



National Cancer
Centre Singapore
SingHealth

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salubris

...HELPING READERS TO ACHIEVE GOOD HEALTH

Salubris is a Latin word which means healthy, in good condition (body) and wholesome.

**“NOTHING IS
HOPELESS UNLESS
YOU GIVE UP ON
YOURSELF.”**

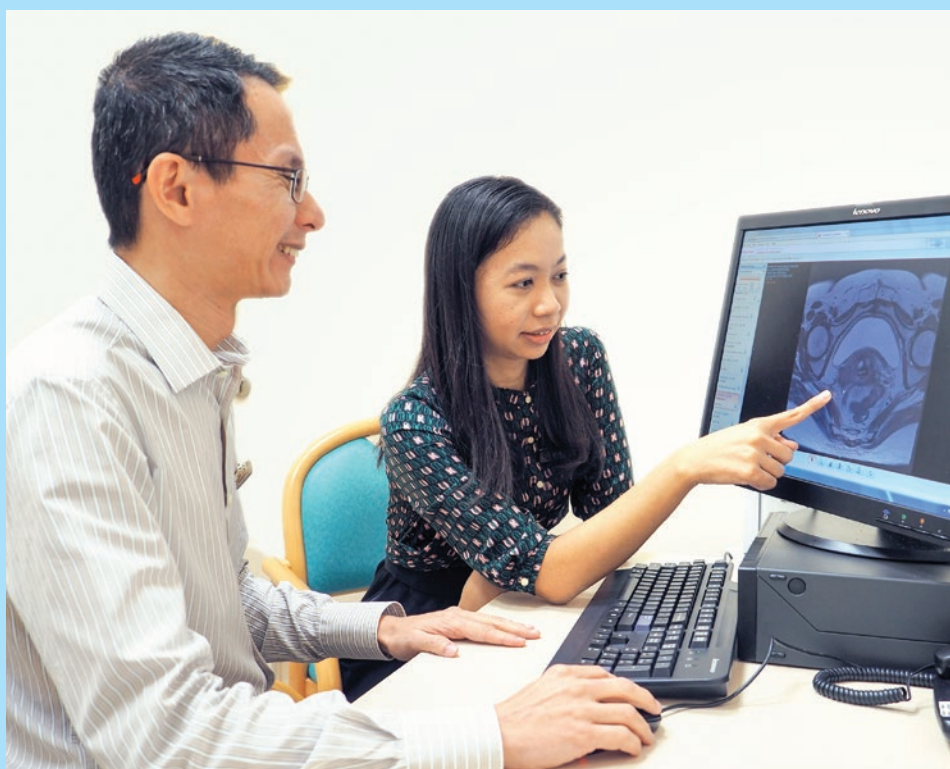
SURVIVOR

OVERCOMING OBSTACLES, OFFERING HOPE

BY ALSON TAN

Corporate Communications

A multidisciplinary team from NCCS recently performed SingHealth and NCCS' first ever MRI Guided Interstitial Brachytherapy treatment for cervical cancer. In conjunction with Cervical Cancer Awareness Month, we speak to **Dr Kiattisa Sommat** and the team as we find out more about the unique challenges and how the team came together to make this procedure a success.



Dr Kwek discusses Ah Hang's case with Dr Kiattisa

ABOUT DR KIATTISA SOMMAT: Dr Kiattisa is a Consultant with the Division of Radiation Oncology (DRO), National Cancer Centre Singapore. Dr Kiattisa sub-specialises in Head & Neck cancers as well as Gynae-oncology.

ABOUT DR KWEK JIN WEI: Dr Kwek is a Senior Consultant with the Division of Oncological Imaging (DOI), National Cancer Centre Singapore (NCCS). Dr Kwek's area of interest is in oncological body imaging specialising in Gynae-oncology and Uro-oncology.

Q Dr Kiattisa, thanks for speaking with *Salubris*. It would be helpful for our readers to understand: "What exactly is MRI Guided Interstitial Brachytherapy?"

Dr Kiattisa Sommat (KS): To explain simply, Brachytherapy is a procedure where radioactive sources are inserted directly into the tumour or the area where the tumour is located. Rather than external radiotherapy which affects a bigger area, this procedure is localised (internal) and precise. Brachytherapy is particularly useful for certain cancer types such as breast, prostate or cervical cancer, in this case.

MRI guided interstitial brachytherapy essentially means that the Brachytherapy procedure was done using an interstitial applicator and Magnetic Resonance Imaging (MRI) was used to guide the treatment planning and administration of radioactive sources during the procedure.

This is the first time this procedure was performed within SingHealth and NCCS so we're very proud to have come together and come through for the patient's benefit.

"We're always excited to find better ways of treating and caring for our patients. We are thankful for their trust and confidence."

– Jeannie Lin, Senior Radiation Therapist

Q Why was MRI guided interstitial brachytherapy used in this particular instance?

