for surgical patients: Meta-analysis of 34 RCTs demonstrated faster intestinal recovery, shorter hospital stays, fewer complications.

Oral Nutritional Supplements should be continued postoperatively for at least 3 months. It is effective at reducing sarcopenia incidence, improving BMI/SMI, and improving chemotherapy tolerance.

Combined EN/PN: Lowest caloric and protein deficits are observed when both enteral and parenteral modalities are utilized and a combination is to be considered if the energy and nutrient requirements cannot be met by enteral intake alone (<50% of caloric requirement) for more than 7 days.

The addition of immunonutrients to postoperative diets does not reduce postoperative complications in patients with cancer.

Targeted postoperative interventions

Supplementation with specific nutrients, such as L-arginine, L-glutamine, and beta-hydroxy-beta-methylbutyrate (HMB, 3–6 g/d), can reduce inflammation, improve immune function, and promote muscle preservation in postoperative patients.

It is recommended to provide

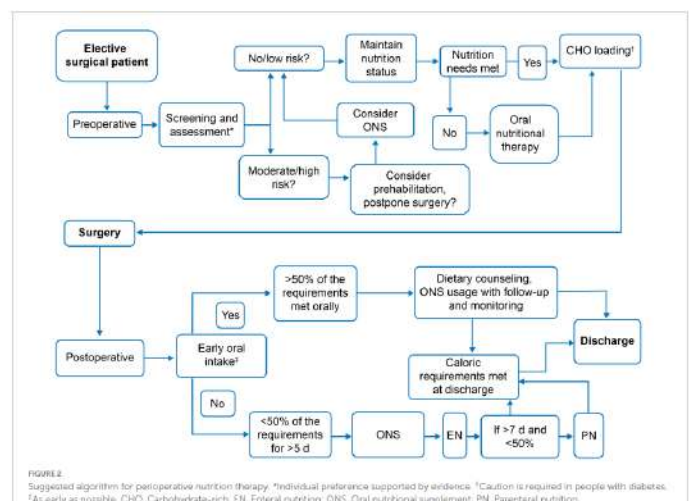
protein intake of at least 1–1.5 g per kg of body weight per day) along with physical activity to reduce surgery-related muscle loss and improve functional outcomes.

In patients with gastrointestinal intolerance, peptide-based enteral formulas (dipeptide- and tripeptide-based) can be used to enhance tolerance and improve nutritional outcomes.

Synbiotics: Preoperative plus postoperative administration is more effective than postoperative alone.

Monitoring and adjustment of nutritional plans:

Regularly monitor nutritional intake and outcomes (e.g., weight, muscle mass, albumin levels) postoperatively to adjust nutritional interventions and ensure optimal recovery.



Proposed Clinical Algorithm: Simplified ESPEN-adapted algorithm featuring preoperative SGA screening, risk stratification, multimodal interventions, and postoperative monitoring protocols

Commentary

The study demonstrates robust consensus methodology with clear thresholds and iterative refinement. The multi-institutional representation from leading Indian surgical centres enhances credibility and provides diverse geographic perspectives. The focus on India-specific considerations addresses a genuine gap in surgical nutrition literature. Practical implementation emphasis with a simplified algorithm shows understanding of ground realities in Indian healthcare settings.

There are a few limitations to consider. The panel size may be considered small, and 9 experts may inadequately represent India's diverse healthcare landscape, potentially limiting generalizability beyond tertiary centres. The issue of Industry funding does raise legitimate concerns about recommendation bias, particularly regarding ONS and specific nutritional products. Furthermore, supporting evidence varies

considerably across domains, with some recommendations based on limited India-specific data. While barriers are identified, concrete solutions and implementation timelines remain unclear. Cost-effectiveness analysis is notably absent despite resource constraint emphasis. The proposed India-specific cut-offs and algorithms have yet to be validated and long-term outcome data is not represented.

Implications for Practice

Actionable, evidence-based recommendations

Identification of tools to standardize nutritional screening and risk stratification will allow institutions to develop protocols for preoperative evaluation and selective prehabilitation.

Emphasis on dedicated perioperative nutrition teams with defined roles and responsibilities

Take-Home Points

Multi-institutional Indian consensus that provides the first comprehensive, evidence-based framework for perioperative nutritional support adapted specifically for Indian surgical practice.

Practical Implementation Focus: SGA screening is the preferred assessment tool due to feasibility considerations, while functional measures (handgrip strength, 6MWT) offer practical sarcopenia screening options.

Multimodal Intervention Strategy: Risk stratification-based prehabilitation combined with early postoperative feeding and targeted nutritional supplementation shows strongest evidence for improving surgical outcomes.

Research Priorities: Validation of India-specific recommendations, cost-effectiveness analyses, and implementation science research are critical next steps for advancing perioperative nutrition care.

TOP PANCREAS TRANSPLANT SURGEONS

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*'For me, those 90 days in Tokyo were both a mirror and a window:
a mirror showing the strengths and gaps in my current practice, and a window into different ways of
thinking and organising complex surgical work.'*

Short-term Japanese Fellowships for surgeons: *Oishi Desu ka?*

Reflections from a 90-day advanced clinical fellowship in Tokyo

In August 2023, I found myself in a familiar but disquieting place for a surgeon: clinically busy, technically engaged, but intellectually restless. The pace and demands of daily work, combined with the “political” currents every surgeon recognises, had begun to eat into the time and space I once had for deep reading and structured learning.

I wanted to step away briefly, not to

escape the work, but to re-engage with it in a different setting. I was particularly interested in how other high-volume transplant units managed complexity — both in the operating room and in the systems that support it. That search led me to Professor Kasahara's unit in Tokyo and Professor was kind enough to provide me an opportunity to take a short fellowship in NCCHD at Tokyo, Japan.

I had a very specific goal in going to Japan: ABO incompatible liver transplantation and peritransplant management of inborn errors of metabolism.

Preparation: The Unseen Foundation

A short-term advanced clinical fellowship is not a “breezy” holiday, nor is it a substitute for a formal training program. It is an intensive



immersion that rewards preparation far more than improvisation. To make the most of my time, I defined what I wanted to learn in the 90 days. That meant restricting goals and catching up on the reading. There is usually a 6 to 12 month gap before the date in which you are supposed to start your fellowship. That gave me adequate time to read up and make notes on my goals. (Not that it helped a lot - I had to rewrite all the protocols during the training program) So that now I use pencils a lot) An advanced fellowship assumes a certain level of foundational competence. I arrived with a plan to focus on eight specific clinical conditions and one methodology, giving me a framework for my questions and a filter for the flood of information I knew I would encounter.

Financial planning comes first. A 90-day fellowship for a 50 year old surgeon, meant loss of pay and professional fees in addition to the cost of training and living in a foreign country. Advanced fellowships are expensive — program fees, accommodation, local transport, and daily living costs can add up quickly. Japanese hospitals will provide trainee accommodation with basic necessities, including a small kitchen. The rooms are clean and you are expected to keep it clean and it is a culture in Japan to clean up your premises before you hand over the keys.

The timing of the fellowship also matters. Arriving during a season that suits your tolerance for heat or cold makes daily living far easier. I found the time between January and April best for me as I could see the best of Japan in those days. Cultural readiness is another crucial step.

Learning the basics of local etiquette and systems before arrival is not trivial. I learnt how to address people elder to me and learnt to thank people before arriving in Japan. I watched youtube videos of how to eat with a chopstick and practiced it - today, it has become second nature. I studied the subway map, learnt about the Suica card system for transport, and familiarised myself with simple Japanese phrases for greetings and gratitude.

I made a few mistakes as well. Japan is a cash based economy and every where where you go, you need to carry cash. I landed in Shibuya and I could get anyone to guide me to the bus stop which will take me to NCCHD. I would suggest doing this planning in India and printing out the instructions in Japanese and carry it with you, especially when it is your first travel to Japan. Despite difficulty in communication, Japanese are very helpful people. Also print the email communication set by the secretary, which has detailed instructions of where to go when you arrive at your accommodation. You will always find the correct person waiting for you. To do these well, I will suggest what I call the “two-day rule.” Arriving two days before the start date allows time to find the nearest convenience store, load a transport card, map the route to the hospital, and familiarise myself with the neighbourhood. Without that buffer, I might have been navigating luggage forwarding services, bus transfers, and taxi rides on the same morning I was expected in the operating room. The third mistake was assuming you can find the food you like on the day of arrival - I survived on junk food on day 1. One day's worth of ready-to-eat food in your bag is unglamorous

but will prove genuinely useful.

