

## **Report of clinical visit to Memorial Sloan Kettering Cancer Center in New York 7.-27.10.2024/ Minna Sopo**

### **Gynecological cancer surgery in New York**

*I visited the gynecological surgery unit of the Memorial Sloan Kettering Cancer Center in New York for three weeks in 7.-27.10.2024. The hospital has been ranked among the two most significant cancer hospitals in the USA for over three decades, and its gynecological cancer patient volumes and the clinic's scientific research activity are unparalleled.*

*Overall, the visit was very interesting and rewarding to get inside the daily life of a large, international cancer surgery unit, get to know its practices, notice the differences and, on the other hand, also the positive aspects that are happening in our hospital in Finland.*

Memorial Sloan Kettering Cancer Center (MSKCC) consists of the Memorial Surgical Hospital and the Sloan Kettering Research Institute, and is located on the Upper East Side of Manhattan, New York. The main hospital and research unit, located on the East River waterfront, form their own block; surgical activities are divided into the main hospital and the Josie Robertson Surgery Center (JRSC) facilities next to the Queensboro Bridge, which focuses on day and short-term surgery. The outpatient clinic and outpatient activities are located in several other units across Manhattan. The central surgical unit of the main hospital has 22 operating rooms and the JRSC has 12 rooms. In addition to gynecological patients, they treat cancer surgeries in thoracic, neuro, gastrointestinal, urological, and plastic surgery. The hospital is private: it receives significant donations from foundations and commercial entities, for example, to enable active research activities. Patients must have either private medical insurance or those aged 65 or over can be covered by Medicare, which covers treatment, i.e., is in practice, public sector insurance.

MSKCC employs 15 surgical gynecological oncologists and 26 medical gynecological oncologists. All gynecological oncologists operate their patients and are also responsible for pre-operative assessment and post-operative treatment planning. In addition, the gynecological clinic has 14 doctors performing a subspecialization in gynecological oncology in clinical work and two doing research. There are 6–8 specialising doctors in the clinic annually completing oncological training for gynecological specialization.

The gynecological clinic performed 3,300 surgeries in 2023, and according to the prognosis, there will be about 200 more operations in 2024. Approximately 500 ovarian cancer surgeries were performed, approximately 600 endometrial/uterine cancer surgeries and approximately 120 vulvar/vaginal carcinoma surgeries in 2023. 28–30 C1 type radical hysterectomies were performed, of which 60 % were open and 40 % were robot-assisted. The unit participates in an international, randomized multicenter study, the RACC trial, in which early-stage cervical carcinoma patients are randomized to either open or robot-assisted surgery.

Trachelectomies are performed 10–12 annually. There are 400–500 gynecological outpatient visits per month.

The clinic's research activity attracted attention and aroused admiration. Gynecological oncology subspecialising doctors all do 1–2 years (on average 1.5 years) of research work (clinical and/or laboratory research) related to their specialization before providing surgical service. The specialization in gynecological oncology takes a total of four years, of which two years are surgery and one year of medical oncology. Gynecological oncologists have groups responsible for research and development in different areas, e.g. the ovarian carcinoma group and the uterine cancer group, which include 4–6 gynecological oncologists per group. The working week of a gynecological oncologist also includes one academic day per week.

The director of the clinic, Professor Abu-Rustum, is an experienced pioneer in gynecological cancer surgery. He also serves as a professor of obstetrics and gynecology at Weill Cornell Medical College. He has been awarded the IGCS Excellence in Teaching Award 2021 as a top-level surgical educator and is a pioneer in, among other things, the surgical treatment of cervical cancer and sentinel lymph node dissection. Prof. Abu-Rustum's extensive scientific research focuses on the surgical treatment of gynecological cancers and innovative surgical approaches, for which he was awarded the 2017 SGO Innovation Award. He has worked at Memorial Sloan Kettering Cancer Center for 23 years and has written or participated in over 300 scientific publications and several gynecological textbooks.

