

IGCS20_1056

90 THE PROTEIN EXPRESSION OF TNFR2 AND STAT3 IN HIGH-GRADE SEROUS OVARIAN CANCER (HGSC) TISSUE AND ITS ASSOCIATION WITH PLATINUM SENSITIVITY

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10.1136/ijgc-2020-IGCS.85

Objective To determine the relationship between TNFR2 and STAT3 in high-grade serous ovarian cancer (HGSC) tissues with chemotherapy response and prognosis outcome.

Methods This is a retrospective cohort study involving HGSC patients underwent primary cytoreduction followed by first-line adjuvant platinum-based chemotherapy with a minimum follow-up of 12 months. Tissue microarray slides were constructed utilising archived paraffin tissue from 25 chemo-naïve patients with HGSC and were stained for protein expression.

Results Overexpression of TNFR2 (48%) and STAT3 (60%) were found in the ovarian tissue of patients with advanced stage disease. The median PFS was significantly longer in the platinum sensitive (PS) compared to the platinum resistant (PR) group (18 vs 3 months, $p=0.0001$). In PS patients, median PFS is shown to be of longer trend in the weakly expressed compared to the overexpressed group among TNFR2 (31 vs 18 months, $p=0.74$) and STAT3 proteins markers (34 vs 18 months, $p=0.693$), but were not statistically significant. Unexpectedly, among the PR group, the TNFR2 overexpressed group showed significantly better PFS compared to TNFR2 weak group (90 vs 30 days, $p=0.015$). Conversely, among the PR group, the STAT3 overexpressed group showed significantly longer PFS compared to STAT3 weak expression group (120 vs 30 days, $p=0.017$).

Conclusion The PFS was found to be better trend among PS with TNFR2 or STAT3 weak expression tumour. Conversely, in the PR group, the PFS was longer among the strong protein expression tumour. Further study using a larger number of tissues is recommended to achieve statistical significance.

IGCS20_1061

94 COMPARATIVE BENEFIT OF OLAPARIB IN RECURRENT BRCAm OVARIAN, BREAST, PANCREATIC AND PROSTATE CANCER

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10.1136/ijgc-2020-IGCS.86

Objectives To compare the extent of clinical benefit and cost effectiveness of olaparib in ovarian cancer compared to breast, pancreatic, and prostate cancer.

Methods Data were extracted from FDA labels for olaparib. We compared the use of olaparib in gBRCAm (germline BRCA mutant) recurrent ovarian, breast, prostate, and pancreatic cancer. Prevalence of the germline BRCA biomarker and survival benefit were compared between gynecologic and other

cancer types. Incremental cost effectiveness ratio (ICER) analyses will be performed.

Results In ovarian cancer, 15–20% of patients carry gBRCAm. Treatment with olaparib at recurrence with gBRCAm increased PFS by 4.7 months progression-free survival (PFS) versus gBRCAwt (Study 19). In gBRCAm breast cancer, 10–15% of patients carry gBRCAm and had 2.8 month PFS benefit (OlympiAD). In pancreatic adenocarcinoma, gBRCAm is present in 9%, and POLO demonstrated a 3.6 months PFS benefit. Olaparib is approved for gBRCAm or homologous-recombination deficient (HRD) in metastatic castration resistant prostate cancer. With gBRCAm (present in 1–2% of patients), there was a 3.8 month of PFS benefit (PROfound), and 2.3 months including gBRCAm and HRD.

Conclusions Across cancer types with FDA approval for olaparib, the clinical benefit and proportion of patients eligible is highest in ovarian cancer. PFS benefit is similar across cancer types (2–5 month range). Prostate cancer is the only cancer with FDA approval for treatment with olaparib in the recurrent setting for both HRD and gBRCA. Additional study is on HRD breast, pancreatic, and ovarian cancer to determine if olaparib therapy could benefit these populations.

IGCS20_1064

96 ADJUVANT TREATMENT FOR ADENOSARCOMA CONFINED TO THE UTERUS PROVIDES NO SURVIVAL BENEFIT

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10.1136/ijgc-2020-IGCS.87

Introduction Aim of the present study was to investigate patterns of use and outcomes of adjuvant treatment for patients with stage I adenosarcoma.

Methods Patients diagnosed between 2004–2015 with stage I adenosarcoma without a history of another tumor who underwent hysterectomy with lymphadenectomy and had at least one month of follow-up were drawn from the National Cancer Database. Patients who received adjuvant chemotherapy (CT) and/or radiotherapy (RT) defined as treatment within 6 months from surgery were identified. Overall survival (OS) was evaluated after generation of Kaplan-Meier curves and compared with the log-rank test. A Cox model was constructed to control for confounders.

Results Among 735 patients with stage I adenosarcoma, 186 (25.3%) received adjuvant treatment; 61.3% RT only, 26.9% CT only and 11.8% both RT and CT. Rate of adjuvant treatment was 14.1% for patients with stage IA compared to 35.8% and 53.3% for those with stage IB and IC, $p<0.001$. Age, race, insurance, type of treatment facility and co-morbidities did not impact rate of adjuvant treatment administration, $p>0.05$. Five year OS rate for patients who did not receive adjuvant treatment was 79.9% compared to 63.4%, 68.8% and 74.1% for those who received RT only, CT only and both CT and RT, $p=0.002$. After controlling for substage, patient age, insurance status and co-morbidities, administration of adjuvant treatment was not associated with a survival benefit (HR: 1.29, 95% CI: 0.92, 1.58)