

GAYA SPOLVERATO

MD, FACS | Associate Professor of Surgery | Director, General Surgery 3 – University Hospital of Padova

EXECUTIVE PROFILE

Gaya Spolverato, MD, FACS is Associate Professor of Surgery and Director of General Surgery 3 at the University Hospital of Padova, one of Italy’s leading academic surgical oncology units. Her clinical and academic activity focuses on colorectal surgical oncology, minimally invasive and robotic surgery, pelvic exenteration, artificial intelligence in surgery, and translational oncology.

She trained at Memorial Sloan Kettering Cancer Center and Johns Hopkins University and currently leads multiple national and international educational and research initiatives in surgical oncology. She is founder of the SICO Surgical Oncology Fellowship, founder of the RoSI Master in Robotic Surgery and Intelligent Systems (University of Padova), member of the ESSO Education and Training Committee, and Delegate of the Rector of the University of Padova for Equal Opportunities.

With more than 326 peer-reviewed publications, over 10,000 citations and an h-index of 57, she is among the most impactful Italian academic surgeons of her generation. Her work is redefining the future of surgical oncology through artificial intelligence, precision surgery, and national education programmes.

326	>10,000	57	FACS
Peer-reviewed Publications	Citations	H-index (Scopus)	Fellow, American College of Surgeons

NATIONAL AND INTERNATIONAL LEADERSHIP

National Leadership

- Director, General Surgery 3 – University Hospital of Padova (2024–present)
- Regional Lead, Veneto Colorectal Cancer PDTA – Regione Veneto (2025–present)
- Founder & Director, PELVITA – Multidisciplinary Pelvic Oncology Programme, AOUP (2025–present)
- Co-Founder & Director, SICO Surgical Oncology Fellowship – Italian Society of Surgical Oncology (2023–present)
- Founder & Director, Master in Robotic Surgery & Intelligent Systems (RoSI) – University of Padova (2025–present)
- Delegate of the Rector for Equal Opportunities – University of Padova (2021–present)
- Board Member, Società Italiana di Chirurgia Oncologica (SICO)
- Co-founder & Past President, Women in Surgery Italia (WIS Italia)
- Guideline Editor, AIOM – Colorectal cancer (2026–present)
- Guideline Reviewer, AIOM – Sarcoma & GIST (2021–present)
- Lead, MDT Colorectal Oncology – AOUP / Istituto Oncologico Veneto (2024–present)
- Chair, Azienda Committee – Centre for Prevention of Violence as External Cause of Disease (2024–present)
- Principal Investigator, PRIN 2022 – Artificial Intelligence in Rectal Cancer

International Leadership

- Surgical Oncology Fellow – Memorial Sloan Kettering Cancer Center, New York (2017– 2018)
- Research Fellow – Johns Hopkins University School of Medicine, Baltimore (2013–2015)
- Representative, ESSO Education & Training Committee for Colorectal Cancer
- Member, Society of Surgical Oncology (SSO)
- Fellow, American College of Surgeons (FACS)
- Member, European Surgical Association (ESA)
- Founder & Editor-in-Chief, Artificial Intelligence Surgery (journal)
- Founder Member, AIONS – Artificial Intelligence Organization of the Next Generation of Surgeons
- Invited Speaker, HIMSS 2024–2025 – AI in Surgery
- Invited Speaker, AHPBA 2026 – AI to Reduce Surgical Complications
- Hands-on Course Director, ESSO 2025 – MIS Colorectal Cancer Oncological Standards
- Proctor Intuitive Robotics – Colorectal Robotic Surgery (2025–present)

PROGRAMMES AND INITIATIVES FOUNDED

- **2016** Women in Surgery Italia (WIS Italia)
- **2023** SICO Surgical Oncology Fellowship – first national surgical oncology fellowship in Italy
- **2025** Master RoSI – Robotic Surgery & Intelligent Systems, University of Padova
- **2025** PELVITA – Multidisciplinary Pelvic Oncology Platform, AOUP
- **2020** Artificial Intelligence Surgery – peer-reviewed international journal (Founder & Editor-in-Chief)
- **2018** ReSARCh Trial – national multicentre rectal sparing prospective study
- IMMUNOREACT – multicentre translational immunology platform in rectal cancer
- Clinical AI initiatives for surgical outcome prediction (PRIN 2022 funded)

SCIENTIFIC IDENTITY AND RESEARCH THEMES

Future of Surgical Oncology

Artificial Intelligence in Surgery | Robotic & Minimally Invasive Oncology | Precision Colorectal Oncology | Pelvic Oncology | Surgical Education & Fellowship | Gender Leadership | Translational Science

