Pattern of Recurrence and CA125 Monitoring in BRCA Wild-type Recurrent Ovarian Cancer Patients Under Maintenance with Niraparib

Introduction/Background The recurrence pattern in BRCA wild-type ovarian cancer (OC) patients relapsing during Niraparib maintenance is still unknown. Moreover, the role of the CA125 as an effective biomarker to detect disease progression in OC patients under maintenance with PARP inhibitors is unclear. We, therefore, explored the pattern of recurrence in this setting of patients, also investigating the concordance between the serological elevation of CA125 and radiological disease progression.

Methodology This retrospective study included BRCA wild-type OC patients treated between 2017 and 2022 and recurrent during maintenance with Niraparib (first recurrence). All patients had CA125 elevation before starting platinum-based therapy. CT scan was performed every 24 weeks or earlier in case of clinical or CA125 progression. CA125 was performed monthly. We evaluated the concordance between CA125 and disease progression according to Response Evaluation Criteria in Solid Tumours (RECIST) criteria. The pattern of recurrences was also collected. Oligometastases were defined as less or equal to 3 nodules of disease.

Results 91 OC patients progressed after a median recurrence-free interval of 5 months [1-45]. 64 patients of 91 (70.3%) had concordant CA125 and RECIST progression, whereas the remaining 27 (29.7%) had radiological disease progression without CA125 elevation. 3 (11%) of 27 patients with no CA125 progression had a peritoneal site of relapse, while the remaining 24 (89%) had an extraperitoneal recurrence. As expected, among patients with peritoneal carcinoma, only 2 (6.8%) had low CA125 (p<0.001), whereas the remaining 27 (29.7%) had radiological disease progression (70.3%) had concordant CA125 and RECIST progression, –

Conclusion Most recurrences after Niraparib might occur as oligometastatic without CA 125 rising. Therefore, CA125 surveillance alone may not be sufficient to detect disease progression and tailor oligometastatic disease approach with surgery or radiotherapy. Larger and confirmatory studies are needed.

Detailed Profiling of the Immune Microenvironment in Ovarian Epithelial Cancers; Relation to Tumour Characteristics and Impact on Prognosis

Introduction/Background Advances in knowledge of tumour microenvironment in various cancers have led to revolutionary immunotherapies and improved patient survival. The profiling of ovarian cancer microenvironment and impact on outcome remain understudied.

Methodology All ovarian cancer patients treated at a large UK Cancer tertiary referral institution over a 5 year period were identified. Included were epithelial ovarian primaries of any stage and grade undergoing primary or interval de-bulking surgery with follow up and tumour paraffin blocks available. Representative tumour blocks were immunohistochemically stained for CD3 (T lymphocytes), CD20 (B lymphocytes), CD68 (pan macrophages) and CD163 (M2 macrophages subtype). Detailed quantitative scoring and topography following the International Immuno-Oncology Group guidelines was done.

Results A total of 138 cases with mean age of 60.5 years were included. 52.9% of cancer cases were WHO stages 3&4 and 72.55% were grade 3. Neoadjuvant chemotherapy was used in 16.7% of cases. After 81 months of follow up, 62.3% of patients were alive with median survival of 41 months. Increased CD3 stromal average was found in grade 3 cancers compared with grades 1 and 2 (p=0.009) and in higher stage disease (p=0.047). CD3 stromal average correlated positively with patients’ age (rs = 0.172, p=0.044). CD20 stromal average and percentage were statistically higher in high grade tumours (p=0.009 and p=0.036 respectively). CD3/CD20 stromal averages and CD20% negatively correlated with survival (rs=-0.215, p=0.014), (rs=-0.250, p=0.004), (rs=-0.267, p=0.004) respectively. CD68/CD163 expression did not predict tumour characteristics or patient outcome.

Conclusion There was significant association between increased stromal tumour infiltrating lymphocytes and adverse tumour prognosticators and worse patient survival supporting an important role of the tumour microenvironment in prognosis and potential for immunotherapies in ovarian cancer. Further analyses are underway to determine the expression in different tumour types and relation to neoadjuvant chemotherapy response.

Solitary Unusual Metastasis of Serous Ovarian Carcinoma in the Gastric Wall. Report of a Case

Introduction/Background The pattern of recurrence in epithelial ovarian cancers is well documented. However, the occurrence of solitary unusual metastasis is uncommon and might present diagnostic dilemmas.

Conclusion Most recurrences after Niraparib might occur as oligometastatic without CA 125 rising. Therefore, CA125 surveillance alone may not be sufficient to detect disease progression and tailor oligometastatic disease approach with surgery or radiotherapy. Larger and confirmatory studies are needed.