**IVF 'raises the risk of cancer': Treatment linked to high levels of 'dangerous' tissue**

* **Controlled ovarian stimulation is a key part of most IVF treatments**
* **Those who undergo it are more likely to develop dense breast tissue**
* **Breast density is known to be a strong risk factor of breast cancer**
* **Women with highly dense breasts up to 6 times as likely to develop disease**

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**PUBLISHED:** 01:07, 13 April 2016 | **UPDATED:** 03:30, 13 April 2016

Women who have IVF may be at an increased chance of developing breast cancer, research suggests.

A study involving 43,000 women found that those who undergo controlled ovarian stimulation – a key part of most IVF treatments – are more likely to develop dense breast tissue.

Breast density is known to be one of the strongest risk factors of breast cancer, with women who have highly dense breasts up to six times as likely to develop the disease.

Dense breast tissue contains more glandular tissue and less fat. Although it usually feels no different to the touch, it contains many more cells that are likely to turn cancerous.

The team of scientists from the Karolinska Institute in Sweden found that women who are infertile already tend to have more dense breast tissue than fertile women – an average of an extra 1.53 cubic centimetres. Experts suspect the root causes of infertility cause changes in the breast.

But the team found that women who underwent controlled ovarian stimulation had even more dense breast tissue – an extra 4.26 cubic centimetres.

Writing in the journal Breast Cancer Research, they said this indicates that the treatment itself – which involves hormone injections to stimulate the ovaries – may be altering the structure of the breast.

‘Among the infertile women, those who had gone through controlled ovarian stimulation had the highest absolute dense volume,’ they wrote. ‘This may indicate a potential adverse effect of controlled ovarian stimulation, but could also be due to the underlying infertility.’

However, they stressed that dense breasts may not necessarily lead to breast cancer. Previous studies have found that an extra three cubic centimetres of dense tissue increases breast cancer incidence by just 2.5 per cent.

Around 50,000 women have IVF each year in the UK. Experts said they have little to fear, because the numbers affected are so small and it is not clear whether the treatment is to blame. But some urge caution and say clinics should not overuse the technique.

Previous research, conducted by University College London and presented at a major fertility conference last autumn, suggested that IVF may increase the risk of ovarian cancer by around a third.

Professor Alastair Sutcliffe of UCL, who led that study, stressed that research into this field is at a very early stage and no scientist has yet definitively established whether cancer risk is due to the treatment itself or underlying fertility problems.

‘These findings are plausible but, nonetheless it would be irresponsible in the extreme to frighten women who have been subfertile and had treatment to think that they would be at higher risk of breast cancer,’ he said.

Dr Emma Blamont of the Breast Cancer Now charity, added: ‘If confirmed, this is a link that could help women who have undergone fertility treatment better understand their risk of breast cancer.

‘The next step is to identify whether it is the original infertility or the hormone treatment for it that is causing this effect.

‘Importantly, the best way for women to reduce their risk of breast cancer is to maintain a healthy weight, be more physically active and reduce their alcohol intake.’

Samia Al Qadhi, chief executive of Breast Cancer Care, added: ‘The message for women today is if you’ve had hormonal fertility treatment this does not mean you will definitely have a higher risk of breast cancer.

‘The biggest risk factors for the disease remain out of our control – being female and getting older.’

Read more: <http://www.dailymail.co.uk/health/article-3536979/IVF-raises-risk-cancer-Treatment-linked-high-levels-dangerous-tissue.html#ixzz4Bk52Z81E>   
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