CURRENT POSITIONS

Director, General Surgery 3 – Azienda Ospedale Università di Padova	October 2024 – present
Associate Professor of Surgery – University of Padova	July 2022 – present
Director, Research Biobank – AOUP	March 2025 – present
Proctor Intuitive Robotic Colorectal Surgery	April 2025 – present

ACADEMIC TRAINING AND FORMATION

Surgical Oncology Fellow – Memorial Sloan Kettering Cancer Center, New York City, NY	August 2017 – July 2018
Research Fellow – Johns Hopkins University School of Medicine, Baltimore, MD	July 2013 – February 2015
Residency in General Surgery – University of Padova & University of Verona	June 2011 – July 2017 (Summa cum Laude)
MD – University of Padova (110/110 Summa cum Laude, Distinction)	22 July 2010

INSTITUTIONAL ROLES AND GOVERNANCE

- Delegate of the Rector, Equal Opportunities – University of Padova (2021–present)
- Regional Lead, PDTA Colon and Rectum – Regione Veneto (2025–present)

- Chair, Azienda Committee – Centre for Prevention of Violence, AOUP (2024–present)
- Lead, MDT Colorectal Oncology – AOUP / IOV (2024–present)
- Founder & Lead, PELVITA Pelvic Oncology Programme (2025–present)
- Council Member, Ordine dei Medici di Padova (2021–2024)
- Lead, Commission for Medical Education – Ordine dei Medici di Padova (2021–2024)
- Member, National Observatory for Oncology Networks – AGENAS (2022–2023)
- Member, Technical Committee, Ministry of Health – Subsecretariat for Health, Sileri (2022)
- AIOM Guideline Editor – Colorectal cancer (2026–present)
- AIOM Guideline Reviewer – Sarcoma and GIST (2021–present)

ACADEMIC EDUCATION LEADERSHIP

Founding Directorships

- Co-Founder & Director, SICO Surgical Oncology Fellowship (national; 2023–present)
- Founder & Director, Master II Level in Robotic Surgery & Intelligent Systems (RoSI) – University of Padova (2025–present)

Teaching Appointments – University of Padova

- Faculty, General Surgery – MD Programme (2019–present)
- Faculty, General Surgery – Nursing Programme (2019–present)
- Faculty, Residency in General Surgery (2019–present)
- Faculty, Residency in Oncology (2023–present)
- Faculty, Master in Statistics & Epidemiology (2021–present)
- Faculty, Master in Biobanks for Research (2024–present)
- Thesis Supervisor – >30 medical graduates; >20 surgical residents (2019–present)

Scientific Congresses – Director / Scientific Chair

- Le Giornate Padovane della Chirurgia Oncologica (2025–2026)
- Midterm Congress SICO (2023)
- WIS Italia Annual Congress (2016–2025, 10 editions)
- Core Skills in Laparoscopic Surgery Course (2025–present)
- Core Skills in Robotic Surgery Course (2025–present)

ARTIFICIAL INTELLIGENCE IN SURGERY: A LEADERSHIP AREA

Gaya Spolverato is one of the most visible Italian academic surgeons at the intersection of AI and surgical oncology. Her contributions include:

- Founder & Editor-in-Chief, Artificial Intelligence Surgery (peer-reviewed international journal)
- 2024 Best Editorial Board Member Award – Artificial Intelligence in Surgery
- Principal Investigator, PRIN 2022 – AI model predicting response in rectal cancer after neoadjuvant treatment
- Invited Speaker, HIMSS 2024 and 2025 – “AI in Surgical Oncology”; “How AI can bridge the gender gap in surgery”
- Invited Speaker, AHPBA 2026 – “Using AI to reduce anastomotic leak and surgical complications”
- Founder member, AIONS – Artificial Intelligence Organization of the Next Generation of Surgeons
- Lead Author / Consensus contributor – Ethics of AI in HPB Surgery (E-AHPBA); AI-enabled Surgomics (Bioengineering 2026)
- Machine learning radiomics for rectal cancer response prediction (several papers and PRIN grant); AI for anastomotic leak (several papers and presentations)
- Co-Director, RoSI Master – embedding AI curriculum in surgical education

SOCIETY MEMBERSHIPS AND EDITORIAL ROLES

- Co-founder & Past President – Women in Surgery Italia (WIS Italia)
- Board Member – Società Italiana di Chirurgia Oncologica (SICO)
- Representative – ESSO Education & Training Committee, Colorectal Cancer

- Member – Society of Surgical Oncology (SSO)
- Fellow – American College of Surgeons (FACS)
- Member – European Surgical Association (ESA)
- Member – Italian Club of Robotic Surgery (ICoRS), Scientific Committee
- Editor-in-Chief – Artificial Intelligence Surgery
- Associate Editor – BMC Gastroenterology