Alongside this, pay close attention to unit culture — dressing as the team dresses, keeping to their punctuality standards (7:15 am, starting time in PICU), and maintaining a pleasant, professional demeanour. In a short-term fellowship, every interaction counts, because you represent not only yourself but also your home program and country.

Making the Most of Fellowship Learning

One of the common misconceptions about short-term fellowships is that they will dramatically change your surgical technique. In reality, unless you already have extensive operative exposure, the learning curve for hands-on mastery is simply too steep to climb in a few months. The real value of a short term fellowship is dependent on the fellow: how to observe, absorb and integrate it. Having been a practising HPB and transplant surgeon, who was doing pediatric liver transplants, I had very different needs. I had specific questions to the faculty and that gave me hours of deep discussions with them and an interaction that continues to this day. It helped understand how decisions and surgical techniques were shaped and allowed me to think for myself and the local needs in India.

Protocols are another rich source of learning in short term fellowships. In Japan, many were in the local language, so I used Google Translate to create a working version and then simplified these into fishbone diagrams or goal-circle charts for my own understanding (It is much better now: ChatGPT can do it faster).



Observing the same protocol applied to different patients revealed nuances that no single reading could provide.

Mastering the tools was equally important. In transplantation, especially in pediatric liver transplantation, there are many additional device skills one needs to learn. It was tough for me to learn plasmapheresis in pediatrics and also pediatric critical care. Learning Japanese surgical terminology for numbers (ich, ni, san, yon, go, roku, nana) and materials also allowed me to follow intraoperative discussions in real time.

Though you select the training program based on the professor, the maximal learning comes from the assistant professors or attendings or staff grade surgeons. These are the people with whom you interact on a daily basis and the learning is from the daily chores and the minutiae in a work day - that will be the key. Make your interaction with them - both cordial and pleasant.

A short-term fellowship can feel overwhelming — new systems, unfamiliar faces, and a different pace of work. Without a plan, the experience can pass by quickly, leaving only a few scattered

memories instead of lasting lessons. I have found it useful to begin with a clear learning agenda, focusing on three to five topics or skills I want to deepen. This focus acts like a filter, helping to navigate the constant flow of information. In the first few days, I resist the urge to ask too many questions, choosing instead to observe quietly. Watching workflows, noticing variations in technique, and observing how decisions are made gives me a richer base for meaningful discussion later.

Each evening, I make a few notes — sometimes bullet points, sometimes diagrams — because for me, writing down forces clarity. Over time, these notes become a valuable personal reference, far more reliable than memory. Along the way, I make a conscious effort to understand the “why” behind the “how.” (Actually, that notebook now looks crazy - full of annotations in different colors as I keep adding new points). Techniques vary from place to place, but the reasons behind those choices — whether related to patient population, resource constraints, or philosophy — are what allow those lessons to be adapted at home. So instead of blindly following them, think along those lines.

The learning is never confined to the operating table. Nurses, technicians,

junior doctors — all hold knowledge that fills in the practical details. Engaging with the whole team enriches the picture and reveals the subtle cultural context that shapes clinical practice. Respecting local protocols, even when they differ from my own, builds trust and opens doors. It is only by working within the local system that I can truly see it from the inside. Finally, I make time to pause and think about how the day's lessons could be integrated into my own setting. Reflection turns observation into understanding, and understanding into change. Some aspects of practice will always resist neat categorisation. Complex decisions often emerge from a blend of structured process and seasoned intuition. A good fellowship, in any specialty, sharpens both.

Integrating into the Team

Cultural integration accelerates professional integration. Food was the simplest and most effective bridge. My Japanese colleagues introduced me to yakiniku barbecue and other local dishes; in return, I took them to South Indian restaurants in Tokyo.

Language helped too. A cheerful “Ohaiyo sensei” in the morning and “Maata ashita” in the evening brought smiles and often initiated further conversation. These small gestures made me part of the daily rhythm of the unit.

But the most powerful integration tool was listening. By hearing stories of the unit's history — why certain protocols were adopted, how crises

had been handled, what changes had worked or failed — I gained insights that went far beyond what was visible in the OR or on rounds. That trust led to access: to documents, diagrams, and personal notes that will directly inform how I develop our pediatric transplant program at home.

Closing Reflections

Short-term fellowships will not transform a novice into an independent operator. That is the realm of multi-year training. What they will do — if approached with preparation, cultural openness, and focused attention — is refine your observation, deepen your understanding of process, and broaden your network of mentors and peers.

For me, those 90 days in Tokyo were both a mirror and a window: a mirror showing the strengths and gaps in my current practice, and a window into different ways of thinking and organising complex surgical work.

Was it worth it? To borrow the question I heard many times in Japan — Oishi desu ka? (“Was it good?”) — my answer is unreserved: yes.



TOP PANCREAS TRANSPLANT SURGEONS

PROFESSOR DEREK M. MANAS

Professor Derek M. Manas is a leading hepatopancreatobiliary (HPB) and transplant surgeon based at Newcastle upon Tyne Hospitals NHS Foundation Trust in the UK. He has been instrumental in developing liver, pancreas, and islet transplant programs in the region, establishing Newcastle as a major center for abdominal organ transplantation. With extensive expertise in complex HPB surgery, he has contributed significantly to improving outcomes for patients with advanced liver and pancreatic diseases. Professor Manas is also active in research and education, publishing widely and training future transplant surgeons. His leadership, innovation, and dedication have earned him international recognition in transplantation.



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"Without precise definitions, medicine drifts between art and confusion; with them, it becomes a science guided by reason."

— Adapted from the spirit of Sir William Osler

Data Matters

Why Definitions Shape the Science We Believe

If a scientist were asked, "Do you believe in God?", a truly true scientist would respond: "Define God."

That answer is not pedantic; it is foundational. The whole enterprise of science rests on a few essential pillars—observation, asking the right question, defining the right outcome, and applying those answers where they matter. This section, Data Matters, focuses on the nuances of defining entities, maintaining data integrity, handling variables, and interpreting outcomes.

Why Definitions Matter?

Defining entities is crucial for the credibility of any scientific study. Vague definitions lead to unclear conclusions.

Consider the question: Who is a gastrointestinal surgeon?

- Is it someone with a Master of Chirurgiae (MCh) or Diplomate of National Board (DNB) degree in gastrointestinal surgery?

- Or a general surgeon with over 10 years of advanced gastrointestinal surgical experience?

What kind of surgeries would comprise advanced gastrointestinal surgical procedures?

Would a surgeon performing a pancreaticoduodenectomy occasionally qualify?

Depending on the definition, the group of "gastrointestinal surgeons" in a study could differ significantly, leading to very different results.

Similarly, what constitutes a pancreaticoduodenectomy? In the literature, it may refer to:

- A standard pancreaticoduodenectomy.
- A pylorus-preserving pancreaticoduodenectomy.
- An extended resection involving vascular reconstruction.

Unless clearly defined, the "same" operation can vary across studies, making meta-analysis nearly impossible.

Clinical parameters also differ; consider hypoalbuminemia:

- Some studies define it as serum albumin <3.0 g/dl.

- Others as ≤ 3.0 g/dl. - Some as <3.5 g/dl.

This slight difference shifts who is considered "at risk" and directly affects risk-adjustment models. In large cohorts, changing the cut-off can alter the predicted mortality risk. While definitions may not matter for those being defined, they are vital for those defining them—and extremely important for those interpreting the evidence.

Variables: Independent, Dependent, and Beyond

In research, variables are entities whose definitions dictate the reliability of results.

- Independent variables (predictors): age, comorbidity scores, operative technique.
- Dependent variables (outcomes): mortality, complication rate, length of hospital stay.

For instance, in studies of pancreatic surgery, the reported

“complication rate” may vary widely. Some researchers include only complications requiring reoperation (major morbidity), while others include minor electrolyte disturbances or delayed drain removal. The vast range in which complication figures are usually reported is explained mainly by differing definitions. The Clavien–Dindo classification of surgical complications has helped standardise reporting. Some studies record only grade III and above; others include minor grades I–II. The reported “complication rate” may vary from 15% to 65%—a staggering difference, explained purely by how complications were defined. The result: seemingly “better outcomes” that are an artefact of reporting definitions rather than actual performance. Another striking example is the postoperative pancreatic fistula. Before the International Study Group of Pancreatic Surgery (2005 and then 2016) proposed a uniform definition, each centre reported fistulas by its own criteria. Today, grade B and C fistulas are standardised internationally, which has enabled more reliable analyses and quality improvement (1,2).

