

chemotherapy ($p=0.008$) were significantly associated with overall survival.

Conclusion/Implications Our findings suggest that cytoreductive surgery and intraperitoneal chemotherapy are important treatment options for improving survival in patients with DMPM. Further research is needed to better understand the optimal treatment approach for this rare and aggressive cancer.

EP361/#722

CLINICOPATHOLOGICAL FEATURES AND SURGICAL PROCEDURE OF ADNEXAL MASSES WITH ABDOMINAL PAIN IN PEDIATRIC AND ADOLESCENT PATIENTS

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Introduction This study investigated the clinicopathological features and surgical procedures of adnexal masses with abdominal pain in pediatric and adolescent patients.

Methods Retrospective cohort study of 212 pediatric and adolescent patients was performed who admitted for abdominal pain and presenting with an adnexal mass between March 2012 to December 2019

Results The proportion of patients presented with acute onset pain, persistent or recurrent pain, and duration of pain less than 3 months was significantly higher in the TO group than in the non-TO group ($P < 0.001$). 69.2% of patients with torsion had fixed pain sites, compared with 42.2% in patients without torsion ($P < 0.001$). The symptom of nausea and vomiting was more common among girls with torsion ($P < 0.0001$). 88.5% of girls with torsion had an ovarian cyst/mass ≥ 5 cm, compared with 75.0% in girls without torsion ($P = 0.038$). 66.7% of girls underwent ovary-preserving surgery, compared with 92.2% in patients without torsion. The most common pathologic types were mature teratoma and simple cyst, accounting for 29.4% and 25.6%, respectively. The multivariate analyses confirmed that mass size greater than 5 cm, acute onset pain, persistent or recurrent pain were significantly associated with increased risk of torsion.

Conclusion/Implications Most pediatric or adolescent patients with adnexal torsion present with acute onset of persistent, recurrent pain and had fixed pain sites. Thus, a strategy of earlier and liberal use of Diagnostic Laparoscopy (DL), particularly with a pelvic mass size greater than 5 cm, acute onset pain, persistent or recurrent pain, may improve ovarian salvage.

EP362/#696

NEW PATIENT-DERIVED MODELS AND THERAPY SCREENING IN MUCINOUS OVARIAN CARCINOMA

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Introduction Mucinous ovarian carcinoma (MOC) is a rare cancer with poor outcomes when advanced due to innate resistance to standard of care platinum-taxane chemotherapy regimens. There is a lack of evidence to support different chemotherapy choices due to poor clinical trial recruitment and a scarcity of suitable pre-clinical models. Our objective was to develop new patient-derived models of MOC and use them to test therapies.

Methods We collected tissue samples with consent from women undergoing surgery for primary or recurrent MOC. We optimised culture conditions for growing tumour cells as 3D organoids in Matrigel, which included specific growth factors and processing conditions. Successful cultures were characterised by immunohistochemistry (CK7, CK20, PAS, PAX8, p53, HER2) and DNA and RNA sequencing for comparison to the original tumour. Organoids were tested with 14 therapeutic agents and evaluated using CellTiter-Glo, brightfield imaging and Hoechst staining.

Results We successfully cultured eight MOC as organoid lines that showed strong concordance with tumour genetic and protein characteristics. Drug screening showed little response to platinum-based chemotherapies. Variable responses were seen with paclitaxel, mitomycin C and gemcitabine, with the strongest responses observed with topoisomerase I inhibitors irinotecan and topotecan.

Conclusion/Implications This is the first cohort of organoid models for MOC tested across a wide range of chemotherapeutic agents. Results support clinical observations of limited response to platinum chemotherapy, while other therapies show some promise as alternatives. Future work will explore combinations of agents as well as correlation back to genetic and gene expression characteristics to assess biomarkers of response.

EP363/#213

THE ROLE OF SURGEON SPECIALTY IN MANAGEMENT AND SURVIVAL OF MALIGNANT OVARIAN GERM CELL TUMORS: A POPULATION-BASED STUDY

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Introduction The aim of this study is to describe treatment and survival outcomes in patients with malignant ovarian germ cell tumors (MOGCT) who had surgery by general gynecologists (GG) versus gynecologic oncologists (GO).

Methods A population-based retrospective cohort study, including adult patients with MOGCT identified in the provincial cancer registry (1996–2020). Baseline characteristics, surgical and chemotherapy treatment were compared between those with surgery by GG or GO. Cox proportional hazards (CPH) model was used to determine if surgeon specialty was associated with overall survival (OS).

Results Overall, 363 patients were included. One-hundred and sixty (44%) patients underwent surgery by GO and 203 (56%) by GG. There were higher rates of stage II-IV in the GO group (27.5% vs 3.9%, $p < 0.001$) (table 1). Multivariable logistic regression with age, histologic type, and socioeconomic status showed stage of disease was the only factor associated with having surgery by a GO (OR 6.79, 95% CI