OVEREXPRESSION OF THE ORPHAN NUCLEAR RECEPTOR NR2F6 IS ASSOCIATED WITH AN IMPROVED SURVIVAL IN ENDOMETRIAL CANCER PATIENTS

Lousia Poppe, Tobias Jagomast, Jülika Ribbat-Idel, Sophie Beume, Georgios Gitas, Franziska Hampertmacher, Achim Rody, Sven Perner, Lars Hanker. University Hospital Schleswig-Holstein, Campus Luebeck, Gynecology and Obstetrics, Luebeck, Germany; 2Charité, Gynecology and Obstetrics, Berlin, Germany

Abstracts

Objectives NR2F6 (nuclear receptor subfamily 2 group F member 6, also called Ear-2) is known to be an orphan nuclear receptor being an intracellular immune checkpoint in effector T cells. It might play an essential role for tumor development and growth. Therefore, the prognostic impact of NR2F6 in endometrial cancer is evaluated in this study.

Methods Expression analysis of NR2F6 in 142 endometrial cancer patients was performed by immunohistochemistry. Staining intensity of tumor cells was computerized assessed semi-quantitatively, and results were correlated with clinicopathological characteristics and survival.

Results 46 of 117 evaluable samples (39.3%) showed an overexpression of NR2F6, leading to an improvement of the overall (OS) and disease-free survival (DFS). In NR2F6 positive patients, the mean OS was 156.6 months (95% confidence interval (CI): 142.4 – 170.8) compared to 105.8 months in NR2F6 negative patients (95% CI: 85.6 – 125.9; p = 0.025). The disease-free survival differed by 58.4 months (156 months (95% CI: 142.2 – 169.9) vs. 97.6 months (95% CI: 74.7 – 120.6), p = 0.004). Furthermore, we found significant associations between NR2F6 positivity, MMR status, and PD1 status. A multivariate analysis suggests NR2F6 to be an independent factor influencing the disease-free survival (p = 0.037).

Conclusions This is the first report on the prognostic impact of NR2F6 in endometrial cancer patients. We could demonstrate that there is a significant better progression-free and overall survival for patients with overexpression of NR2F6 in patients with endometrial cancer. Further studies are required to validate its prognostic impact.

PROSPECTIVE ANALYSIS OF LEARNING CURVE IN ROBOTIC ASSISTED TYPE-I EXTRAFASCIAL PANHYSTERECTOMY WITH PELVIC AND PARAORTIC LYMPHADENECTOMY FOR ENDOMETRIAL CANCER IN AN INDIAN TERTIARY CARE CENTER

Eloey Saldaraha*, Sp Somashekar, Ashwin Rajagopal, Rohit Kumar. Manipal Comprehensive Cancer Centre, Gynec and Surgical Oncology, Bangalore, India

Objectives Prospective non-randomized observational study was designed to analyze the proficiency and efficiency of robotic assisted type-I extrafascial pan hysterectomy with pelvic and para-aortic lymphadenectomy in treatment of endometrial cancer patients in an Indian tertiary care center. We intended to assess the pace in which surgeons gain proficiency using cumulative summation (CUSUM) technique.

Methods 262 consecutive proven endometrial cancer patients underwent type-I extra fascial pan hysterectomy with pelvic and high para-aortic lymphadenectomy using the daVinci® X at single tertiary care center. Data was analyzed under these parameters, docking time, surgeons console time, total operative time and number of lymph nodes retrieved. The surgery team maintained the same in all cases.

Results Surgeons console time of 180 minutes was achieved at 12th case and thereby consistently maintained 180 minutes or less. Target docking time of 7 minutes was achieved at 29th case. CUSUM line direction changes at 12th case and maintained the downward trend. Target number of pelvic lymph node 12 was achieved by 9th case and para-aortic lymph node harvest of 10 nodes was achieved at 18th case.

Conclusions daVinci® robotics technology in our practice enabled us to offer minimal invasive surgery to endometrial cancer patients in a short time. The robotic-assisted procedures seems to offer a safe and useful alternative to conventional surgical techniques & would be a tool in
Abstracts

armamentarium of gynec-oncologist. Learning curve can be shortened with constant self auditing of the surgeon and team with each surgeries performed, reviewing the steps and by improvising techniques

**EP150/#325 ENDOMETRIAL CANCER: AGREEMENT BETWEEN P53 IMMUNOHISTOCHEMISTRY AND TP53 MUTATION ANALYSIS?**

1Aloise Salmon*, 2Adriane Dixeur, 3Vincent Bours, 4Katty Delbecque, 5Élodie Gonne, 5Clérence Players, 6Marjolijn De Cuypere, 7Frédéric Goffin, 8Pierre Lovinfosse, 2Anathasios Kaklos, 9Frédéric Kidelka, 10Christine Gennigen. 1Centre Hospitalier Universitaire (CHU), Medical Oncology, Liège, Belgium; 2Centre Hospitalier Universitaire (CHU), Gynaecology and Obstetrics, Liège, Belgium; 3Centre Hospitalier Universitaire (CHU), Genetics, Liège, Belgium; 4Centre Hospitalier Universitaire (CHU), Pathology, Liège, Belgium; 5Centre Hospitalier Universitaire (CHU), Radiotherapy, Liège, Belgium; 6Pierre Lovinfosse, 7Centre Hospitalier Universitaire (CHU), Nuclear Medicine, Liège, Belgium; 8Centre Hospitalier Universitaire (CHU), Gynaecology and Obstetrics, Liège, Belgium

**Objectives** Endometrial carcinoma (EC) is the most common cancer of the female genital tract in developed countries. TP53 mutation is the most significant predictive biomarker for poor prognosis in EC patients. In immunohistochecmistry (IHC), overexpression and complete absence of p53 protein are interpreted as mutation-type. We aimed to compare the agreement between the results of p53 in IHC and TP53 mutational analysis.