KS: We routinely performed standard intracavitary brachytherapy in combination with external beam radiotherapy in the management of cervix cancer. Standard intracavitary brachytherapy is done by placing a "tandem and ovoid" or "tandem and ring" applicator into the uterus and vaginal cavity to deliver high dose radiation to the cervix. However, patients with more advanced or bulky cervical tumours, such as in this instance, may require interstitial brachytherapy as the extent of tumour may not be encompassed by the dose delivered from the standard intracavitary brachytherapy. Interstitial brachytherapy involves inserting catheters directly into or around the tumour which is beyond the reach of standard intracavitary brachytherapy. We also incorporated the use of an MRI to allow us to precisely position the interstitial catheters, which allowed for a high dose to be delivered to the tumour with relative sparing of the surrounding normal organs.



Roger and Ah Hang enjoying a reunion with the treatment team

Q I understand that there were a few challenges to overcome before the procedure. Tell us more.

KS: In short, timing, teams and facilities. This procedure required quite a few hospital facilities. At that point in time, it was around the Christmas period and usually a busier time for most hospitals, where the facilities would be in high demand.

Finally, this procedure would require experts and care teams from KK Women's and Children's Hospital and NCCS working together seamlessly for the patient. Namely: A Gynaecology surgeon (Dr Wong Wai Loong), a Medical Oncologist (Dr Lim Sheow Lei), Radiation Therapists (Jeannie Lin and Yusnita Omar), Physicist (Foo Yong Wee), Nurses (Julia Eng, Jorene Liew and Loh Chiat Sian), Radiologist (Dr Kwek Jin Wei) and patient care teams. The wide scope of medical expertise available through the team was important in delivering the best possible care in the safest possible manner.

Thus, with the patient's care and treatment in mind, we had to move and work quickly to make sure that we had set up all the logistics in time, from the MRI suites, wards, operating theatres as well as the relevant surgical, medical and care teams. It would have been an otherwise uphill task if not for the dedication, support and help rendered by my team of allied health colleagues in the Division of Radiation Oncology.

Q Congratulations with the procedure being a success! Reflecting on things, are there any lessons learnt or future improvements to share?

KS: Medically, there are quite a few areas that we'd like to explore. First, different anaesthesia options such as a combination of light sedation and local anaesthesia. For the patient, this means better comfort and quicker recovery. This also means that the procedure can be done in a brachytherapy treatment room instead of an operating theatre, requiring less logistics and coordination.

Next, moving forward in the near future towards better imaging through MRI & PET scans so that apart from monitoring tumour size and position, we can also monitor tumour activity and finding ways to tailor treatments according to how tumours respond.

Communication is really important in order to gather ideas, knowledge and expertise. On behalf of the team, I must thank a few people in particular – Dr Kwek Jin Wei for his help and expertise in Oncologic Imaging, Adj Assoc Prof Melissa Teo and Assoc Prof Gopal Iyer for their amazing support with the OT slots as well as the amazing work and constant communication between the NCCS and KKH patient care teams.



Ah Hang and Dr Kiattisa

I'm really grateful for the amazing support from everyone involved. It's heartening to see how various teams from multiple disciplines and multiple organisations were able to work together seamlessly to overcome medical and logistical challenges – overcoming obstacles to give hope to our patients.

“NOTHING IS HOPELESS”

BY ALSON TAN

Corporate Communications

Ah Hang flashes a shy smile as she introduces herself. Petite in size, she speaks softly and glances at her husband, Roger, who is quite the opposite. He flashes a wide smile and a hearty laugh as he speaks with gusto and spirit. Despite the differences, you could clearly feel the warmth in their collective journey and relationship. Under Ah Hang's shy, quiet demeanour hides a fierce courage and determination from the challenging journey that she and her husband have been through.

In 2015, life didn't seem to be out of place. Ms Huynh (Ah Hang) and her husband Mr Roger Tok were dealing with issues that any regular person would deal with – the searing weather, where to eat, daily household bills and chores. Life, as they say, can grind to a screeching halt. A visit to a doctor in the Polyclinic would later turn into an admission into KK Women's and Children's Hospital. At the back of their minds, Ah Hang and Roger had the sinking feeling as fear became a reality – the diagnosis of cervical cancer.

“It was a difficult time. We felt very lost and disappointed – like there was no hope left.”

Dealing with a cancer diagnosis can be a difficult time for many. What Ah Hang and Roger initially thought to be stomach issues turned out to be several tumours at the cervix. The tumours were bulky – each around the size of a tennis ball. “It was a difficult time. We felt very lost and disappointed – like there was no hope left” said Ah Hang in a low, quiet voice as she recounted their struggles.

At a time when many are at their lowest, hope still can be found. But the journey back wasn't easy – because of the size of the tumours, surgery wasn't possible. Much hinged on a procedure never done before in SingHealth and NCCS – MRI guided interstitial brachytherapy. After that, chemotherapy. “Because of her [Dr Kiattisa], happiness came back”, reflected Roger.

