Peritoneal Surface Oncology PSOGI Group International

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Section 1:

Peritoneal Surface Oncology in the UK and Europe: Past, Present and Future.

By Faheez Mohamed

Peritoneal Malignancy Institute, Basingstoke, UK

Past: building the platform

The modern story in the United Kingdom (UK) began in Basingstoke in 2000 with what is now The Peritoneal Malignancy Institute. This was led by Brendan Moran and resulted in the development of a nationally commissioned service for appendiceal tumours and colorectal peritoneal metastases (CPM). Shortly thereafter Sarah O'Dwyer at The Christie NHS Foundation Trust in Manchester built a complementary northern Peritoneal Surface Malignancy (PSM) centre integrating complex surgery, oncology and translational science. These programmes moved the management of peritoneal disease from therapeutic nihilism towards National Health Service funded specialist assessment and treatment with excellent outcomes.

Present: evidence is refining practice

The immediate UK challenge is to combined two centres of expertise into equitable national management of PSM through earlier recognition, specialist multidisciplinary review, transparent selection, shared outcomes and trial access. Jurgen Mulsow in Dublin, Haney Youssef in Birmingham and Jody Parker with Leigh Davies in Cardiff's all-Wales service extends the PSM expertise into several other diseases. In ovarian cancer, UK gynaecological oncologists are recruiting to phase III OVHIPEC-2. They are establishing a network of CRS and HIPEC centres, coupling delivery to prospective evaluation and disease-specific expertise [*Koole S, van Stein R, Sikorska K, et al. Int J Gynecol Cancer. 2020;30(6):888-892. doi:10.1136/ijgc-2020-001231*].

Across the Channel, France's RENAPE consortium deserves recognition for demonstrating the success of a national reference network. A registry of patients, expert pathology and molecular profiling unite rare-tumour care and research [*Villeneuve L, Kepenekian V, Glehen O. Ann Surg Oncol. 2026;33(9):7809-7811. doi:10.1245/s10434-026-20127-z*]. The French PRODIGE 7 trial altered the standard of care for CRS and HIPEC for PSM. The absence of an overall-survival advantage from short-duration oxaliplatin HIPEC, and an increase of late postoperative morbidity dampened enthusiasm for "quick CHIP" [*Quénet F, Elias D, Roca L, et al; UNICANCER-GI Group and BIG RENAPE Group. Lancet Oncol. 2021;22(2):256-266. doi:10.1016/S1470-2045(20)30599-4*]. However, it became clear beyond doubt that expert cytoreductive surgery was of benefit. The focus has now shifted to identifying optimal HIPEC regimens in this setting with biological selection and properly powered trials.

In Spain, the GECOP continues multicentre investigation. HIPECT4 was encouraging. Mitomycin-C HIPEC reduced peritoneal recurrence after resection of locally advanced colon cancer, although mature analysis did not show overall- or disease-free-survival benefit [*Arjona-Sánchez A, Espinosa-Redondo E, Gutiérrez-Calvo A, et al. JAMA Surg. 2023;158(7):683-691. doi:10.1001/jamasurg.2023.0662*]. The current GECOP-MMC protocol asks the equally important therapeutic question regarding recurrent disease after complete cytoreduction of established colorectal peritoneal metastases [*Pereira F, Serrano A, Manzanedo I, et al. BMC Cancer. 2022;22:536. doi:10.1186/s12885-022-09572-7*].

The Nordic Peritoneal Oncology Group provides an organised platform across Sweden, Norway, Denmark and Finland. Kjersti Flatmark's Oslo leadership extends as a collaboration through the EURO-PMP COST Action [*European Cooperation in Science and Technology. European Network on Pseudomyxoma Peritonei (EuroPMP), COST Action CA17101. 2018-2022. https://www.cost.eu/actions/CA17101*]. Currently, Pseudovax, a first-in-human trial of a GNAS-mutant peptide vaccine with checkpoint inhibition for recurrent

or unresectable PMP demonstrates real innovation [*Flatmark K, Torgunrud A, Fleten KG, et al. J Immunother Cancer. 2021;9:e003109. doi:10.1136/jitc-2021-003109; ClinicalTrials.gov. NCT07341360. https://clinicaltrials.gov/study/NCT07341360. Accessed September 5, 2026*].

In the Netherlands, PERISCOPE II found no survival benefit from gastrectomy, CRS and HIPEC over systemic therapy alone for limited gastric peritoneal metastases [*Quik JSE, Vollebergh MA, Retèl VP, et al; PERISCOPE II Consortium. Lancet Oncol. 2026;27(8):1031-1042. doi:10.1016/S1470-2045(26)00144-0*]. Future progress with gastric cancer will depend on a better understanding gastric cancer tumour biology, accurate staging and improved patient selection. The Dutch CAIRO6 study, led by Ignace de Hingh found that perioperative systemic therapy improved progression-free but not overall survival versus upfront CRS-HIPEC for resectable CPM [*Rovers KP, Bakkers C, van den Heuvel TBM, et al; CAIRO6 Investigators. Lancet Oncol. 2026;27(7):849-863. doi:10.1016/S1470-2045(26)00085-9*].

Germany remains strongly represented by Beate Rau and colleagues at Charité Berlin, alongside Hanover and other specialist centres. Rau's phase III GASTRIPEC-I trial found no overall-survival benefit from adding HIPEC to CRS for gastric peritoneal metastases, but improved progression-free and metastasis-free survival [*Rau B, Lang H, Königsrainer A, et al. J Clin Oncol. 2024;42(2):146-156. doi:10.1200/JCO.22.02867*]. In Italy, Marcello Deraco and the Fondazione IRCCS Istituto Nazionale dei Tumori in Milan continue to advance peritoneal malignancy programmes, while Anna Fagotti and colleagues at Policlinico Gemelli in Rome have been particularly productive in ovarian cancer and optimal selection of ovarian cancer patients for surgery.

Future: commitments for 2026-2027

A connected European learning system has been constructed. Common datasets; registries linked to tissue and imaging; widely accepted definitions and outcomes; cross-border trial referral; and multidisciplinary fellowships are now imperative. The European School of Peritoneal Surface Oncology is leading the way in education and training. Europe should align trials across disease-specific pathways. One model is the PMPnet Accelerator Award, funded by CRUK, AECC and AIRC, linking The Christie/Manchester CPOC, Fondazione IRCCS Istituto Nazionale dei Tumori in Milan, and Vall d'Hebron Institute of Oncology in Barcelona to build a European cohort and biobank [*Manchester Cancer Research Centre. Pseudomyxoma peritonei (PMP): CRUK Accelerator Award. https://www.mcrc.manchester.ac.uk/impact-case-studies/pseudomyxoma-peritonei-pmp/. Accessed September 5, 2026*]. The International Barcelona Patient Manifesto, presented by seven patient organisations at PSOGI 2025, must now be operationalized [*International Patient Manifesto for*

Peritoneal Malignancies - Barcelona PSOGI 2025. 2025. https://www.amarape.com/wp-content/uploads/2025/11/Manifesto-final.pdf. Accessed September 5, 2026].

It is not possible to recognize the many excellent European and UK teams not named in this survey. A shared commitment of Europe and the UK allows the field to enter 2027 with confidence and optimism.

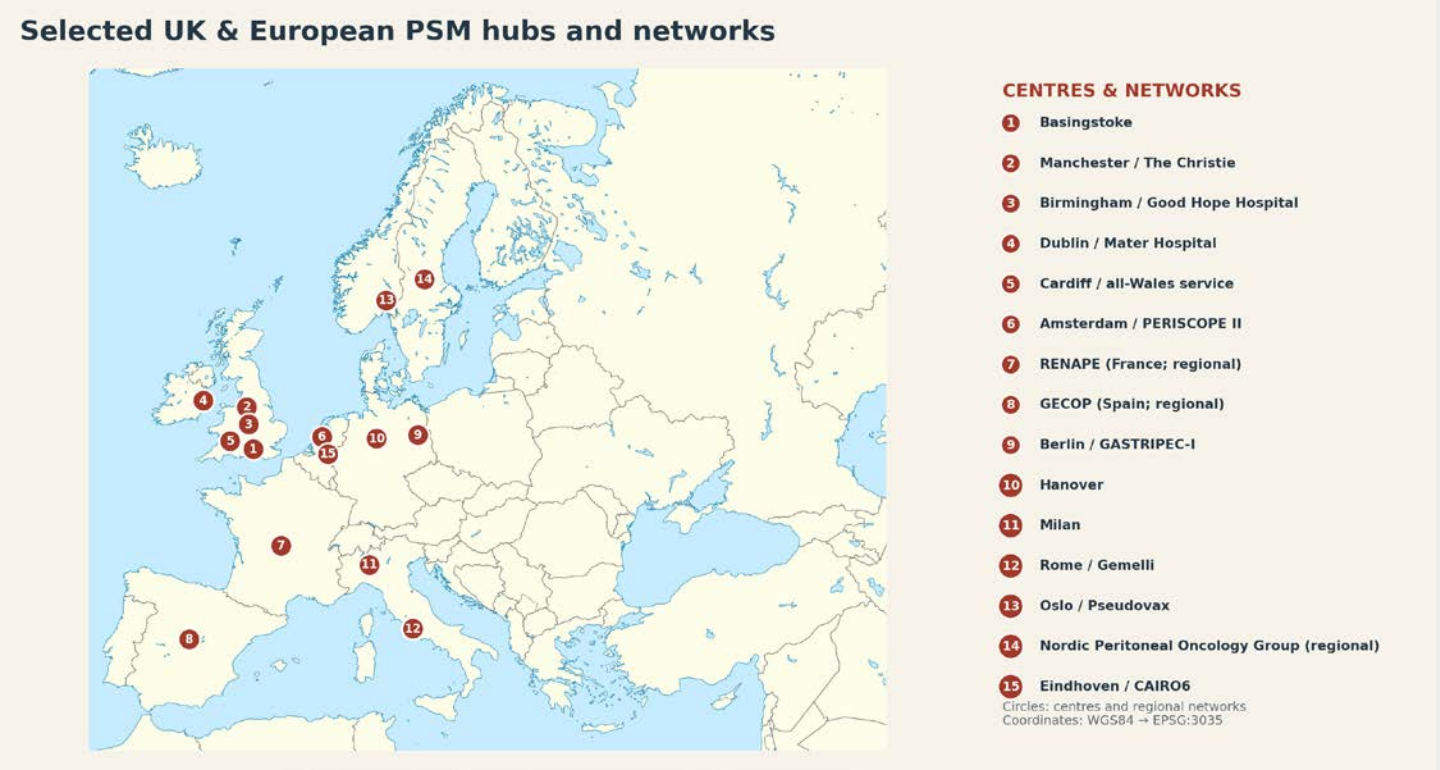


Figure 1. *Selected centres and regional networks discussed in this review; not indicative, a designation or exhaustive directory. Positions calculated from WGS84 coordinates on an EPSG:3035 map. Base: Alexrk2, Europe blank LAEA location map, Natural Earth data, Wikimedia Commons, CC BY-SA 3.0.*

Section 2:

Peritoneal Surface Oncology in the Middle East: From Individual Excellence to Regional Collaboration.

By Mohammad Alyami[1], Ali Dabous[2], Ali Al-Saffar[3], Faek El Jamali[4], Mohammed Al Hosni[5], Dara Marif[6], Emel Canbay[7]

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[2]Department of Surgery, King Hussein Cancer Center, Amman, Jordan
[3]Department of Surgery, Amiri Hospital, Kuwait City, Kuwait
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[5]Sultan Qaboos Comprehensive Cancer Care and Research Centre, Muscat, Oman
[6]College of Medicine, University of Sulaimani, Sulaymaniyah, Kurdistan Region, Iraq
[7]Department of General Surgery, NPO Center for Peritoneal Surface Malignancies, Istanbul, Türkiye

Over the past two decades, peritoneal surface oncology has evolved substantially across the Middle East, progressing from individual pioneering efforts toward specialized multidisciplinary programs and growing regional collaboration.

Saudi Arabia has been an important contributor since the introduction of cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) in 2008. Today, 14 centers provide services across eight cities: Riyadh, Jeddah, Makkah, Najran, Abha, Jazan, Dammam, and Al-Ahsa [*Alyami M, Mercier F, Bin Traiki T, et al. Indian J Surg Oncol. 2019;10(Suppl1):33–36. doi:10.1007/s13193-019-00876-y; Helmi H, et al. J Surg Oncol. 2024;130(6):1332–1336. doi:10.1002/jso.27879*]. Figure 1 illustrates the geographical distribution of PSM programs and related clinical, academic, and collaborative activities across the Middle East.

At King Khalid Hospital in Najran, our efforts have focused on establishing a comprehensive peritoneal surface malignancy (PSM) program outside a major metropolitan center. Milestones include the first pressurized intraperitoneal aerosol chemotherapy (PIPAC) procedure in the Middle East in 2019 and the region's first robotic CRS/HIPEC procedure in 2021. Our ongoing priorities include multidisciplinary care, surgical innovation, clinical research, education, and supporting emerging regional programs.

Regional Activity and Institutional Contributions

In Jordan, the CRS/HIPEC program at King Hussein Cancer Center was established in December 2018, supported by mentorship from The Christie in Manchester, United Kingdom. The program continues to develop its clinical services and academic activities.

