

## **Prof. Roberto BIFFI, MD**

Director, Division of Gastro-Intestinal Surgery

### **Personal Details**

Place of Birth: Aicurzio (Milan)

Date of Birth: September 16, 1956.

E mail: [roberto.biffi@ieo.it](mailto:roberto.biffi@ieo.it)

Tel. +39 02 57489609 or 94372690 (Personal Assistant)

Fax +39 02 94379215

### **Education and PHD/Masters/Courses**

October 1970 - July 1975: High School of Humanistic Sciences - Diploma di Maturità Classica, full honors. Liceo-Ginnasio statale "Bartolomeo Zucchi", Monza.

November 1975 - July 1981: Medical School – Medical Degree, *magna cum laude*. University of Milan.

November 1981 - July 1986: Post-Doctoral School of Surgery, *magna cum laude*. University of Milan.

November 1987 - July 1992: Post-Doctoral School of Urology, *magna cum laude*. University of Milan.

May 1992 – July 1992: Visiting Surgeon. Transplantation Institute and Presbyterian University Hospital, Pittsburgh-PA, US. Director: Prof. T. E. Starzl. Topic: experimental and clinical small bowel transplantation.

February 1993 – February 2003: Fellow, Advanced Trauma Life Support ®. American College of Surgeons, Committee on Trauma. Program ATLS®.

June 1999: Visiting Surgeon. Centre Hepato-Biliaire, Hopital Paul Brousse, Université Paris Sud, Villejuif, France . Director: Prof. H Bismuth. Topic: surgery of the liver and biliary tree.

December 2001 – December 2005: Instructor, Advanced Trauma Life Support ®. American College of Surgeons, Committee on Trauma. Program ATLS®.

May 2004 – November 2004: Course of laparoscopic and minimally invasive surgery. ACOI School -Associazione Chirurghi Ospedalieri Italiani. Modena Hospital (prof. A. Melotti). Final Diploma, full honors.

October 2006 – March 2007: Course of Medical Management for Directors of Clinical Units. IREF – Istituto Regionale di Formazione, Regione Lombardia. Final Diploma, full honors.

September 2006: Course of robot-assisted abdominal surgery. ACOI School - Associazione Chirurghi Ospedalieri Italiani. Grosseto Hospital (prof. P.C. Giulianotti). Final Diploma.

### **Titles and Positions**

NOVEMBER 1981 -JULY 1986: RESIDENT OF GENERAL SURGERY. IRCCS Ospedale Maggiore Policlinico and Istituto di Chirurgia d'Urgenza, University of Milano, Milano (Directors: Proff. V. Staudacher and G. Bevilacqua).

JULY 1986 –AUGUST 1987: RESEARCH FELLOW. Winner of a Reaserch Grant from the Italian Ministry of Health for a clinical study on protein metabolism in septic and cirrhotic patients. IRCCS Ospedale Maggiore Policlinico and Istituto di Chirurgia d'Urgenza, University of Milano, Milano, (Director: Prof. G. Bevilacqua).

AUGUST 1987 – MARCH 1989: JUNIOR ASSISTANT. IRCCS Ospedale Maggiore Policlinico and Istituto di Chirurgia d'Urgenza, University of Milano, Milano (Director: Prof. G. Bevilacqua).

JULY 1989 –FEBRUARY 1993: SENIOR STAFF ASSISTANT. IRCCS Ospedale Maggiore Policlinico and Istituto di Chirurgia d'Urgenza, University of Milano, Milano (Director: Prof. B. Andreoni).

FEBRUARY 1993 – MAY 1994: CONSULTANT SURGEON. IRCCS Ospedale Maggiore Policlinico and Istituto di Chirurgia d'Urgenza, University of Milano, Milano (Director: Prof. G. Tiberio).

MAY 1994 – JULY 2001: DEPUTY DIRECTOR, Division of General Surgery, European Institute of Oncology, Milano (Director: Prof. B. Andreoni)

JULY 2001 – JULY 2006: CO-DIRECTOR, Division of General Surgery, European Institute of Oncology, Milano (Director: Prof. B. Andreoni)

JULY 2006 – OCTOBER 2011: DIRECTOR, Division of Abdomino-Pelvic Surgery, European Institute of Oncology, Milano.

OCTOBER 2011 – MAY 2014: DIRECTOR, Division of Abdomino-Pelvic and Minimally Invasive Surgery, European Institute of Oncology, Milano.

MAY 2014 up to now: DIRECTOR, Division of Gastro-Intestinal Surgery, European Institute of Oncology, Milano.

