before treatment. Paired sample analysis before and after treatment showed that imiquimod acts on the PD-1/PD-L1 pathway, decreasing PD-1 expression (P= 0.0155) in cases of successful treatment (figure 1), possibly controlling the inflammation. We observed that PD-1 levels were not correlated with PD-L1 levels (p=0.5177).

Conclusion Our results suggested that imiquimod modulates PD-1 expression in cervical lesions and that treatment success depends on PD-1 levels at admission. In contrast, increased PD-L1 expression is associated with a higher risk of unsuccessful treatment.

Disclosures The authors report no conflict of interests.

#931 CLINICAL IMPLICATIONS OF SPATIAL INTRA-TUMOURAL HETEROGENEITY ON HOMOLOGOUS RECOMBINATION DEFICIENCY SCORES IN HIGH GRADE SEROUS OVARIAN CANCER

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Introduction/Background High-grade serous ovarian cancer (HGSOC) is typified by extensive genomic instability and intra-tumoural heterogeneity (ITH). Most patients relapse and eventually acquire resistance to platinum- or PARP inhibitor-based therapy. Diverse mechanisms leading to therapy resistance and lack of predictive biomarkers means that matching the best treatment options to patients is difficult. This study aims to examine the effect of spatial and temporal ITH in advanced stage HGSOC on homologous recombination (HR) deficiency scores at presentation and relapse and implications for patient management.

Methodology Patients (n=45) at Hammersmith Hospital (HH) undergoing maximal-effort upfront cytoreduction for advanced HGSOC underwent mapping of their tumour dissemination and tumour biopsies collected (range 4–15). Paired relapse samples were collected for 10 patients. Tumour DNA was extracted (n=5 tumours per patient, plus relapse tumours) and Illumina Human OmniExpress genotyping performed. Allele-specific copy number (CN) was quantified using ASCAT. Multi-site CN data was also accessed from two cohorts (GSE38787, GSE40546). HR scores were estimated in each cohort using a genomic scar 'scarHRD' algorithm, applying a cut-off $\geq$ 42 for HR-deficient (HRD).

Results Variations in HR scores were observed across the cohorts with a proportion of patients presenting with a mixed HR score, displaying both HRD and HR-Proficient (HRP; <42) scores in their tumours: HH cohort (22%, 10/45 patients); GSE38787 (17%, 4/24 patients); and GSE40546 (28%, 4/14 patients). In the HH cohort, we examined if mixed HR status was associated with survival and demonstrated that patients with mixed HR status or all HRP tumours had poorer progression-free (p=0.0052) and overall survival (p=0.00092) than patients with all HRD tumours.

Conclusion Variations in HR-deficiency/proficiency scores indicates HR status may be inconsistent in advanced disseminated HGSOC, thus suggesting that a single tumour biopsy may not accurately depict spatial HGSOC tumour biology.

Disclosures None to declare

#1051 LIQUID BIOPSY BASED DETECTION OF HUMAN PAPILLOMAVIRUS IN CERVICAL CANCER AND CERVICAL DYSPLASIA PATIENTS

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Introduction/Background Cervical cancer (CC) is the 4th most commonly diagnosed cancer among women, leading to approximately 528,000 new cases annually. Current screening approaches for this disease have certain limitations; Pap tests require dedicated cytopathology infrastructure, while human papillomavirus (HPV) DNA testing may lead to invasive procedures in patients with transient infection. Liquid biopsy has emerged as a minimally invasive approach to detect and monitor disease. We and others have previously demonstrated the clinical utility of circulating tumor (ct)DNA to monitor HPV+ cancers. However, little is known about the presence of ctDNA from different liquid biopsy analytes in CC patients.

Methodology The aim of this study was to compare the presence of HPV-ctDNA isolated from different liquid biopsy analytes in patients with CC and cervical dysplasia (CD). Blood, urine, and vaginal swabs were collected from 23 patients with CC (adenocarcinoma or squamous cell carcinoma) and 22 patients with CD at the McGill University Health Centre. Of these patients, longitudinal samples pre- and post-treatment were collected in 7 patients. DNA was extracted using a commercial kit and tested for ctDNA by digital droplet PCR for HPV16, 18 and 33.

Results HPV16, 18 or 33 ctDNA was found to be detectable 14/23 (60%) CC samples and 2/22 (9%) CD patients in plasma, urine, and/or vaginal swab. Concordance in ctDNA positivity across sample types was seen in 90% of cases. Major reductions (97.7–100%) were seen in ctDNA concentrations in all analytes in CC patients following treatment.

Conclusion HPV-DNA was detectable in all liquid biopsy analytes sampled in patients with CC and CD, with a higher frequency of detection in CC samples. Treatment led to reductions in ctDNA across analytes in cancer patients. Globally, this data points to HPV ctDNA analysis as a promising method for detecting and monitoring HPV-related CC and CD.

Disclosures The authors have no disclosures

#1076 PROGNOSTIC FACTORS OF BREAST CANCER IN YOUNG FEMALE PATIENTS: A RETROSPECTIVE STUDY FROM SOUTHERN-EAST TUNISIA

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Introduction/Background Breast cancer (BC) is rarely seen in young women, but recent data shows an increase in rates

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among premenopausal females. Due to its unique characteristics in young women, including fertility and psychosocial concerns, BC requires special attention. This study analyses BC prognostic factors in young women from southern-east Tunisia.