In Kuwait, specialized PSM services were established at Amiri Hospital in 2020 and Kuwait Cancer Control Center in 2025. Current priorities include expanding multidisciplinary care and introducing PIPAC through regional collaboration.

The United Arab Emirates has developed CRS/HIPEC services at Cleveland Clinic Abu Dhabi, Sheikh Shakhbout Medical City, and Burjeel Medical City, alongside cytoreductive surgery services in selected Dubai institutions.

In Oman, Sultan Qaboos Comprehensive Cancer Care and Research Centre has established a CRS/HIPEC program and published its early institutional experience [*Ravi PR, AlShaibi MAN, Sahajanandan R, AlHosni MAS, Mantha SS. Sultan Qaboos Univ Med J. 2026;26(1):276–283. doi:10.18295/2075-0528.2984*].

Iraq has reported its first published CRS/HIPEC experience from Baghdad, while academic engagement with colleagues in Sulaymaniyah offers opportunities for broader collaboration [*Mahmood AS, Al-Obaidi AD, Al-Obaidi MN, et al. Front Oncol. 2026;15:1667950. doi:10.3389/fonc.2025.1667950*].

Iran continues to contribute institutional experience and clinical research, including work from the Shiraz Surgical Oncology Group [*Akrami M, Karami MY. Middle East J Cancer. 2025;16(4):366–371. doi:10.30476/mejc.2024.103256.2131*].

Türkiye has developed substantial expertise across Istanbul, Ankara, and Izmir. Istanbul-based teams have contributed research on gastric peritoneal metastases and multimodal treatment [*Canbay E, Canbay Torun B, Cosarcan K, et al. J Gastrointest Oncol. 2021;12(Suppl 1):S47–S56. doi:10.21037/jgo-20-121; Canbay Torun B, Sobutay E, Akbulut OE, et al. Ann Surg Oncol. 2024;31:5975–5983. doi:10.1245/s10434-024-15499-z*]. Ankara Oncology Training and Research Hospital provides CRS/HIPEC and PIPAC services. In Izmir, Dokuz Eylül University contributes research on repeat cytoreduction, while Acıbadem İzmir Kent Hospital and collaborating institutions have supported surgical education through international PSM workshops [*Manoğlu B, Sökmen S, et al. Eur J Surg Oncol. 2026;52(11):112058. doi:10.1016/j.ejso.2026.112058; Dr. Abdurrahman Yurtaslan Ankara Oncology Training and Research Hospital. Surgical Oncology Clinic: Clinical services and procedures. Official institutional website; Turkish Society of Colon and Rectal Surgery. Peritoneal Surface Malignancy Workshop. Acıbadem İzmir Kent Hospital, July 11–12, 2025*].

Research and Regional Collaboration: 2026–2027

An important milestone has been the establishment of the Saudi National PSM Database, which has commenced patient registration across participating institutions, supporting standardized reporting and future multicenter research.

Regional scientific collaboration has expanded through the First Middle East PSOGI Conference in Jeddah in February 2023, followed by the successful second conference in Jeddah in 2025. These meetings have strengthened professional relationships and encouraged scientific exchange.

The Third Middle East PSOGI Conference, scheduled for March 27–29, 2027, in Jeddah, provides an opportunity to

establish a regional collaborative body and lay the foundation for a Middle Eastern PSM registry. Priorities include multidisciplinary training, quality improvement, standardized outcome reporting, and multicenter research.

Looking Toward the Future

The next challenge is to transform individual institutional achievements into coordinated regional collaboration, strengthening partnerships between established and emerging programs.

The Middle East has also expressed interest in hosting a future PSOGI International Congress in Riyadh, Saudi Arabia, reflecting the region's commitment to international scientific collaboration.

Our future lies not simply in expanding individual programs, but in connecting expertise, sharing knowledge, and advancing patient care through sustained collaboration.

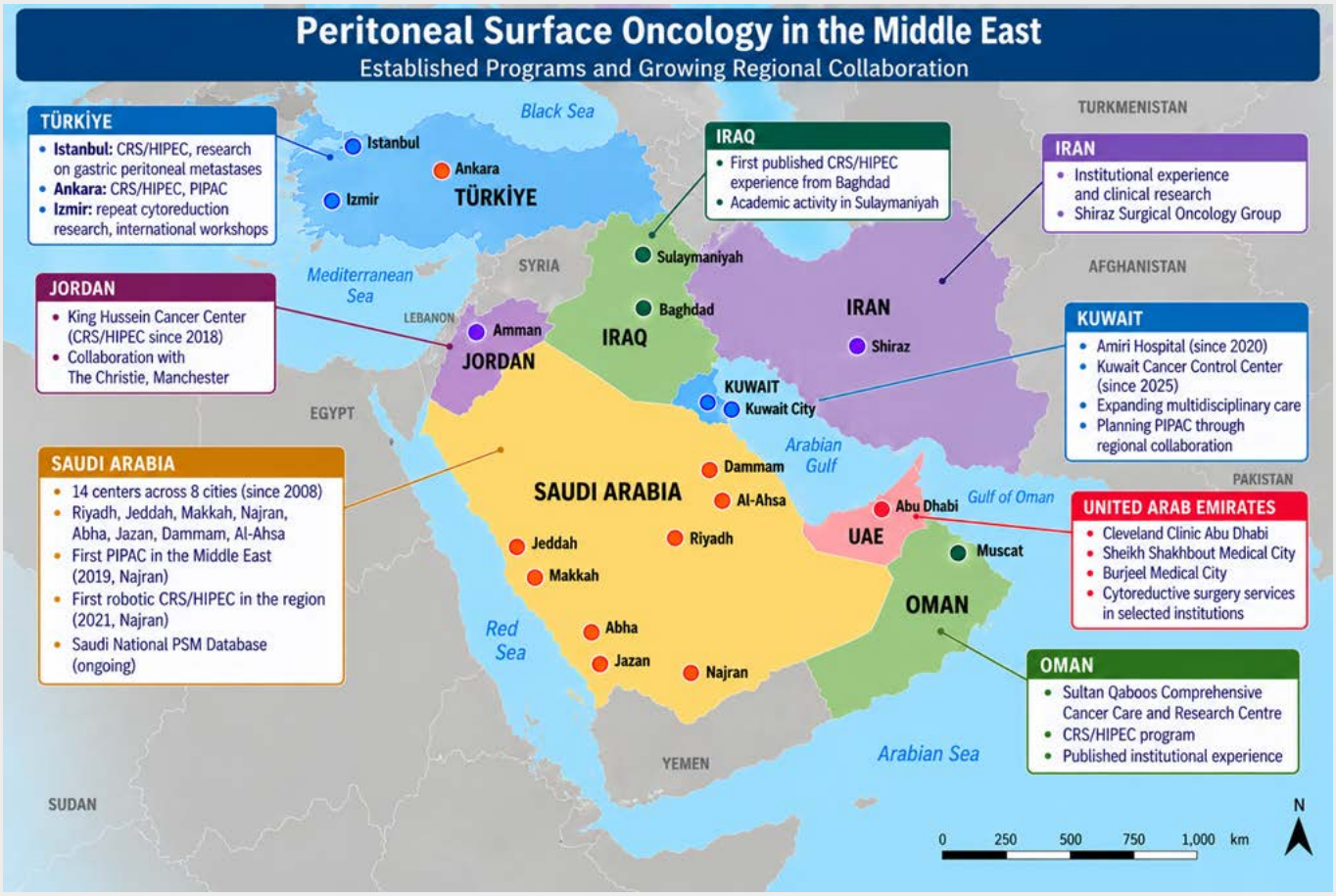


Figure 1. *Geographical distribution of peritoneal surface oncology programs and related clinical, research, educational, and collaborative activities across the Middle East, highlighting established centers and emerging regional initiatives as of 2026.*

Section 3:

Peritoneal Surface Malignancies in Africa: Activity, Access, and the Road to 2027.

By Amine Souadka, MD
Surgical Oncology Department, National Institute of Oncology, Mohammed V University in Rabat, Rabat, Morocco

Africa is not one PSM system but a patchwork of committed teams working at very different stages, often without knowing of each other. This survey is a first attempt to connect them. It is not a final map to connect centres of excellence but may lead the way to a productive collaboration.

At the National Institute of Oncology in Rabat, our programme grew step by step. Building on Abdelilah Souadka's early surgical experience and later training with Dominique Elias at Gustave Roussy, we built cytoreductive surgery (CRS), multidisciplinary selection and perioperative pathways before introducing HIPEC in 2018 [*Souadka A, Essangri H, Majbar MA, et al. Cancers. 2021;13(5):1088*]. The hardest part was never the equipment: it was building surgeons, anaesthesiologists and nurses into a team confident enough to manage a complex postoperative course, patient after patient, in a public hospital with limited beds. Our experience was proof that a learning curve belongs to a team, never to a surgeon alone [*Souadka A, Benkabbou A, Majbar MA, et al. J Surg Oncol. 2020;122:1187–1188*]. What changed our trajectory was managing the programme itself, not just the procedure: we initiated weekly tumour boards, structured morbidity-and-mortality reviews, and prehabilitation built into patient selection [*Souadka A, Boutayeb S, El Khannoussi B, et al. J Surg Oncol. 2023. doi:10.1002/jso.27522*]. These lessons still shape our priorities by strengthening audits and pursuing pragmatic, low-cost prehabilitation through SCODA, launched in 2020 [*Souadka A, Alami L, Elmouatassim Z, et al. Cancers. 2025;17(22):3687*]. For 2027, we are initiating formalising surgical training and measuring of patient-reported recovery as we open the programme to colleagues across the country and the continent.

That regional opening has already begun. A multicentre study linked Rabat with La Rabta Hospital in Tunis and the Batna Cancer Institute in Algeria, with colleagues Amin Makni and Mourad Abid [*Souadka A, Habbat H, Makni A, et al. Cancers. 2025;17(13):2113*]. A companion survey across Morocco, Algeria, Tunisia and Mauritania showed how unevenly HIPEC access and PCI training are distributed within North Africa itself [*Souadka A, Essangri H, Makni A, et al. Front Surg. 2022;9:798523*]. These are the teams a future PSOGI-Africa network can build on for shared case discussions and training exchange.

Egypt has real history in the management of PSM but an unstable present. The National Cancer Institute of Cairo University (Mohamed Ibrahim Fahim and colleagues) and, later, Benha University (Mohamed E. Ramadan, Emad M. Abdelrahman) published concomitant PSM series, and Assiut University announced a new HIPEC programme with Mansoura University in 2025 [*Fahim MI, Nassar OA, Mansour OM, et al. J Egypt Natl Canc Inst. 2018;30(4):139–141; Ramadan ME, Abdelrahman EM, Abdel Zaher Y, Abostate AM. J Coloproctol. 2025;45(2); Assiut University. Institutional announcement describing HIPEC introduction at the Women's Health Hospital and collaboration with Mansoura University. 8 March 2025*].

Further south, the picture is often assumed rather than known. Contrary to the impression that South Africa has no PSM activity, a 2025 case series documents CRS-HIPEC for ovarian cancer in Durban between 2019 and 2024 [*Govender K, Sebitloane M, Bhorat N. Int J Gynecol Cancer. 2025;35:102493*]. In Libya, colleagues have reported surgical oncology services in Sabratha and Misrata with referral abroad for HIPEC [*Attia A, Siala I, Azribi F. General Oncology Care in Libya. In: Cancer in the Arab World. Springer; 2022:133–148*]. Nigeria and much of sub-Saharan Africa show real interest but no dedicated PSM centre we could identify, an absence of visibility this newsletter may itself help correct.

Where HIPEC is unavailable, that should not close the door on surgery. In carefully selected patients with isolated, resectable colorectal peritoneal metastases, complete CRS with systemic therapy remains a reasonable option after expert multidisciplinary review [*Morris VK, Kennedy EB, Baxter NN, et al. J Clin Oncol. 2023;41(3):678–700*]. The same applies to ovarian cancer: cytoreductive surgery has been the backbone of treatment for peritoneal carcinomatosis of ovarian origin since long before HIPEC entered practice. The pivotal OVHIPEC-1 trial tested HIPEC as an addition to, not a substitute for, complete cytoreduction [*van Driel WJ, Koole SN, Sikorska K, et al. N Engl J Med. 2018;378(3):230–240*]. Centres without a perfusion device can therefore still offer meaningful surgical treatment for both diseases, provided selection is rigorous and cytoreduction complete.

Our agenda for 2026–2027 is simple to state and hard to execute: identify every team already treating PSM patients in Africa, connect emerging programmes with experienced regional partners, and train surgeons, anaesthesiologists, nurses and pathologists together. A shared, minimal dataset that records tumour origin, completeness of cytoreduction, morbidity, and patient-reported recovery; would let this collaboration produce evidence, not just goodwill.

The accompanying map marks documented centres, reported but unverified activity, and programmes we believe are emerging. If PSOGI-Ahmedabad 2027 is to mean "no person should be left behind," Africa's contribution should be this: naming exactly where the gaps are, and who is ready to help close them.

