BREAST IMPLANT PATIENTS SHOULD BE WARNED OF RARE CANCER RISK BEFORE SURGERY

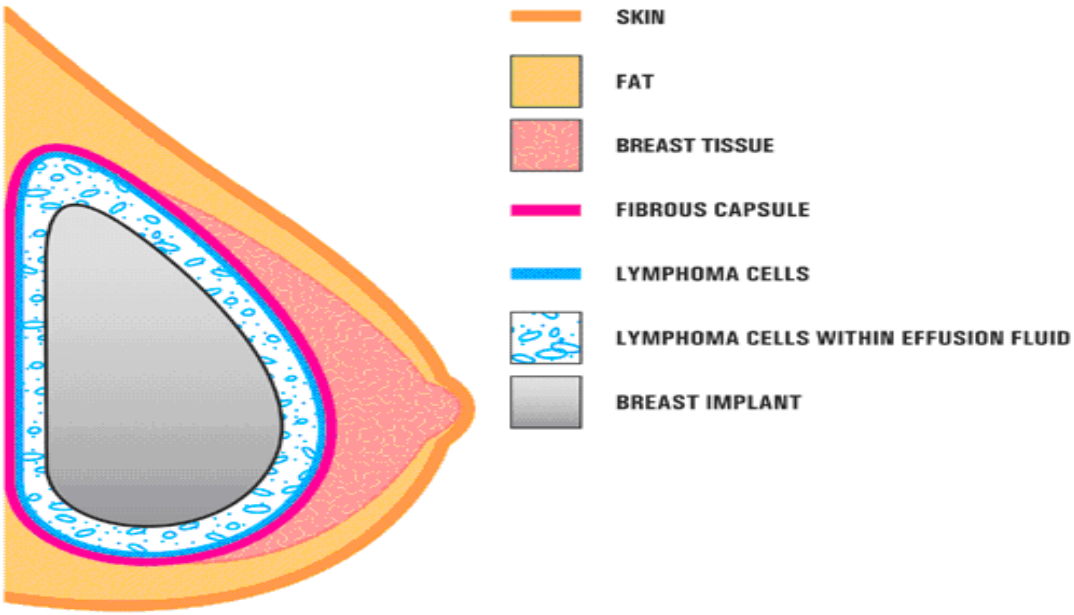
It is important that all women considering any type of breast implant surgery are informed of the risk of a rare but serious type of cancer called anaplastic large cell lymphoma (ALCL). They should also be counselled on the signs and symptoms of this breast implant associated cancer and should be made aware of when to take action.

What is breast implant associated ALCL?

ALCL is a rare type of non-Hodgkin Lymphoma. Like all lymphomas, it is a cancer of the lymphatic system - part of the body's immune system. ALCL develops when abnormal T-cell lymphocytes, a type of white blood cell, divide in an uncontrolled way. These build up in parts of the body like the lymph nodes, lungs or skin.

When breast implants are placed in the body, they are inserted behind the breast tissue or under the chest muscle. Over time a fibrous scar called a capsule develops around the implant, separating it from the rest of the breast. In women with breast implants, the ALCL was generally found adjacent to the implant itself and contained within the fibrous capsule.

The illustration below demonstrates that the normal containment of the ALCL is in the fibrous capsule in close proximity to a breast implant. In most cases, the ALCL cells were found in the effusion fluid (seroma) surrounding the implant or contained within the fibrous capsule.



Although ALCL has been found in the breasts of some women with breast implants, it is important to be clear that it is not cancer of the breast tissue. ALCL may appear in several parts of the body including the lymph nodes, skin, bones, soft tissue, lungs or liver.

Diagnosing implant associated ALCL

ALCL is often difficult to diagnose as the symptoms are non-specific and can vary from person to person. This can often lead to cases of late diagnosis.

The more common symptoms include a spontaneous fluid collection in the breast, developing many months or years after receiving a breast implant, and redness and swelling of the breast around an implant that is not from an infection.

