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Specialist in Focus



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Dr Lim graduated from the Faculty of Medicine, National University of Singapore (NUS), in 1998. He underwent residency in Otolaryngology in Singapore and was awarded the Gold Medal for the MRCS (Edinburgh) General Surgery examination in 2003 and subsequently the Gold Medal Award by the College of Surgeons for the best performing resident in the exit examination organised by the Specialist Training Committee in Otolaryngology in 2009.

In 2010, he was awarded the Ministry of Health's Overseas Training Award and pursued a 2-year Head and Neck Oncologic Fellowship at the University of Pittsburgh Medical Centre in the United States of America. During these 2 years, Dr Lim did translational bench work research in immunotherapy in head and neck cancer, focusing on immunological mechanisms in monoclonal antibody-based therapy in cancer and identifying novel immune modifiers in cancer therapy.

In his clinical training, he was trained in transoral robotic surgery (TORS), minimally invasive video-assisted thyroidectomy (MIVAT) and minimally invasive approaches in head and neck surgery, in addition to the major head and neck resections. Upon his return to Singapore in 2012, he was appointed Consultant in the Division of Surgical Oncology (Head and Neck Surgery), NCIS, and Department of Otolaryngology - Head and Neck Surgery, NUH, as well as Assistant Professor at the Yong Loo Lin School of Medicine, NUS.

In the area of research in robotic surgery, Dr Lim is actively collaborating with the academic staff from the Faculty of Engineering, NUS, and was the co-Principal Investigator evaluating the key technologies for minimally invasive robotics surgery and navigation. Dr Lim has published in book chapters and numerous peer-reviewed journals.

Clinical Highlights

Robotic Assisted Head & Neck Surgery

Transoral resection of oropharyngeal and laryngeal cancer has been made possible with the development of the robotic system. The advantage of using the robotic system is its ability to operate in tight confines of the oropharynx due to the increased surgical manoeuvrability of instruments afforded by the 360-degree wristed technology.

Additionally, the increased magnification and 3-dimensional vision have enhanced the surgeon's ability to perform transoral resection of head and neck cancer with equivalent oncologic outcome.

Other than the cosmetic advantage that comes with the use of the transoral approach, surgeons have also avoided the need to split the patient's mandible in order to gain access to the tumour, which is associated with a longer recovery time and a need for routine flap reconstruction of the defect.

These benefits have translated into better swallowing outcome following transoral resection. Other than transoral robotic surgery (TORS), NCIS has also performed remote access thyroidectomy using the robot for thyroid neoplasms. The chief advantage of remote access thyroidectomy (either trans-axillary or retroauricular approach) is the avoidance of a midline neck scar which may be preferred by some patients.

At the National University Cancer Institute, Singapore (NCIS), we have used the robot to perform these surgeries since 2012.

