

## **CV Prof Dr Nicole D. Bouvy**

The leading principle of Prof. Bouvy's career is her mission to diminish, prevent and even eradicate surgical trauma that can be associated with each surgical procedure. This principle (often stated as 'a surgeon without a knife'), in a professional discipline that has regarded for centuries the surgical knife as the single most important instrument, in itself is visionary and breakthrough. Nicole Bouvy has become a globally recognized icon of change in her profession, actively promoting new roles and responsibilities for these 'surgeons of tomorrow'.

In 2004 Nicole Bouvy was the first surgeon in Europe to perform a surgical laparoscopic procedure with the four armed da Vinci robot. Keyhole operations (laparoscopy) fundamentally reduce surgical trauma: smaller incisions, less adhesions, quicker recovery. Thereafter she was one of the first to perform surgical procedures through the mouth thereby avoiding the risk for the patient to develop adhesions or abdominal wall hernia. Namely overweight and reflux can be treated in such a way.

>From less surgical trauma to zero-surgical trauma: Nicole is actively driving innovative solutions and breakthrough innovations that can further reduce and prevent surgical complications caused by the surgical knife. In order to achieve this, her research studies are often outside the primary field of surgery, such as the development of biomaterials to decrease the occurrence of anastomotic leakage and incisional hernia, which were developed with the University of Trieste (Italy) and the University of Applied Sciences in Aachen (Fachhochschule, Germany). In close collaboration with the Technical University Eindhoven a new gel is being developed, which slowly releases chemotherapy in the intra-abdominal space for patients with peritoneal metastases. In another research program, jointly with the Technical University Twente (Netherlands) an artificial neural network is being developed enabling extreme early detection of a wide variety of diseases in exhaled air.

She is actively involved in several start-up initiatives and companies, such as Imec (development of digital lenses for precision identification of complex anatomical structures, Maastricht) and Activ Surgical (empowering scopes with tools that human cannot see, Boston).

She provides an (inter)national contribution to education through proctoring for various specialist courses, such as robot and endoluminal surgery courses and laparoscopic suturing. Through the EAES organization she is actively involved and contributing to many courses to introduce and expand laparoscopic surgery in rural areas (mainly Eastern Europe). In 2021 she started a European network to make the OR greener and gave many lectures on this topic educating and creating awareness beyond OR personal on this topic.

Nicole Bouvy serves the European Association of Endoscopic surgery for many years and she is member of the executive board of EAES and chair of the program committee Roma 2023. She is chairman of the Dutch Endoscopic society (NVEC) and secretary of the Dutch Society of Surgery.