Around them, support from family and friends were a much needed blessing – colleagues would understand Roger's situation at home and help out where they can to share the load at work. Family and friends would offer encouragement and simple acts of service, such as helping to drive Ah Hang to medical appointments. Back home, Roger would help alleviate some of the symptoms of chemotherapy by giving Ah Hang massages, for example.

Reflecting on their journey through this difficult phase, Ah Hang and Roger offer some small nuggets of wisdom and encouragement to others currently going through the same journey:

“Firstly, trust your doctors to treat you. Don't listen to everyone”, says Roger. During their struggle, many stepped forward to offer support and advice. Although he was thankful for their support and good intentions, some would offer hearsay information about treatment and therapy. At a time when someone is lost, such voices could confuse or exasperate.

“Supplements and supportive treatments can sometimes negate current treatment effectiveness or worse, cause adverse reactions”, adds Dr Kiattisa, Consultant Radiation Oncologist. “Always check with your doctor before pursuing any alternative or supportive treatments.”

“Second, [As a caregiver] don't give up. Don't get angry. Try to understand and be patient”, Roger continues, smiling as he glances at Ah Hang. Patients going through the cancer journey need much emotional and mental support. Doing small acts of kindness can help both patients and caregivers in big ways.

A warm smile appears on both Roger's and Ah Hang's faces. They thank Dr Kiattisa and the medical team for their work and care, not before sharing one of the most important lessons learnt in their journey:

“Nothing is hopeless unless you give up on yourself. Never give up.”



Roger and Ah Hang are thankful to Dr Kiattisa and the medical team for their work and care

We at NCCS are thankful for the opportunity to speak to Mr Tok and Ms Huynh. We wish Ms Huynh the very best in health and a speedy recovery.



Prof Soo Khee Chee, Director, NCCS (left), with Mr William Lin, Director, Commercial Operations, Southeast Asia, QIAGEN. (Photo Credit: QIAGEN)

NCCS – QIAGEN COLLABORATION: A MORE STREAMLINED NEXT-GENERATION SEQUENCING WORKFLOW FOR IMPROVED CLINICAL CANCER RESEARCH

BY CEDRIC NG

Division of Medical Sciences, Lab of Cancer Epigenome

Sequencing a human genome in under three days is now achievable with the next-generation sequencing (NGS) technological advances. Ten years ago, this was unthinkable. Laboratories typically found it difficult to implement the inherently complex workflow.

The NGS has proven to be a powerful tool in clinical cancer research, by enabling the sequencing of critical cancer genes, providing insights into variants involved in carcinogenesis. It is also helping to gain understanding of tumorigenic mechanisms, cancer evolution and responses to therapeutic agents.

The National Cancer Centre Singapore Integrated Genomics Platform (IGP) was recently inaugurated at the Academic Clinical Programme Oncology meeting. This unique platform possesses the expertise of performing NGS using formalin-fixed paraffin-embedded (FFPE) tissues. Deploying these tissues represent an extensive repository of tissue material with a long-term clinical follow-up, providing a valuable resource for translational clinical research.

IGP collaborates extensively with various local institutions and provides a one-stop solution for NGS, such as whole genome sequencing (WGS), whole exome sequencing (WES), targeted re-sequencing, tissue DNA/ RNA extraction, and nanostring profiling. IGP is also coming online with single cell isolation workflows and solutions that harness the strength of Fluidigm's C1 microfluidics technology and Silicon Biosystems DeparrayNxT (2Q, 2017) with downstream in-house optimised preparations for single-cell NGS.

In March, IGP has adopted QIAGEN as one of its close working industrial partners for the implementation of QIAGEN's off-the-counter NGS panel services to the research communities. This is in conjunction with the newly launched GeneReader NGS System which offers a workflow comprising integrated instrumentation for nuclei acid extraction, target enrichment, library preparation, clonal amplification and next-generation sequencing, as well as bioinformatics software for the generation of clinical reports.

As Singapore's only comprehensive cancer centre, this collaboration between the National Cancer Centre Singapore (NCCS) and QIAGEN will allow NCCS' scientists and clinician scientists to adopt the NGS workflow for cancer diagnostic, refining clinical cancer research, and thus improving cancer care and outcome for the patients.



The beginning of a partnership between NCCS and MD Anderson. Prof Oliver Bogler (left) and Prof Teh Bin Tean.

A COLLABORATION AGAINST CANCER

BY SITI ZAWIYAH

Corporate Communications

National Cancer Centre Singapore (NCCS) and The University of Texas M.D. Anderson Cancer Center have recently signed a Memorandum of Understanding to develop collaborative research projects, training programmes, faculty exchanges, and oncology courses to advance the understanding of cancer and improve cancer care.