### **Academic titles**

1989-1992: PROFESSORE A CONTRATTO. Post-Doctoral School of Surgery, University of Milano.

1993-2001: TUTOR. Post-Doctoral School of Surgery, University of Milano.

DECEMBER 2013: He received approval for tenure employment as FULL PROFESSOR OF SURGERY, as a direct result of a nation-wide centralized competitive awarding mechanism. Italian Ministry of Education, University and Research, Rome.

#### **Other Titles**

- Fellow of the Italian societies of surgery (sic), of surgical oncology (sico), of parenteral and enteral nutrition (sinpe, national deputy-president); fellow of the European societies of surgical oncology (esso) and of artificial nutrition and metabolism (espen).
- Founder of the GAVECOLT group (Italian study group on long-term central venous access).
- Fellow of the Society of Pelvic Surgeons.
- Member of the editorial boards of Journal of Vascular Access, Nutritional Therapy and Metabolism, e-Cancer Medical Science.
- Associate editor of European Journal of Surgical Oncology.
- Reviewer of The Lancet, Annals of Surgery, European Journal of Surgical Oncology, Oncology, Supportive Care in Cancer.
- Director of the European School of Abdomino-pelvic Surgery in Gynecologic Oncology (ESAGON) – IEO Education.

## CLINICAL ACTIVITIES CARRIED OUT IN IEO

Since 1994 Dr. Biffi performed more than **5000 major surgical procedures in the field of abdominal oncological surgery**, treating **esophageal, gastric, small bowel, colo-rectal, anal, liver and pancreatic cancers**. His clinical focus has been on extensive application of minimally invasive surgical techniques (**laparoscopy and robot-assisted surgery**). He has also acquired substantial expertise in the multimodal treatment of abdominal sarcomas, gastrointestinal stromal tumors (GIST) and primary / secondary tumors of kidneys and adrenal glands.

A significant portion of his clinical activity is carried out in close cooperation with the Division of Gynecology Oncologic Surgery, in order to implement multidisciplinary surgical treatment of **advanced ovarian cancers** within the Ovarian Cancer Center at IEO.

Cases are regularly discussed with medical oncologists, radiation oncologists, endoscopists and interventional radiologists within **multidisciplinary groups**.

He also developed unique expertise in the field of **long-term central venous access** for chemotherapy, palliation and nutrition. Since 1994 more than 7500 catheters were implanted by Dr. Biffi and his clinical team at IEO, with substantial research efforts in this field being underway.

## RESEARCH ACTIVITIES CARRIED OUT IN IEO

Area "Surgical Oncology of GI tract": "Principle investigator" of an International multi center randomized trial aimed at assessing the impact of a preoperative chemotherapy in locally advanced operable **gastric cancer**.

Active participation to research programs of **adjuvant and neo-adjuvant treatment of colorectal tumors and liver metastases**.

Active participation to the ROLARR international trial (**Robotic vs Laparoscopic Rectal Cancer Resection**).

Area "Totally implantable central venous access devices": he concluded a randomized trial comparing **2 different devices for long-term central venous access in oncology patients**. He carried out a randomized 3-arm trial for evaluation of the best approach to central veins for long-term chemotherapy.

Area "Artificial nutrition in oncology": he participated to a randomized multicenter trial comparing **total parenteral versus enteral nutrition in oncology surgery** of GI tract, whose results were published in *The Lancet*. He coordinated an observational multicenter national survey on more than 2 hundred advanced oncology patients submitted to **oral integration of omega-3 fatty acids**, with the aim to assess its impact on nutritional parameters and quality of life.

He concluded a randomized Italian multicenter trial aimed at evaluation of possible effects of **parenteral administration of glutamine** on postoperative infectious morbidity in surgical oncology patients.

He coordinated a national survey on the **prevalence of calories and protein malnutrition** in oncology Italian outpatients. Now he is running a trial on the impact of **preoperatively administered malto-dextrins** on postoperative resistance to insulin and infectious complications in surgical oncology patients.

Area "Venous thromboembolism in surgical oncology": he concluded as Co-Investigator a national multicenter survey on more than 2 thousands patients, investigating prevalence of **deep venous thrombosis in surgical oncology patients**. Moreover, he participated to a multicenter International trial enrolling more than 2,500 patients receiving **different anti-thrombotic drugs**.

