carriers with Lynch syndrome. The purpose of this study is to examine the factors predictive of endometrial cancer patients' adherence to genetic counseling referrals for genetic testing.

**Methods** An IRB-approved retrospective study was conducted on eligible patients identified at multidisciplinary tumor boards between January 2016 to October 2019. Our primary outcome was genetic testing completion when recommended by a genetic counselor. Data collected included age at diagnosis, ethnicity, stage, metastasis, mismatched repair deficiency testing, presence of Lynch syndrome, and genetic counselor presence at the tumor board. We performed univariate analyses to test for group differences using the independent student's t-test for age and Fisher's exact test for categorical variables. We performed multivariable logistic regression to determine the independent odds of genetic testing, including age, metastasis, and stage.

**Results** Our sample included 165 patients, and genetic testing was recommended for 30 (18.2%). Sixteen of the 30 (53.3%) patients recommended for testing adhered to the recommendation. As a result, three patients were diagnosed with Lynch syndrome. There was a significant difference in age between those tested versus those who did not get tested. On multivariable analysis, for every one year increase in age, the odds of genetic testing decreased. There was a trend toward reduced odds of genetic testing among patients with stage III/IV compared to I/II cancer.

**Conclusions** Our findings suggest an opportunity to increase the genetic testing referral process for older patients and possibly those with more advanced disease.

## EPV152/#655 GENETIC PROFILE BY WHOLE EXAM SEQUENCING OF BORDERLINE OVARIAN TUMORS: SERIES OF 32 PATIENTS

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**Objectives** Borderline ovarian tumors are defined as non-invasive epithelial ovarian tumors which can have an intraperitoneal extension. Molecular studies have shown a correlation between the patient's response to chemotherapeutic treatments adjunct to surgery and the tumor's genetic profile, especially related to the KRASand BRAF genes. This study aims to assess the molecular profile of BOTs in the Lebanese population by Whole Exome Sequencing (WES) and correlate the results with patients' clinical profiles.

**Methods** 33 tumors belonging to 32 Lebanese patients presenting with BOTs, diagnosed at Hôtel Dieu de France were included. A total of 234 genes involved in different germinal and somatic types of cancer were analyzed using Next Generation Sequencing in the 33 included tumors. Genetic variants detected in more than 5% of the reads, with a sequencing depth $\geq$ 50x, were selected.

**Results** Among 33 tumors, 18 were serous, 12 mucinous and 3 seromucinous. Molecular analysis of tumors allowed us to detect mutations in genes involved in the MAP Kinase (MAPK) cascade and in the DNA repair mechanism. Our initial analysis revealed an association between defects in DNA Double-Strand Break repair and occurrence of mucinous BOT, in 75% of cases. Mutations affecting MAPK signaling pathway were detected in 46.9% of BOT.

**Conclusions** Here we report the molecular profile of BOT in the Lebanese population. This is the first study associating the DNA repair pathway to BOT. The inclusion of further patients is essential to validate our hypothesis and to better delineate the mechanisms of the disease, thus allowing the implementation of targeted therapeutic approaches.

## EPV153/#66 RELIABILITY, COSTS AND APPLICABILITY OF THE WHOLE BODY DEXA SCAN IN THE ASSESSMENT OF MUSCLE MASS AFTER RISK-REDUCING SALPINGO-OOPHORECTOMY IN BRCA1/2 PV CARRIERS

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**Objectives** Sarcopenia is the quantitative and qualitative loss of skeletal muscle, which may be associated with acute surgical menopause after risk-reducing salpingo-oophorectomy (RRSO) in BRCA1/2 PV carriers. Magnetic Resonance Imaging (MRI) and Computed-Tomography (CT) are currently the golden standard to measure muscle mass. Dual Energy X-ray Absorptiometry (DEXA) is less costly with less radiation exposure. As there are no data on its intra- and inter-observer variability, the aim of this study was to establish if the DEXA scan could be a reliable alternative to CT or MRI in the analysis of muscle mass.

**Methods** To assess inter- and intra-observer variability, DEXA scans of the lower extremities of women 10 or more years after RRSO were analyzed by two observers, who independently analyzed each scan twice. Information about costs and radiation dose from the DEXA, CT and MRI were collected from literature.

**Results** DEXA scans of 34 women with a median age of 58.0 years (range 45.0–73.0) and a median BMI of 24.6 (range 18.0–47.2) were analysed. Inter-observer variability had an Interclass correlation coefficient (ICC) of 0.997 and acceptable limits of agreement. Intra-observer variability was also low: $ICC_{observer1}$:0.998 and $ICC_{observer2}$:0.997. Observer 1 had lower limits of agreement. Costs and radiation exposure were lower for DEXA than CT and MRI.

**Conclusions** The assessment of muscle mass of the lower extremities with DEXA scan has a high reliability, is less costly and has a lower radiation dose than CT and MRI. DEXA scan may be a good alternative for measuring muscle mass to diagnose sarcopenia.