MD Anderson and NCCS aim to increase the capacity of trained health professionals and investigators in oncology in Singapore, and to promote national and international collaboration in the field of cancer with learning and research institutions from other countries.

Both institutions will be working together to explore mutually beneficial exchange opportunities for clinical and research personnel, establish an extended network of investigators and institutions in Asia to further research collaborations, and identify further opportunities in both research and clinical arenas to improve patient outcomes.

“This partnership is not just restricted to research, but also involves education, clinical, and training. This is a great opportunity for our young scientists and clinicians to consider doing their HMDP or clinical attachment in MD Anderson, and learn from one of the best faculties that is working to end cancer,” said Prof Teh Bin Tean, Deputy Director (Research), NCCS.

Prof Oliver Bogler, Senior Vice President, Academic Affairs, MD Anderson sharing about the Global Academic Programs.



CANSURVIVE: A CELEBRATION OF LIFE!

BY CHIA YI LIN
Community Partnership

The National Cancer Centre Singapore (NCCS) will celebrate **National Cancer Survivors Day** on 4 June 2017. On this day, we honour the survivors and showcase how life after a cancer diagnosis can be fruitful, rewarding and even enriching. This is the inspiring journey of **Mr Khng Eu Meng**.



Mr Khng Eu Meng with his bird photography print "Together in Harmony" which was auctioned off at the recent NCCS Charity Dinner. 100% of the proceeds were donated to Community Cancer Fund.

Mr Khng, an NCCS patient, survived cancer more than once. He was first diagnosed with nasopharyngeal cancer (nose cancer) in 2010. It was a trying time for him.

"Even after my treatment was over, cancer would not take its claws off me. Cancerous growths were spotted in my left and right lungs in 2012 and 2014," said Mr Khng. He had a lobe removed from both lungs.

However, he did not let cancer stop him from doing what he loves: bird photography. "It gave me great satisfaction and certainly took my mind off the disease," shared Mr Khng.

To date, he has captured nearly 800 bird species on his camera.

"I refuse to mope at home and so my hobby has taken me to Costa Rica, India, Sri Lanka, the Philippines, Taiwan, China, Vietnam, Malaysia and many other countries! I believe this hobby has extended my life."

Following in the footsteps of Mr Khng, who found activities like photography beneficial to his health and well-being, cancer patients and survivors can participate in meaningful initiatives at NCCS, thanks to the support of the Community Cancer Fund.

THE COMMUNITY CANCER FUND PROVIDES FUNDS FOR:

- **Financial assistance** for patients in need;
- **Education and training** of clinicians to improve patient care and develop skill sets in cancer prevention; and
- **Improvements** in infrastructure, equipment and facilities to enhance patient care.

If you would like to learn more about how you can make a difference through the Community Cancer Fund or be on our mailing list for future fundraising initiatives, please contact Chia Yi Lin (Ms) at **+65 6334 9577** or **chia.yi.lin@nccs.com.sg**.



*Far left:
Golden
Pheasant,
Henan, China,
in April 2017*

*Left: Reeve's
Pheasant,
Henan, China,
in April 2017*

NATIONAL CANCER SURVIVORS DAY

National Cancer Survivors Day is observed worldwide in June annually to celebrate those who have survived cancer, inspire those recently diagnosed, and gather support for families affected by cancer. It serves as an important outreach to the community in raising awareness on cancer and survivorship.

In Singapore, 37 people are diagnosed with cancer every day. With early detection and the advances in treatment, many cancers can now be treated. And for those diagnosed with cancer, life after the cancer journey can continue to be meaningful and rewarding.

This infographic shows the most common cancers affecting men and women in Singapore, the steps you can take to prevent them, and how you can help in the fight against cancer.

THE NUMBER OF CANCER CASES HAS BEEN INCREASING OVER THE YEARS



COLO-RECTUM CANCER

Both men and women should start regular **colorectal screening at age 50**. The chances of getting colorectal cancer increase with age.

5-YEAR AGE-STANDARDISED OBSERVED **SURVIVAL RATE** FOR COLO-RECTUM CANCER (MALE)

2005-2009

45.9%

2010-2014

50.7%

Survival rates for colorectal cancer cases have improved for both males and females due to early detection of cancer through screening and the advances of cancer treatment in recent years.

BREAST CANCER

5-YEAR AGE-STANDARDISED OBSERVED **SURVIVAL RATE** FOR BREAST CANCER (FEMALE)

2005-2009

67.5%

2010-2014

70.5%

Recommended Screening Frequency

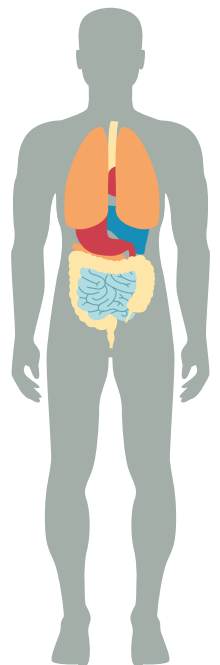
50 YEARS AND ABOVE:
Once every two years.