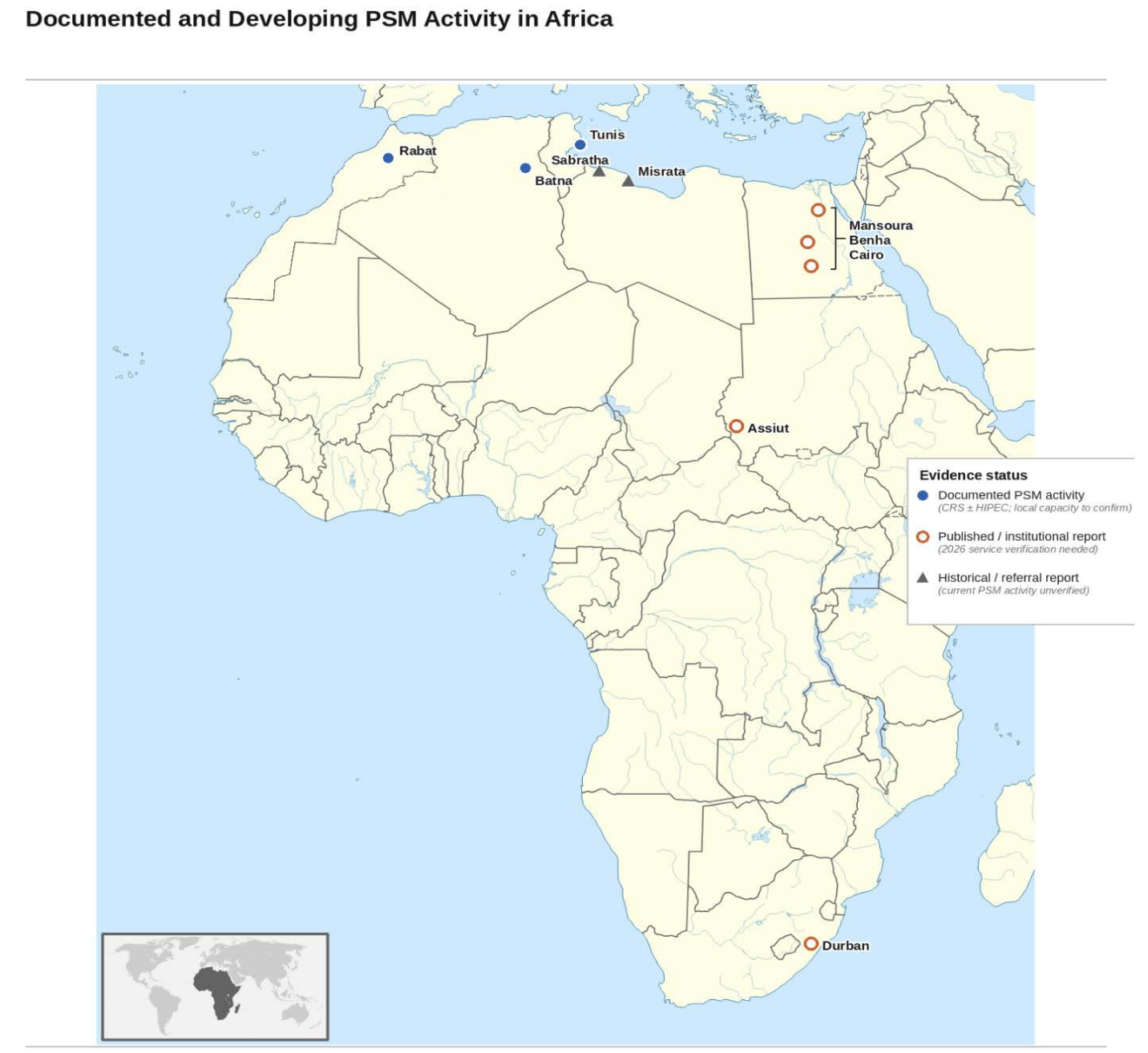


Figure 1. *Documented and developing PSM activity in Africa, with evidence status shown by symbol. Dated working map; not a designation of centres of excellence without local or formal confirmation.*

Section 4:

Cytoreductive Surgery for Peritoneal Malignancies in Post-Soviet Countries.

By Vadim Gushchin[1] and Mikhail Yu Reutovich[2]
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The treatment of peritoneal surface malignancies (PSM) is gradually developing across the post-Soviet region. The access, experience, and organization vary considerably between countries. This overview is based primarily on opinions and firsthand reports from clinicians rather than systematic national data, consistent with the purpose of this communication. It is safe to emphasize that regional PSM efforts are more active than the international literature suggests because much of the clinical experience remains unpublished or is reported in national forums and local-language medical journals.

In **Armenia**, cytoreductive surgery (CRS) is available, with most procedures performed at Nairi Medical Center by gynecologic oncologist Dr. Artem Stepanyan. The center is ESGO-accredited for advanced ovarian cancer surgery and treats approximately 40 cases annually in a country with a population of about three million. Advanced ovarian cancer is the main indication, although general surgeons also refer selected patients with colorectal peritoneal metastases. PIPAC is available, but HIPEC has not yet been introduced. The center is also accredited by ESGO for training and provides fellowship opportunities for physicians interested in gynecologic oncology and cytoreductive surgery. Few patients travel abroad; Germany is the most common destination, followed occasionally by France.

In **Azerbaijan**, three centers in Baku have access to HIPEC and/or PIPAC, although their activity levels are not well documented. Two identified centers are the Republican Diagnostic Center, represented by Dr. Ilgar Ismayilov, and BonaDea, represented by Dr. Elgun Samedov. CRS is performed mainly for ovarian cancer and peritoneal mesothelioma, with selected use for colorectal cancer. Some patients travel to Turkey for treatment.

In **Belarus**, HIPEC treatment and research are concentrated at the N. Alexandrov National Cancer Center in Liasnoy, Minsk Region. This is the country's only oncology institution that performs cytoreductive surgery for peritoneal malignancies. The center pioneered HIPEC research in Belarus and began using HIPEC to treat gastric cancer in 2008. Since then, it has performed more than 170 procedures, including prophylactic HIPEC

for gastric cancer. This study and others associated with a high risk of metachronous peritoneal metastases with therapeutic HIPEC for pseudomyxoma peritonei, peritoneal mesothelioma, and gastric cancer with synchronous peritoneal dissemination. A prospective randomized study of HIPEC combined with adjuvant chemotherapy is currently accruing patients. The center is also developing a prognostic model to identify patients at increased risk of metachronous peritoneal dissemination, to improve selection for prophylactic HIPEC and second-look laparoscopy. CRS and HIPEC data are regularly presented at national oncology meetings and published in national and, occasionally, international medical journals.

In **Georgia**, cytoreductive surgery is performed by Dr. Irakli Todua and his gynecological oncology team at Innova, which has an ESGO-accredited ovarian cancer program. Surgical oncologists Drs. Zaza Tsitsishvili and Ilia Gotsadze operate at American Hospital Tbilisi, Dr. David Karsimashvili at Zhordania Clinic, and Dr. Archil Sharashenidze at Caucasus Medical Center. Ovarian cancer surgery is also performed sporadically at several other institutions. HIPEC is not yet routinely established. Limited state reimbursement remains an important barrier because it does not reflect the complexity and cost of complete cytoreduction. Nevertheless, specialized surgical expertise continues to develop.

Kazakhstan appears to have the most developed CRS/HIPEC network in Central Asia, with several centers offering this treatment. Identified programs include NNOC in Astana (Drs. Kerimkulov and Mamlin); KazNIOR in Almaty (Dr. Kukubasov, gynecologic oncologist); Sema Almaty (Dr. Murat Kairbayev, gynecologic oncologist); the Regional Oncology Center in Taldykorgan (Dr. Dauronbek Arybzhanov, surgical oncologist; and Sovmin clinic in Almaty (Dr. Abzalbek Yestay Shaykhibekuly). CRS and HIPEC are used primarily for ovarian and colorectal cancer, with selected treatment of other peritoneal malignancies. These approaches are commonly discussed at national oncology forums and reported in national medical journals.

Based on the available reports, no established national CRS/HIPEC programs were identified in **Kyrgyzstan, Turkmenistan**, **Tajikistan**, and **Moldova**. Individual cytoreductive procedures may nevertheless be performed, and the absence of centralized data makes national activity difficult to assess. Patients requiring specialized treatment may be referred to Kazakhstan (for Central Asian countries), Russia, or international centers.

Russia has the broadest activity in the region, with CRS and HIPEC performed at numerous state cancer centers and private hospitals, most commonly for colorectal and ovarian cancer. Active programs include the N.N. Petrov National Medical Research Center of Oncology in St. Petersburg (Dr. Andrey Domansky); the Dmitry Rogachev National Medical Research Center in Moscow (Dr. Dmitry Akhaladze); the N.N. Blokhin

National Medical Research Center of Oncology (Dr. Alexey Kalinin); Hadassah Medical Moscow at the Skolkovo International Medical Cluster (Dr. Alexey Bogdanov); and the P.A. Herzen Moscow Oncology Research Institute (Dr. Vladimir Khomyakov), where PIPAC is also being developed. The P.A. Herzen Institute is also among the largest contributors to an international PIPAC database. In addition to treating colorectal and ovarian cancer, selected national centers manage appendiceal tumors, peritoneal mesothelioma, and other rare peritoneal malignancies. CRS, HIPEC, and PIPAC are regularly presented at national oncology meetings and discussed in Russian medical journals. The publication of the first national recommendations for appendiceal tumors with peritoneal dissemination marks another important step toward greater recognition and standardization of care.

In **Uzbekistan**, CRS is being introduced at AKFA Medline University Hospital by Dr. Ravshan Abdusattorov, drawing on principles learned at experienced international centers. Establishing a formal HIPEC program remains pending equipment registration and further coordination of surgical, anesthetic, intensive-care, and patient-management resources.

Overall, the region has a growing community of surgeons and oncologists interested in peritoneal surface malignancies. When comprehensive local care is unavailable, patients travel to neighboring post-Soviet countries or internationally, particularly to Turkey, South Korea, Israel, Germany, France, and other European countries. Next steps include connecting existing centers, strengthening referral networks and training, standardizing patient selection, improving reimbursement, and bringing regional clinical experience into collaborative registries and international publications.

Section 5:

Peritoneal Surface Malignancy in India: Progress in 2026 and the Road Ahead

By Sanket S. Mehta[1] and Aditi Bhatt[2]
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[2]SSO Cancer Hospitals, Ahmedabad, India

Our institution: past, present and future

When I returned to India in 2011, two surgeons in the country had trained in and were beginning to perform cytoreductive surgery (CRS) and HIPEC: Aditi Bhatt and myself. S.P. Somashekhar's group in Bengaluru soon followed, and the first PSOGI workshop in India (Bangalore, April 2015) allowed eight surgeons to pool their first 384 patients [*Bhatt A, Mehta S, Seshadri RA, et al. Indian J Surg Oncol 2016;7(2):160–165.* PMID

27065706; *Bhatt A, Zaveri S. Indian J Surg Oncol 2016;7(2):136. DOI*]. Our own practice has since grown into a model that is, to my knowledge, unique: nine surgical oncologists performing CRS and HIPEC across six hospitals in Mumbai and two in Ahmedabad. Together we perform more than 650 CRS and over 300 HIPEC procedures a year. To ensure that we reach out to the maximum number of patients needing our services, we have undertaken several innovative measures like partnering with medical device industry to develop an indigenous HIPEC machine (Novopec, Curotherm Technosolutions LLP), development of an indigenous PIPAC device (Nanosol, Curotherm Technosolutions LLP) and establishment of SSO cancer centres, which is a distributed network of low cost cancer centres that perform complex cancer surgeries at an extremely affordable cost and with high clinical standards.

Advanced ovarian cancer accounts for most of this work and has been our principal research focus, with more than 40 publications from the group. The multicentre TORPEDO study of protocol-based total parietal peritonectomy (TPP) at interval cytoreduction enrolled 218 patients at four Indian centres and reported CC-0/1 resection in 95.8%, a median progression-free survival of 22 months and platinum-resistant recurrence in only 6.4% [Bhatt A, Kammar P, Sinukumar S, et al. *Ann Surg Oncol* 2021;28(2):1118–1129. PMID 32748154; Bhatt A, Sinukumar S, Damodaran D, Parikh L, Goswami G, Mehta S, Kammar P. *J Gynecol Oncol* 2024;35(4)]. We are the principal site for the TORPEDO-2 study that currently involves 12 Indian centres, 2 French, 2 Korean and 1 Italian centre and the participation is expected to increase.

India: the national picture

Peritoneal surface oncology in India has moved from two centres to a national specialty in fifteen years [*Bhatt A, Mehta S, Seshadri RA. Indian J Surg Oncol 2019;10(Suppl 1):41–48. PMID 30886493*]. The full spectrum of treatments for PM is offered in India include multi-visceral transplant for pseudomyxoma peritonei at one specialized centre. Two societies now serve the field, the Indian Network for the Development of Peritoneal Surface Oncology (INDEPSO) and the Indian Society of Peritoneal Surface Malignancies (ISPSM); their ideologies differ, their purpose is shared, and each maintains a registry [*Bhatt A, Mehta S, Ramakrishnan AS, et al. Indian J Surg Oncol 2017;8(4):527–532. PMID 29203985; Bhatt A, Mehta SS, Zaveri S, et al. Int J Hyperthermia 2018;35(1):361–369. PMID 30300029*]. The Indian HIPEC Registry has reported long-term survival in 450 patients [*Sinukumar S, Kammar P, Ray M, et al. Indian J Surg Oncol 2023;14(Suppl 1):198–208. PMID 37359912*], and the ISPSM registry has captured 1,470 ovarian cancer patients treated with CRS-HIPEC [*Somashekhar SP, Deo SVS, Sekhon R, et al. J Clin Oncol 2022;40(16 suppl), ASCO Annual Meeting abstract. Abstract*].