Continuous versus Categorical Variables

How a variable is defined—not only by threshold, but also by type—shapes the statistical interpretation.

- Continuous variables (age, operative time, blood loss, serum creatinine) allow nuanced analysis. A regression model can show how increasing blood loss by 100 mL increments affects mortality risk.
- Categorical variables (presence or absence of diabetes, occurrence

of fistula, survival vs. death) simplify analysis but often obscure granularity. For example, body mass index can be studied as a continuous variable (kg/m^2) or categorised as underweight, normal, overweight, and obese. Treating body mass index as categorical can overstate the risk of “obesity” while missing the linear trend of increasing morbidity with rising body mass index. Similarly, operative time is often dichotomised (≤ 6 hours vs. > 6 hours). This may falsely suggest a “cutoff effect,” whereas in reality, risk increases gradually with each additional hour. Dichotomisation reduces statistical power and inflates the risk of false findings (3).

Relevance in Surgical Research

- In pancreatic resections, defining margin positivity (R1) as tumour ≤ 1 mm from the margin versus > 1 mm leads to very different survival analyses.
- In hepatic resections, “major hepatectomy” may mean resection of three or more segments in one study, or four or more segments in another. This alters comparisons across centres.
- In ventral hernia repair, recurrence may mean a radiologically detected bulge, a clinically palpable defect, or only a symptomatic recurrence requiring reoperation. Recurrence rates have varied from 5% to 25% between studies—largely due to definitional variation.

Key Message

Clear, transparent definitions are not academic nitpicking. They are the difference between knowledge

and noise. Every researcher must therefore:

Define entities before data collection.

Use accepted international consensus definitions where available (e.g., International Study Group of Pancreatic Surgery, Clavien–Dindo classification).

Explicitly state definitions in methods for reproducibility.

Recognise that treating a variable as continuous versus categorical directly determines statistical validity.

Science progresses not merely by asking questions, but by ensuring everyone agrees on what the question really means.

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“Behind every scar lies a story that humbles the healer.”

The Great Indian Jugaad



Dr Sanjiv Haribhakti

Chairman, Department of Surgical Gastroenterology,
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The Great Indian Jugaad underscores the value of pragmatic innovation in surgical practice. Within the operating room, resource limitations often catalyze the development of simple, reproducible, and cost-effective solutions that rival or even surpass commercial alternatives. This section documents such indigenous techniques and adaptations—devices fashioned from readily available materials—that enhance operative efficiency, reduce dependence on specialised equipment, and maintain surgical safety. In doing so, it highlights the intersection of necessity, ingenuity, and academic rigour in advancing surgical care.

Hammock retractor

A novel scarless left lobe liver retractor for MIS UGI surgery

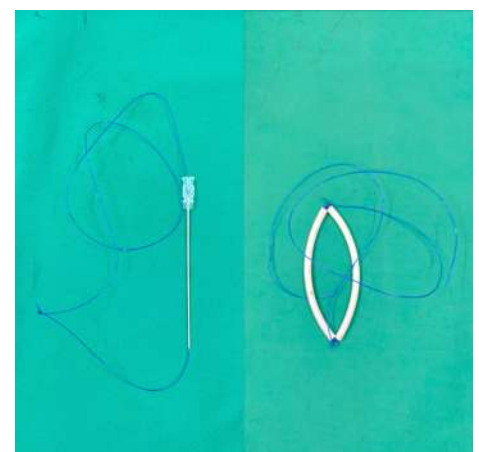
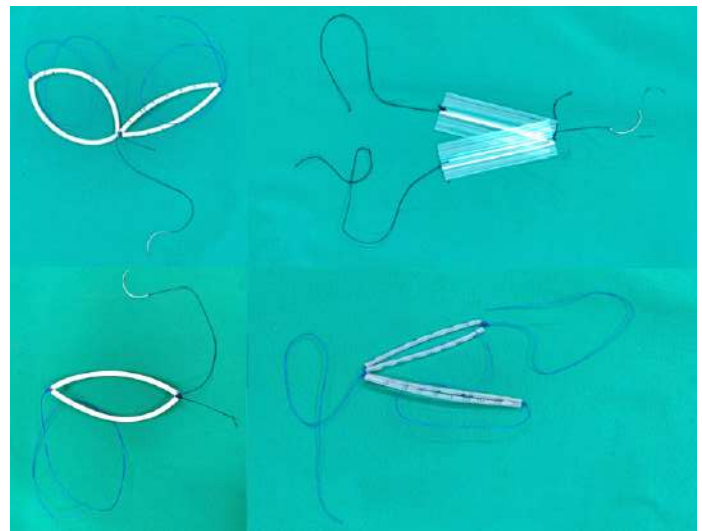
The Hammock Retractor is a simple indigenous device designed to facilitate left lobe liver retraction during minimally invasive procedures, such as laparoscopic or robotic upper gastrointestinal or bariatric surgeries. It provides a safe, effective, and space-saving alternative to rigid mechanical retractors. The Hammock Retractor represents a valuable tool in minimally invasive surgery by offering gentle, stable atraumatic retraction of the left liver lobe without occupying trocar ports. Its flexible and non-invasive design enhances surgical field visibility, particularly in complex upper GI procedures.

It can be created very easily on the operating trolley using a suture and either a piece of Penrose drain, corrugated drain, Ryle's tube, an infant feeding tube, or any silicone catheter. It is inexpensive,

very effective, and very easy to use. It provides a stable traction throughout the procedure. Specifically in robotic surgeries, an epigastric port and retractor which fights with the robotic arms, can be avoided. It is very useful in procedures like Laparoscopic / robotic fundoplication, cardiomyotomy, bariatric procedures, and esophago-gastric cancer surgeries.

Method of Use:

Hammock retractor is created with the use of silk / polypropylene suture with a needle attached to one end and 10-12 cm long Penrose drain.



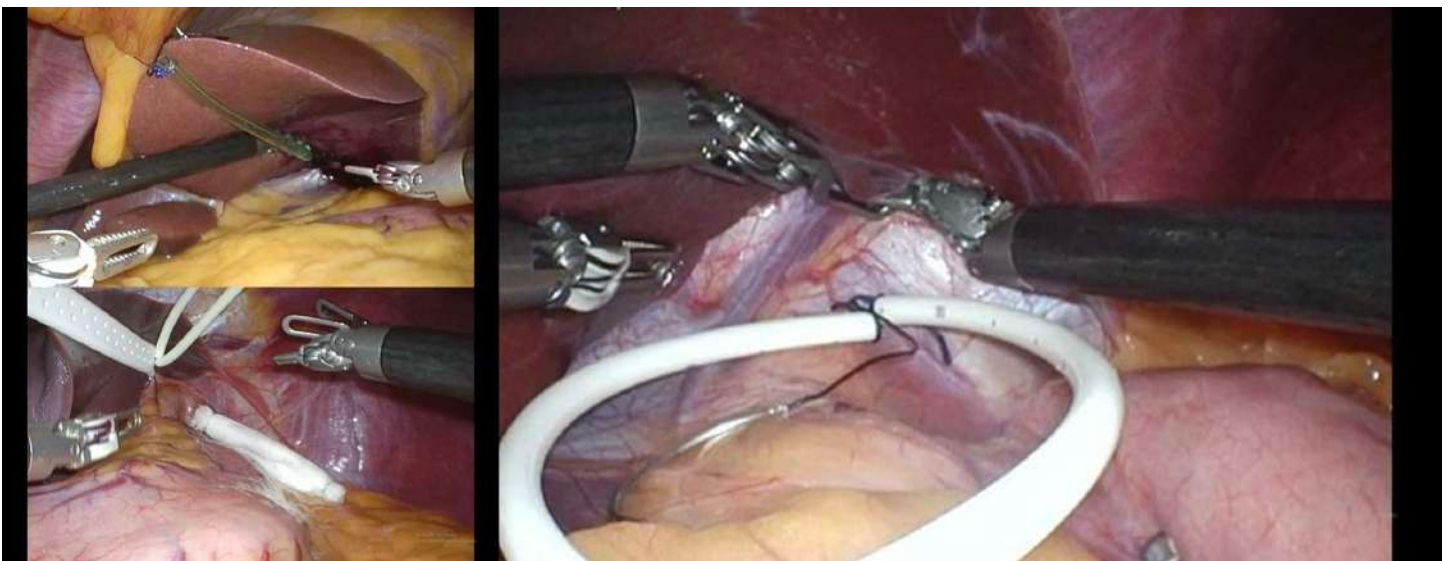


The entire retractor is inserted into the abdomen from the telescope 10-mm port. Underneath the left lobe of liver, the suture is tied just anterior to the hiatal opening and other end of the thread is extracted from the epigastrium to the right of the falciform ligament to retract the left lobe of liver as well as the falciform

ligament. Externally this thread is held tight by hemostat forcep. At the end of procedure, the hemostat is released and the hammock is removed from the 10-mm port.

