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### POPULATION TESTING AND PERSONALISED OVARIAN CANCER RISK PREDICTION FOR RISK ADAPTED TARGETED PREVENTION

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**Introduction/Background** The current approach to genetic-testing and risk assessment is based on family-history and misses the majority of people at risk. Unselected population-based testing can enable personalised ovarian cancer (OC) risk prediction combining genetic/epidemiology/hormonal data. This permits population risk stratification for risk adapted targeted screening and prevention. Such an intervention study has not previously been undertaken. We aimed to assess the feasibility of OC risk stratification of general population women using a personalised OC risk tool followed by risk management.

**Methodology** Volunteers were recruited through London primary care networks. Inclusion criteria: women  $\geq 18$  years. Exclusion criteria: prior ovarian/tubal/peritoneal cancer, previous genetic testing for OC genes. Participants accessed an online/web-based decision aid along with optional telephone helpline use. Consenting individuals completed risk assessment and underwent genetic testing (BRCA1/BRCA2/RAD51C/RAD51D/BRIP1, OC susceptibility single-nucleotide polymorphisms). A validated OC risk prediction algorithm provided a personalised OC risk estimate using genetic/lifestyle/hormonal OC risk factors. Population genetic testing (PGT) for OC-risk stratification uptake/acceptability, satisfaction, decision aid/telephone helpline use, psychological health and quality of life were assessed using validated/customised questionnaires over six months. Linear-mixed models/contrast tests analysed impact on study outcomes. Main outcomes: feasibility/acceptability, uptake, decision aid/telephone helpline use, satisfaction/regret, and impact on psychological health/quality of life.

**Results** In total, 123 volunteers (mean age = 48.5 (SD=15.4) years) used the decision aid, 105 (85%) consented. None fulfilled NHS genetic-testing clinical criteria. OC-risk stratification revealed 1/103 at  $\geq 10\%$  (high), 0/103 at  $\geq 5\%$ – $<10\%$  (intermediate), and 100/103 at  $<5\%$  (low) lifetime OC risk. Decision aid satisfaction was 92.2%. The telephone helpline use rate was 13% and the questionnaire response rate at six months was 75%. The high-risk woman underwent surgical prevention. Contrast tests indicated that overall depression ( $p=0.30$ ), anxiety ( $p=0.10$ ), quality-of-life ( $p=0.99$ ), and

distress ( $p=0.25$ ) levels did not jointly change, while OC worry ( $p=0.021$ ) and general cancer risk perception ( $p=0.015$ ) decreased over six months. In total, 85.5%–98.7% were satisfied with their decision.

**Conclusion** Findings suggest population-based personalised OC risk stratification is feasible and acceptable, has high satisfaction, reduces cancer worry/risk perception, and does not negatively impact psychological health or quality-of-life. Larger implementation studies evaluating long-term impact and cost effectiveness of this strategy are needed.

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### ATTITUDES TOWARDS RISK REDUCING EARLY SALPINGECTOMY WITH DELAYED OOPHORECTOMY FOR OVARIAN CANCER PREVENTION: A COHORT STUDY

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**Introduction/Background** With increasing evidence and acceptability of the central role of the fallopian-tube in the etiopathogenesis of epithelial ovarian cancer (OC), risk-reducing-early-salpingectomy-and-delayed-oophorectomy (RRESDO) has been proposed as a two-stage surgical alternative to risk reducing salpingo-oophorectomy (RRSO). RRESDO offers some level of risk reduction to women who decline/wish to delay RRSO whilst conserving ovarian function and avoiding detrimental consequences of premature-menopause. However, prospective outcome data for RRESDO are lacking. The aim of this study was to determine RRESDO acceptability and effect of surgical prevention on menopausal sequelae/satisfaction/regret in women at increased OC risk.

**Methodology** UK Multicentre, cohort, study (IRSCN:12310993). OC unaffected UK women  $\geq 18$  years, at increased OC-risk, with/without previous RRSO, ascertained through specialist familial-cancer/genetic-clinics and BRCA support-groups. High-risk women completed a 39-item customised questionnaire developed through literature review, expert clinician and patient support groups' involvement. Baseline characteristics were described using descriptive statistics. Logistic/linear-regression models analysed impact of variables on RRESDO acceptability and health-outcomes. Main outcomes were RRESDO acceptability, barriers/facilitators, menopausal-sequelae, satisfaction/regret.

