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460 DIFFUSE LARGE B-CELL LYMPHOMA OF THE OVARY: A SERIES OF FOUR CASES

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Introduction Diffuse large B-cell lymphoma (DLBCL) of the ovary is a very rare condition. Surgery is often mandatory to establish the diagnosis which is based on the histologic examination and immunohistochemistry testes. Treatment is based on chemotherapy.

Methods We report a series of four cases treated in Salah Azaiz Institute of Oncology, Tunis, Tunisia, from 2001 to 2019.

Results The average age was 49 (from 34 to 67 years old). The abdominal symptoms consisted of pelvic pain and swollen abdomen. CA-125 was high in one case. The average radiological size of the ovarian mass measured with CT scan was 141 mm (from 50 to 200 mm). Pleural effusion, mediastinal, axillary and supraclavicular lymphadenopathies was found in one case. Per-operative findings showed ascites in one case and unilateral ovarian mass in three cases. One case showed an invasion of the uterus requiring a hysterectomy. For another patient, the tumor invaded the small intestine therefore she underwent an additional small bowel resection. The average histological size of the tumor was 92,5 mm. CD 20 and Bcl-2 were expressed in all cases and the Ki67 was higher than 50% in all cases. Two patients had R-CHOP chemotherapy and are in total remission; the two others are lost to follow-up.

Conclusion Ovarian DLBCL mimics usually both clinically and radiologically an ovarian epithelial tumor. Surgery remains the only way to establish the diagnosis and guide the treatment.

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462 PREDICTIVE RADIOGENOMIC MODEL BASED ON OVARIAN ULTRASOUND IMAGES TO DETECT GERMLINE BRCA 1-2 STATUS (PROBE STUDY) A RADIOGENOMIC MODEL ON US IMAGES

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Objectives To evaluate feasibility and performance of a radiogenomics model based on ovarian US images predicting germline BRCA1/2 gene status.

Methods This retrospective study included 255 patients who were addressed to germline BRCA1/2 testing and pelvic US documenting normal ovaries. Four imaging feature groups were extracted from each normalized US image with manually

segmented regions of interest. Feature selection for univariate analysis was carried out via correlation analysis.

Multivariable analysis for classification of germline BRCA1/2 status was then carried out via logistic regression, support vector machine, ensemble of decision trees and automated machine learning pipelines. Data were split into a training (75%) and a testing (25%) set.

The performance of the models was assessed with respect to negative and positive capability to predict germline BRCA1/2 status and compared with NGS data.

Results The four strategies obtained a similar performance in terms of accuracy on the testing set, varying from 0.54 of logistic regression to 0.64 of the auto-machine learning pipeline. The latter showed also the highest value of specificity on the testing set (0.91) and a negative predictive value of 0.65. Data coming only from the Voluson US machine showed generally higher performances, particularly with the auto-machine learning pipeline (testing set specificity 0.87, negative predictive value 0.73, accuracy value 0.72 and 0.79 on training set).

Conclusions The study shows that a radiogenomics-based model on machine learning techniques is feasible when applied to US images. Future investigations are warranted to make it a reliable screening tool for gBRCA1/2 status.

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463 LVSI AND KI67 IN PREDICTION OF LYMPH-NODE METASTASIS IN PRIMARY LOW-GRADE OVARIAN CANCER

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Objective Low-grade serous ovarian cancers (LGSOC) characterize less frequent incidence of lymph-nodes (LN) metastasis. Ki67 expression level is associated with prognosis and therapy outcome differences. Its' expression in combination with lympho-vascular space invasion (LVSI) have not been evaluated in prediction of LN involvement yet.

Methods Patients with LGSOC were identified in institutional database. Receiver-operator characteristics (ROC) curve analysis was performed to find cut off values of Ki67% to discriminate patients with LN metastasis. The association between LVSI presence and LN involvement was performed.

Results A total of 109 patients treated between 2000 and 2018 with primary LGSOC were identified in our institution database. Complete data of Ki67 expression and LVSI in patients who underwent lymph node dissection was obtained in 61 (84.7%) of those patients. Presence of LVSI was associated with higher risk of lymph-nodes metastases in univariate and multivariate analysis ($p < 0.001$ and $p = 0.01$ respectively). $Ki67 \geq 6\%$ was associated with higher risk of LVSI presence ($p = 0.017$). No significant correlation between Ki67 expression level and nodal metastases was found ($p = 0.145$). Neither presence of LVSI, nor nodal metastases were associated with prognosis differences.

