Ovarian cancer: US trial boosts hope of early detection

US research suggests possibility of spotting common but hard-to-detect cancer in time to save lives

- Sarah Boseley, health editor
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Ovarian cancer is the fifth most common cancer among women. Photograph: Alamy

Hopes of a screening programme for ovarian cancer, which is often lethal because detected at a late stage, have risen with the publication of the results of a trial in the United States.

Ovarian cancer is the fifth most common cancer among women, with 7,000 new diagnoses in the UK alone each year. It causes great anxiety and concern because there are few symptoms and they are not very distinctive in the early stages – they include a bloated stomach and abdominal pain. Many women arrive at the GP with a cancer that proves fatal.

The trial, of 4,051 women at the University of Texas MD Anderson cancer centre, in Houston, showed it is possible to identify ovarian tumours correctly through a blood test and internal ultrasound examination with a low rate of errors, which means that few women should be wrongly suspected of having cancer.

In ovarian cancer, this is crucial, because the next step is abdominal surgery, which carries serious risks.

The Houston study was very small – because ovarian cancer is relatively rare, only 10 women were identified as cause for concern and operated on, and four of those were found to have

invasive ovarian cancer.

However, it will raise hopes because the technique used is similar to that used in a far bigger study in the UK, involving 300,000 women, which is due to report in 2015.

The results of the Houston trial are being published early online in Cancer, the journal of the American Cancer Society, and will raise hopes that were dashed by an earlier and bigger US study that looked at screening for four cancers – prostate, lung, colorectal, and ovarian cancer.

The ovarian cancer arm of that study used the same blood test – which measures raised levels of a protein called CA125 – followed by transvaginal ultrasound in suspicious cases.

Unfortunately, the level of CA125 can be raised by a number of other factors besides ovarian cancer, including liver cirrhosis, appendicitis and heart problems.

Many unnecessary operations have been done. More than 3,000 women were wrongly thought to have ovarian cancer and more than 1,000 of those had surgery, 163 of whom suffered serious complications. The new trial shows it is possible to use the same tests and get a far better result by assessing each individual's risk of a high reading given their age and state of health.

An important new element is the rise in the CA125 level in a woman's blood compared with that shown in her last test. For the US trial protocol low-risk women had an annual blood test; those with an intermediate risk had the test repeated at three months, and only high-risk women proceeded to ultrasound and a referral to a gynaecologist.

"The results from our study are not practice-changing at this time," said Karen Lu, who led the study. "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." She added that she now looked forward to the results of the trial in the UK for further answers.

"If verified in an ongoing clinical trial, [the screening technique] could potentially help save the lives of thousands of women each year in the US alone," said a statement from the medical centre.

The UK collaborative trial of ovarian cancer screening (UKCTOCS) study has a lot of hard questions to answer. The most important is whether correctly identifying cancers actually saves lives. Screening is not helpful if it does not prolong the life of women whose cancers are picked up.

Sarah Blagden, a medical oncology consultant at Imperial College London and a member of the ovarian cancer action research team, said there were different sorts of ovarian cancers. It was important to know whether screening would find not just the "indolent", slow-growing cancers but the fast-developing ones that tended to be more lethal.

"I had a patient who had an ultrasound showing clear and six months later we picked her up at stage four [the most advanced]. This is in fact the most common type," she said.

There is a risk that women given the all-clear might not go to the doctor with symptoms. "If you have a screening programme that tests people once a year, it might have a dangerous effect.

We really have to think carefully about that," Blagden said.

It did appear, however, that the Houston study might have detected one or two cases of those kinds of rapidly developing cancers.

There is obvious enthusiasm for screening for ovarian cancer, but Blagden said that it was important to introduce it only if there was clear evidence of greater benefit than harm.

"It is not just about the finances, as everybody always thinks. It is much more about the cost in morbidity [harm] and psychological stresses and false reassurance," she said.