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Trust's world first for patients

Pioneering clinicians at Maidstone and Tunbridge Wells NHS Trust have developed a revolutionary radiological technique that uses tiny bubbles to help detect cancer.

The breakthrough in diagnostic care will prevent thousands of breast cancer patients in the UK – tens of thousands of women worldwide – from having to have repeat surgery.

Dr Ali Sever, Consultant Radiologist, who led the study, said: “This is a world first. The test only takes a few minutes to perform and has transformed the way we care for patients.”

Normally, while undergoing surgery to remove breast cancer, surgeons routinely recommend that patients also have an operation to remove glands in their armpit to check if they are cancerous.

The so called “sentinel lymph node” is the first to be affected if the cancer has spread. It is found during the operation with the aid of a coloured dye and is removed for testing. If the nodes are found to be cancerous a second operation is required to remove all the remaining glands in the armpit.

The procedure, which was pioneered by the specialist breast cancer unit at Maidstone Hospital in Kent, allows the sentinel lymph node to be located and tested **without** surgery.

To do this, microbubbles – minute bubbles - are injected by the radiologist in a tiny amount of fluid into the patient's breast. The bubbles travel to the sentinel lymph node and can be spotted using ultrasound. A fine needle biopsy can then be performed to see if the node is cancerous. If the test is positive, patients have just one operation to remove all the lymph glands at the same time as their main operation.

Dr Sever added: “The use of ultrasound with microbubbles to detect the sentinel lymph node is unique and something that will benefit breast cancer care around the world..“

Consultant Breast Surgeon Mr Peter Jones, who is part of the team who developed the ground-breaking “microbubbles” procedure at Maidstone Hospital in Kent, said: “It is possible for breast teams to use this test and thousands of women can avoid unnecessary surgery.”

Another member of the team, Mrs Sue Jones, Consultant Breast and Oncoplastic Surgeon, said: “Telling women who have undergone breast cancer surgery that they need another operation because the cancer has spread to the sentinel lymph node is the worst news they can hear. It is a real emotional set back in their cancer journey.

“While still traumatic, patients seem to deal with this news much better if they find out before operation that the lymph glands have cancer in them.”

About 25% of breast cancer patients are found to have cancer in the sentinel lymph node and go on to need a second operation.

The results of the team’s work are being shared worldwide at international health conferences and have been published in this month’s British Journal of Surgery. Dr Sever has been asked to talk about the revolutionary procedure on American television.

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Editors note

The breast specialists involved in this research are:

Dr Ali Sever, Consultant Breast Radiologist
Mrs Sue Jones, Consultant Breast and Oncoplastic Surgeon
Mr Peter Jones, Consultant Breast Surgeon
Dr Pippa Mills, Consultant Breast Radiologist
Dr Jenny Weeks, Associate Specialist Breast Clinician
Dr David Fish, Consultant Breast Pathologist