Conclusion Pelvic and para-aortic lymphadenectomy in surgical staging of eEOC improves DFS for the price of increasing post-operative complications and time to chemotherapy but does not affect OS.

IGCS20_1319

PREVALENCE AND PROGNOSIS OF LYNCH SYNDROME AND SPORADIC MISMATCH REPAIR DEFICIENCY IN THE COMBINED PORTEC-1,-2 AND -3 ENDOMETRIAL CANCER TRIALS

1C Post*, 1E Stelloo, 1V Smit, 1O Ruano, 1CM Tops, 1L Vermij, 1TA Rutten, 2IM Jürgenliemk-Schulz, 2LC Lutgens, 4JJ Jobsen, 1RA Nout, 2EJ Crosbie, 4ME Powell, 1L Mishkin, 1A Leary, 9P Bessette, 1SM de Boer, 1NH oreweg, 1Tv anWezel, 1T Bosse, 1CL Creutzberg.

1C Post*, 1E Stelloo, 1V Smit, 1O Ruano, 1CM Tops, 1L Vermij, 1TA Rutten, 2IM Jürgenliemk-Schulz, 2LC Lutgens, 4JJ Jobsen, 1RA Nout, 2EJ Crosbie, 4ME Powell, 1L Mishkin, 1A Leary, 9P Bessette, 1SM de Boer, 1NH oreweg, 1Tv anWezel, 1T Bosse, 1CL Creutzberg.

1Leiden University Medical Center, Netherlands; 2University Medical Center Utrecht, Netherlands; 3MAASTRO Clinic, Netherlands; 4Medical Spectrum Twente, Netherlands; 1University of Manchester, St Mary’s Hospital, UK; 6Barts Health NHS Trust, UK; 7Peter MacCallum Cancer Centre, Australia; 8Gustave Roussy Cancer Center – INSERM U984, Universite Paris Saclay, France; 9University of Sherbrooke, Canada

28 Recurrence-free survival in the fully triaged MMRd patients

Kaplan-Meier method and pairwise log-rank test. and recurrence-free survival were estimated and compared using MMRd-EC due to other causes (other MMRd-EC). Overall ECs without MMR germline mutations were classified as LS-associated (LS MMRd-EC). Unmethylated MMRd-EC cases tumor and normal tissue next-generation sequencing results was 90%. Concordance between clinical and research panel sequencing results was 90%.

IGCS20_1217

COMPREHENSIVE MOLECULAR ASSESSMENT OF MISMATCH REPAIR DEFICIENCY IN LYNCH-ASSOCIATED OVARIAN CANCERS USING NEXT-GENERATION SEQUENCING (NGS) PANEL

1S Kim*, 2L Oldfield, 3A Tone, 3A Pollette, 3E Van de Laar, 5S Pederson, 2JW ellum, 4B Clarke, 4T Pugh, 3Ferguson. 1Department of Obstetrics and Gynecology, University of Toronto, Canada; 2Department of Medical Biophysics, University of Toronto, Canada; 3Division of Gynecologic Oncology, Princess Margaret Cancer Centre/University Health Network/Sinai Health Systems, Canada; 4Department of Laboratory Medicine and Pathobiology, University of Toronto, Canada

10.1136/ijgc-2020-IGCS.29

Abstract 28 Figure 1 Kaplan-Meier survival curves for recurrence-freesurvival in the fully triaged MMRd patients

Objectives Abnormalities in mismatch repair (MMR) gene may be the result of pathogenic germline (Lynch syndrome) and somatic mutations as well as epigenetic events. We aimed to examine the cause of MMR defects (MMRd) in non-serous/non-mucinous ovarian cancer (OC) through targeted mutational sequencing.

Methods Women with non-serous/mucinous OC (N = 215) were prospectively recruited from three cancer centers in Ontario, Canada. Tumors were assessed for MMR protein expression by immunohistochemistry. Matched MMRd tumor-normal samples were run on a custom NGS panel to identify germline and somatic mutations, copy number variants, rearrangements and promoter methylation in MMR and associated genes.

Results Of 215 women enrolled in our study, 185 (86%) had OC and 30 (14%) had synchronous OC and endometrial cancer. Twenty-eight (13%) cases were MMRd, 11 of which were synchronous. Using the NGS panel, Lynch syndrome (LS) was detected in 39% of MMRd cases (11/28; 7 OC and 4 synchronous): 7 MSH6, 2 MLH1, 1 PMS2, and 1 MSH2. An explanation for the observed MMR phenotype was available for 18/20 deficient cases, including 9/10 MLH1/-PMS2(7 somatic methylation, 1 bi-allelic somatic deletion, 1 germline mutation), 0/1 PMS2-, 6/7 MSH6- (6 germline mutations) and 2/2 MSH2/-MSH6- (1 germline mutation, 1 bi-allelic somatic mutation). Concordance between clinical and research panel sequencing results was 90%.

Conclusions Use of our custom NGS panel allows for the streamlined assessment of hereditary and somatic causes of MMR deficiency in OC and may be an attractive screening strategy for LS in this population.