40 TO 49 YEARS:
Discuss with their doctors the benefits and limitations of screening mammogram for their age group so that they can make informed decisions about going for screening.

Survival rates among breast cancer patients have been improving. Survival is higher when the cancer is detected early.

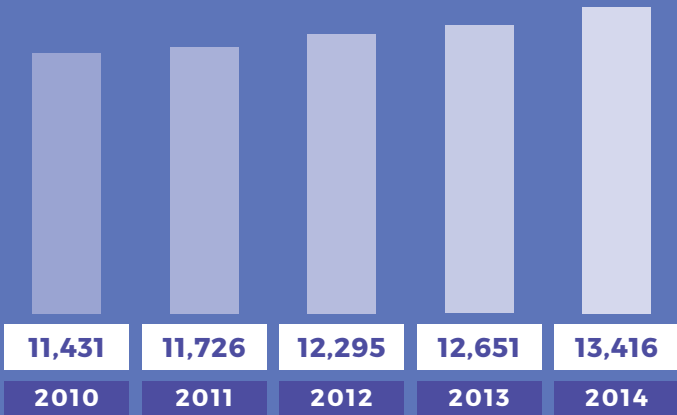
MOST COMMON CANCERS

Nasopharynx	3.7%
Lung	15.0%
Stomach	4.8%
Liver	7.6%
Colo-rectum	17.2%
Kidney & Other Urinary	3.6%
Prostate	12.4%
Lymphoid neoplasms	6.8%
Skin, including melanoma	5.8%
Myeloid neoplasms	3.2%

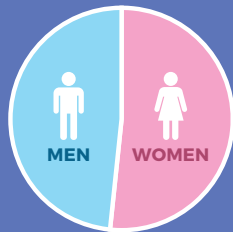


WITH STRONG SUPPORT FROM THE COMMUNITY, WE CAN GET CLOSER TO OUR GOAL OF A CANCER-FREE FUTURE.





For the period 2010-2014 **48.4%** AND **51.3%** of cancer cases were reported on **MALES** and **FEMALES** respectively.



HOW CAN WE REDUCE OUR RISK OF CANCER?



Maintain a healthy **DIET**

EXERCISE regularly

Maintain a healthy **WEIGHT**

QUIT SMOKING or avoid smoking if you have not started



DRINK in **MODERATION**



VACCINATIONS (such as Hepatitis B and Human Papillomavirus to prevent liver cancer and cervical cancer respectively)

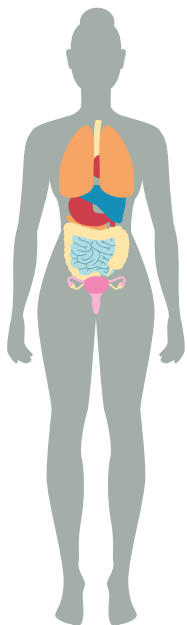


Support and/or engage in **CANCER RESEARCH**



Go for recommended **HEALTH SCREENINGS REGULARLY** to detect cancer at an early stage

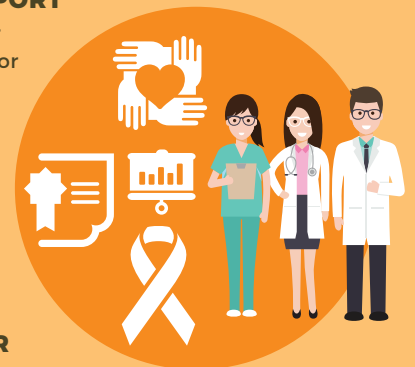
AFFECTING MEN & WOMEN



- 3.7% Thyroid
- 29.2% Breast**
- 7.6% Lung
- 3.5% Stomach
- 13.3% Colo-rectum
- 6.6% Corpus uteri
- 5.4% Ovary, etc
- 3.2% Cervix uteri
- 4.4% Lymphoid neoplasms
- 4.3% Skin, including melanoma

HOW DOES NCCS HELP IN THE FIGHT AGAINST CANCER?

- ✓ Provide **CARE** and **SUPPORT** to close to **70%** of cancer patients in the public sector
- ✓ Train **MEDICAL PROFESSIONALS** to enhance patient care
- ✓ Conduct **CANCER RESEARCH** for new medical breakthroughs
- ✓ Promote **ANTI-CANCER** advocacy



SOURCES: • Ministry of Health Statistics • Singapore Cancer Registry, Interim Annual Registry Report, Trends in Cancer Incidence in Singapore 2010-2014

HOW CAN YOU HELP?



