Abstracts

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PRECISION-PREDICTING RISK OF ENDOMETRIAL CANCER IN ASYMPTOMATIC WOMEN

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Introduction/Background Global endometrial cancer (EC) cases continue to increase, placing a significant health and financial burden on individuals and healthcare services. Effective primary disease prevention strategies are urgently required but remain under-researched. Identifying high-risk women for intervention would ensure therapies are targeted at those most likely to benefit. This study aimed to develop a well calibrated EC risk prediction model based on routinely collected data and to validate it in an independent cohort.

Methodology Data from the UK Biobank, comprising 222,031 females ages 45–60 years and 902 incident EC cases, were used to build a flexible parametric survival model using EC risk factors identified through a systematic review of the literature. Model fit was improved with variable transformation and stepwise backward selection. Missing data were dealt with using multiple imputation and bootstrapping (100-fold) was applied for internal validation. Model calibration was assessed using flexible calibration plots and discrimination through calculation of the C-statistic. The model is being externally validated in the Clinical Practice Research Datalink, using data from 3,094,371 women, of whom 20,882 have developed EC.

Results Age, body mass index, waist circumference, age at menarche, age at last birth, late menopause (≥55 years), current hormone replacement therapy or tamoxifen use, prolonged oral contraceptive pill use (≥5 years), type 2 diabetes, smoking and family history of bowel cancer were incorporated into the model. Based on these variables, the model had an adjusted C-static of 0.75 and was well calibrated, with a calibration slope of 0.97 after internal validation.

Conclusion Our model, using easily measurable anthropometric, lifestyle and reproductive variables alongside personal and family medical history, accurately identifies women at high-risk of EC. External validation will determine whether it can be
used to determine eligibility for primary EC prevention trials and reduce the size and costs associated with such studies.

**Introduction/Background**

Women carrying a mutation in BRCA 1 or BRCA 2 genes face complex decisions regarding strategies for managing their increased breast and gynecologic cancer risk. Prophylactic mastectomy in high genetic risk of female cancers could severely affect body esteem decreasing sexual satisfaction. Risk-reducing bilateral salpingo-oophorectomy (RRBSO) through minimally invasive technique has been shown to reduce the risk of ovarian cancer. Recent evidence has suggested that women with BRCA 1 gene mutations may have an increased risk of uterine serous carcinomas. A new minimally invasive technique, Transvaginal Natural Orifice Transluminal Endoscopic Surgery (vNOTES), allows access to the peritoneal cavity through the vagina without skin incisions.

**Methodology**

From June 2021 to February 2022, women carrying a mutation in the BRCA 1 gene, with a history of previous bilateral mastectomy and underwent hysterectomy and RRBSO using vNOTES technique were studied prospectively. We administered validated tools as Female Sexual Function Inventory (FSFI) and Body Image Scale (BIS) to evaluate the impact on cosmetic, psychological and sexual domains.

**Results**

10 women carrying BRCA 1 gene mutation and undergoing vNOTES technique for hysterectomy and RRBSO were enrolled. The mean age was 47 years (range 34–50). 4 (40%) patients had a history of breast cancer and they underwent contralateral prophylactic mastectomy. The mean pain assessment after gynecologic surgery was 2.1 (range 0–5). The complete exploration of the abdomen with peritoneal biopsies were performed in all (100%) cases. 6 (60%) women were high concern with body image. Sexual function decreased progressively with age, but FSFI scores in lubrication, orgasm and sexual satisfaction. Risk-reducing bilateral salpingo-oophorectomy (RRBSO) through minimally invasive technique has been shown to reduce the risk of ovarian cancer. Recent evidence has suggested that women with BRCA 1 gene mutations may have an increased risk of uterine serous carcinomas. A new minimally invasive technique, Transvaginal Natural Orifice Transluminal Endoscopic Surgery (vNOTES), allows access to the peritoneal cavity through the vagina without skin incisions.

**Conclusion**

Risk-reducing surgery may result in changes to patients’appearance. If prophylactic breast surgery severely affects women body esteem, vNOTES for gynecologic prophylactic surgery has the potential to improve surgical experience, provide good long-term functional and cosmetics outcomes.