This versatile device can be used in many other surgeries. It is used to sling stomach for laparoscopic

/ robotic pancreatic surgeries specifically distal or central pancreatectomy. It can also be used for gastric cancer surgeries to sling the stomach for the station VI, VII, VIII, & IX lymph node dissection. It can also be used for uterine traction for rectal surgeries.





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By combining sound economics with behavioural science, India can advance towards financial protection and timely access for surgical patients

Economics of Surgical Care in India

Current Landscape, Behavioural Challenges, and Opportunities

Surgical care in India still relies mainly on out-of-pocket (OOP) payments, despite notable improvements in public spending and insurance coverage over the past decade. According to the National Health Accounts (NHA), the proportion of OOP expenditure in total health spending has decreased but remains significant. It dropped from 44.4% in 2020–21 to 39.4% in 2021–22 (provisional estimates), while government health expenditure increased to nearly 48% of total health expenditure in the same year (1). Although this shows progress compared with earlier years when OOP exceeded 60%, the financial burden on households for surgical and medical care remains considerable.

India's healthcare landscape has long been characterised by OOP expenditure exceeding 50%, delayed healthcare-seeking behaviour, and low participation in preventive

care (2). For surgical diseases—particularly gastrointestinal (GI) and hepatopancreatobiliary (HPB) disorders—these factors amplify morbidity and costs. Patients often present late, after exhausting savings or borrowing, which increases both clinical complexity and financial distress. Beyond economics, health illiteracy, stigma, cultural beliefs, and mistrust of insurance schemes influence patient decisions. Behavioural economics, therefore, becomes essential in understanding why financial protection has not led to adequate surgical access.

Insurance penetration, both public and private, has grown considerably, but essential gaps remain. On the publicly funded side, Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (AB-PM-JAY) now offers eligibility to approximately 55 crore individuals (12.37 crore families), accounting for about 38–40% of the population. As of November 2024,

roughly 36 crore Ayushman Cards had been issued, and more than eight crore hospital admissions had been authorised since the scheme's start (3). These figures demonstrate both the scale and the challenges of implementation, as not all eligible families have registered or accessed benefits.

Private insurance has also grown rapidly. Insurance Regulatory and Development Authority of India (IRDAI) data for FY 2023–24 reported nearly 57 crore “lives covered” under retail, group, and employer-based health insurance products, serviced by general and standalone health insurers (4). However, this number likely includes duplications, as individuals may be covered under multiple schemes or employer and state programs simultaneously. Therefore, the actual number of unique persons covered is smaller. Survey data provide a more conservative view:

the National Family Health Survey (NFHS-5, 2019–21) reported that 41% of Indian households had at least one member covered under any form of health insurance, compared with 28.7% in NFHS-4 (2015–16) (5).

Despite expanded coverage, surgery poses unique economic challenges. Package pricing under AB-PM-JAY and state schemes often fails to reflect the actual costs of complex surgical procedures, especially in GI and HPB specialities. Rising prices of consumables, implants, disposables, and human resources, coupled with inflation and regional variation, create a mismatch between package reimbursements and real expenditures (6). This discourages private hospital participation and sometimes results in additional costs shifted to patients.

Another challenge is the incomplete coverage of the surgical pathway. While government schemes typically cover inpatient episodes, pre-operative investigations, outpatient consultations, and post-operative rehabilitation often remain outside the benefit basket, forcing patients to pay out of pocket (1). These hidden costs contribute to catastrophic health expenditures, particularly for poor households undergoing major surgery. Provider-induced demand in private setups further complicates the economics, as unnecessary investigations or interventions increase costs without improving outcomes (2).

Payment delays and claim adjudication issues further complicate the economics of surgery. Hospitals, especially those in tier-2 and tier-3 cities, face working capital pressures when reimbursements

are delayed or partially denied. This results in under-provision of services and discourages smaller facilities from expanding surgical services (3). Geographic disparities in empanelment also worsen access problems. While PM-JAY has empanelled thousands of hospitals, coverage remains concentrated in urban areas, leaving patients in rural and underserved districts with high travel and accommodation costs, which are usually not reimbursed.

The costs of surgical consumables, implants, and perioperative support add another layer of difficulty. While India has imposed price caps on selected devices like stents and knee implants, many GI and HPB surgical consumables remain uncapped, and their costs are not fully accounted for in package rates. Similarly, perioperative costs related to anaesthesia, critical care, and trained OT nursing staff are often under-reimbursed. As a result, hospitals may compromise on quality or avoid offering complex procedures altogether (6).

Behavioural Dimensions of Surgical Economics

The barriers to surgical care in India are not solely economic; they are also behavioural. Health illiteracy, stigma, cultural beliefs, and mistrust of formal systems delay care-seeking, especially for chronic and gastrointestinal diseases. Patients often postpone surgery until it is very advanced, which worsens outcomes and increases costs. Low participation in preventive care means cancers and severe GI disorders are often diagnosed late, when surgery becomes more complex and costly. Behavioural healthcare economics provides useful tools to bridge these gaps (2).

First, behavioural interventions can improve health-seeking behaviour. Nudges such as mobile reminders, simplified OPD flow, and structured counselling can encourage early screening for GI cancers or diabetes. Second, insurance uptake can be enhanced by reducing complexity: default-based micro-insurance and trust-building designs have been shown to improve enrolment and utilisation. Third, treatment adherence can be reinforced through behavioural nudges like digital reminders, gamification, and family involvement, which are particularly relevant for chemotherapy and chronic GI disorders. Cost-efficient programme design, using opt-out enrolment and commitment contracts, ensures low-cost but high-impact interventions. Finally, public health campaigns for vaccination, cancer awareness, and lifestyle modification can utilise emotive storytelling, social norm-based messaging, and non-monetary incentives such as recognition or time savings (7,8).

Challenges and the Way Forward

Despite promising examples, challenges remain. Few health ministries or hospital systems have dedicated behavioural economics units, and smaller hospitals often lack robust data analytics systems. Behavioural interventions are sometimes dismissed as 'soft science,' limiting adoption, and funding for behavioural trials in healthcare is sparse—these barriers slow integration of behavioural tools into mainstream surgical care (9). The way forward involves institutionalising behavioural insights within India's health system. Creating dedicated behavioural units in both public and private

sectors, incorporating nudges into digital health platforms, and conducting randomised controlled trials in surgical and primary care settings can show tangible benefits. Simple tools such as SMS reminders, local champions, and community-level incentives can be rapidly scaled, especially in tier-2 and tier-3 areas where surgical care gaps are most significant. By combining sound economics with behavioural science, India can advance towards financial protection and timely access for surgical patients (7,8).

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“The best teachers in medicine don’t wear white coats—they wear hospital gowns.”





Dr Anubhav Gupta

DrNB Surgical Gastroenterology Superspeciality resident,
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"The best teachers in medicine don't wear white coats—they wear hospital gowns."

Residents' Corner

Reflection on Two Cases That changed my perspective

I joined my superspeciality residency around a year after completing my MS. During my MS, we encountered a wide range of cases and gained considerable experience in handling emergencies. I have colleagues who have significantly more years of experience than I do. I always used to think I had a fair amount of clinical skill and knowledge, and would pride myself on being the first to raise an alarm when a patient's life was under threat or a bedside decision needed to be made and was delayed.