Registry and industry data together give the following picture:

- CRS-HIPEC is performed in every major hospital of India's eight metro cities, 80% of its 97 tier-2 cities has at least one hospital performing HIPEC, and is penetrating the more than 1,000 tier-3 cities, which currently contribute about 15% of cases.
- There are 92 permanent HIPEC machine installations, but a per-case rental model for machines and disposables has put the modality within reach of over 950 hospitals: a decentralised form of access suited to a price-sensitive market.
- More than 40 public teaching hospitals perform CRS-HIPEC, so every cohort of surgical oncology trainees gains basic exposure; many then start programmes in their home towns.
- Fewer than 50 hospitals perform more than 30 HIPEC procedures a year. For a population of 1.4 billion, the headroom for new high-volume units is substantial.

Collaborative research

INDEPSO, has been the engine of collaborative science since 2016, reporting on outcomes of CRS and HIPEC for all common peritoneal malignancies, most recently, peritoneal mesothelioma [*Bhatt A, Sinukumar S, Rajan F, et al. Indian J Surg Oncol 2019;10(Suppl 1):71–79. PMID 30886497; Bhatt A, Sinukumar S, Kepenekian V, Kammar P, Mehta S, et al. Front Oncol 2022;12:951419. DOI; Kazi M, Saklani A, Kammar P, Desouza A, Sukumar V, Lavingia V, Mehta S, Bhatt A. Eur J Surg Oncol. 2026 Sep;52(9):111978. doi: 10.1016/j.ejso.2026.111978. Epub 2026 Jun 26. PMID: 42379051*]. These studies provide baseline clinical outcomes of CRS and HIPEC in India. Three special issues of the Indian Journal of Surgical Oncology on peritoneal malignancies have been published in the last 10 years which have served to popularize the field and educate the surgical oncology community. INDEPSO, in conjunction with ISPSM, national consensus statements on the 5 malignancies most commonly treated by CRS, enhanced recovery after surgery and minimally invasive CRS. [*Patel S, Sheshadri RA, Saklani A, Somashekhar SP, Kumar R, Singh S, Sukumar V, Bhatt A. JCO Glob Oncol 2024;10:e2400306. DOI 10.1200/GO-24-00306; Bhandoria GP, Guru A, Pawar A, Bhatt A, et al. Gynecol Oncol Rep 2025;57. Record*]. PIPAC reached India in 2017 through parallel efforts in Bengaluru and Mumbai [*Somashekhar SP, Ashwin KR, Kumar CR, Rauthan A, Rakshit SH. South Asian J Cancer 2019;8(1):27–30. PMID 30766848; Katdare N, Prabhu R, Mishra S, Mehta S, Bhatt A. Indian J Surg Oncol 2019;10(Suppl 1). PMC6414563*]; the Manipal group's study demonstrating the safety of combining PIPAC and bevacizumab, is a landmark for the field [*Somashekhar S, Ashwin K, Rohitkumar C, et al. Surgical Oncology Insight, 2026; 3 10.1016/j.soi.2026.100262*]. The subsequent development of an indigenous, commercially available PIPAC device has democratised the modality by removing the cost barrier of imported

disposables. Indian peritoneal malignancy centres have initiated and collaborated on multi-centre international studies. Under the aegis of INDEPSO, the EFFIPEC phase-3 randomized trial (by the NORDIC peritoneal malignancy group) opened recruitment in India. MIS-CYTO, evaluating the oncological adequacy of minimally invasive CRS, and the TORPEDO-2 study are other studies initiated by INDEPSO that have international participation.

Among the other institutions sustaining this work are AIIMS New Delhi, Tata Memorial Centre Mumbai, Thangam Cancer Centre, Nammakal, Aster Hospitals Bengaluru, MVR Cancer Centre Calicut, SSO hospitals Ahmedabad, Jehangir Hospital Pune, Basavatarakam Indo-American Cancer Hospital Hyderabad and Rajiv Gandhi Cancer Institute New Delhi, to name a few. Since 2015, 9 annual updates on peritoneal malignancies have been organized by INDEPSO and ISPSM with the involvement of national and global leaders from the PSOGI in the field [*Somashekhar SP, Rohit KC, Deo SVS, Ashwin KR. Pleura Peritoneum 2020;5(3):20200120. PMC7746887*].

2026–27 and the road ahead

I expect the number of CRS-HIPEC procedures in India to double within five years. Our shared priorities for 2026–27 are to get funding for the TORPEDO-2 study; extension of PIPAC into tier-2 cities using the indigenous device; and structured fellowship and mentorship programs to shorten the long learning curve. Volume will grow regardless; our collective responsibility is to ensure, through surgical audit and collaborative research, that quality and outcomes grow with it.

The activity across India is far greater than this brief account can hold. Many institutions doing significant work could not be included here.

The peritoneal malignancy task force is proud to be hosting the 16th International Congress of the PSOGI on peritoneal surface malignancies with the motto, “Peritoneal malignancy moonshot- no patient should be left behind.”



Figure 1. *Principal peritoneal surface malignancy centres in India contributing to registries and collaborative studies. Positions are schematic; many additional centres in tier-2 and tier-3 cities are not shown.*

Section 6:

Global Progress in Peritoneal Surface Malignancy (PSM) in China.

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[8]Zhongnan Hospital, Wuhan University.
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Peritoneal surface malignancy (PSM) from gastrointestinal malignant tumors has become a hot research topic in China over the past five years. Specialized PSM centers or departments have been set up in major top-level hospitals across the country. Two national PSM-focused associations serve as second- and third-level branches of the Chinese Anti-Cancer Association (CACA). Their members are mostly key experts and leaders of provincial PSM centers.

In China, CRS (cytoreductive surgery) and HIPEC are mainly used to treat colorectal cancer (CRC), gastric cancer, ovarian cancer and pseudomyxoma peritonei (PMP). Gastric cancer and PMP are the most common causes of PSM in northern China, while CRC and PMP account for most PSM cases in southern China. CRS is carried out in large hospitals in first-tier cities. By contrast, HIPEC is performed nationwide on the hospital ward using Chinese-made HIPEC devices with the closed-abdomen technique.

A majority of HIPEC treatments are prophylactic for high-risk primary CRC, or palliative in unresectable PSM. A minority of HIPEC procedures are therapeutic and conducted after a complete CRS. In this report on global progress in PSM in China, we surveyed twelve most prominent PSM centers from the leading university hospitals in selected areas of China. Team leaders from these centers provided data, including numbers of PSM cases, CRS operations, HIPEC/PIPAC/NIPS procedures, PSM clinical features, 2026 updates in PSM management, and plans for future development. These data are listed in Table 1. Clinical characteristics and standards of practice in PSM, clinical research activity, basic and translational research and 2027 future plans for each center are described in detail.

Southern China in Guangdong Province

The Sixth Affiliated Hospital of Sun Yat-Sen University, Guangzhou

Prof. Wang Hui established this PSM center in 2018. It continues to grow rapidly and is now the largest CRC center with >8000 surgeries for CRC per year. Activities include an established standardized CRS+HIPEC system; microenvironment-responsive biomaterial for intraperitoneal chemotherapy delivery systems (hydrogel sustained-release and implantable drug-delivery devices); intraperitoneal oncolytic virotherapy; and multimodal AI-assisted niche stratification and prediction of prognosis. Prospective RCTs include upfront mFOLFOXIRI+bevacizumab combined with CRS versus early CRS, studies of peritoneal lavage ctDNA for early diagnosis and prophylactic resection and HIPEC in high-risk CRC as predicted by an AI model for early detection of PSM. More than 40 peer-reviewed manuscripts have been published in Advanced Materials/Advanced Science/Annals of Surgery. Studies are focused on intraperitoneal chemotherapy delivery systems, intraperitoneal microbiological profiling, detection of oncolytic viruses, and AI-assisted stratification. This scientific activity forms an integrated translational framework linking academia-research-industry, and clinical practice.

Future plans include Clinical Proteomic Tumor Analysis (CPTCG dataset) establishing a clinical cohort and biobank for CRC-PM. This includes more than15 medical institutions and enrolling >1,000 patients. Plans include continued development of intraperitoneal chemotherapy including NIPS/HIPEC/PIPAC. Intraperitoneal research projects include Tumor Infiltrating Lymphocytes, T-cell Receptor-T cell immunotherapy and oncolytic virus combined with CRS+HIPEC; Promotion of industrial translation includes investigational new drug application filing for bio scaffolds, pharmaceutical formulations, and cell therapy products, targeted modulation of the intraperitoneal microbiota and AI-assisted stratification and prediction. The Sixth Affiliate Hospital seeks to continue leading the formulation of technical specifications, expert consensuses, and national guidelines.

Guangzhou Medical University Cancer Hospital

Routine CRS+HIPEC is associated with growing volumes of CRC, gynecologic, gastric, and PMP etiologies. The center is involved in the development of a Chinese HIPEC machine and is exploring HIPEC thermosensitivity mechanisms. Plans are to expand the HIPEC expertise and research in the thermal mechanisms of apoptosis.

The First Affiliated hospital of Guangzhou Chinese Medicine University

HIPEC/NIPS with systemic therapy by a multidisciplinary team pathway is routine practice. Prospective studies include: a single-cell multi-omics study of the intraperitoneal microenvironment. Studies involve gastrointestinal PSM integrating traditional Chinese medicine and HIPEC with research on lipid metabolic remodeling, molecular atlas of PMP, and traditional Chinese medicine. Plans are to explore PIPAC in order to promote the formulation of national guidelines and a deepening collaboration with PSOGI.

Northern China in Beijing

Beijing Tsinghua Changgung Hospital, Tsinghua University

Prof. Li Yan established the first PSOGI team and CRS/HIPEC center in China. Focus is on treatment of PSM from CRC, gastric cancer, ovarian cancer, and appendix mucinous tumors. With CRS as the core treatment, HIPEC is routinely performed; NIPS-based conversion therapy is carried out and PIPAC is being explored. The MDT for PSM is routinely implemented. Beijing Tsinghua Changgung Hospital has conducted one RCT study comparing the number of HIPEC sessions after CRS in PMP. Under study are basic and translational research on tumor microenvironment and mechanisms of invasion and metastasis in PSM with publications in progress. Plans are to continue expanding the scale of CRS-HIPEC surgery and standardizing surgical quality control; promote prospective clinical studies and multicenter collaboration; deepen basic and translational research; disseminate standardized diagnosis and treatment through technical training; and refine the MDT workflow and total patient management systems.

Beijing Aerospace Center Hospital

Prof. Xu Hongbin established the first Mucinous tumor center in China in 2012. The cumulative single-center surgical volume for PMP has reached 2,500 cases. The median PCI was 30, the CC0/1 rate was approximately 50%. Severe complications occurred in about 10%, perioperative mortality was about 1% and the 10-year overall survival was 50%. Currently, the cumulative HIPEC volume has exceeded 5,000 sessions. Twenty retrospective clinical studies have been conducted with more than 30 related peer-reviewed manuscripts published. Multicenter clinical research in collaboration with domestic and international centers is part of the ongoing effort.

Eastern China in Shanghai and Zhejiang province

Fudan University Cancer Center in Shanghai

This group reports routine and standard CRS and HIPEC in CRC peritoneal metastases and PMP with a high volume of 4000 CRC surgeries per year. Multiple clinical studies include the use of recombinant mutant human TNF in HIPEC and prophylactic HIPEC in high-risk CRC. Plans place a priority on prospective clinical and translational studies, strengthen multicenter collaboration and an enhanced academic collaboration.

Ruijin Hospital, Shanghai Jiaotong University

This group is focused specifically on gastric cancer PM. The center employs an integrated NIPS/HIPEC/PIPAC strategy supported by an extensive DRAGON trial series. DRAGON series (01/02, 09–12, 16/17/19) covering NIPS/laparoscopic-HIPEC, immunotherapy, CLDN18.2-targeted intraperitoneal treatment, drug resistance and prophylactic chemotherapy. ctDNA is used for NIPS response prediction, exosomal miRNA prediction of PSM/NIPS efficacy, Machine Learning includes Surface-Enhanced Raman Spectroscopy (ML-SERS) rapid diagnosis. Plans include a comprehensive gastric PSM MDT, biobank; standardization of NIPS/CRS+HIPEC/PIPAC indications and advancement of DRAGON-12/16/17/19 clinical trials.

The Second Affiliated Hospital, Zhejiang University

This large multidisciplinary team integrates novel therapies (Tumor Necrosis Factor-based HIPEC, CEA CAR-T, TAS-102 (Lonsurf)+bevacizumab+serplulimab regimens) within a broad PSM treatment platform spanning CRC, gastric, gynecologic, and PMP etiologies. Projects include prognostic immune scoring studies; prophylactic HIPEC study (2023 ASCO); multi-omics recurrence prediction (2025 ASCO); macrophage/regulatory T-cell interactions (Gut 2026). Plans are to standardize and homogenize PSM diagnosis and treatment and strengthen translational and international academic collaboration.