- ✓ **VOLUNTEER** at **NCCS**
- ✓ **DONATE** to:
 - Cancer research through **NCC Research Fund**
 - Cancer care through **Community Cancer Fund**



If you wish to give to the cancer cause by making a **DONATION**, kindly contact **NCCS Community Partnership** at 6236 9440 or email to donate@nccs.com.sg.

If you would like to **VOLUNTEER**, kindly contact **NCCS Volunteer** at 6376 3642 or email to volunteer@nccs.com.sg.

SINGAPORE HEALTH INSPIRATIONAL PATIENT AWARDS 2017

Started in 2010, the Singapore Health Inspirational Patient Awards is an annual award which honours individuals for their strength, courage and resilience in the face of healthcare challenges, and encourages other patients and caregivers in their healthcare journeys.

This year, 33 patients and five support groups received the Inspirational Patient / Support Group Awards. As one of this year's award recipients, **MR TAN PENG YANG**, Research Officer at the National Cancer Centre Singapore (NCCS), shares his thoughts on his personal journey with cancer.

PENG YANG'S JOURNEY

I was 18 and it was during my 'A' Levels when I started feeling fatigued all the time. I was very active in my junior college soccer team and even when there weren't training sessions, my teammates and I would still meet to play. I attributed the fatigue to the football sessions and the stress from studying for my exams.

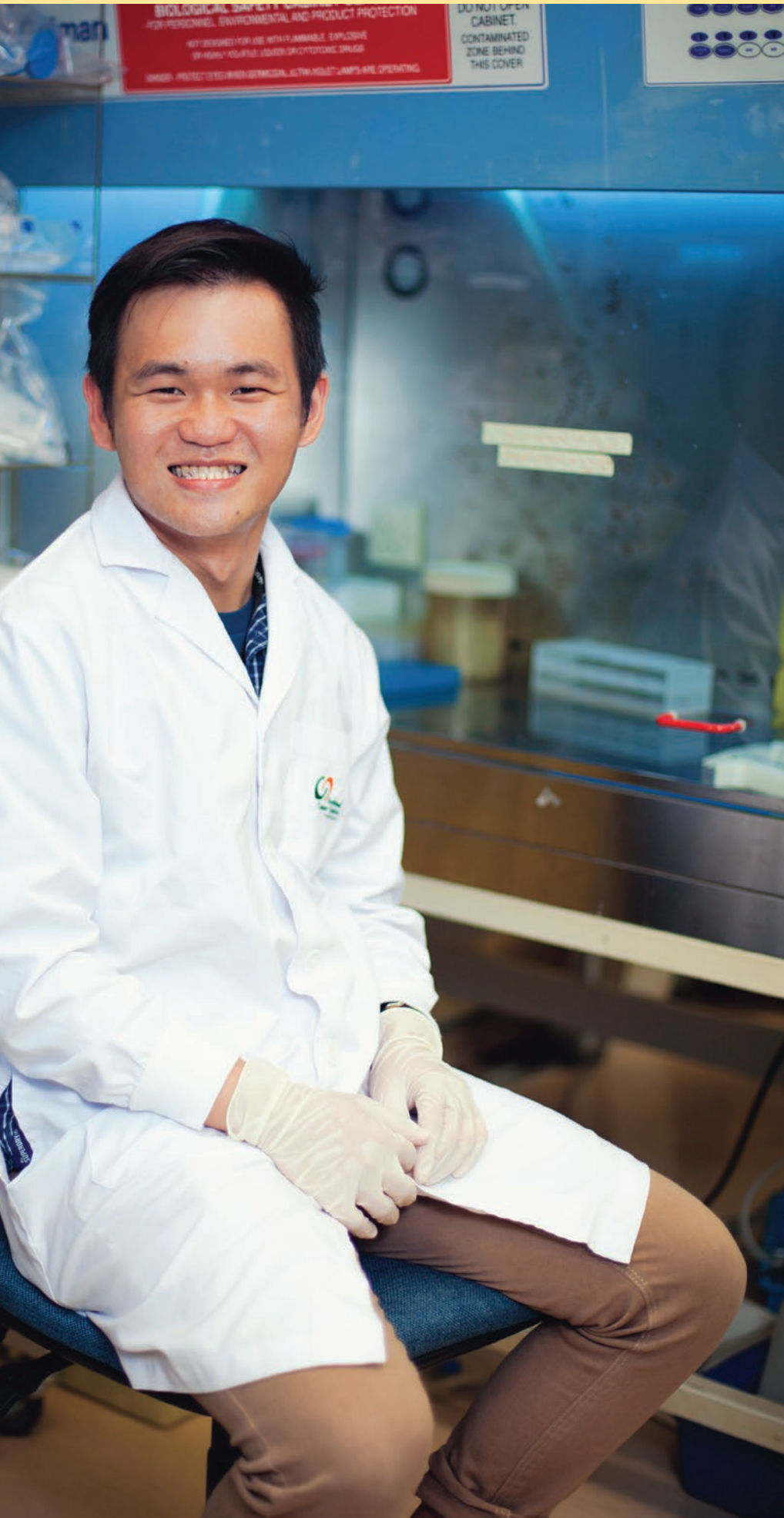
It was only after I went for my National Service health check-up that they discovered I had myeloid dysplastic syndrome, an early stage of leukaemia. My dad, who accompanied me to the doctor's visit, broke down in the car as we made our way home. Seeing him cry hit me harder than the diagnosis.