Robotic thyroidectomy

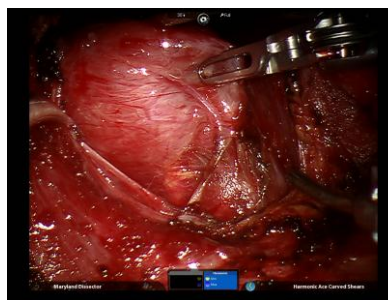


Fig 1. Thyroid nodule visualised using the robotic system

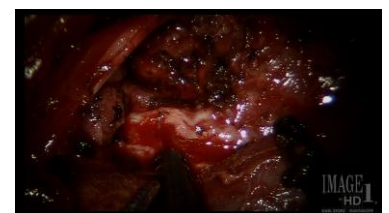


Fig. 2. Post thyroidectomy showing the recurrent laryngeal nerve

Pre and post resection of oropharyngeal cancer

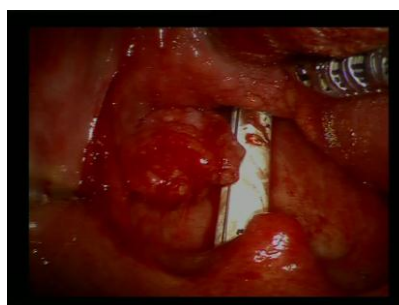


Fig.1. Early T1 tonsillar

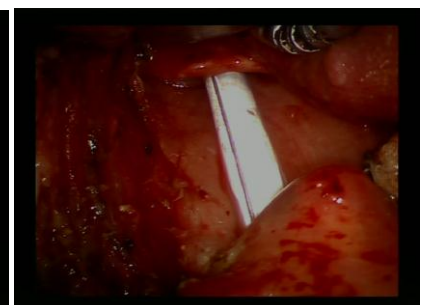


Fig 2. Post resection using TORS

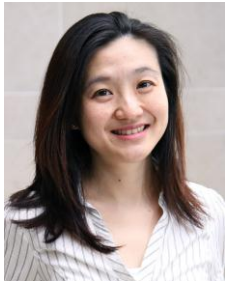


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Specialist in Focus



Dr Chan Ching Wan

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Dr Chan Ching Wan is the leader and a Senior Consultant in the Division of Surgical Oncology (Breast Surgery), NCIS, and Division of General Surgery (Breast Surgery), University Surgical Cluster, NUH. She obtained her medical degree from the University of Edinburgh, and then returned to Singapore to pursue a surgical career. After becoming a Fellow of both the Royal College of Surgeons of Edinburgh, and the Royal College of Physicians and Surgeons of Glasgow, she took some time out to complete a PhD at the University of Bristol.

This stimulated her interest in breast cancer as a disease, and after completing her surgical training, she decided to specialise in breast surgery. Her main interest is in breast conservation surgery.

She completed her advanced training as a Fellow in the Nottingham Breast Institute (UK) – one of the main breast cancer centres in the United Kingdom with a very comprehensive Oncoplastic Training Programme.

Clinical Updates

Oncoplastic Techniques in Breast Conserving Surgery

The treatment for breast cancer has undergone radical change in the past 3 decades. From the early days of the Halsted's mastectomy and radical mutilating surgery, much has changed.

In the early seventies, surgeons began questioning the benefit of such morbid and disfiguring surgery, and with rapid improvements in adjuvant therapy, surgery was able to evolve towards breast conservation.

These days, women are living longer and better lives after a diagnosis of breast cancer, and the psychosocial implications of a physically-deformed breast after treatment begin to exert greater influence on the mental well-being of our patients.

Oncoplastic surgery is a combination of oncologic resection of the cancer with remodelling of the breast mound using plastic surgery techniques.

There are 2 main techniques in use:

1. Subcutaneous and / or sub-glandular undermining
2. Therapeutic mammoplasty

Subcutaneous / Sub-glandular undermining

This technique is used when the volume of tissue excised is small and involves mobilising tissue from either side of the defect and drawing them in, in order to close this space.

The extent of undermining can be extensive, and care has to be taken to avoid fat necrosis, lumpiness and distortion post radiotherapy.

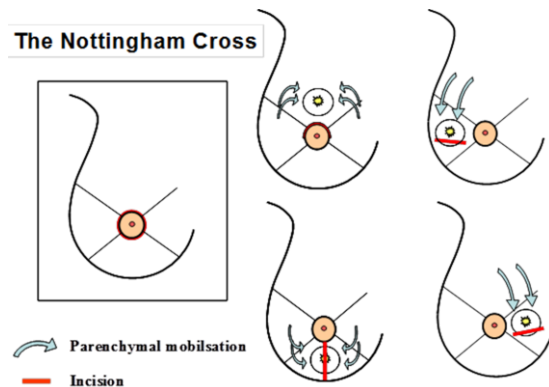


Fig. 1 *Advances in Breast Cancer* 2008;5:10-12.

Therapeutic Mammoplasty

This is the technique of choice for patients whose cancers require larger volumes of excision, and who have lower pole laxity. In this situation, skin is excised to produce a breast of smaller volume, yet preserving a natural shape and form, with complete removal of the cancer. Contralateral procedures can be performed to maintain symmetry; however, some patients do elect for unilateral procedures – choosing to have a smaller breast, rather than undergoing a total mastectomy, in spite of the subsequent asymmetry.

Therapeutic mammoplasty is performed along the principles of breast reduction surgery techniques, long used by plastic surgeons, but modified to accommodate the position of the breast cancer within the breast.

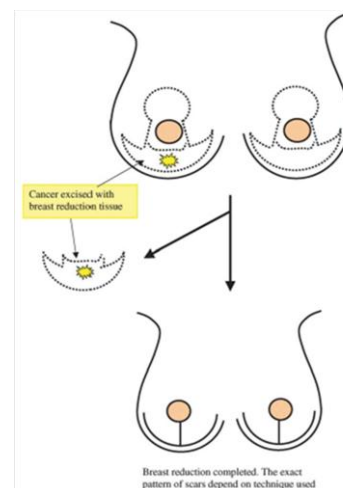


Fig. 1 *British Journal of Plastic Surgery* (2005) 58, 889–901



Shaping Medicine for the Future

CME Registration: <https://nuhcme.com.sg/>

News Updates

Paper clock idea won international award

NUH structured system also allows nurses more time to do other tasks



NUH Deputy Director of Nursing Ng Sow Chun with the paper clock (right) that hangs outside each ward cubicle. After each visit, the nurse shifts its hand two hours ahead to remind the next nurse when she has to visit.