Middle China in Wuhan, Hubei province

Union Hospital, Tongji Medical University

The goal is to build standardized PSM care with a mature CRS+HIPEC. Currently, prophylactic HIPEC is used for high-risk gastric, CRC, plus early-stage PSM. PIPAC is used at exploration. Conducted WUHIPEC01/02 (lobaplatin/mitomycin vs. paclitaxel regimens), HIPEC-01/02/06/09 (multicenter phase III RCTs), HOPE-1 (PIPAC safety/efficacy). Multiple papers have been published in Journal of Immunotherapy of Cancer (JITC) concerning autophagy and mechanistic studies on gastric and CRC PSM in 2026. Current plans are to refine patient selection/perioperative management; expand prophylactic HIPEC and further explore PIPAC.

Zhongnan Hospital of Wuhan University

Zhongnan Hospital has conducted routine CRS+HIPEC treatment with an MDT. Long-term clinical research on PSM from gastric cancer and optimization of HIPEC drugs continues. Established rabbit and large-animal models of gastric PM at early stage are used. Focus is on tumor microenvironment, including stranding for RNA transcripts longer than 200 nucleotides, protein ubiquitination, ferroptosis, lipid metabolic reprogramming, hypoxic microenvironment, peritoneal mesothelial cell interactions, together with translational platforms as patient-derived organoids. Plans include individualized diagnostic and therapeutic regimens for PSM, establish PSM databases and biobanks; prospective cohorts, multicenter real-world studies, and RCTs. An immediate goal is to strengthen MDT collaboration.

Western China in Sichuan and Chongqing

West China Hospital, Sichuan University

This group is focused on CRS and HIPEC for limited PSM, extended locoregional resection using a MDT. There are multiple registered clinical trials. Clinical and translational studies including CRS-HIPEC, microenvironment and HIPEC reagents. Plans: refine MDT system, establish prospective case registration and follow-up, and advance clinical& translational research and collaboration.

Chongqing University Cancer Center

The center has progressively advanced standardized PSM management, with CRS+HIPEC now well-established as the core treatment, chiefly for gastric and right-colon cancer patients. This affiliated hospital conducts some prospective and basic research programs. Plans are to further standardize implementation of CRS+HIPEC and expand research infrastructure.

PSOGI World News – Survey Table on Peritoneal Metastasis Diagnosis and Treatment in 12 leading centers of China

Hospital	Lead Physician(s)	PM Cases (Past 3 Years)	Primary Source (CRC/Gastric/Gynecologic/PMP)	CRS procedure Cases (Past 3 Years)	CRS Cases In 2026 by Aug
The Sixth Affiliated Hospital, Sun Yat-sen University	Wang Hui, Yuan Zixu, Huang Rongkang	1,302	CRC 1,080; Gastric 26; Gynecologic 128; PMP 68	1,025	238
Beijing Tsinghua Changgung Hospital, Tsinghua University	Li Yan	849 (2023); 1,659 (2024); 1,247 (2025)	CRC, gastric, ovarian cancer, peritoneal mesothelioma, PMP, appendiceal mucinous adenocarcinoma	360 (2023); 486 (2024); 614 (2025)	~700 (projected)
Beijing Aerospace Center Hospital	Xu Hongbin, Ma Ruiqing	1,531	CRC 71; Gastric 9; Gynecologic 119; PMP 1,339	1,067	233
Fudan University Cancer Center	Cai Guoxiang, Wang Renjie	652	Primarily CRC and PMP	571	90
Ruijin Hospital, Shanghai Jiao Tong University School of Medicine	Zhu Zhenggang, Yan Min, Yan Chao, Li Chen	~1,000	Gastric cancer	~100	~30
Second Affiliated Hospital, Zhejiang University	Ding Kefeng, Sun Lifeng, Wang Jian	1,924	CRC, Gastric, Gynecologic, PMP	1,324	395
Union Hospital, Tongji Medical College, HUST	Tao Kaixiong, Wu Chuanqing	362	CRC/Gastric/PMP	100	19
Zhongnan Hospital, Wuhan University	Xiong Bin, Yang Xiaojun	242	PMP	215	48
West China Hospital, Sichuan University	Meng Wenjian; Wang Ziqiang; Yang Kun	1,558	Primarily CRC and appendiceal/PMP; also gastric, gynecologic	~350 patients	90
Chongqing University Cancer Hospital	Sun Hao	90	Gastric and CRC	50	10
Guangzhou Medical University Cancer Hospital	Zhang Xiangliang, Wang Jin	390	CRC 152; Gynecologic 84; Gastric 90; PMP 42; Other 22	406	138
First Affiliated Hospital, Guangzhou University of Chinese Medicine	Tang Hongsheng	750	CRC/Gastric/PMP	330	85

Section 7:

Peritoneal Malignancy Surgery Across Australia, New Zealand and Southeast Asia: An Evolving Landscape. Regional Update for Australia, New Zealand, Thailand, the Philippines, Singapore and Malaysia

By A/Prof. Cherry E. Koh, Dr. Chayanit Sirisai, Prof. Ancoy Marc Lopez, A/Prof. Claramae Chia

If there is one word that captures the state of peritoneal malignancy surgery across our part of the world, it is variable. From Perth to Bangkok, Auckland to Manila, the potential of cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) is real and growing, but this growth is occurring disparately – not just between countries but within countries.

CRS and HIPEC as a procedure, is highly specialised, resource intensive and inherently low volume in comparison to other radical cancer surgeries. As a result, growth and development of any peritoneal malignancy service, is incumbent on alignment of funding, established multi-disciplinary expertise and a sustained drive to build and deliver a service. When these do not align, services will likely continue but on a plateau, falling short of their potential and continue in a less ideal form. Across south-east Asia, there has been steady growth in peritoneal malignancy services but access remains highly variable with the more established centres providing "state of the art" services, driving research and training much like their western counterparts. In contrast, it is not uncommon to find less established centres floundering, usually driven by a handful of enthusiastic surgeons.

To truly appreciate the growth of peritoneal malignancy services in Southeast Asia, one must put into context how this compares against the PSOGI affiliated editorial from 2019. This editorial eloquently summarised the challenges that plaques peritoneal malignancy services in Asia, highlighting the lack of a service in 30 of 45 Asian countries. And in the remaining 15 countries, funding is either lacking or so limited that for the majority of patients in need of CRS and HIPEC, the treatment is only within grasp of those who can afford it or who are "in the know".

Against this backdrop, the six jurisdictions covered here – Australia, New Zealand, Singapore, Malaysia, Thailand and Philippines, are in relative terms, ahead. But "ahead" still leaves enormous scope for further growth and development and in preparing this article, I am grateful to the candid and honest sharing of the following surgeons about their experience with peritoneal malignancy services in their country: Dr. Claramae Chia, Dr. Chayanit Poonyarat, Prof. Ancoy Marc Lopez and Dr. Tony Kim.

Australia and New Zealand: Continued Growth

Australia and New Zealand have some of the longest-established peritonectomy services in the region. In Australia, the states of Victoria, South Australia and Perth are each served by a single state funded service. The state of New South Wales is served by two peritoneal malignancy centres because of the larger population but also inclusion of the ACT (Australian Capital Territory) and parts of Tasmania within its service coverage. Queensland is also served by two peritoneal malignancy centres but this stems from one centre being a Gynae-Oncology centre and the other being a peritoneal malignancy centre for other types of peritoneal cancer. Caseload varies between centres but the highest volume centres are the Royal Prince Alfred and St. George Hospitals in New South Wales followed by Peter MacCallum Cancer Centre in Victoria. Publicly available data from the Royal Prince Alfred Hospital through their annual reporting suggests continued growth of the service both in volume and complexity of cases with high volume cases, re-operative CRS HIPEC cases and also CRS HIPEC procedures combined with pelvic exenteration. Including non-HIPEC cases (because of cancer type), Royal Prince Alfred Hospital now consistently performs about 100 CRS procedures per year.

Until 2022/3, New Zealand had one peritoneal malignancy centre in Waikato. Auckland City Hospital established a second peritoneal malignancy centre in New Zealand in 2022/3. Combined caseload across both sites is thought to be between 60 and 90 cases per year. As the more established site, Waikato now has credible published outcomes, including long term survival data. By international standards however, it remains a low volume service.

Some centres have explicitly described their service as a low volume centre because of funding limitations. If population served by a peritoneal malignancy centre is to be a guide of anticipated caseload, the difference between the actual and anticipated caseload may be an interesting measure of adequacy of a service and may provide a glimpse into the funding required. It is highly likely that despite having an established service, the equity of access issues remain. Low volume centres carry the inherent structural fragility of variable referral base and unexpected workforce changes. This also has flow on effect in terms of patient selection and outcomes and although this is clinical intuitive and inevitable, demonstrating this with data is more challenging.

In Australia, 30% of the population reside away from a metropolitan city. In a study published by the Royal Prince Alfred Hospital peritoneal malignancy service comparing outcomes of patients from metropolitan vs regional areas, most surgical and oncological parameters did not differ significantly between metropolitan

and regional patients once they reached surgery, and quality-of-life scores were comparable out to 12 months. The comparability in outcomes bodes well for the service for patients but it is conceivable that regional patients who made it to surgery represented a selective subset, with the health literacy and financial means to navigate a complex referral journey that many of their neighbours simply were not able to enter and remained out of the service. It is a reminder that access can remain uneven even within a mature and well-resourced system – that regional patients have the same need for this surgery but are at greater risk of not ever reaching a surgeon who can offer it.

Southeast Asia: Real Momentum, Real Constraints

Further north, the story shifts from where within the country the service is provided to whether the country has a service at all, and if so, whether patients can actually afford it once the service is located.

Thailand offers perhaps the clearest illustration of a system genuinely on the move. Peritoneal malignancy treatment using CRS and HIPEC was introduced in the country in 2015 at Siriraj Hospital by Prof. Asada Methasate, trained under Prof. Yutaka Yonemura. In the earliest cases, a refurbished heart-lung machine was used to circulate the HIPEC, a detail that speaks to how far the programme has progressed. Today, roughly 21 hospitals across Thailand have provided HIPEC at some point, about half of them university hospitals, though established, regular practice remains concentrated in only about five centres – three performing 40–60 cases a year and two performing around 20, four of the five based at universities. The trajectory in national case volume is genuinely striking: from around 60–70 HIPEC cases a year before the COVID-19 pandemic, volume has climbed to roughly 100 a year, then around 150 in 2025, with approximately 120 cases performed in the first half of 2026 alone – implying the national total is on track to roughly double again this year. Most patients treated have peritoneal metastases from colorectal cancer or pseudomyxoma peritonei. Much of this growth traces to a deliberate push on education: peritoneal malignancy and HIPEC now feature regularly in national surgical and gynaecological conferences and workshops, with international figures including Prof. Paul Sugarbaker, Prof. Yutaka Yonemura and Prof. Beate Rau contributing to local training, alongside structured HIPEC workshops and supervised mentoring programmes run out of Siriraj Hospital, Chulalongkorn Hospital and the National Cancer Institute to support hospitals building new services.

Thailand is also moving into molecular profiling to guide more personalised treatment planning, has begun folding adapted HIPEC protocols into its national colon and ovarian cancer clinical practice guidelines as a foundation for a future standardised national framework, and is increasingly implementing ERAS pathways to improve perioperative recovery. Funding remains a real constraint underneath this progress: Thailand's

Universal Coverage Scheme funds the surgical component of CRS for most of the population, but patients still cover the cost of consumables and chemotherapy agents themselves, a sum that can exceed a typical monthly income for many families. Workforce capacity is the other binding constraint – Thailand has yet to establish a formal national peritoneal malignancy society, and while dedicated surgeons collaborate informally to build consensus and mentor new centres, the scarcity of specialists able to take on the long operative times and steep learning curve of CRS/HIPEC remains the key barrier to broadening capacity nationally. Taken together, Thailand's experience is less a story of a system held back than one actively building itself, one workshop, one mentored centre and one clinical guideline update at a time.

Malaysia is earlier still in this journey. The country's first dedicated CRS/HIPEC service has only recently been established, and the surgeons involved have spoken openly on the difficulties of setting it up – a frank and genuinely useful contribution to the region's collective learning, and the kind of honest reporting this field needs more of. Malaysia's Ministry of Health has also commissioned its own formal health technology assessment of HIPEC, which is worth noting as a signal in itself: HTA reviews of this kind are typically a precursor to national funding and reimbursement decisions, even before their specific conclusions are public or finalised. Taken together, these two developments suggest Malaysia's clinical capability and policy attention are both moving in the right direction, even if – as in Thailand – the funding architecture needed to support the service at scale is still being built. At present, the service is managed by two to three surgeons spread across several sites. Unlike other services and centres, there is a tendency for Malaysian surgeons to travel to a site to support the local team with surgery instead of patients travelling to the peritoneal malignancy centre. Part of this is in the spirit of collaboration but also in recognition of a patients' extensive support network that struggles to travel with the patient to the dedicated centres. An external proctor was appointed for the Northern Malaysian Peritoneal Malignancy Service who, together with the local team, also conducted audits, and surgical workshops to expand local expertise. At present, case volume continues to be low. Multiple barriers continue to exist which limits ability to expand on local expertise and caseload.