As a pessimist by nature, I felt resigned to my fate. I was also against spending a large sum of money on chemotherapy and a bone marrow transplant, which had no guarantee of a cure. Seeing my parents work so hard every day at their noodle stall, I didn't want to be a financial burden to them. But my parents were adamant that I should go for treatment and encouraged me not to give up.

Soon, my condition progressed to acute myeloid leukaemia and a bone marrow transplant was my only life-saving option. The transplant was a success and I stayed in the isolation ward for three months. During this time, my mother would cook my favourite food and visit me daily. Because of the love and support from my parents, my recovery was relatively smooth.

Having gone through the battle with cancer, it made me want to do something that could help other cancer patients. A student then at the National University of Singapore, where I was pursuing a Bachelor of Science (Life Sciences) degree, I decided to switch my major from Chemistry to Biology and began doing research on liver cancer at the National Cancer Centre Singapore (NCCS) as part of my final year project. But in my final semester, just four-and-a-half years after surviving the first cancer, I was diagnosed with myeloid sarcoma, an extramedullary relapse of my previous cancer.





I was devastated. It was a very dark time for me and the only thing that kept me going was my family. I bit the bullet and proceeded with the treatment. Thankfully, it went smoothly. I went back to school almost immediately, finished my final year research project and graduated with second-class honours.

Now, I work as a Research Officer specialising in liver cancer research at NCCS. Together with my colleagues, we are looking at the possibility of early screening for high risk liver cancer patients and personalised drug for cancer treatment. Eventually, I hope to start researching on leukaemia and have applied to do a PhD in the hope of further contributing to the fight against cancer.

My battles with cancer have taught me not to take life for granted and that it is very much worth fighting for. I hope to be able to uncover new ways to fight cancer because every patient deserves a second chance at life.

“Despite life’s many harsh challenges, Peng Yang never lost hope and persevered. He is a colleague I am proud to have at NCCS, dedicating his research to the improvement of cancer care.”

Dr Wang Yu

Research Fellow, CMR – Laboratory of Cancer Genomics, NCCS

ROW FOR HOPE 2017: CANCER DOCTORS AND SURVIVORS “ROW” TO RAISE OVER \$100,000 FOR PATIENT CARE PROGRAMMES AT NCCS

BY WILSON NG

Corporate Communications

“Me? Paddle dragon boat? Never in my wildest imagination.” – Ms Teoh Hooi Leng, 63, a stage 3 primary peritoneal carcinoma survivor of ten years.

Hooi Leng was one of the courageous cancer survivors who participated in Row For Hope with the *Pink Spartans*, a dragon-boating team made up of survivors, patients and supporters.

Row For Hope 2017 took place on 26 March, Sunday, on the waters of Marina Bay.

For the first time this year, the event featured a friendly exhibition dragon boat race that pit the *Pink Spartans* against a team of doctors, nurses and healthcare professionals from NCCS.

In a nail-biting neck-to-neck race, the cancer survivors pulled through to an exhilarating victory, proving that with determination and a positive attitude, one can overcome any obstacles ahead of them.

“Every day, we witness our brave patients fighting their cancer. We want them to know that they are not alone,” said Dr Khoo Tan, leader for the Team NCCS dragon boaters and Senior Consultant Radiation Oncologist at NCCS.

“Just as we give all our energy today rowing alongside the *Pink Spartans*, we are with our patients in body and spirit to overcome their cancers,” Dr Khoo Tan added.

The second edition of the annual Row For Hope saw a continued collaboration with The Oxford and Cambridge Society of Singapore (Oxbridge). The Society donated \$10,000 for the second year running to support NCCS’ campaign in the fight against cancer.

In a first for the event this year, an International Boat Race saw members of Oxbridge Hong Kong row against the Singapore team in their boats known as “eights”. Oxford University’s vice-chancellor, Professor Louise Richardson, graced the event as a special guest.

Associate Professor Toh Han Chong, Deputy Director and Senior Consultant at NCCS who rowed for the event as a Cambridge alumnus said, “One in three people will get cancer in their lifetime. Over time, treatment costs can potentially take a toll on patients and their families. We will give our best on the water and hope for your support to raise funds for cancer patients with financial needs.”



