

Ovarian cancer screening strategy may allow earlier detection

A new screening strategy for ovarian cancer appears to be highly specific for detecting the disease before it becomes lethal (Lu et al, 2013). If verified in an ongoing clinical trial, this could potentially help save the lives of thousands of women each year.

There currently are no established screening strategies for ovarian cancer. The disease often causes no specific symptoms and is difficult to detect in the early stages when it is most responsive to treatment. Therefore, ovarian cancer is

highly lethal because most women have advanced disease when they are diagnosed.

Dr Karen Lu, of The University of Texas MD Anderson Cancer Center in Houston, led a team that tested the potential of a two-stage ovarian cancer screening strategy that incorporates changes in CA125 levels (a known tumour marker).

In their 11-year study, 4051 post-menopausal women initially underwent an annual CA125 blood test. Based on a calculation called the 'Risk of Ovarian Cancer Algorithm', women were divided into three groups: those who should receive another CA125 test 1 year later (low risk), those who should receive a repeat CA125 in 3 months (intermediate risk), and those who should receive a transvaginal ultrasound and be referred to a gynaecological oncologist (high risk).

An average of 5.8% of women were found to be of intermedi-

ate risk each year, so they should receive a CA125 test in 3 months. The average annual referral rate to transvaginal ultrasound and review by a gynaecological oncologist was 0.9%.

Ten women underwent surgery based on their ultrasound exams, with four having invasive ovarian cancers, two having ovarian tumours of low malignant potential, one having endometrial cancer, and three having benign ovarian tumours. This equates to a positive predictive value of 40% for detecting invasive ovarian cancer.

The specificity of the testing strategy was 99.9%, meaning that only 0.1% of patients without cancer would be falsely identified as having the disease. Importantly, all of the ovarian cancers were early stage.

'The results from our study are not practice-changing at this time; however, our findings suggest that using a longitudinal (or change over time) screening strategy may be beneficial in

post-menopausal women with an average risk of developing ovarian cancer,' said Dr Lu.

Dr Sarah Blagden, from the Ovarian Cancer Action research centre in the UK, said: 'The screening study ... shows that multimodal screening is a feasible method of detecting early stage ovarian cancer. Relative to the trial underway in the UK (the UKCTOCs), this is a small study, but it does show that effective ovarian screening is possible.'

She continued: 'In 2015 the results of the UKCTOCs study will become available. This is a much larger trial ... and the results are eagerly anticipated, more so now that this American study has produced such encouraging results.'

Lu KH, Skates S, Hernandez MA et al (2013) A 2-stage ovarian cancer screening strategy using the risk of ovarian cancer algorithm (ROCA) identifies early-stage incident cancers and demonstrates high positive predictive value. *Cancer* August 26 (Epub ahead of print)

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Girls with anorexia nervosa have increased number of autistic traits

Girls with anorexia nervosa show a mild echo of the characteristics of autism, suggests new research (Baron-Cohen et al, 2013). In particular, compared to typical girls, girls with anorexia have an above average number of autistic traits, an above average interest in systems, but score below average in empathy. This profile resembles – to a lesser degree – that seen in people with autism.

At first glance, anorexia and autism seem very different, but they both share certain features, such as rigid attitudes and behaviours, a tendency to be very self-focussed, and a fascination with detail.

The team, led by Professor Simon Baron-Cohen at the Autism Research Centre at Cambridge University, tested how 66 adolescent girls (aged 12–18 years) with anorexia but without autism scored on tests to measure traits related to autism. They compared them to over 1600 typical teenagers in the same age range, and measured their autistic traits using the Autism Spectrum Quotient, their 'systemising' using the Systemising Quotient, and their empathy using the Empathy Quotient.

They found that on the Autism Spectrum Quotient, five times more girls with anorexia scored in the range that

people with autism score in than the typical girls. In addition, on the Autism Spectrum Quotient, over half of the girls with anorexia showed the 'broader autism phenotype', compared to just 15% of typical girls.

On the tests of empathy and systemising (how strong an interest the person has in repeating patterns and predictable rule-based systems), girls with anorexia had a higher Systemising Quotient, and a reduced Empathy Quotient, a profile that parallels that seen in autism.

Professor Baron-Cohen said: 'Traditionally, anorexia has been viewed purely as an eating

disorder. This is quite reasonable, since the girl's dangerously low weight, and the risk of malnutrition or even death has to be the highest priority. But this new research is suggesting that underlying the surface behaviour, the mind of a person with anorexia may share a lot with the mind of a person with autism. In both conditions, there is a strong interest in systems. In girls with anorexia, they have latched onto a system that concerns body weight, shape, and food intake.'

Baron-Cohen S, Jaffa T, Davies S, Auyeung B, Allison C, Wheelwright S (2013) Do girls with anorexia nervosa have elevated autistic traits? *Molecular Autism* 4: 24 (6 August epub ahead of print)