## PAST CLINICAL AND RESEARCH ACTIVITIES

Professional career: on June 1986 he was awarded a Research Grant of the Italian Ministry of Health for an investigation study on protein synthesis in septic and cirrhotic patients, at the Istituto di Chirurgia d'Urgenza, University of Milano and Istituto di Ricovero e Cura a Carattere Scientifico Ospedale Maggiore Policlinico di Milano (Director: Prof. Vittorio Staudacher).

On August 1987 he became Junior Assistant (until March 1989) at the Istituto di Chirurgia d'Urgenza - IRCCS Ospedale Maggiore Policlinico di Milano (Director: Prof. Giuseppe Bevilacqua). He joined - as a trauma specialist -

the staff of Emergency Unit of the Regione Lombardia (Coordinator: Prof. G. M. Sinigaglia).

On July 1989 he obtained the position of Senior Staff Assistant, again at the Istituto di Chirurgia d'Urgenza, IRCCS Ospedale Maggiore Policlinico, Milano. He held this position until February 1993, when he became Consultant Surgeon in the Emergency Department of the same Institution.

On May 1994 he moved to the European Institute of Oncology as Deputy Director of the Division of General Surgery (Director: Prof. Bruno Andreoni), where is still working.

**Research:** on 1991 he obtained a 3-year research grant from the Italian Ministry of Health for a research program on intestinal transplantation. Focusing on this topic, he was Visiting Surgeon on 1992 at the Transplantation Institute and Presbyterian University Hospital, Pittsburgh-PA, US. Director: Prof. T. E. Starzl. He led experimental studies on this topic, obtaining publications in major impacted journals, and lecturing at international congresses (Paris 1993 and Pittsburgh 1995). A paper published in European Journal of Surgery – dealing with enteral nutrition and bacterial intestinal translocation in piglets submitted to small bowel transplantation – was selected by an independent board of US specialists to be published in the Year Book of Surgery 1998, published by Mosby.

Other research topics in those years were trauma surgery, autotransfusion techniques and quality assurance in medicine.

### AWARDS AND OTHER RECOGNITIONS

His research activity obtained a number of scientific awards and recognitions:

Premio di Operosità Scientifica on April 1985, from the Lega per la Rifondazione dell'Ospedale Maggiore of Milano.

Scientific Award "Forum Giovani"- SERONO 1989, for research activity on autotransfusion in surgery.

Member of the Scientific Committee of the "Ospedale Maggiore Policlinico", Istituto di Ricovero e Cura a Carattere Scientifico di Diritto Pubblico, Milano 1991.

Award for the best scientific paper – Società Italiana di Nutrizione Parenterale ed Enterale, 1994.

Selection of a paper on the Year Book of Surgery, Mosby 1998.

Competitive selection for a 2-year research grant (2003-04) from AIRC (Associazione Italiana per la Ricerca sul Cancro).

### PUBLICATIONS

He authored 135 full papers, published in international medical journals, with a total Impact Factor (I.F.) more than 450. He published more than 250 congress proceedings (mostly international). He was Invited Speaker in a number of events. He authored Guidelines from international scientific societies.

Main scientific topics of research activity: surgical oncology of GI tract, robot-assisted abdomino-pelvic surgery, surgery of advanced ovarian cancer, central venous access devices, artificial nutrition, small bowel transplantation.

#### Stats 2013:

Number of publication views	3935
Number of citations	656
Full text downloads	602
Total Impact Factor	451.82
Research Gate score	37.48 (> 95 percentile)

#### List of some papers:

The role of the robotic technique in minimally invasive surgery in rectal cancer.

Bianchi PP, Luca F, Petz W, Valvo M, Cenciarelli S, Zuccaro M, **Biffi R.**

Ecancermedalscience. 2013 Sep 26;7:357.

Impact of robotic surgery on sexual and urinary functions after fully robotic nerve-sparing total mesorectal excision for rectal cancer.

Luca F, Valvo M, Ghezzi TL, Zuccaro M, Cenciarelli S, Trovato C, Sonzogni A, **Biffi R.**

Ann Surg. 2013 Apr;257(4):672-8.

Factors predicting worse prognosis in patients affected by pT<sub>3</sub> No colon cancer: long-term results of a monocentric series of 137 radically resected patients in a 5-year period.

**Biffi R**, Botteri E, Bertani E, Zampino MG, Cenciarelli S, Luca F, Pozzi S, Cossu ML, Chiappa A, Rotmensz N, Bazolli B, Magni E, Sonzogni A, Andreoni B.

Int J Colorectal Dis. 2013 Feb;28(2):207-15.