### **Close cooperation of surgeons guarantees learning**

A typical working week for a gynecologist in the clinic consists of two surgery days, two clinical work days (outpatient clinic, department work) and one academic research day. Surgical patients are treated in close cooperation with the subspecialising fellows who are on their surgical practice, the subspecialising fellows rotate the postoperative surgical patients in the department before the start of the day's surgeries and also take care of the implementation of postoperative orders and discharge. Depending on the skill level and the complexity of the surgery, the subspecialising fellows also largely operate on patients under the close supervision of the gynecologist, and the senior operates on the most challenging stages/surgeries. Teaching robotic-assisted surgery also occurs very naturally in the same way, because all robotic rooms have dual consoles for teaching. There are a total of 16 robots in the hospital. On one surgical day, the same team can perform open, laparoscopic, and robot-assisted surgeries. One surgical team performed extensive debulking surgeries a maximum of two operations a day, but one team could perform four to six shorter operations a day, meaning that surgery days generally continued until the evening.

There were gynecological activities in 3–6 rooms daily at the main hospital and in three operating rooms at the JRC. The medical resourcing for surgeries was really abundant, as the specializing doctors for gynecology were also assisting in the surgeries and in robotic surgeries there could also be so-called general assistants who worked as robotic surgery

assistants across specialty boundaries, in which case the specializing doctor performed essentially the same task as the instrument nurse in our hospital, namely uterine manipulation.

The undersigned participated mainly in the operating room activities according to a pre-prepared program, of course, I was allowed to choose the most interesting and useful surgeries according to my interest. In addition, weekly clinic scientific meeting lectures and MDT meetings were part of the program. Most of the surgeries I participated during the three weeks were open ovarian cancer debulking surgeries and robot-assisted uterine and cervical cancer surgeries, and some open radical hysterectomies were also included in the program.

The most significant differences from our practices were that the gynecologist performs also intestinal/ bowel resections and, for example, splenectomy in debulking operations for ovarian carcinoma. The gastrosurgeon was invited only to participate in more demanding gastrosurgical procedures such as ventricular and pancreatic resections. HIPEC surgeries (hyperthermic intraperitoneal chemotherapy) are performed rarely at interval debulking situation in the treatment of peritoneal carcinoma.

The cooperation between the gynecologist and the subspecialising fellow in the operating room, especially in tissue preparation, was very close and intensive: it was noteworthy that energy instruments were used somewhat less than we do, and traditional preparation and diathermy were used very actively. Of course, a tissue fusion device (Ligasure) was used in most of the surgeries. An interesting detail was that the critical information of the surgery was displayed on the large screen in the operating room, e.g. amount of bleeding, urine output in “real time”, names of surgical team members, critical patient information, stages and times of surgery, etc. easily visible to everyone.

Almost all gynecologists also perform robot-assisted surgeries. In practice, sentinel lymph node technology has replaced total lymphadenectomy in the treatment of uterine cancer. ICG reinjections are rarely needed, but in practice, sentinel lymph nodes are always found and site-specific lymphadenectomy is rarely needed anymore. In serous uterine cancers, instead of removing the omentum, only an omentum biopsy was taken. In traditional laparoscopy, only three trocar ports are routinely used, of which the camera port is 5 mm wide. The operator holds the camera and again, the preparation and use of the energy instrument are carried out in close cooperation between the gynecologist and the subspecialising fellow. It was also interesting that a metal detector was used after the surgery to detect any possible folds left in the abdominal cavity.

### **The meeting activities were of high quality**

Thursday mornings began at 07:00a.m. with three-hour marathon meetings. At first, there were high-quality scientific clinical meeting presentations, which concerned, among others, the local Lynch syndrome research project and gynecological pathology by visiting lecturers. This was followed by an MDT (multidisciplinary team) meeting, where the entire clinic and

multidisciplinary discussions were held to discuss the research results and further treatment plans of the operated/treated patients. In addition, internal issues of the clinic could be discussed and, among others, complication statistics and the length of ward periods were analyzed, and a working group was established to minimize the aforementioned risks by various means.

General safety in the USA, and especially in public spaces, often raises questions and interest. At MSKCC, all exterior doors were guarded and a photo pass card was presented upon entering, which was given at the beginning of the visit. In addition, at JRSC, a locator was always given upon entering the building, from which the person's location could be determined in real time. JRSC was otherwise very modern in terms of facilities, including the staff social facilities with restaurants, rest rooms and magnificent outdoor viewing terraces, which were very comfortable.

All in all, the visit was very interesting and rewarding. The advantages of a large unit are naturally the abundance of material, versatility and numerous repetitions in operational activities. Overall, however, based on this, I can state that the level of care and gynecological cancer treatment in Finland and Kuopio meets international standards and is very competitive. I would like to express my warm thanks to The Nordic Federation of Obstetrics and Gynecology for supporting this clinic visit!