Singapore, by contrast, has built one of the region's more mature and structured programmes, anchored by the Sarcoma, Peritoneal and Rare Tumours (SPRinT) service at the National Cancer Centre Singapore, which also runs peritoneal malignancy training courses and workshops with the National University of Singapore. There are two other public hospitals, National University Hospital and Tan Tock Seng Hospital that offer peritoneal malignancy service. Case volume and experience is most established with the National Cancer Centre consistently performing 80-100 cases a year.

As a regional medical hub for other Asian countries, the private medical health industry does have private vendors who are known to offer CRS and/or HIPEC procedures. As with all private referrals, without formal MDT oversight,

it is difficult to ascertain case volume and surgical indications. What stands out from Singapore's experience though, is not a lack of surgical capability but a variable referral patterns and a referral bottleneck. Strategies to encourage cross centre collaboration may improve care and overall surgical access.

In the Philippines, CRS and HIPEC is now recognised as the standard of care for many peritoneal surface malignancies. However, only a few centres offer the service and all of them are located in major cities. In a country of islands, this often contributes to late referrals, or patients never being offered CRS and HIPEC at all.

To close this gap, the PSCRS (Philippines Society of Colorectal Surgery) Subcommittee on Peritoneal Surface Malignancies launched the CRS ++ HIPEC Project in June 2025. It is a mentorship program that offers peritoneal malignancy training in addition to colorectal surgery fellowship program. The name reflects the team approach. "CRS" stands for Colorectal Surgery. The "++" stands for the other specialties whose work is just as essential: medical oncologists, critical care specialists, anaesthesiologists, radiologists, pathologists, nurses and others, highlighting the importance of comprehensive care. The program standardises patient selection, operative decision-making, safe surgical technique and postoperative care.

The first milestone came at Cotabato Regional and Medical Center. The team first met regional medical leaders online to assess the hospital's capabilities and needs. On-site work followed: a multidisciplinary conference, focused lectures and detailed operative planning. This led to Cotabato Regional and Medical Center's first CRS and HIPEC procedure, a first for the hospital and the region. To experienced surgeons, this may not be that remarkable but the significance of this locally is significant. This case highlighted the importance of mentorship and with commitment from the hospital, CRS and HIPEC can be offered safely in a regional public hospital. Three other hospitals have since completed their first CRS and HIPEC procedures under the project: Quirino Memorial Medical Center (Quezon City), Western Visayas Medical Center (Iloilo City) and Rizal Medical Center (Pasig City). More centres across the country are scheduled for upcoming activities (Figure 1). These early results suggest that a collaborative, mentorship-based model can make high-quality peritoneal malignancy care available, lasting and more equitably accessible across the Philippines, so that the patient's primary residence no longer contributes to whether the patient is eligible for life-prolonging treatment.



Figure 1. *Geographic distribution of identified centers in the country where CRS++ HIPEC activities are to be conducted. Provinces scheduled for CRS-HIPEC missions are marked with yellow stars. These planned activities are part of the initiative of the Philippine Society of Colorectal Surgery (PSCRS) to expand access to peritoneal surface malignancy care across the country.*

The Common Thread

Across all six jurisdictions, three constraints recur, in different proportions: funding that has not caught up with clinical evidence, referral pathways that are inconsistent, under-recognised, or simply too slow, and patients who, by the time they are identified as candidates, are already carrying more advanced disease than a well-functioning system would allow. None of these are technical problems – the surgery itself is being performed to a high standard wherever it is offered. They are systems problems, and systems problems are solvable, but only with sustained advocacy, shared data, and patience. The absence of data from the region is itself a finding: it suggests a service landscape that is continuing to evolve, most likely concentrated where patients can self-fund care, without yet the volume, public funding pathway or registry infrastructure needed to generate the kind of reporting now coming out of each centre.

There is real cause for optimism here. Every jurisdiction in this update has more capability today than it did five years ago, and clinicians across the region are increasingly willing to publish honestly about their struggles as well as their successes – itself a marker of a maturing field, and one this newsletter is well placed to keep showcasing. But if PSOGI's global mission means anything in this part of the world, it means continuing to press for the unglamorous work behind the scenes: national funding pathways, informed general practitioners, primary-care education, education of referring medical oncologists and surgeons, formal training programmes where none yet exist, consider external proctors where local expertise is lacking and consider regional registries.

Section 8:

Peritoneal Surface Malignancy in Canada: From Pioneering Programs to a National Network.

By Mikaël Lefebvre-Soucisse, MD, FRCSC; Lucas Sideris, MD, FRCSC
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Canada's experience in peritoneal surface malignancy (PSM) has evolved from a few pioneering programs into a geographically dispersed national network committed to multidisciplinary care, research and improved access. Canada's early experience was shaped by pioneering programs in Montreal and Calgary. At Hôpital Maisonneuve-Rosemont (HMR), Université de Montréal, Pierre Dubé performed complete cytoreductive surgery (CRS) with early postoperative intraperitoneal chemotherapy (EPIC) in 1997. Shortly thereafter, under Walley Temple's leadership, Calgary's Tom Baker Cancer Centre introduced heated intraperitoneal chemotherapy (HIPEC) in 1998. HMR introduced oxaliplatin-based HIPEC in 2003 following the arrival of

Lucas Sideris. These groups helped establish the foundations of Canadian PSM care and national collaboration.

At Université de Montréal, HMR and CHUM subsequently developed extensive PSM expertise. In 2015, Canadian leaders created the Canadian HIPEC Collaborative Group and published national guidelines, followed by updated colorectal guidelines in 2020. In 2022, the Province of Quebec formalized a provincial PSM network with standardized referral, multidisciplinary discussion and prospective data collection. The Université de Montréal program reached its 1,000th HIPEC in 2026 and maintains close collaboration with gynecologic oncology, particularly for advanced ovarian cancer.

Calgary remains a major PSM program. Building on Walley Temple's work, Lloyd Mack and Antoine Bouchard-Fortier currently lead the program, performing approximately 30–40 CRS-HIPEC procedures annually and contributing to ERAS pathways, collaborative research and international consensus work.

Across Canada, regional programs have matured and expanded access. In Toronto, Andrea McCart and Anand Govindarajan have been longstanding leaders of Mount Sinai's PSM program, established in 2011. The program evaluates approximately 300 patients and performs about 60 CRS-HIPEC procedures annually. At McGill University, Tsafrir Vanounou established the Jewish General Hospital program approximately 15 years ago. This expertise is now being continued at the McGill University Health Center under the leadership of Sinziana Dumitra and Teodora Dumitra in close collaboration with gynecologic oncology. Their research includes prehabilitation and artificial intelligence applications in PSM care.

Québec City established its program in 2019 under Cindy Boulanger-Gobeil and Alexandre Brind'Amour and now performs more than 50 procedures annually, including gastrointestinal and ovarian malignancies, while strengthening referral pathways. In Ottawa, Brittany Dingley and Sameer Apte recently launched a multidisciplinary program closely integrated with gynecologic oncology. Ottawa is expanding regional outreach and leading initiatives toward a national peritoneal database and standardized diagnostic laparoscopy reporting.

In Western Canada, Edmonton maintains CRS-HIPEC expertise. The British Columbia Peritoneal Malignancy Program, founded by Yarrow McConnell in 2013 and now co-led by Trevor Hamilton and Andrea MacNeill, serves British Columbia and Yukon, performs approximately 35 procedures annually and maintains a longitudinal patient-reported quality-of-life registry. Manitoba has had a program since 2016, started by Pamela Hebbard and joined by Justin Rivard shortly thereafter.

In Atlantic Canada, the Queen Elizabeth II/Dalhousie Atlantic Peritoneal Oncology Program, historically developed under Carman Giacomantonio and now led by Gregory Knapp and Ashley Drohan, provides regional referral and maintains an active prospective registry. Newfoundland and Labrador has evaluated the feasibility of establishing provincial CRS-HIPEC services.

The next chapter should reconnect these regional strengths nationally. Renewed collaboration, harmonized data collection, improved referral pathways and outreach to remote communities can ensure that expertise is not limited by postal code. An equally important priority is stronger integration between surgical oncologists and gynecologic oncologists in managing ovarian peritoneal malignancies, an approach increasingly adopted across Canadian centres. Sharing expertise in complex cytoreduction, patient selection, perioperative care and research offers an important opportunity to advance care for women with advanced ovarian cancer. For Canada, the Ahmedabad 2027 theme – "No patient should be left behind"– is especially relevant. Every patient with a potentially treatable peritoneal malignancy should have timely access to expert multidisciplinary care, wherever they live.

Section 9:

Global Progress in Peritoneal Surface Malignancy (PSM) in the USA

By Paul H. Sugarbaker, MD, FRCS, FACS
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In the 1980s, the only place in the world for a patient to receive a definite treatment for non-gynecologic peritoneal metastases was the Surgery Branch, National Cancer Institute in Bethesda, Maryland or the Emory University Winship Cancer Center in Atlanta, Georgia. The complete cytoreduction using peritonectomy procedures and visceral resections had been described and were performed as standard of care. The perioperative cancer chemotherapy was given as early postoperative intraperitoneal chemotherapy (EPIC). The only drugs available for EPIC at that time in the history of cancer chemotherapy were 5-fluorouracil, mitomycin C, and cisplatin. The results of treatment were surprisingly good. The appendiceal mucinous tumors presented a major challenge in terms of a complete cytoreduction but also showed the most favorable long-term survival of all diseases treated. Disease-free survival at 5 years was 75%. In addition, peritoneal mesothelioma with cytoreduction plus intraperitoneal cisplatin did well. The survival at 3 years was increased from 0 to over 60%. Colorectal cancer peritoneal metastases at 3 years also showed approximately 50% survival. In none of these 3 diseases was there preoperative cancer chemotherapy. That may have contributed to the unexpectedly favorable results with cytoreductive surgery and EPIC.

In the mid-1990s, hyperthermic intraperitoneal chemotherapy (HIPEC) using heated intraperitoneal mitomycin C or heated cisplatin as a planned part of the cytoreductive surgery was introduced from Japan into the United States. Brian Loggie in Winston-Salem, North Carolina and Paul Sugarbaker in Washington, DC were early proponents of HIPEC. The ease of administration of the intraperitoneal chemotherapy in the operating room by the surgeon and the thought that hyperthermia would markedly improve the cytotoxicity of the intraperitoneal drugs led to a rapid expansion of expertise for management of peritoneal metastases throughout the United States.

It became clear to all of us treating non-gynecologic peritoneal metastases that the complete cytoreduction was necessary for a long-term favorable outcome. Also, the prognostic indicators peritoneal cancer index, prior surgical score and histologic classification of the peritoneal metastases was extremely important in selecting patients for treatment and in the realization of a favorable outcome (Jacquet P, Sugarbaker PH. J Exp Clin Cancer Res 1996;15(1):49-58).

Dedicated efforts at the University of Pittsburg Medical Center under the direction of David Bartlett, the efforts of Edward Levine in Winston-Salem, North Carolina and Paul Sugarbaker at the Washington Hospital Center in Washington, DC led to a proliferation of peritoneal surface malignancy (PSM) treatment centers throughout the United States.

Currently, cytoreductive surgery plus HIPEC as a management strategy for non-gynecologic peritoneal metastases is available in all states within the United States except for Alaska, Hawaii, Idaho, Wyoming, South Dakota, Oklahoma, Indiana, and New Hampshire. In the other 41 states, 122 PSM treatment centers offer cytoreductive surgery plus HIPEC for appendiceal mucinous neoplasm patients and colorectal cancer patients with peritoneal metastases. Complete cytoreductive surgery plus a mitomycin C HIPEC is the standard of care. Six centers are able to take on patients with peritoneal mesothelioma. The state of New York, not surprisingly, has the largest number of PSM treatment centers with 9 institutions offering treatment. Pennsylvania and Florida each offer treatment at 8 different PSM centers. Seven centers are available in Texas, Maryland, Illinois, and California.

A cohesive effort among the PSM treatment centers in the United States was facilitated by the Chicago Consensus published in 2020 (Chicago Consensus Working Group. The Chicago Consensus Guidelines for

Peritoneal Surface Malignancies: Introduction. Ann Surg Oncol 2020 Jun;27(6):1737-1740). A forum for reporting clinical research and results of treatment has been sponsored by the Society of Surgical Oncology on a yearly basis as the Conference on Management of Advanced Cancer. Also, the PSM team at University of Pittsburg Medical Center has had a quarterly virtual meeting for case presentations and for critical discussion. This effort has been in progress over two decades. Charles Staley and his group at the Emory University Winship Cancer Center, Atlanta, Georgia have promoted clinical research funded by the Eastern Cooperative Oncology Group of the National Cancer Institute. Promising centers of excellence for research and practice are active at several institutions. Brian Badgwell at the MD Anderson Cancer Center in Houston continues to test combinations of CRS, laparoscopy and HIPEC in gastric cancer peritoneal metastases (GCPM). Maheswari Senthil of the ECOG-ACRN Cancer Research Group is testing the addition of paclitaxel administration directly into the abdominal cavity combined with systemic chemotherapy for GCPM (STOPGAP II). Studies to investigate the role of HIPEC have been revived at the Mayo Clinic by Travis Grotz. Selection of an optimal HIPEC is the goal for spheroid research in Winston-Salem, North Carolina by Votanopoulos and coworkers

Now, a concerted effort to bring the 125 PSM treatment centers together in a cooperative effort to improve the results of treatment, improve the selection factors for treatment, and to conduct clinical research has been initiated by the Smillow Cancer Center in New Haven under the direction of Kiran Turaga and his team. The goal is to make progress in the management of PSM.