SELECTED INVITED LECTURES (2022–2026)

- Using AI to reduce surgical complications: Anastomotic Leaks and Beyond – AHPBA 2026
- Textbook oncological outcome in colorectal cancer – International Colorectal Congress 2025
- How AI can bridge the gender gap in surgical oncology – HIMSS 2025
- Hands-on Course: Oncological Standards in MIS Colorectal Cancer Surgery – ESO 2025
- AI in Surgical Oncology – HIMSS 2024
- A Machine Learning Model to Predict Chemoradiation Response in Rectal Cancer – ACS 2024
- Is Total Neoadjuvant Therapy overtreatment? A critical evaluation – ESO 2024
- The application of artificial intelligence to rectal cancer diagnosis and treatment – SICO 2024
- Advancing Surgical Care: The Role of Artificial Intelligence Surgery – Oxford Summer School, UniPD 2024
- Therapeutic options for local recurrence in rectal cancer – EAES 2023
- Shaping the future of new leaders in Surgical Oncology – ESO 2023
- From Burnout to Stress Resilience in Surgery – EHPBA 2023
- Surgery in dMMR/MSI Advanced Colorectal Cancer after Immunotherapy – STAR Meeting 2022
- Careers for women in surgery: problems and perspectives – SSAT 2022
- GIST: A model of Oligometastatic approach – SIC 2022
- Rectal Sparing Approach (ReSARCh): final results – ESO 2022
- Mentoring – E-AHPBA 2021

SELECTED RECENT PUBLICATIONS

Bibliometric Profile

326	>10,000	57	0000-0002-7275-2573
Publications	Citations	H-index	ORCID

Landmark & High-Impact Papers (selection)

- Total Neoadjuvant Therapy for Locally Advanced Rectal Cancer. JAMA Oncology 2025 (International Real-World TNT Study Consortium).
- NO-CUT: Total neoadjuvant therapy followed by non-operative management or surgery in stage II-III rectal cancer. Lancet Oncology 2025.
- Comparing local excision with watch and wait for rectal cancer after neoadjuvant chemoradiotherapy. Colorectal Dis 2025.
- Quality of life and functional outcomes after rectal sparing approaches. Int J Surg 2025 (ReSARCh Study Group).
- Gender Disparity in Surgical Research: Authorship in Randomized Controlled Trials. J Surg Res 2024.
- Robotic, transanal, and laparoscopic TME for locally advanced rectal cancer: European multicentre study. BJS Open 2024 (EuMaRCS Study Group).
- Colorectal-vaginal fistula after rectal cancer resection: international comparative cohort. Br J Surg 2025 (TENTACLE-Rectum Collaborative).
- IMMUNOREACT 4: Peritumoral Microenvironment Associated with Anastomotic Leaks After Rectal Cancer Surgery. Cancers 2026.
- Machine Learning Model Based on MRI Radiomics to Predict Response to Chemoradiation in Rectal Cancer. Life 2024.
- Ethics and trustworthiness of AI in HPB Surgery. HPB (Oxford) 2025 – E-AHPBA Innovation Committee.

GRANTS AND AWARDS

- RICERCA FINALIZZATA NAZIONALE 2026 – Co- PI: PREDICT PanNET: A Nomogram-Based Approach to Personalized and Cost-Effective Surveillance for Pancreatic Neuroendocrine Tumor Recurrence
- PRIN 2022 – Principal Investigator: “Artificial Intelligence model predicting pathological response in locally advanced rectal cancer”
- TERZA MISSIONE – Principal Investigator: “Prevention, sustainability and diagnostic-therapeutic pathways in oncology” (2023)
- CARIPARO Eccellenza – Co-investigator: ImmuneSARC (2022)
- 2024 Best Editorial Board Member Award – Artificial Intelligence in Surgery
- Best Oral Presentation Award – IHPBA World Congress (2014)
- SITO Research Award – Italian Society of Transplant (2014)
- International Award – Society for Clinical Vascular Surgery (2015)

QUALIFICATIONS AND LICENCES

- ASN – Abilitazione Scientifica Nazionale, Settore 06/C1 Chirurgia Generale, Fascia I (Professore Ordinario; valid 09.11.2020–09.11.2029)
 - FACS – Fellow of the American College of Surgeons
 - ECFMG / USMLE Step 1, Step 2CK, Step 2CS
 - Formazione manageriale per Direzione Strutture Complesse – Regione Veneto (2025)
 - Medtronic Hugo Robot Training – IRCAD Strasbourg (2023)
 - Da Vinci Xi Robotic Training – Robotic Academy Intuitive (Naples 2022; New York City 2017)
-