Other less common symptoms are tenderness and contraction of the scar tissue capsule surrounding the breast implant. If left untreated, patients can develop a firm distinct mass in their breast.

Surgeons are being encouraged to ensure that patients are aware of the most common signs and symptoms. The US Food and Drug Administration (FDA) advises patients that there is no need to change their routine medical care and follow-up. Currently, there is no recommendation to remove the implants in patients who are not showing any signs or symptoms.

The FDA does advise patients to follow standard medical recommendations including:

- Monitor your breast implants.
- If you notice any changes, contact your health care provider promptly.
- Be aware that symptoms of ALCL, such as pain, lumps, swelling or differences between breasts can occur as late as eight to nine years after surgery.
- Get routine mammography screening.
- If you have silicone gel-filled breast implants, get periodic magnetic resonance imaging (MRI) to detect ruptures.

FDA guidance for plastic/cosmetic surgeons

The FDA has also issued guidance to health care providers, specifically plastic/cosmetic surgeons, on what to do if a patient presents to them with pain, lumps, swelling or asymmetry of the breasts, particularly if these occur a long time after insertion of the implants.

The recommendations are as follows:

- Consider the possibility of ALCL when you have a patient with late onset, persistent peri-implant seroma. In some cases, patients present with capsular contracture or masses adjacent to the breast implant.

- If you have a patient with suspected ALCL, refer her to an appropriate specialist for evaluation.

- When testing for ALCL, collect fresh seroma fluid and representative portions of the capsule and send for pathology tests to rule out ALCL.

- Diagnostic evaluation should include cytological evaluation of seroma fluid.

- Report all confirmed cases of ALCL in women with breast implants to the FDA.

- The FDA also recommends reporting cases to the PROFILE Registry where more comprehensive case data can be provided.

- Develop an individualised treatment plan in coordination with the patient's multi-disciplinary care team.

Additional tests may be conducted to give doctors more information about the disease and whether or not it has spread (and if so, how far) in the body. The assessments can include blood tests, a computed axial tomography (CAT) scan, a positron emission tomography (PET) scan, a magnetic resonance imaging (MRI) scan, and a bone marrow biopsy.

Treatment of implant associated ALCL and prognosis

A study published in the J Clin Oncol. 2014 Jan concluded that, for patients where the ALCL is confined by the fibrous capsule, treatment may be limited to implant removal and capsulectomy - removal of the surrounding scar tissue.

If ALCL is diagnosed late or in a more aggressive form or recurs after a capsulectomy, additional treatment is likely to be required. In these cases, a distinct mass often develops. When this occurs, treatment with chemotherapy and or radiotherapy is usually required.

The study referred to above found that 39 of 42 patients (93%) with ALCL confined by the fibrous capsule achieved complete remission, compared with complete remission in 13 of 18 patients (72%) who had a distinct mass.

This evidence suggests that ALCL is more likely to be fatal for women who have developed a solid mass than for those where the cancer cells were limited to the surrounding fluid (ALCL effusions). In the above study, patients with effusion-type ALCL were still alive five years after their diagnosis compared to only 75% of the patients with solid masses. The recurrence rate was higher when a solid mass was present. The implication from this data is that the earlier the diagnosis, the better the outcome.

The link between ALCL and breast implants

In January 2011, the US Food and Drug Administration (FDA) issued a warning about a possible link between breast implants and ALCL.

This link came to light when a study found that 34 women diagnosed with ALCL in a breast had implants. FDA scientists looked at results from other studies, consulted implant experts and manufacturers and contacted international health agencies. The scientists found six more US women and about 24 international women who were diagnosed with breast ALCL in a breast with an implant.

According to the National Cancer Institute, approximately one in 500,000 women is diagnosed with ALCL in the United States each year. ALCL in the breast is even more rare – only around three in 100 million women per year in the US are diagnosed with ALCL in the breast.