All of us involved in this new subdivision of surgical oncology called Peritoneal Surface Malignancy (PSM), realize that we have a come a long way over the past 45 years in prolonging the survival and improving the quality of life of patients who develop non-gynecologic peritoneal metastases. The focus has been on appendiceal mucinous neoplasms, malignant peritoneal mesothelioma, and colorectal cancer. Peritoneal metastases from gynecologic malignancy has been added to the list of diseases to be treated by CRS and HIPEC. We are all very much aware that we have a long way to go to achieve a high level of success with all groups of patients. CRS and HIPEC are now in competition with systemic chemotherapy and molecular treatments for peritoneal metastases. These more conservative treatment measures offered by a medical oncologist usually come first and may dampen the favorable effects of CRS and HIPEC in that complete responder and non-responder patients are the ones often referred for surgical intervention. To achieve the maximal benefits efforts to properly sequence systemic and local-regional treatments are required. Normothermic intraperitoneal and systemic (NIPS) chemotherapy has been introduced with considerable

success in gastric cancer peritoneal metastases in Japan and China. It is now finding its way into treatment plans in the United States, not only for gastric cancer but also for malignant peritoneal mesothelioma and peritoneal metastases from colorectal malignancy.

Controlled studies to reorganize and redirect collaborative efforts to evaluate more effective treatments to preserve the surgical complete response with a low-cost perioperative chemotherapy are critically needed. These collaborative efforts need to incorporate projects to improve, even perfect, the cytoreductive surgical procedure at all PSM treatment centers in the USA. These sorts of educational efforts are always needed because new groups and young surgeons are performing PSM treatments on a regular basis.

Currently, there is no accreditation for the management of PSM. The CRS and HIPEC is recognized as a new subdivision of surgical oncology but a hierarchy for quality control does not exist. Voluntary efforts to define the expected results of treatment throughout the United States have been published but are difficult to obtain. Efforts to identify the most important questions to address are currently underway.

Section 10:

Peritoneal Surface Oncology in Mexico: From Mentorship to a National Network.

By Guillermo Flores Ayala, MD[1]; Rolando García Matus, MD[2]; Jesús Esquivel, MD[3]; Héctor Martínez Said, MD[4]; Andrea Flores A., MD[5]

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The development of the Peritoneal Surface Malignancy Program at the Instituto Jalisciense de Cancerología in Guadalajara has grown through mentorship, education, and collaboration. Its roots are part of a broader Mexican effort that began in Oaxaca. In 2007, Dr. Rolando García-Matus invited Dr. Jesús Esquivel to participate in the treatment of a patient with peritoneal carcinomatosis for whom no therapeutic options remained. That first collaboration became the starting point for a sustained effort to introduce cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) in Mexico.

In 2009, the first formal Mexican course-workshop dedicated to the management of peritoneal carcinomatosis was organized in Oaxaca. I traveled there and met Dr. Jesús Esquivel, who became my mentor. That encounter changed the direction of my surgical practice. Soon afterward, I completed an observership at St. Agnes Hospital in Baltimore. The following year, we treated our first patient in Guadalajara. For approximately one year, Jesús continued traveling to our institution to monitor our early cases and teach us the principles and technique of CRS and HIPEC. Professor Paul Sugarbaker's participation in the Mexican workshops has been invaluable. This experience reinforced a principle that remains central today: complex peritoneal surgery is learned through mentorship, from surgeon to surgeon, in the operating room. The educational effort traveled through Mérida, Toluca, Mexico City and Guadalajara, connecting regional teams through shared learning. Year after year, our program has grown through clinical experience, education, training, and international collaboration through PSOGI.

Over time, our role has evolved from receiving mentorship to providing education and training to a new generation of surgeons. Our fellows now develop within a multidisciplinary program while remaining connected to the international peritoneal surface oncology community through PSOGI scientific meetings, consensus initiatives, and collaborative research. Today, I lead the Peritoneal Surface Malignancy Program at the Instituto Jalisciense de Cancerología. Our multidisciplinary approach brings together surgical oncology fellows and residents, medical oncologists, pathologists, radiologists, and other specialists through tumor board discussion. More than half of our current practice involves ovarian cancer. We also treat pseudomyxoma peritonei, colorectal peritoneal metastases, peritoneal mesothelioma, and selected cases of gastric cancer. Part of this experience has been published and presented within the international PSOGI community.

Our next goal is not simply to perform more procedures. It is to create a clear pathway for the early referral of patients with peritoneal metastases. Too often, peritoneal dissemination is still interpreted as a clinical situation in which nothing meaningful can be offered. Not every patient will be a candidate for surgery or regional treatment, but suitable patients should have the opportunity to be evaluated by an experienced peritoneal malignancy team before that conclusion is reached.

This challenge is particularly relevant in Mexico. Geography, socioeconomic disparities, transportation costs, fragmented access to oncologic care, and delayed referral can make evaluation at specialized centers difficult. Established experience in peritoneal surface oncology can now be found in Guadalajara, Oaxaca, Mexico City, Toluca, Mérida, Monterrey, Chihuahua, and other regions. The Mexican model also includes

collaboration beyond these centers. Experienced surgeons sometimes travel to support local teams; I have participated in selected cases in cities across central and northern Mexico, while Rolando García-Matus has supported similar efforts in southern Mexico. These collaborations allow some patients to receive specialized treatment closer to home while local teams gain experience through direct mentorship and shared operative experience.

The opportunity for 2026 and 2027 is to transform these relationships into a more connected national community: clearer referral pathways, shared educational activities, stronger multidisciplinary evaluation, multicenter research, and closer communication between established and emerging programs. The objective is not to centralize every procedure, but to coordinate expertise, patient selection, and multidisciplinary decision-making while extending collaboration to the regions where patients live. The Mexican experience in peritoneal surface oncology grew through mentorship. Its future should be built through collaboration.

Section 11:

Peritoneal Surface Oncology in Spanish-Speaking South America.

By Francisco Izquierdo Martínez (Puerto Montt, Chile), Maikel Pacheco (Bogotá, Colombia), Pablo Carmignani (Córdoba, Argentina)

Puerto Montt Regional Hospital serves the Chilean Lake District, at the gateway to northern Patagonia, and is, to our knowledge, the southernmost center treating peritoneal surface malignancies in the world. Its first cytoreductive surgery with HIPEC was performed in August 2023 in a patient with pseudomyxoma peritonei. Until then, no program in the region offered this treatment. Three years later, the program receives referrals from across southern Chile, and many of the barriers that once made specialized peritoneal treatment unavailable locally have been overcome.

Although Puerto Montt has approval to develop a regional cancer center under Chile's National Cancer Law, construction has been delayed. Rather than wait, the hospital changed its management model and began working as a cancer center within the facilities already available, based on a simple principle: coordinating the cancer pathway is the responsibility of the institution, not of the patient. This created the conditions for CRS-HIPEC to develop within a multidisciplinary model that includes medical oncology, palliative care, tumor boards, oncology nurse navigators and coordinated follow-up.

The Puerto Montt experience reflects a broader Latin American challenge. Peritoneal surface malignancies are uncommon and complex, and their treatment should be concentrated in experienced multidisciplinary teams. In geographically large countries, however, expertise must also be distributed strategically. The goal should not be to send every patient to the capital, but to develop connected regional referral centers capable of delivering specialized care closer to home.

Chile illustrates this challenge. Peritoneal surgery remains largely concentrated in Santiago, while regional programs have progressively emerged. The experience in Puerto Montt shows that specialized peritoneal oncology can be developed outside the capital when multidisciplinary structures and institutional support are in place. As elsewhere in the region, the absence of a national registry limits our understanding of activity and outcomes.

Colombia has nearly two decades of experience with CRS-HIPEC, with programs established in several major cities and selected centers also incorporating PIPAC. The 5th Latin American Congress on Peritoneal Neoplasms, held in Colombia in August 2026, brought together groups that had previously worked independently and strengthened a growing national community. Similarly, the 4th Latin American Congress in Frutillar, Chile, in 2024 helped connect Chilean teams, strengthen collaboration and give greater visibility to peritoneal surface oncology in the south of the country.

Argentina has also developed programs over the past two decades in both private and public institutions. Access remains limited by late referral, the availability and cost of high-complexity care, and persistent skepticism regarding surgery in selected patients with peritoneal disease.

Other Spanish-speaking countries are part of the same evolving landscape. Peru now has dedicated CRS-HIPEC expertise in Lima, while Ecuador also has documented experience in this field. These examples reinforce a regional pattern: expertise exists, but activity remains heterogeneous and national data are limited. The challenge is to connect experienced centers and create stronger pathways for referral, education and research.

The difficulties are remarkably similar across our countries: limited access, incomplete registries, variable referral pathways and no common agreement on which centers should treat these patients. The expertise already exists. What Latin America lacks is not the ability to perform complex surgery, but the organization to deliver specialized peritoneal cancer care consistently. The collaboration created through recent congresses offers an opportunity to change this.

Our goal for 2027 is to move from informal collaboration toward a structured regional network connecting specialized centers across Latin America. This should include shared registries and collaborative research, but also educational exchange through observerships, rotations and visits between centers, allowing teams to learn from one another and share their experience. Future Latin American congresses can serve not only as scientific meetings, but also as regular meeting points to review what has been achieved, strengthen collaboration and define the next steps for peritoneal surface oncology in the region.

Latin America is a continent of enormous geographic and social diversity, with remote communities and vast areas separated from specialized cancer care by long distances. Peritoneal surface disease makes these inequalities particularly visible: treatment may require long operations, intensive perioperative care, prolonged follow-up and strong family support. These different realities make regional collaboration essential. By working together, sharing data and experience, training across centers and generating research as a region, we can improve both access and outcomes for patients with peritoneal malignancies throughout Latin America.

Section 12:

Peritoneal Malignancies in Brazil: From Pioneering Efforts to Building a Network.

By Rafael Seitenfus[1], Cláudio de Almeida Quadros[2,3], Elio José Silveira da Silva Barreto[4], Tarcisio José Cysneiros da Costa Reis[5], Carlos Humberto Cereser Junior[1], Moacyr Christopher Salem[6]

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In Brazil, the challenge of treating peritoneal surface malignancies now extends beyond the operating room: it is to ensure that specialist care reaches those who may benefit from it. Since the introduction of cytoreductive surgery combined with hyperthermic intraperitoneal chemotherapy (CRS/HIPEC) in 2001, pioneering initiatives have grown into a community dedicated to treating peritoneal metastases. Among these milestones was the first CRS/HIPEC procedure in northeastern Brazil, performed at Hospital Universitário Onofre Lopes in Rio Grande do Norte. More than two decades later, accumulated experience and the recognition of specific indications within the public healthcare system represent important

achievements. Yet the gap between the expertise of experienced centres and the care patients actually receive remains a challenge for Brazil's medical community.

Santa Casa de Misericórdia de Porto Alegre illustrates this trajectory. Its Peritoneal Disease Programme was established through international exchange, the development of a multidisciplinary team and institutional support. Training through the European School of Peritoneal Surface Oncology and at Centre Hospitalier Lyon-Sud, under Olivier Glehen's mentorship, helped introduce new techniques and consolidate a programme dedicated to peritoneal surface oncology. This experience shows how collaboration with the European school can strengthen local clinical capacity and create opportunities for training and research.

Porto Alegre's experience is part of a broader movement built by teams across different regions of the country. The establishment of specialist services has expanded treatment opportunities beyond the pioneering centres. Throughout this process, the Brazilian Society of Surgical Oncology (SBCO) has played an important role in connecting teams, sharing knowledge and advocating for access to treatment.

A milestone in these efforts came in 2018, when the SBCO, under Cláudio Quadros's presidency and with Elio Barreto's active involvement, began formally advocating for the incorporation of CRS/HIPEC into the Unified Health System (SUS), Brazil's universal public healthcare system, which provides care free of charge to patients. In 2022, the process reached a decisive achievement: the approval of protocols for pseudomyxoma peritonei and malignant peritoneal mesothelioma, accompanied by regulations governing treatment provision and funding. The work of Quadros and Barreto, alongside other members of the society, helped make treatment for these indications available within Brazil's public healthcare system.

For patients, the change was tangible. Before incorporation, access often depended on personal funds or court orders requiring the government or private health insurers to cover treatment costs. A clinical indication alone was not always enough. Institutional recognition established national standards and created a more consistent foundation for organising referrals and strengthening services.

This achievement also brought the challenge of regionalisation into sharper focus. In a country of continental proportions, bringing treatment closer to patients requires more than installing equipment. Emerging services need supervised training, mentorship and institutional support to develop their teams and manage complications. Training in cytoreductive surgery deserves particular attention: it is a technically demanding

component of treatment whose quality has a decisive influence on outcomes. Programmes such as the European School of Peritoneal Surface Oncology can support both the training of new centres and the further development of established teams.