Methodology This retrospective study enrolled 90 women under 40 years with histologically confirmed early BC. Immunohistochemical evaluation of HR, HER2, and Ki67 expression was conducted for all cases. Statistical analysis was conducted using SPSS version 20.

Results The average age was 35.5 years, with 23.9% having a family history of BC. Pregnancy was associated with BC in 10% of cases. Mean time to diagnosis was 2.8 months, and the average tumor size was 3.8 cm. Advanced clinical stage and unfavorable biological characteristics were more common in young women. Ductal carcinoma of non-specific type was the most frequent histologic subtype (97.8%). HR negativity was observed in 28.9% of cases, HER2 over-expression in 32.2%, and high proliferation index (Ki-67 > 20%) in 78.8%. Luminal B Her2-negative was the predominant molecular subtype (28.8%), while triple-negative subtype accounted for 16.2%. Treatment modalities included conservative surgery (36.4%), neoadjuvant chemotherapy (25.6%), and radiation therapy (92.3%). After a median follow-up of 60 months, 32.2% of patients experienced relapse, with a 5-year overall survival rate of 77%. Prognostic factors influencing survival included tumor stage, lymph node involvement, histological grade, HR negativity, high Ki67, and relapse. Multivariate analysis did not identify any significant impact on overall survival.

Conclusion While we know that young women with BC are more likely to have a genetic predisposition, larger breast tumors, unfavorable biological characteristics, distant metastatic disease at diagnosis, and poorer outcomes, the findings of this study emphasize the need for further research to understand the complex relationships among BC prognostic factors in young women.

Disclosures No conflicts of interest to disclose.

#1085 Y-CHROMOSOME DETECTION AND ONCOGENIC RISKS IN TURNER SYNDROME

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Introduction/Background Turner syndrome (TS) is a multisystem syndrome characterized by monosomy X. Cancer risks in women with TS are particularly still controversial, and the association between hidden Y chromosome material and the risk of gonadoblastome seems to be well-established. This study explores this association while detecting hidden Y chromosome in TS females seen at our genetic counselling.

Methodology A cohort of 26 TS females underwent cytogenetic assessment using conventional cytogenetic methods and fluorescence in situ hybridization (FISH). DNA samples were collected for multiplex PCR analysis to assess the presence of Y chromosome material.

Results Three cases exhibited complete and pure monosomy X, while 14 cases had complete monosomy X with a 46,XX mosaic. Nine cases displayed partial monosomy X with X or Y structural abnormalities, with or without a 45,X cell line. A single patient had a mosaic chromosomal formula with both 45,X and 46,XY cell populations. FISH analysis confirmed the presence of an isoYq-rearranged chromosome with a solitary secondary constriction. Multiplex PCR analysis revealed Y chromosome material in only one patient with an isoYq-rearranged chromosome (3.8%). The remaining 25 TS females tested negative for Y chromosome material. No cancer diagnoses were found in the cohort. The TS patient with Y chromosome material exhibited female-type external genitalia and a small infantile uterus on abdominal Magnetic Resonance Imaging, without identifiable gonads.

Conclusion The presence of detected Y chromosome is associated with an increased risk of gonadoblastoma in TS women, although recent research suggests that hidden Y mosaicism may be more common than previously described, depending on the methods used. In our study, no tumors were found in the TS cohort, affirming the rarity of hidden Y mosaicism in females with TS.

Disclosures There is no conflict of interest to disclose.

12. Trophoblastic Diseases

#106 PULMONARY METASTASIS CHORIOCARCINOMA IN A 44 YEARS OLD WOMAN WITH MYOMA AND 10 MONTHS ABNORMAL UTERINE BLEEDING : A CASE REPORT AND REVIEW OF GTN MANAGEMENT

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Introduction/Background Gestational trophoblastic neoplasia comprises a unique group of human neoplastic diseases that derive from fetal trophoblastic tissues. The hydatidiform mole is the most common form of GTD, representing 80% of cases. An invasive mole is a hydatidiform mole characterized by the enlarged hydropic villi invading into the myometrium, into vascular spaces, or into extrauterine sites.

Results our patient wasG4 woman with a history of molar pregnancy 10 years ago which was treated with actinomycin due to the rise of hCG .At that time (10 YEARS AGO) she followed with BhCG and achieved normal pregnancy after that. (Her last child is 7 y old)

She was admitted with dyspnea (RR=35) and history of covid in 2 months later in the emergency department.

The chest CT image revealed extensive metastatic lung lesion .

Incredibly and unfortunately the pulmonologist took a biopsy without suspicion to GTN.

We requested BhCG which was 700.000 (IU) and vaginal metastasis in gynecologic exam

We put her on two courses Etoposide/Cisplatin and then (with relative response) 7 courses EMA-CO as GTN with lung & vaginal metastasis .(stage 3, Score 16)

She had a good response to chemotherapy.

In the last 3 courses the BhCG remained plato (20 IU) therefore the tumor Board plan was hysterectomy for the patient.

Conclusion She recieved 3 cycles EMA_EP and BhCG was negative for 6 months.

Disclosures There is no conflict of interest

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