Surgical site infections following colorectal cancer surgery: a randomized prospective trial comparing common and advanced antimicrobial dressing containing ionic silver.

**Biffi R**, Fattori L, Bertani E, Radice D, Rotmensz N, Misitano P, Cenciarelli S, Chiappa A, Tadini L, Mancini M, Pesenti G, Andreoni B, Nespola A.

World J Surg Oncol. 2012 May 23;10:94.

Operative blood loss and use of blood products after full robotic and conventional low anterior resection with total mesorectal excision for treatment of rectal cancer.

**Biffi R**, Luca F, Pozzi S, Cenciarelli S, Valvo M, Sonzogni A, Radice D, Ghezzi TL.

J Robot Surg. 2011 Jun;5(2):101-107.

Surgical and pathological outcomes after right hemicolectomy: case-matched study comparing robotic and open surgery.

Luca F, Ghezzi TL, Valvo M, Cenciarelli S, Pozzi S, Radice D, Crosta C, **Biffi R**.

Int J Med Robot. 2011 May 11.

Impact on survival of the number of lymph nodes removed in patients with node-negative gastric cancer submitted to extended lymph node dissection.

**Biffi R**, Botteri E, Cenciarelli S, Luca F, Pozzi S, Valvo M, Sonzogni A, Chiappa A, Leal Ghezzi T, Rotmensz N, Bagnardi V, Andreoni B.

Eur J Surg Oncol. 2011 Apr;37(4):305-11.

No impact of central venous insertion site on **oncology** patients' quality of life and psychological distress. A randomized three-arm trial.

**Biffi R**, Orsi F, Pozzi S, Maldifassi A, Radice D, Rotmensz N, Zampino MG, Fazio N, Peruzzotti G, Didier F.

Support Care Cancer. 2011 Oct;19(10):1573-80.

Surgical outcome after docetaxel-based neoadjuvant chemotherapy in locally-advanced gastric cancer.

**Biffi R**, Fazio N, Luca F, Chiappa A, Andreoni B, Zampino MG, Roth A, Schuller JC, Fiori G, Orsi F, Bonomo G, Crosta C, Huber O.

World J Gastroenterol. 2010 Feb 21;16(7):868-74.

Full robotic left colon and rectal cancer resection: technique and early outcome.

Luca F, Cenciarelli S, Valvo M, Pozzi S, Faso FL, Ravizza D, Zampino G, Sonzogni A, **Biffi R**.

Ann Surg Oncol. 2009 May;16(5):1274-8.

Best choice of central venous insertion site for the prevention of catheter-related complications in adult patients who need cancer therapy: a randomized trial.

**Biffi R**, Orsi F, Pozzi S, Pace U, Bonomo G, Monfardini L, Della Vigna P, Rotmensz N, Radice D, Zampino MG, Fazio N, de Braud F, Andreoni B, Goldhirsch A.

Ann Oncol. 2009 May;20(5):935-40.

Institutional guidelines and ongoing studies in management of liver tumours: the experience of the European Institute of Oncology.

**Biffi R**, Orsi F, Zampino MG, Chiappa A, Fazio N, De Braud F, Bonomo G, Monfardini L, Vigna PD, Luca F, Bodei L, Bartolomei M, Catalano G, Leonardi MC, Ferrari M, Andreoni B, Goldhirsch A, Paganelli G, Orecchia R.

Ecancermedicalscience. 2008;2:64.

Preoperative bi-fractionated accelerated radiation therapy for combined treatment of locally advanced rectal cancer

in a consecutive series of unselected patients.

**Biffi R**, Marsiglia H, Fossa BJ, Leonardi MC, Cante D, Lazzari R, Chiappa A, Cenciarelli S, Andreoni B, Zampino MG, Orecchia R.

Int Semin Surg Oncol. 2007 Sep 20;4:23.

Extended lymph node dissection without routine spleno-pancreatectomy for treatment of gastric cancer: low morbidity and mortality rates in a single center series of 250 patients.

**Biffi R**, Chiappa A, Luca F, Pozzi S, Lo Faso F, Cenciarelli S, Andreoni B.

J Surg Oncol. 2006 Apr 1;93(5):394-400.

Use of totally implantable central venous access ports for high-dose chemotherapy and peripheral blood stem cell transplantation: results of a monocentre series of 376 patients.

**Biffi R**, Pozzi S, Agazzi A, Pace U, Floridi A, Cenciarelli S, Peveri V, Cocquio A, Andreoni B, Martinelli G.

Ann Oncol. 2004 Feb;15(2):296-300.