**Results** 346 of 683 participants underwent risk-reducing salpingo-oophorectomy (RRSO) and 337 did not. 69.1% (181/262) premenopausal women who had not undergone RRSO found it acceptable to participate in a research study offering RRESDO. Premenopausal women concerned about sexual-dysfunction were more likely (OR=2.9, 95%CI=1.2–7.7,  $p=0.025$ ) to find RRESDO acceptable. Women experiencing sexual-dysfunction after premenopausal-RRSO were more

likely to find RRESDO acceptable in retrospect (OR=5.3, 95%CI=1.2–27.5,  $p<0.031$ ). 88.8%(143/161) premenopausal versus 95.2%(80/84) postmenopausal women who underwent RRSO respectively were satisfied with their decision. 9.4%(15/160) premenopausal and 1.2%(1/81) postmenopausal women who underwent RRSO regretted their decision. HRT-uptake in breast-cancer (BC) unaffected premenopausal individuals was 74.1% (80/108). HRT-use did not significantly affect satisfaction/regret levels but reduced symptoms of vaginal-dryness (OR=0.4, 95%CI=0.2–0.9,  $p=0.025$ ).

**Conclusion** Data show high RRESDO acceptability particularly in women concerned about sexual-dysfunction. Although RRSO satisfaction remains high, regret rates are much higher for premenopausal women than postmenopausal women. HRT use following premenopausal RRSO does not increase satisfaction and reduces vaginal dryness.

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#### SURGICAL DECISION MAKING IN PREMENOPAUSAL BRCA CARRIERS CONSIDERING RISK REDUCING EARLY-SALPINGECTOMY OR SALPINGO-OOPHORECTOMY: A QUALITATIVE STUDY

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**Introduction/Background** Acceptance of the role of fallopian tubes in ovarian carcinogenesis and the detrimental sequelae of surgical menopause in pre-menopausal women following risk reducing salpingo-oophorectomy (RRSO), has resulted in risk reducing early salpingectomy with delayed oophorectomy (RRESDO) being proposed as an attractive alternative risk reducing strategy in women who decline/delay oophorectomy. We present the results of a qualitative study evaluating the decision making process amongst BRCA carriers considering prophylactic surgeries (RRSO/RRESDO) as part of the multi-centre PROTECTOR trial (ISRCTN:25173360).

**Methodology** In depth semi-structured 1:1 interviews conducted using a pre-developed topic guide (development informed by literature review and expert consultation) until informational saturation reached. Wording and sequencing of questions were left open with probes used to elicit additional information. All interviews were audio recorded, transcribed verbatim, transcripts analysed using an inductive theoretical framework and data managed using NVIVO v12.

**Results** Informational saturation was reached following twenty four interviews. Seven interconnected themes integral to

surgical decision making were identified: fertility, menopause, cancer risk reduction, surgical choices, surgical complications, sequence of ovarian and breast prophylactic surgeries, support, satisfaction. Women for whom maximising ovarian cancer (OC) risk reduction was relatively more important than early menopause/quality of life preferred RRSO, whereas those more concerned about detrimental impact of menopause chose RRESDO. Women preferred educational support groups to online support groups to help with decision-making. Women engage concurrently in both OC and breast cancer (BC) prevention decision-making and we identified a demand for combined OC and BC prevention-surgery. While preventative surgery reduced anxiety, interviewees wished to be routinely offered an 'optional' (not compulsory) consultation with a psychologist. Women managed in specialist familial cancer clinic (FCC) settings compared to non-specialist settings received better quality care, improved HRT access and were more satisfied.

**Conclusion** Medical, physical, psychological, social contextual factors influence timing of risk reducing surgeries. RRESDO offers women delaying/declining premenopausal oophorectomy, particularly those concerned about menopausal effects, a degree of ovarian cancer risk reduction whilst avoiding premature menopause. Care of high risk women should be centralised to centres with specialist familial gynaecological cancer risk management services to provide a better quality, streamlined, holistic multidisciplinary approach.

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#### PAP SMEAR SCREENING AMONG FEMALE PATIENTS OF THE IBN ROCHD UNIVERSITY HOSPITAL CENTER: A CROSS SECTIONAL SURVEY

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**Introduction/Background** Cervical cancer is preceded by a period of pre-invasive state, and is characterized histologically by a broad spectrum of events ranging from cellular atypia to different degrees of cervical intraepithelial neoplasia before progressing to invasive cancer. The association between certain oncogenic (high-risk) strains of HPV and cervical cancer is well established. The purpose of this study is to highlight – through the findings – the importance of emphasizing accurate information about cervical cancer and the purpose of Pap smear for Moroccan women.

**Methodology** This cross-sectional study was carried out among 500 female patients who had a pap screening at the gynecology and obstetrics department at the UHC Ibn Rochd over a period of 2 years (2016 – 2017).

**Results** The average age of the patients having a pap smear screening is 39.5 years. The most affected age group is between 30 and 40 years old. 67% of the patients had started sexual activity before the age of 20. A history of recurrent