Although ALCL is extremely rare, the FDA has concluded that women with breast implants may have a very small but increased risk of developing this cancer.

Currently this cannot be confirmed with statistical certainty nor is it possible to identify whether a type of implant (ie silicone versus saline) has a smaller or greater risk.

The FDA has been gathering data to learn more about the actual incidence of ALCL in women with breast implants, the characteristics of breast implants that might increase the risk of ALCL, and the pathological characteristics and clinical features of ALCL in women with breast implants.

Based on information gathered by the FDA between August 2010 and September 2015, their current estimate is that there have been 100-250 known cases of ALCL in women with breast implants worldwide. All the information to date still suggests that women with breast implants may have a very low but increased risk of developing ALCL. They continue to reconcile the data between the various sources and will provide updated findings as new information and analyses become available.

Ensuring that patients understand the risk

Women considering any type of breast implant surgery should understand their risk of ALCL according to a special topic paper in the April issue of *Plastic and Reconstructive Surgery*, the official medical journal of the American Society of Plastic Surgeons (ASPS).

Dr Mark Clemens of the University of Texas MD Anderson Cancer Centre said: *"Breast implant associated ALCL should be included during preoperative counselling on the risks of breast implantation when obtaining informed consent."*

While the true rate of breast implant associated ALCL is unknown, the risk of developing the cancer is at least 18 times higher than in women without implants. Informal surveys suggest that up to three quarters of surgeons do not discuss ALCL when obtaining informed consent for breast implant procedures. This is likely to be in part due to the difficulty in determining an accurate assessment of the risk.

The law on informed consent has changed following a recent Supreme Court judgment. Doctors must now ensure that patients are aware of any "material risks" involved in a proposed treatment, and of reasonable alternatives, following the judgment in the case *Montgomery v Lanarkshire Health Board*.

The Supreme Court's ruling defined the new test: *"The test of materiality is whether, in the circumstances of the particular case, a reasonable person in the patient's position would be likely to attach significance to the risk, or the doctor is or should reasonably be aware that the particular patient would be likely to attach significance to it."*

The review conducted by Dr Clemens and his team concluded that the legal threshold for inclusion of a specific risk in informed consent is vague. Although the decision to make inclusion of breast implant associated ALCL in the informed consent process is not mandatory, it is strongly encouraged and patients should be made aware of the existence of the risk, the common presenting symptoms and what to do should these occur.

Elise Bevan, a solicitor in the clinical negligence team at Penningtons Manches LLP, said: "*While there are still significant knowledge gaps in the association between ALCL and breast implants, we believe that patients should be made aware of the existence of this rare cancer and be able to use the available information to make an*

informed decision when considering breast implants.

"Implant manufacturers and surgeons have been quick to dismiss the FDA's findings. Allergan, a manufacturer of both silicone and saline breast implants, said "a woman is more likely to be struck by lightning than to get this condition". Although the chance of developing implant related ALCL is very low, there is still an increased risk and we believe that advising patients of this risk should form part of the informed consent process.

"More importantly, the topic of implant associated ALCL should be discussed with the patient to ensure that they are aware of the signs and symptoms. It is clear from the evidence that early diagnosis and treatment leads to a better prognosis. Surgeons should be encouraged to make patients aware of the existence of this rare cancer and the most important things to look out for. Surgeons may feel more inclined to do this if they are educated and trained on the signs and symptoms.

"If you have a breast implant, be reassured by the FDA's advice for women and their doctors about implants but do not hesitate to call your doctor if you are concerned. Definitely call your doctor if you have symptoms or problems with your implant such as pain, lumps, swelling or asymmetry."

Case note

Penningtons Manches is currently acting for a young woman who was diagnosed with implant associated ALCL four years after first presenting with swelling. After multiple procedures to drain the fluid causing the recurring swelling, the surgeon decided to refer her for further investigation and at this point a diagnosis of ALCL was made.

In this case better training for the surgeon and the patient being alert to the signs and symptoms, may have prevented the late diagnosis.