However, these two instances made me rethink my approach to assessing patients at the bedside. These two cases profoundly altered my perspective on patient care. Most importantly, they re-emphasised the value of humility. Even more, they made me rejudge my bedside decisions. In both the instances, the case was one that, we often consider very simple, sometimes so much so that, one might even put a face to

the case identification number for the first time on the operating table.

After my MS, when I was working as a senior resident, one eventful day, we operated on a gunshot victim. We ended up doing a limited right hemicolectomy for multiple colonic entry wounds from a shot-gun and brought out the ends as a double barrel ileo-colostomy.

Post-operatively, we discovered that the patient was HIV seropositive and already on treatment for the same. Contrary to our expectations that this pre-existing disease might worsen the course of our patient's recovery, he did very well post-operatively and was discharged home soon.

He returned to us after about 2.5 months for the reversal of his ileostomy. Fortunately, I was given the opportunity to perform the surgery with a fellow resident. This boosted my confidence a notch higher. We were satisfied upon its

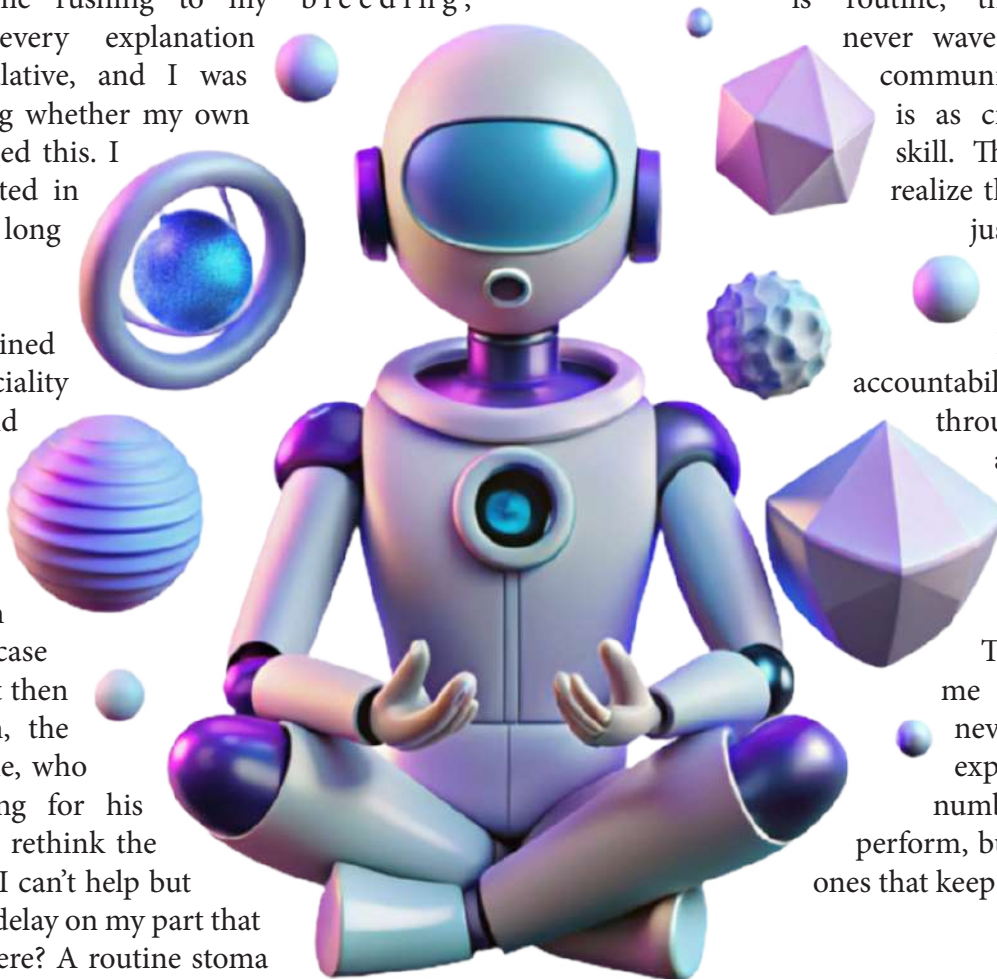
successful completion, and did not have any doubts or concerns in our minds. After the surgery, we happily greeted the patient and his family in the recovery room. On the second post-operative day, there was some purulent discharge from his wound, which wasn't very concerning and we just applied a fresh dressing. To our surprise, by the evening his wound would start discharging fecal matter. This came as a shock to me.

I am still early in my career, but during my MS training, I was fortunate to perform a good number of anastomoses, and I remain grateful that none of them leaked. So naturally, this stoma reversal leaking came to me as a shock and a hit to my confidence. We rushed him to the operating room and found that the anastomosis was intact, but it was a more proximal enterotomy that was leaking. We washed everything, redid the stoma, inserted drains, and came out. But he was an immunocompromised man with poor effort tolerance. He had to be kept on ventilator support

Soon, I joined my superspeciality residency, and almost 2 years passed since that incident. I had not thought much about that case since then. But then A young man, the same age as me, who is now battling for his life, makes me rethink the previous case. I can't help but think, was it a delay on my part that landed him there? A routine stoma

Had I been more prompt, we might not have had to wait an additional hour before taking him back to the operating room. His case is a case that perplexed me. We found haemoperitoneum but no active bleeding,

These cases taught me what textbooks never could—that experience is not the number of surgeries you perform, but the weight of the ones that keep you awake at night.





Dr Shraddha Patkar

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Dr. Shraddha Patkar is an Professor of Surgical Oncology and a consultant surgeon at the Tata Memorial Centre in Mumbai, India. She specializes in hepatobiliary and retroperitoneal surgery, with a focus on treating gallbladder and bile duct cancers

International Fellowship Finder

Observership to Japan	https://www.jshbps.jp	Duration: 3 months
International Observership to Korea	http://www.kahbps.or.kr	Duration: 1 month
ESSO Educational Grants & Fellowships	https://essoweb.org	Duration: Variable
IHPBA Fellowship Registry	https://www.ihpba.org/27_HPB-Fellowship-Registry.html	
UICC technical fellowship	https://www.uicc.org/	Duration 6-12 weeks
IASO International fellowship	https://www.iasoindia.in/	Duration : 4 weeks
Society of Surgical Oncology	https://surgonc.org/	Duration : Variable



Dr Avinash Supe

**Renowned Indian medical professional,
Surgical Gastroenterologist, & Academic Educator.**

He is known for his extensive contributions to the medical field, holding multiple leadership positions throughout his career. Most recently, he was conferred the title of Professor Emeritus by the National Academy of Medical Sciences.

Red hot rounds

What does success mean to you?

Making a meaningful difference to people and systems and growing with each challenge.

What's something you say you'll do, but never will?

Taking a year-long break from work and tour the world.

instantly downloadable like an app, which one would it be?

Perfect laparoscopic suturing technique.

Who do you look up to?

Those who lead with humility and integrity.

What's the one thing you would like to change about yourself?

Learning to say no to people.

Which surgery are you terrible at?

Plastic reconstructive procedures in era prior to microvascular surgery

What makes you feel uneasy? Overwhelmed? Anxious?

Lack of preparation and patient safety risks.

Which three qualities do you value in the people who work with you?

Commitment, collaboration, adaptability, humility.

If surgeries had movie ratings, what rating would yours get?

PG-13—challenging, but with care and discipline.

Knowing what you know now, what advice would you give your 18-year-old self?

Advice to 18-year-old: have mentors and be resilient

If someone were to play you in a movie, who would you want it to be?

Someone who values authenticity, truthfulness—maybe Nana Patekar

What's the most underrated surgical skill?

Meticulous tissue handling.

What is a dream you have that you've yet to achieve?

Revolutionizing surgical education internationally.

If you could change your name, what would it be?

Prefer to keep my name—it's part of my identity.

How do you know when you're "ready" for independent operating?

When judgment matches skill confidently.

The most valuable non-surgical skill in a surgeon's life?

If you could make one surgical skill

Clear and empathetic way.”
communication.

One myth about surgery you wish you could erase from juniors' minds?

That surgery is only about speed and courage.

If you could teach only one thing to a junior before they graduate, what would it be?

Prioritize safety above all else.

The most dangerous thing a junior can say in the OT?

“I think I saw someone doing it this

How do you spot a future great surgeon early in their career?

Curiosity, lifelong learner and seeking feedback.

The quickest way for a junior to lose your trust?