**Methods** Between January 2019 and December 2021, we conducted a monocentric retrospective study of 166 patients treated for EC (all stages) at the CHU of Liège. Sixty-two patients were excluded. The remaining 104 patients had both p53 IHC and mutational analysis. McNemar’s test and Kappa of Cohen coefficient were used to evaluate the agreement between the 2 methods.

**Results** The McNemar’s test demonstrated 28.9% and 23.1% of p53 mutation-type in IHC and mutational analysis, respectively (p=0.16). There were twelve tumours with false-positive staining p53 IHC and no TP53 mutation detected (specificity of 75.0%). Moreover, there were six tumours with false-negative IHC but TP53 mutation detected (sensitivity of 85.0%). The agreement between p53 IHC and TP53 mutation analysis was 86/104 (82.7%) patients. The Kappa of Cohen coefficient was 0.55 (IC95%; 0.37–0.73), confirming the similarity between both techniques.

**Conclusions** Abnormal expression of p53 in IHC can be considered as a reliable surrogate test for TP53 mutation. Moreover, p53 IHC is quicker, easier to perform and less expensive. Nevertheless, based on a 25% rate of false positivity, consideration should be given to confirm TP53 status for all patients with abnormal p53 IHC.

**EP152/#348 PROPENSITY SCORE-MATCHED COMPARISON OF PERIOPERATIVE OUTCOMES USING DA VINCI XI AND SP SURGICAL SYSTEM IN ENDOMETRIAL CANCER SURGICAL STAGING**

Kieun Seon*, Yong Jae Lee, Jung-Yun Lee, Eun Ji Nam, SungHoong Kim, Young Tae Kim, Sang Wun Kim. Institute of Women’s Medical Life Science, Yonsei University College of Medicine, Department of Obstetrics and Gynecology, Seoul, Korea, Republic of

**Objectives** We aimed to compare perioperative outcomes of endometrial cancer surgical staging using da Vinci Xi and SP system.

**Methods** In this study, 42 consecutive patients who underwent endometrial cancer surgical staging with da Vinci SP system (SP) since 2018 and propensity score-matched 124 patients who underwent surgery with da Vinci Xi system (Xi) were included. We compared operation time, postoperative complications and postoperative hospital stay of each group. Considering learning curve of SP robotic surgery, we also compared Xi group with each 10 cases of SP group respectively.

**Results** The console time and total operation time were shorter in Xi group than SP group (83.7 ± 37.3 minutes vs. 133.4 ± 56.3 minutes; and 178.5 ± 58.7 minutes vs. 245.9 ± 80.5 minutes, respectively). Total console time of the first 10 cases of SP group was 195.2 ± 63.3 minutes and it decreased to 110.8 ± 47.4 minutes in the 4th 10 SP cases. Postoperative hemoglobin change was 0.64 ± 0.69 g/dL in SP group and 1.79 ± 0.87 g/dL in Xi group (P < 0.001). The overall postoperative complication rate was not different in two groups (10.5% in Xi and 11.9% in SP group). The median postoperative hospital stay was shorter in SP group (2 days) compared to Xi group (5 days). The median number of harvested lymph nodes were 12 (IQR: 6–20) in SP group and 6 (IQR: 3–11) in Xi group.

**EP151/#917 THE STATUS OF MMR PROTEIN AND PD-L1 EXPRESSION IN PATIENTS WITH ENDOMETRIAL CANCERS**

1Rupinder Sekhon*, 2Raj Pratima, 3Amita Naithani, 4Anurag Mehta, 5Meenakshi Kamboj. 1RGCIRC, Gynaecological Oncology, Delhi, India; 2RGCIRC, Pathology, Delhi, India

**Objectives** Mismatch repair (MMR)-deficient endometrial carcinomas (ECs) are highly immunogenic and may represent excellent candidates for therapies targeting the programmed cell death (PD)/programmed cell death ligand-1 (PD-L1) immune checkpoint pathway. Aim: To evaluate the Status of MMR proteins and PD-L1 expression in patients with EC

**Methods** Prospective observational study of 80 patients diagnosed with endometrial cancers between September 2019- September 2021 at tertiary cancer centre.Evaluation of Mismatch repair proteins (MMR) was done using IHC (MLH1, PMS2, MSH2, MSH6) and PD-L1 analysis was done using clone SP263 on Ventana platform on endometrial curettings

**Results** Our study showed MMR deficiency rate was 32.5%. Loss of MLH1and PMS2 was frequently seen (73.1%). MMR deficient was seen among 63.6% mixed ECs, 33% Endometroid ECs, 25% serous ECs, 20% MMMT ECs and among clear cell ECs no loss of MMR proteins were seen. Expression patterns of PD-L1 tumor proportion score (TPS) and immune cell score (IC) did not show any significant association with MMR proficient or deficient cases. However, combined positive score (CPS) of >1 was associated with 50% of MMR deficient EC cases with p = 0.052. PD-L1 expression CPS >1 was detected in 57.1%, 37.5%, 34.6% and 16.7% of MImixed ECs, MMMT, EECs and clear cell ECs respectively. There was no PD-L1 expression detected in serous ECs.

**Conclusions** MMR status may be biomarker for response to PD-1/PD-L1 immunotherapy in EC. PD-L1 expression may predict the response to anti-PD-1/PD-L1 monoclonal antibodies. Expression of PD-L1 varies between different subhistotypes and grades. Prospective studies are in need to further evaluate the predictive value of PD-L1expression.