When lorry driver Ramlan Abdul Hamid landed in hospital with a chest infection earlier this month, he was struck by how caring the nurses were. "They were very friendly and took the time to come around a lot," said the 50-year-old, who was warded at the National University Hospital (NUH) for five days.

A proactive approach at the hospital, where nurses visit patients on a set schedule to talk to them and anticipate their needs, is working well for patients who are reaching for their call buttons less. And nurses, used to being rushed off their feet, have found that their workload has eased as well.

It works like this: Instead of attending to patients mainly when it is time to give medicine or when they ask for help, the nurses go to them every two hours for a three to five-minute chat, where they explain medical procedures and offer help for toileting needs, among other things.

A paper clock hangs outside each ward cubicle and, after each round of visit, the nurse moves its hand two hours ahead. This reminds the next nurse what time she has to visit.

Since this approach was rolled out hospital-wide last year, the number of call bells pressed has gone down by one-fifth on average, allowing nurses to perform other tasks, such as paperwork and preparing medicine, more efficiently.

For instance, a team of 12 nurses looking after 44 patients used to answer about 100 call bells a day, but now sees to fewer than 80. "This approach decreases interruptions so we are able to concentrate on each patient better," said senior staff nurse Mao Liang Cui, 30. Said Mr Ramlan: "When you know the nurse is coming around soon, you don't need to press the bell so often. They also introduce the next nurse after their shift, so the care feels more personal."

Deputy Director of Nursing (Nursing Quality) Ng Sow Chun, who introduced the scheme as part of ongoing efforts to transform bedside care, said she had learnt of the approach through medical literature, as it had shown good results in the West. But an NUH pilot with two wards in 2013 was not all smooth-sailing. "It takes time to change mindsets, from reactive to proactive," Ms Ng admitted. "And when it gets busy, people tend to forget." So she introduced the paper clock as a visual reminder, among other measures.

Yesterday, Ms Ng got international recognition for her efforts. She was awarded the prestigious Practice of the Year Award from the Association for Patient Experience, a non-profit organisation sponsored by the Cleveland Clinic in the United States. NUH is the first institution in Asia to receive the award.

Source: *The Straits Times* (Published on 19 May 2015).

New ways of caring for patients

Community-acquired pneumonia

Patients who catch severe pneumonia in the community but are not admitted quickly enough to the intensive care unit (ICU) have twice the chance of dying compared with those who are. In 2008, NUH began a workflow that would standardise the treatment of such patients in the emergency department. Medical staff now relies on a set of criteria to identify severe community-acquired pneumonia early and follow a document, known as a resuscitation bundle, to carry out aggressive treatment for patients.

The entire bundle – which includes blood tests for oxygen levels, as well as the provision of antibiotics and fluids – has to be completed within six hours of a patient showing up at the emergency department. While these are being done, the emergency department team alerts the medical ICU team. Patients who remain unstable are transferred to the medical ICU, where the interventions are continued. Years ago, care for such patients was left to individual doctors in the emergency department and medical ICU. A study by the hospital, published in the *European Respiratory Journal* in 2013, reported that the workflow reduced hospital deaths from 23.8 per cent to 5.7 per cent for this group of patients. Delayed ICU admissions dropped from 32 per cent to 14.8 per cent.

Acute respiratory distress syndrome

This life-threatening condition prevents enough oxygen from getting to the lungs and into the blood, which means patients may require mechanical ventilation. Recent studies show that such patients have better oxygenation when lying on their front. This is because the so-called prone position relieves pressure on the back of the lungs, said Dr Jason Phua, a respiratory physician and intensivist at NUH. Since 2013, patients with a severe form of the syndrome – mostly due to severe pneumonia – are nursed in the prone position at the hospital, often as early as from their first day in the ICU. A study on 466 patients published in *The New England Journal of Medicine* in 2013 reported that 16 per cent of those who were in prone position died after 28 days. But 32.8 per cent of patients who were lying on their backs did not make it to the 28-day mark.

Source: *The Straits Times* (Published on 23 April 2015).

Upcoming CME Event

| Date | Topic |
|---------|---|
| 20 June | Common GI Issues in Children |
| 27 June | Recent Advances in Hepatobiliary Disorders (Benign & Malignant) |
| 4 July | An Insight to Cardiothoracic & Vascular Surgery |

Registration & lunch will start at 12.30 pm

Event Venue:

NUHS Tower Block, Auditorium, Level 1
1E Kent Ridge Road, Singapore 119228

Please visit our CME Portal @ <https://nuhcme.com.sg/> for registration. For enquiries you may contact the GP Liaison Centre @ gp@nuhs.edu.sg