A national organisational question remains, however: who can connect Brazil's initiatives in clinical care, education and research? The SBCO, in dialogue with PSOGI and other scientific organisations, can help coordinate an approach that respects regional differences while establishing shared commitments to training, referral pathways and outcome assessment. A coordinated network would allow teams to share experiences, support developing services and reduce professional isolation.

Access to technology is also part of this equation. Brazilian equipment, including systems from Braile Biomédica and Wendymed, is available alongside international platforms such as RanD and ThermaSolutions, expanding the options for HIPEC delivery. Estimated kit costs of R$12,000 to R$34,000, depending on the technology used, illustrate the financial burden of consumables on treatment sustainability. A wider range of suppliers needs to translate into purchasing and operating conditions that are compatible with the realities of these services.

In pressurised intraperitoneal aerosol chemotherapy (PIPAC), collaboration between clinical care and technological development has also produced a Brazilian contribution. Bhio Stilus Plus was developed by the Brazilian company Bhio Supply, with government financial support, in partnership with Santa Casa de Porto Alegre and Brazilian researchers. This domestic solution for intraperitoneal aerosolisation received regulatory approval in Brazil and became available alongside international technologies such as CapnoPen and TOPOL-SKALA-Medica, expanding opportunities for clinical application, training and research.

Another barrier is the dissemination of knowledge beyond teams already working with peritoneal malignancies. Evidence varies according to the disease, treatment setting and protocol used. Its interpretation requires dialogue among surgeons, medical oncologists and other specialists. Continuing education and multidisciplinary discussion are essential to appropriate patient selection and to preventing gaps in knowledge from limiting treatment opportunities.

Yet the country is still navigating without knowing its numbers. Difficulties in recording cases and following patients leave fundamental questions unanswered: how many patients are treated, where do they receive care and what outcomes do they achieve? Without this picture, it is difficult to assess demand, identify underserved regions and determine where to invest in infrastructure and training. Prospective registries and

multicentre studies are needed to turn scattered experiences into a national evidence base. Perhaps the greatest challenge for Brazilian teams is to build effective collaboration among centres performing HIPEC, sharing data, experience and responsibility for advancing care across the country.

Responding to this need, the 5th International Scientific Congress of the ISSPP, held in São Paulo in 2026, brought Brazilian and Latin American teams closer to the international community. Turning these encounters into joint work, however, requires sustained commitment. Initiatives involving shared case discussions, prospective registries and multicentre studies remain at an early stage and need encouragement, recognition and institutional support. For 2027, strengthening these initial efforts and expanding exchanges between experienced services and emerging centres offers a practical step towards building a Brazilian network, with the prospect of wider Latin American cooperation.

Four priorities shape the next stage: establishing systematic registries, regionalizing access, securing essential supplies and carefully expanding indications. National referral coordination must consider the geographical distribution of services and their capacity to provide care, supported by standardised training and mentorship for new centres. Access to mitomycin requires a reliable supply, through domestic production or imports coordinated by the Ministry of Health. Incorporating CRS/HIPEC into selected first-line treatment settings for ovarian cancer must follow the evidence, with clear eligibility criteria and wider dissemination among professionals who advise and refer these patients. Brazil already has experienced teams. The challenge now is to make their expertise accessible to those who remain far from it.

Section 13:

Studies in Peritoneal Metastases in Korea.

By Wansik Yu, MD
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Korea was one of the first Asian countries to demonstrate the benefits intraperitoneal chemotherapy used as an adjuvant to complete resection of gastric cancer. Yu and his colleagues in Taegu, Korea conducted a randomized controlled study of gastric cancer patients at high risk for peritoneal metastases (*Yu W et al. World J Surg 2001; 25: 985*). They used the early postoperative intraperitoneal chemotherapy (EPIC) with intraperitoneal mitomycin C administered on the first postoperative day and 5-fluorouracil on the subsequent four postoperative days. Two hundred and forty-eight patients with biopsy-proven advance gastric cancer were randomized. Overall, there was a survival advantage in patients who received the EPIC as an adjuvant treatment (p=0.0278). The patients who profited most were those who most needed additional therapy. In patients with stage 3 disease five-year survival increased from 23% to 57% with the EPIC (p=0.0024). With patients who had resectable stage 4 disease, the survival increased from 5% to 28% (p=0.0098). They reported statistically significant difference in patterns of recurrence (*Yu W. Surg Oncol Clin N Am 2003; 12: 623*). The incidence of peritoneal recurrence after surgery with EPIC was 15% and that after surgery only was 29% (p=0.043).

In retrospect, perhaps a mistake in our efforts to control gastric cancer in Korea involved the replacement of EPIC with hyperthermic intraperitoneal chemotherapy (HIPEC) to treat gastric cancer with peritoneal seeding. HIPEC showed increased toxicity and less efficacy. Also, the addition of hyperthermia created a disparity in the possibility of treating larger numbers of patients from multiple institutions. The requirement for an expensive HIPEC machine as compared to the EPIC administration markedly limited the generalized application of the use of perioperative intraperitoneal chemotherapy to prevent or to treat peritoneal seeding and thereby improve their survival of patients with gastric cancer.

To treat peritoneal metastasis from gastric cancer, a more modern EPIC regimen would be normothermic intraperitoneal and systemic (NIPS) chemotherapy protocol. Intraperitoneal paclitaxel would be used on early postoperative days 1 and 8, combined with S-1 for days 1-14, and oxaliplatin on day 1, repeated every 21 days. In this multicenter phase II clinical trial, intraperitoneal paclitaxel with systemic S-1 plus oxaliplatin showed promising efficacy and safety in the treatment of peritoneal metastatic gastric cancer (*Seo WJ et al.*

Eur J Surg Oncol 2025; 51: 109603). Intraperitoneal paclitaxel plus intravenous fluorouracil, leucovorin, oxaliplatin (FOLFOX), and nivolumab (phase II IPLUS Trial) demonstrated encouraging survival outcomes (one-year overall survival rate 86.4%; progression free survival rate 63.6%) and high conversion surgery rate (40.9%) in gastric cancer with peritoneal metastasis (*Kang SH et al. Gastric cancer 2026; 29: 788*). A multicenter randomized phase III trial (PIPS-GC-003 Trial) is currently testing intraperitoneal paclitaxel and systemic chemotherapy.

Currently, there are promising trials with advanced ovarian cancer. In the KOV-HIPEC-03R Trial (*Yoo JG et al. J Gynecol Oncol 2023; 34: e72*), patients underwent a second-look surgery with or without HIPEC carboplatin or paclitaxel. The 10-year progression-free survival (53.6% vs. 34.9%, p=0.009) and overall survival (57.0% vs. 34.5%, p=0.025) were significantly longer in the HIPEC group. HIPEC was an independent predictor of a longer progression-free survival (HR=0.42, p=0.005). A phase III randomized controlled trial (KOV-04, FOCUS) is currently testing cisplatin HIPEC with an interval cytoreductive surgery.

To overcome a short half-life and rapid peritoneal clearance of oxaliplatin, sustained-release oxaliplatin, oxaliplatin-loaded multivesicular liposomal (MVL) depot was developed for intraperitoneal chemotherapy to treat colorectal cancer with peritoneal carcinomatosis (*Abujar SM et al. Pharmaceutics 2020; 12: 736*).

Section 14:

Upcoming Events.



Join Video-based Workshop on Cytoreductive Surgery - in person or online

Registration is open for our one-day Video-based Workshop on Cytoreductive Surgery exploring the technical aspects of cytoreductive surgery (CRS) for peritoneal surface malignancies.

You can attend this workshop in person or online.

2 February 2027

Berlin, Germany / Online



Registration Open for the Advanced Course on the **Management of HIPEC after CRS**

This advanced course on **CRS, HIPEC** and **intraperitoneal treatments** for peritoneal malignancies aims at discussing evidence-based clinical decision-making in the management of **primary and secondary** peritoneal cancers. It will offer a multidisciplinary programme combining both practical aspects and theoretical problems.

This year's programme will feature **debates and 'pro-con' sessions** on key controversies in peritoneal surface oncology. In the **wet-lab**, the participants will have an opportunity to learn **open and minimally invasive** cytoreductive surgery.

3-5 February 2027
Berlin, DE

2027

COMPREHENSIVE MANAGEMENT OF PERITONEAL SURFACE MALIGNANCY WORKSHOP AND PIPAC COURSE



Singapore

26 - 28 April 2027

For more details and registration, click here or scan QR code





Our Speakers



Prof Somashekhar S. P.



A/Prof Cherry E Koh



Dr. Olivia Sgarbura



Dr. Manuela Robella

Endorsed By:

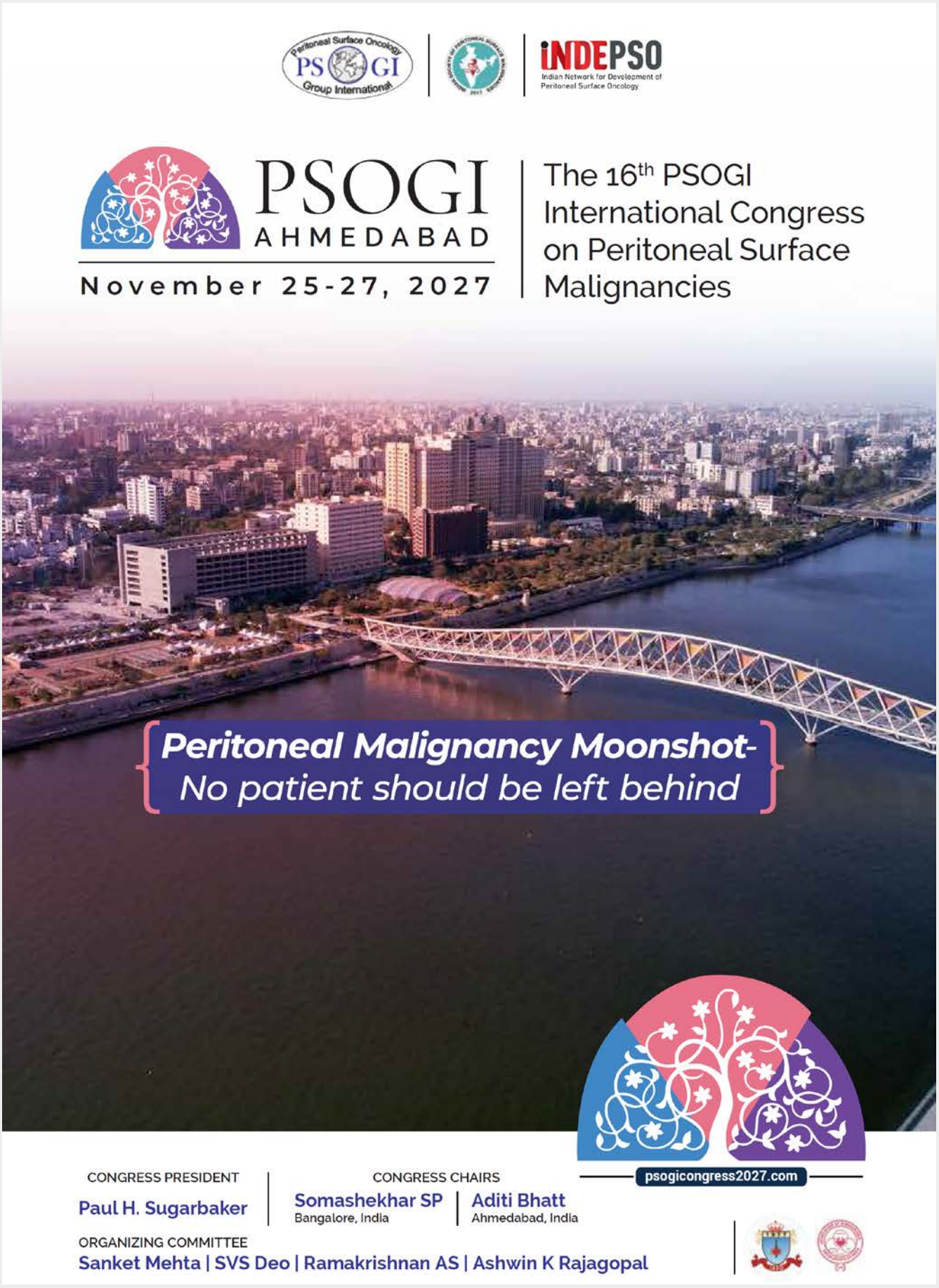
ISSPP

PSOGI esso EUROPEAN SCHOOL OF PERITONEAL SURFACE ONCOLOGY

Organised By:

National Cancer Centre Singapore SingHealth

Singapore General Hospital SingHealth


Peritoneal Surface Oncology Group International
PSOGI
INDEPSO
Indian Network for Development of Peritoneal Surface Oncology
PSOGI
AHMEDABAD
November 25-27, 2027
The 16th PSOGI International Congress on Peritoneal Surface Malignancies
Peritoneal Malignancy Moonshot-
No patient should be left behind
psogicongress2027.com
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Peritoneal metastases when optimally treated can be cured; in selected patients peritoneal metastases can be prevented. The ultimate goal is to eliminate local-regional recurrence and peritoneal metastases from the natural history of gastrointestinal and gynecologic malignancy.