**BRCA1/2 TESTING RATES IN EPITHELIAL OVARIAN CANCER: A FOCUS ON THE UNTESTED PATIENTS**

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**Introduction/Background** (Encore-but-modified/new-data). Since 2015, BRCA1/2 pathogenic variant (PV) testing is recommended for all epithelial ovarian cancer (EOC) patients in the Netherlands. Recently, recommendations shifted from germline testing to universal tumor testing and subsequent germline testing in those with BRCA1/2 tumor PVs (TPVs). Data on testing rates of these approaches and on characteristics of patients missing out on testing remain scarce. Therefore, we evaluated BRCA1/2 testing rates in EOC patients and compared rates of germline testing (performed from 2015 until mid-2018) versus tumor testing with germline testing only in those with TPVs (implemented mid-2018). Additionally, we delineated characteristics of patients who were less likely to receive BRCA1/2 testing.

**Methodology**
A consecutive series of 250 patients diagnosed with EOC between 2016 and 2019 was included from the OncoLifeS databank of the University Medical Center Groningen. Testing rates were analyzed for the overall study population and by period of diagnosis to evaluate rates of germline testing (period I) and tumor-first testing (period II) separately. Characteristics of tested and untested patients were compared using the appropriate statistical test.

**Results**
Median age was 67.0 years (interquartile range: 59.0–73.0) and 69.2% was diagnosed with high-grade serous carcinoma (HGSC). Overall, 80.4% of all patients had a known germline PV (GPV) status. In period I, 80.1% of all patients had a known GPV status and in period II this was 81.0%. Overall, and in period I and II separately, a significantly greater proportion of patients with HGSC was tested, as compared to those with non-HGSC (74.6% versus 23.9%; P=0.001).

**Conclusion**
The results show that BRCA1/2 testing rates are suboptimal and suggest that clinicians may not be choosing to test EOC patients with non-HGSC, although guidelines recommend BRCA1/2 testing in all EOC patients. Suboptimal testing rates limit the optimization of care for EOC patients and counseling of potentially affected relatives.

**VAGINAL BRACHYTHERAPY -THE PATIENT JOURNEY**

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**Introduction/Background** Vaginal brachytherapy is frequently used in patients with endometrial cancer. Its role in prevention of local recurrence is substantial. Safe and effective use of vaginal brachytherapy requires dedicated personnel with specific training, skills, techniques, and patient education. Success of the treatment is a combination of professionalism including a positive experience for the patient leading to close cooperation and a smooth process. To ensure a less traumatic procedure, we developed a special approach to this category of patients giving special attention to the patients’ education.

**Methodology** Since 2018 when the brachytherapy service was established, we have developed a special and comprehensive approach tailored for every patient. During the first visit, each patient meets the following personnel: doctor, nurse, and brachytherapy coordinator. Each patient receives a detailed verbal, visual and written information regarding the whole process and a short guided ‘tour’ in the brachytherapy unit. We provide a supportive group facilitated by a social worker, sexologist and a psychologist. The brachytherapy treatment itself take place at the brachytherapy unit, separated from the rest of the department giving our patients a feeling of safety and probability for referral is set at 3%. Patients are then seen in rapid access clinics (RAC) in Secondary Care. Unfortunately, many referrals are inappropriate and this creates a burden in secondary care. These referrals also cause unnecessary anxiety to the patients. To improve the efficacy and effectiveness of the RAC, we identify inappropriate referrals and manage these patients in an alternative pathway. We provide timely feedback and education for staff working in Primary Care. Standardised letters have been developed for each type of inappropriate referral, which are sent to both the patient and the referring doctor.

**Conclusion** A retrospective analysis of all suspected cancer referral forms sent to our unit between May 1st 2021 and April 31st 2022 was performed.

**Results** A total number of 958 suspected cancer referrals were made to our unit within the period of 12 months. These were triaged by a senior gynaecologist and 28% were deemed inappropriate. Of these inappropriate referrals, 15% were for suspicion of endometrial cancer, 7% were for ovarian cancer and 6% were for cervical, vulval and vaginal cancers grouped together. Breakthrough bleeding on Hormone Replacement Therapy (HRT) was the most common inappropriate referral (n=81). Other common reasons included: obviously benign lesions of the vulva, vagina and cervix, intermenstrual bleeding, postcoital bleeding, non-suspicious ovarian cysts, endometrial thickening, and isolated elevation of CA125. We have identified Primary Care doctors that are outliers and provided targeted education and training.

**Conclusion** We have identified common reasons for inappropriate referral and created an alternative pathway for these patients. Targeted education has been provided for Primary Care doctors. These measures have enabled the RAC to function more effectively.