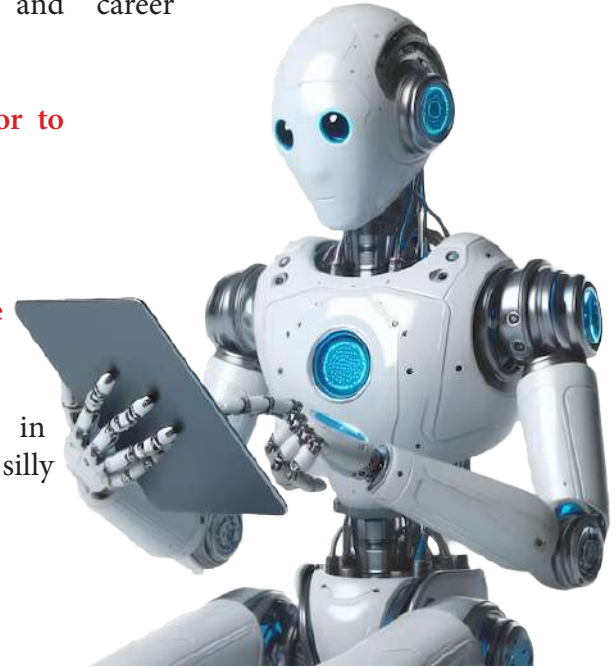
Hiding mistakes or facts.

One piece of advice you give every trainee?

Always ask—never assume in patient care. No question is silly question.

The best surgical advice you ever got?

Stay humble and keep learning, no matter your title and stage in your career



**Questions Framed by
Dr Deeksha Kapoor**

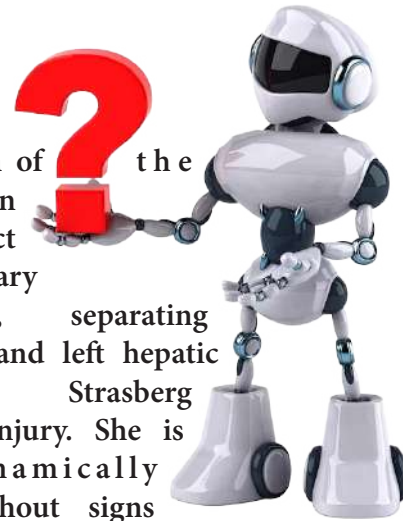


VENKATESHA UDUPA

Dr. Venkatesha Udupa is a highly respected consultant transplant and hepatopancreatobiliary (HPB) surgeon at Oxford University Hospitals, United Kingdom. He plays a key role in one of Europe's largest pancreas and kidney-pancreas transplant programs, managing complex multi-organ transplants with excellent outcomes. Trained in leading centers in India and the UK, Dr. Udupa has developed expertise in advanced abdominal surgery, living-donor transplantation, and minimally invasive approaches. He is actively involved in clinical teaching, mentoring surgical trainees, and contributing to research in transplantation and HPB surgery. Known for his precision, innovation, and patient-focused care, he stands as a global leader in transplantation.

TOP PANCREAS TRANSPLANT SURGEONS

GI Surgery Quiz



1. A 58-year-old gentleman presents with colicky pain, abdominal distension, and obstipation. At presentation, the patient is hemodynamically stable, with a pulse of 92 beats per minute and a blood pressure of 136/88 mm Hg. The duty resident admits the patient and performs a contrast-enhanced CT of the abdomen after checking the status of the renal functions. The CT shows a near-obstructing upper rectal mass 11 cm from the anal verge, with proximal colonic dilatation and no perforation. He now gives a consultation with the gastroenterology team, who plan an endoscopic SEMS placement. Other routine laboratory tests were within normal limits, and the serum CEA level was 7.5 ng/mL. What would be the next best steps in the management of the patient?



- A. Immediate SEMS across the rectal tumour.
- B. Immediate long-course chemoradiation without decompression
- C. Emergency Hartmann's procedure; adjuvant chemo later

D. Diverting loop colostomy, restage, then total neoadjuvant therapy (TNT) with long-course chemoradiation or chemo-selective strategy, followed by TME.

2. A 64-year-old man has an iatrogenic mid-thoracic oesophageal perforation during dilation. Presentation is within 12 hours; he is hemodynamically stable with a contained leak, minimal mediastinal air, no diffuse contamination, and no sepsis. What is the appropriate management?

- A. Immediate thoracotomy and primary repair for all perforations
- B. Non-operative management with NPO, broad-spectrum antibiotics, close monitoring, and image-guided drainage as needed
- C. Endoscopic dilation and stent immediately in all cases
- D. Discharge on oral antibiotics

3. A 55-year-old woman underwent a laparoscopic cholecystectomy for chronic cholecystitis. On postoperative day 3, she develops abdominal pain, jaundice, and bilious drainage from a subhepatic drain. A CT scan of the abdomen was performed, revealing a minimal subhepatic collection with a drain within it. An ERC was attempted, which showed a complete leak of contrast from the proximal CBD, with no opacification of the intrahepatic biliary radicles. MRCP indicates a complete

transection of the common hepatic duct at the biliary confluence,

separating the right and left hepatic ducts—a Strasberg type E4 injury. She is hemodynamically stable without signs of peritonitis or sepsis.

The operating surgeon is a trained general surgeon with five years of experience, the bulk of his work comprising cholecystectomies, hernias and perianal cases. What is the most appropriate initial management?

- A. Attempt primary end-to-end repair over a T-tube by the index surgeon
- B. Urgently transfer the patient to a hepatobiliary (HPB) centre for further management.
- C. Endoscopic biliary stenting alone and delay repair for three months
- D. Up-front right hepatectomy with left duct anastomosis

4. A 63-year-old gentleman presents with acute left-lower-quadrant pain. CT scan shows acute sigmoid diverticulitis with a 5-cm pericolic abscess (modified Hinchey II). He is hemodynamically stable without diffuse peritonitis. He receives intravenous broad-spectrum antibiotics and undergoes CT-guided percutaneous drainage. After 72 hours his symptoms

and inflammatory markers improve, and he is discharged on oral antibiotics. Which of the following is the most appropriate recommendation once he has recovered?

A. Continue non-operative management without interval colonoscopy or surgery because recurrence risk is low.

B. Schedule elective sigmoid resection after recovery because recurrence is common in abscess-associated diverticulitis.

C. Initiate prophylactic oral antibiotics for 6 months to prevent recurrence.

D. Arrange colonoscopy within 2 weeks and resect only if another episode occurs.

5. A 26-year-old gentleman with genetically confirmed FAP (APC c.1309del; family history positive) undergoes preoperative colonoscopy showing pancolonic polyposis (>500 adenomas) and dense rectal polyposis (~60 adenomas, up to 12 mm; no evidence of malignancy or high-grade dysplasia in the biopsied polyps). Sphincter function is normal, and he desires future fertility. Upper-GI staging shows Spigelman stage II duodenal disease. Which is the most appropriate primary operation?

A. Total abdominal colectomy with ileorectal anastomosis (IRA) and 6-monthly rectal surveillance

B. Restorative proctocolectomy with ileal pouch-anal anastomosis (IPAA) (two-stage), performed

minimally invasively if feasible

C. Subtotal colectomy with end ileostomy

D. Defer surgery; start celecoxib and endoscopic debulking of rectum

Questions Framed by
Dr Deeksha Kapoor





Dr Eppa Vimalakar Reddy

Organising Secretary,
Senior Consultant & HOD – Surgical Gastroenterology, GI
Oncology, Bariatric, Robotic Surgery & Liver Transplantation
KIMS SUNSHINE Hospitals, Begumpet.



A Scientific Feast at IASG Mid-Term 2025

From Controversies to Consensus – KIMS-SUNSHINE

February 14–15, 2025 | Kakarla
Subba Rao Learning Centre, KIMS
Hospitals, Secunderabad
Theme: Colorectal Diseases –



Advances & Controversies

Organising Chairmen: - Dr R A
Sastry

Organising Secretary: - Dr.
G. Parthasarathy, Dr. E Vimalakar
Reddy

KEY HIGHLIGHTS

Symposiums

Focused sessions shed light on
evolving and controversial aspects

of colorectal surgery:



IBD Symposium: Multidisciplinary
views on diagnosis, medical therapy,
and surgical options including
IPAA.