Conclusions It is the first study showing association between LVSI presence, Ki67 expression and risk of lymph-node

metastasis in primary low-grade ovarian cancer. Further prospective trials evaluating LVSI and Ki-67 as a predictor of lymph-node metastasis should be planned.

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COMPARISON OF DIFFERENT METHODS TO DETERMINE MYOMETRIAL INVASION IN ENDOMETRIAL CANCER – A NATIONWIDE SWEGCG STUDY

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Background Deep myometrial invasion (MI) ($\geq 50\%$) is a prognostic factor for lymph node metastases and poorer survival in endometrial cancer. There is no consensus regarding which pre/peroperative diagnostic method should be preferred.

Aim To explore the pattern of different diagnostic methods for MI assessment in Sweden and to evaluate differences between MRI, vaginal ultrasound, frozen section and gross examination in clinical practice.

Methods Women with endometrial cancer registered in the Swedish Quality Registry for Gynecologic Cancer (SQRGC) between January 2010 and December 2019 were eligible. Inclusion criteria were FIGO stage I-III and available information on histology and on assessment of MI. Data on age, histology, FIGO stage, degree of MI, histology results, method for MI assessment and hospital level were collected from the SQRGC. The final assessment by the pathologist on specimens from hysterectomy was golden standard.

Results The study population included 1,950 women, 33% (n=649) had a MI $\geq 50\%$. The methods used for MI assessment were vaginal ultrasound in 54%, MRI in 22%, gross examination in 13% and frozen section in 11% of cases. Age, histology or FIGO stadium did not differ between the methods. The sensitivity, specificity and accuracy of vaginal ultrasound was 61.2%, 83.3% and 0.75% respectively, and for MRI 74.2%, 72.7% and 0.73%. The highest accuracy was for frozen section; 95.0%.

Conclusion The assessment of deep myometrial invasion in endometrial cancer is most often performed with vaginal ultrasound in Sweden. The sensitivity of this method is lower in clinical practice than for MRI and perioperative methods.

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DELAYS IN TREATMENT IN GYNAECOLOGY ONCOLOGY PATIENTS IN QATAR SEEKING MANAGEMENT OVERSEAS

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Introduction The gynaecological oncology service in Doha treats all women living in or visiting Qatar. Despite the quality and affordability of the service many women travel overseas for their treatment following diagnosis or present following previous treatment overseas requesting further management. Although they must perceive potential advantages which encourage them to do so, there are difficulties which could arise including delay in treatment of a malignancy that could affect their outcomes. We wished to understand the impact of travel overseas on the waiting time for treatment.

Methods All patients seen over a period of 3 yrs who had travelled overseas were identified. Records were reviewed to identify what impact the decision to travel abroad had made on the timing of their treatment. According to Qatari cancer treatment standards, treatment should be within 14 days of a decision made by MDT. We considered that a delay in treatment would reasonably be defined as an interval of >4 weeks.

Results 18% of patients (n=153/850) with a recorded care plan by the MDT sought medical treatment overseas between 4/2015 and 3/2018. Patients had 25 different nationalities; Qatari nationals represented the majority (40.5%). Patients travelled to 28 different destinations. Most travelled to the U.S.A(15.7%), Philippines(15%), the UK(10.5%) and Thailand (9.2%).

23.5% of patients had a delay in treatment; 9,2% had an unknown treatment timing plan. Most had delays of <6 weeks; 10% had significant delays of many weeks, months and even >1 year.

Conclusion The decision to travel overseas in our patients resulted in delays of treatment for roughly 1/4 of patients. In 10% these delays would be expected to have an adverse effect on outcomes.

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SIMVASTATIN MODIFIES THE INTERNALIZATION, ENDOCYTIC TRAFFICKING, AND THE CONTENT OF OVARIAN CANCER CELL-DERIVED EXTRACELLULAR MICROVESICLES WHICH ARE RESPONSIBLE OF INDUCING MIGRATION AND INVASION IN VITRO

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Introduction High grade serous ovarian carcinoma (HGSOC) is the leading cause of death among all gynecological malignancies. Extracellular microvesicles (MVs) are secreted by most cells in the body and play a crucial role regulating cell-to-cell communication and several biological functions. Current