Sphincter-Saving Techniques:
Current strategies in
intersphincteric, transanal, and
endoscopic resections.

Complex Colorectal Cancers:
Evidence-based insights on
lymphadenectomy, recurrent rectal

cancers, and HIPEC.

Ano-Rectal Disorders: Covered
Hirschsprung's, pelvic floor
dysfunction, FMT, probiotics, and
new technologies like AI and ICG.

MDT Panels

Interactive case-based tumor boards
brought experts across specialties to
the table:

Colon Cancer MDT: Practical
approach to challenging colon
lesions and appendicular carcinoma.

Rectal Cancer MDT: Emphasis on
MRI staging, neoadjuvant strategies,
and tailored surgical planning.

Colorectal Liver Mets MDT:
Integrated management with
insights on ALPPS, transplant
candidacy, and IR-guided therapies.
Conclusion



IASG Mid-Term 2025 was not just an academic meeting—it was a convergence of purpose, precision, and passion. With over 550 delegates, 111 faculty, and sessions that spanned every nuance of colorectal science, this event marked a turning point in collaborative GI surgery education.

The blasting gala evening added joy to the academic intensity—making this a truly unforgettable celebration of science and synergy.



IHPBA India Mid-Term Meet 2025

August 23-24, 2025 | JLN Auditorium, AIIMS, New Delhi
Theme: Mastering Techniques in HPB Surgery: Difficulties

The IHPBA India Mid-Term Meeting 2025 was successfully organized by Dept of GI Surgery and Liver Transplantation, AIIM, New Delhi under the chairmanship of Prof Nihar Ranjan Dash of the dept. The event brought together, leading experts, faculty, and young surgeons from across the country and abroad. The two-day academic feast focused on the theme "Mastering Techniques in HPB Surgery: Difficulties" and provided a comprehensive platform to deliberate on challenging scenarios and innovations in hepatobiliary and pancreatic surgery.

This midterm meet was unique for two reasons:

1. This was the first time that

while another 200 joined online from India & abroad.

2. Inclusion of a separate, one day conference for nursing officers from operation theatre with the same theme as the main conference. The same was attended by 100 nursing officers with 150 more joining online.

Apart from the 56 national faculties, 4 international faculties also joined the conference online to deliver their talks. These included giants of HPB surgery like Dr Masaru Miyazaki from Japan & Dr Timothy Pawlik from USA.

Dr M Srinivas, Director, AIIMS, New Delhi, was the chief guest at the inaugural ceremony. He emphasized on the importance of events like these and encouraged the participants to actively engage with the speakers and panelists citing this as an opportunity not routinely encountered.

the organizers effort and especially lauded the associated Nursing conference, mentioning that this is perhaps the first such conference where she has witnessed the inclusion of a separate conference for nurses.

Dr Puneet Dhar, President, IHPBA India spoke on the education initiatives being taken up by IHPBA India.

Day 1 Highlights

The meeting commenced with sessions on complex biliary surgery, followed by an engaging session on pancreatic malignancy. Afternoon sessions focused on benign pancreatic surgery. The day concluded with a session on liver resections.

Day 2 Highlights

The second day opened with session on pancreatitis followed by a very special, potpourri session, which carried techniques such as ICG use in HPB surgery and intraoperative ultrasound.

This was followed by sessions on transplant (liver, pancreas & auto-islet cell transplant) with contributions from global experts, portal hypertension.

The concluding session addressed biliary tract malignancies.

Closing Note

The meeting concluded with a vote of thanks by Dr Rajesh Panwar, Asso Prof, Dept of GI Surgery, AIIMS Delhi, recognizing the efforts of the organizing committee led by AIIMS, New Delhi, and the IHPBA



a midterm meet was streamed live via Zoom for a nominal fee. Approximately 100 delegates attended at event the auditorium,

Dr Nirupam Madan, Medical Superintendent, AIIMS, New Delhi, was the guest of honour. She praised

India leadership.

The scientific program successfully
balanced technical depth with

The IHPBA India Mid-Term Meet
2025 reaffirmed the IHPBA India's
commitment to advancing the



practical insights, ensuring rich
academic take-home messages,
as witnessed by the intense and
engaging discussions during and
after each session.

science and art of HPB surgery,
fostering collaboration, and
inspiring young surgeons to take on
future challenges.



IASGCON 2022 Kolkata





Spotlight : Debates that Shaped the Conference

Laparoscopic vs Open Surgery

Intensive debate examining evidence-based approaches and expert opinions on surgical technique selection for optimal patient outcomes.

Liver and Pancreatic Transplantation

Comprehensive discussion on challenging cases and innovative treatment protocols for liver and other solid organ transplantation.

Robotics and AI in GI Surgery

Critical analysis addressing the question: Is robotic surgery revolutionary advancement or expensive hype? Panel included Dr. Sujoy Pal and other leading surgical experts.



Quiz Answers

1) Correct answer: B

In classic FAP, operative choice hinges largely on rectal disease burden. When the rectum harbours >20 adenomas, larger lesions, or endoscopically unmanageable disease, guidelines favour proctocolectomy with IPAA to minimise rectal cancer risk and reduce the need for intensive, indefinite rectal surveillance. ASCRS+1. APC genotype matters. Variants in codons 1250–1464—notably c.1309—predict a more severe colorectal and rectal polyp phenotype, tilting decision-making toward IPAA at index surgery rather than IRA.

IRA (option A) is acceptable when rectal disease is limited (≤ 20 small rectal adenomas) and endoscopically controllable, recognising a persistent lifetime rectal cancer risk (~5–6%) and need for frequent surveillance; that profile does not fit this patient's dense rectal polyposis.

Chemoprevention alone (option D) does not replace prophylactic colectomy in classic FAP; NSAID/COX-2 regimens may modestly reduce polyp burden but are adjuncts, not definitive therapy.

When expertise is available, a minimally invasive approach to IPAA is reasonable. It may be associated with lower desmoid tumour risk compared with open surgery—an essential consideration in FAP—though evidence is observational.

Regardless of colorectal operation, patients require lifelong upper-GI surveillance and pouch/rectal cuff surveillance per protocol. (His Spigelman II status warrants scheduled endoscopic follow-up).

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- Poylin VY, Shaffer VO, Felder SI, et al. The American Society of Colon and Rectal Surgeons Clinical Practice Guidelines for the Management of Inherited Adenomatous Polyposis Syndromes. *Diseases of the Colon & Rectum*. 2024;67(2):213-227. doi:10.1097/DCR.0000000000003072
- Zaffaroni G, Mannucci A, Koskenvuo L, et al. Updated European guidelines for clinical management of familial adenomatous polyposis (FAP), MUTYH-associated polyposis (MAP), gastric adenocarcinoma, proximal polyposis of the stomach (GAPPS) and other rare adenomatous polyposis syndromes: a joint EHTG-ESCP revision. *British Journal of Surgery*. 2024;111(5):znae070. doi:10.1093/bjs/znae070
- Steinberger AE, Westfal ML, Wise PE. Surgical Decision-Making in Familial Adenomatous Polyposis. *Clin Colon Rectal Surg*. 2024;37(03):191-197. doi:10.1055/s-0043-1770732

2) Correct answer: D.

The resident missed performing a per rectal examination. The consultant surgeon performed a per rectal examination on the next

morning and felt a hard mass at the tip of the examining finger. Subsequently, an MRI pelvis was performed, which suggested T3c disease with EMVI+, N2, clear MRF (>2 mm), lesion length 5 cm, cranio-caudal extension into the mid-rectum.

Acute or impending obstruction from rectal cancer generally requires prompt decompression and further management. For rectal lesions, diverting loop colostomy is preferred to facilitate safe resuscitation and delivery of neoadjuvant therapy; SEMS in the rectum is technically challenging and relatively contraindicated in mid to distal lesions because of pain, migration, tenesmus, and higher perforation risk; even in upper/mid rectum, careful case selection is needed and many colorectal teams still favor diversion over SEMS for neoadjuvant candidates.

After decompression and full staging, TNT is guideline-concordant for clinically node-positive/T3+ rectal cancers because it improves systemic control and pCR compared with historical CRT → surgery → adjuvant approaches. PROSPECT (NEJM 2023) supports chemo-selective omission of RT (neoadjuvant FOLFOX → CRT only if <20% tumour regression) for mid/high rectal tumours with clear MRF; in obstructed cases, you still decompress first, then consider PROSPECT-like strategy if anatomy fits (upper/mid rectum, MRF clear). A is suboptimal: SEMS across rectal tumours extending to the mid rectum can cause pain, tenesmus

and a poor retention rate. ESGE supports SEMS for malignant large-bowel obstruction as a bridge to surgery, mainly for the left-sided colon; for the rectum, success is lower and symptoms troublesome; avoid when the lesion is ≤ 5 cm from the anal verge; perforation jeopardises oncologic outcomes.

C sacrifices sphincter/continuity and delays optimal oncologic therapy.

D ignores the obstruction; patients tolerate CRT poorly during obstruction.

Reading Material:

- Benson AB, Venook AP, Al-Hawary MM, et al. NCCN Guidelines® Insights: Rectal Cancer, Version 3.2024. J Natl Compr Canc Netw. 2024;22(8):e247045.
- Schrag D, Shi Q, Weiser MR, et al. Preoperative Treatment of Locally Advanced Rectal Cancer (PROSPECT). N Engl J Med. 2023;389(4):322-334.
- Dijkstra EA, Nilsson PJ, Hospers GAP, et al. RAPIDO 5-year follow-up: increased LRR but reduced distant failure with TNT. Ann Surg. 2023;278(4):e744-e748.
- van Hooft JE, Veld JV, Arnold D, et al. ESGE Guideline: SEMS for obstructing colonic/rectal cancer. Endoscopy. 2020;52(5):389-407.
- Cardoso PM, Silva-Moreira A, Figueiredo PN. Self-Expandable Metal Stents for Obstructing Colon Cancer—Update. Cancers (Basel). 2024;17(1):87.

3) Correct answer: B.

Explanation and management

Recent guidelines and reviews outline strict criteria for non-operative management (NOM) of iatrogenic oesophageal perforations. In stable patients presenting early (usually <24 h after injury) with contained perforations that drain back into the oesophageal lumen, minimal contamination, no distal obstruction or underlying pathology (e.g., malignancy), and no sepsis, conservative management can be safe. This approach is most applicable to cervical or thoracic perforations after instrumentation; delayed or spontaneous ruptures with mediastinal contamination or sepsis generally require surgery.

Key elements of conservative management include:

Nothing by mouth (NPO) with nasogastric or nasojejunal decompression to minimise further leak.

Broad-spectrum intravenous antibiotics and proton-pump inhibitors (PPIs) are used to prevent mediastinitis and acid injury.

Nutritional support, either parenteral or via feeding tube distal to the perforation.

Close clinical and radiologic monitoring (serial imaging and laboratory assessment) to ensure the leak remains contained and sepsis does not develop.

Percutaneous or endoscopic drainage of pleural or mediastinal collections when necessary.

Endoscopic interventions (through-the-scope clips, self-expanding stents, or endoluminal vacuum therapy) may be used on a case-by-case basis to control the leak, but do not replace adequate drainage.

Stents are contraindicated in long perforations or when there is extensive contamination.

NOM demands an experienced multidisciplinary team, as up to 20 % of patients treated conservatively may later require surgery. Failure of conservative therapy, deterioration, large uncontained leaks, or evidence of sepsis are indications for early operative intervention, which may entail primary repair with drainage, oesophageal diversion, or resection depending on the location and tissue viability. Discharging the patient on oral antibiotics (option D) is unsafe because continued NPO, close observation, and imaging are mandatory. Immediate thoracotomy for all cases (option A) is not justified when the leak is contained and the patient is stable. Likewise, routine endoscopic stent placement (option C) is not appropriate for every case and must be individualised.

References:

- Chirica M, Kelly MD, Siboni S, et al. WSES guidelines: esophageal emergencies. World Journal of Emergency Surgery. 2019;14:26.
- Hummelink S, Freeman RK, et al. Management of esophageal perforation: a modern update. J Thorac Dis. 2024;16(4):1597-1612.
- Ahmad U, Davila D, et al. Esophageal perforation: principles of nonoperative and operative management. Ann Thorac Surg. 2023;115(1):171-179.

4) Correct answer: B.

Explanation. Strasberg E4 injuries involve transection of the common hepatic duct at the biliary confluence with loss of communication between right and left hepatic ducts and are classified as major bile duct injuries. Because both hepatic ducts are separated, simple stenting or primary repair is rarely successful; definitive treatment requires Roux-en-Y hepaticojejunostomy (HJ) appropriately timed.

It is recommended that inexperienced surgeons should not repair major BDIs; in such cases, the surgeon should place a drain to control bile leakage and immediately transfer the patient to an HPB centre. The preferred strategy is to control sepsis, delineate anatomy and plan reconstruction in a specialised unit. For hepatic duct transections <2 cm from the confluence (Strasberg E2–E5) or injuries at the confluence (E4), Roux-en-Y hepaticojejunostomy is the standard reconstruction. High biliary injuries are often associated with a vascular injury and the level tends to worsen with time. Delaying the repair by 4–6 weeks allows the injury to mature and inflammation and sepsis to settle. These cases present as external biliary fistulae more commonly than obstructive jaundice and require meticulous planning, including proper delineation of the biliary anatomy and placement of percutaneous transhepatic biliary stents. In case of complex injuries, with associated vascular compromise, atrophy of the liver lobe or associated cholangiolar abscess in the atrophic lobe, an upfront hepatectomy may be considered.

Why are the other options wrong?

A: Primary end-to-end repair or T-tube insertion is suitable only for minor injuries (e.g., E1) where there is sufficient duct length; attempting this in an E4 injury risks ischemia, stricture and failure.

C: Endoscopic stenting may palliate a leak but does not restore continuity in a complete transection; delaying definitive reconstruction without referral risks cholangitis, stricture and secondary biliary cirrhosis.

D: Hepatectomy is a salvage option for complex injuries with vascular damage or atrophy but is not first-line for stable E4 injuries. Early referral for biliary reconstruction yields better outcomes and preserves liver parenchyma.

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- Flum DR. Bile Duct Injury During Cholecystectomy and Survival in Medicare Beneficiaries. *JAMA*. 2003;290(16):2168. doi:10.1001/jama.290.16.2168
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5) Correct answer: B

Explanation

Diverticular disease of the sigmoid ranges from uncomplicated inflammation to more serious complications such as abscesses, fistulas, or perforations. For abscesses measuring ≥ 4 –5 cm (modified Hinchey II), percutaneous drainage combined with intravenous antibiotics is the preferred initial treatment. However, retrospective studies and systematic reviews indicate that recurrence rates after successful medical and percutaneous management of diverticular abscesses are quite high (40–61% overall), with many recurrences being more severe than the original episode. In a review of 1051 patients, only 28 % treated non-operatively for a diverticular abscess avoided surgery or recurrence. Based on this evidence, the American Society of Colon and Rectal Surgeons (ASCRS) and other recent guidelines recommend elective colectomy after recovery from complicated diverticulitis involving an abscess. The decision should be personalised, but the high risk of recurrence supports surgery in most suitable patients. An interval colonoscopy is advised to exclude malignancy after the acute episode;

however, colonoscopy during the immediate recovery phase (as in option D) is not routine. Long-term use of prophylactic antibiotics lacks evidence-based support. Therefore, B—elective sigmoid resection once the patient has recovered—is the best choice.

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“In learning to cure, we discover what it means to care.”



Welcome to the October 2025 Issue of “SUTRA”

Building on the warm response to our inaugural edition, this second issue continues to weave together science, stories, and the shared spirit of surgical gastroenterology. Inside, you'll find insightful articles, inspiring journeys, and thought-provoking perspectives from across our community.

Stay connected — keep reading, keep contributing, and help us shape SUTRA into a vibrant platform for learning and collaboration.

Explore More Insights,
updates & events at

www.iasgindia.com



Date: 10TH | 11TH | 12TH OCTOBER 2025

Venue: ITC Grand Chola, Chennai

35th National Conference of Indian Association of Surgical Gastroenterology

Hosted by: Tamilnadu Surgical Gastroenterology
Alumni Association

Theme: **GI Oncology** *Innovations, AI & Beyond*



Who Should Attend ?

- ▶ Surgical Gastroenterologists
- ▶ Medical Gastroenterologists
- ▶ Surgical Oncologists
- ▶ Medical Oncologists
- ▶ General Surgeons
- ▶ Respective PG's



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