The *Pink Spartans*, consisting of cancer survivors, patients and supporters. Photo by NCCS



The survivors and patients’ dragon boating team (in purple) pulled ahead in a narrow victory against Team NCCS’ oncologists (in green). Photo by Steve Choo for NCCS



Team NCCS, made up of doctors, nurses and healthcare professionals passionate about dragon boating for the cancer cause. Photo by NCCS



The full Pink Spartans team with their St Joseph's Institution supporters. Photo by NCCS

Row For Hope collected over \$100,000 this year for the Community Cancer Fund to benefit cancer care and survivorship of those affected by the illness.

You can make your contributions to the Community Cancer Fund here:

For cheque donations, please make payable to **Community Cancer Fund**. On the back of the cheque, kindly include your name, NRIC number, address and contact number (required for tax deduction) and mail to the following address: **Community Cancer Fund**, c/o National Cancer Centre Singapore, 11 Hospital Drive, Singapore 169610.

You can also make your donations online here: <https://www.giving.sg/community-cancer-fund>

The organisers would like to thank NCCS' strategic partner Tessa Therapeutics, and our generous donors and sponsors for supporting the fight against cancer.



Members of the public warming up to our mascot Buddie the Badger at the Row For Hope carnival. Photo by Steve Choo for NCCS

OUTREACH – PUBLIC FORUMS, CANCERWISE WORKSHOP, UPCOMING EVENTS FOR THE GENERAL PUBLIC

Public Forums	Date, Time, Venue	Registration
<p>Use of Traditional Chinese Medicine in Cancer Care</p> <p>TOPICS:</p> <ul style="list-style-type: none"> • How does Traditional Medicine Complement Conventional Cancer Treatment? • Potential Herb and Drug Interactions • Understanding the Side Effects 	<p>27 May 2017, Saturday</p> <p>MANDARIN SESSION Time: 09.15am to 10.30am (Registration: 08.45am to 09.15am)</p> <p>ENGLISH SESSION Time: 11.15am to 12.30pm (Registration: 10.45am to 11.15am)</p> <p>National Cancer Centre Singapore Peter & Mary Fu Auditorium, Level 4 11 Hospital Drive Singapore 169610</p>	<p>Free Admission Strictly no admission for children below 12 years old. Registration is a MUST as seats are limited.</p> <p>PHONE REGISTRATION ONLY Open for registration Please call: 6225 5655 Monday – Friday: 8.30am to 5.30pm</p>
<p>Gynaecological Cancers</p> <p>TOPICS:</p> <ul style="list-style-type: none"> • Cancers of the Female Reproductive System • Risk Factors • Signs & Symptoms • Early Detection & Screening • Treatment Options & Recent Advances 	<p>08 July 2017, Saturday</p> <p>ENGLISH SESSION Time: 11.15am to 12.30pm (Registration: 10.45am to 11.15am)</p> <p>National Cancer Centre Singapore Peter & Mary Fu Auditorium, Level 4 11 Hospital Drive Singapore 169610</p>	<p>Free Admission Strictly no admission for children below 12 years old. Registration is a MUST as seats are limited.</p> <p>PHONE REGISTRATION ONLY Open for registration Please call: 6225 5655 Monday – Friday: 8.30am to 5.30pm</p>
<p>Adapting to Life After Cancer</p> <p>TOPICS:</p> <ul style="list-style-type: none"> • Understanding Emotional Effects of Cancer After Treatment • Fear of Recurrence and Uncertainty • Ways to Cope and Positive Lifestyle Changes 	<p>15 July 2017, Saturday</p> <p>ENGLISH SESSION Time: 11.15am to 12.30pm (Registration: 10.45am to 11.15am)</p> <p>National Cancer Centre Singapore Peter & Mary Fu Auditorium, Level 4 11 Hospital Drive Singapore 169610</p>	<p>Free Admission Strictly no admission for children below 12 years old. Registration is a MUST as seats are limited.</p> <p>PHONE REGISTRATION ONLY Open for registration Please call: 6225 5655 Monday – Friday: 8.30am to 5.30pm</p>
<p>Race Against Oral Cancers</p> <p>TOPICS:</p> <ul style="list-style-type: none"> • Overview of Oral Cancers / Oral Pre-malignant and Malignant Lesions • Virus and Oral Cancer: Is There a Link? • Reconstructive Surgery for Oral Cancer • What Happens After Treatment? • Life After Oral Cancers • New Innovation in Dental Surgery 	<p>29 July 2017, Saturday</p> <p>ENGLISH SESSION Time: 09.30am to 11.45am (Registration: 09.00am to 09.30am)</p> <p>National Cancer Centre Singapore Peter & Mary Fu Auditorium, Level 4 11 Hospital Drive Singapore 169610</p>	<p>Free Admission Strictly no admission for children below 12 years old. Registration is a MUST as seats are limited.</p> <p>PHONE REGISTRATION ONLY Open for registration Please call: 6225 5655 Monday – Friday: 8.30am to 5.30pm</p>

The information is correct at Press time. NCCS reserves the right to change programmes or speaker without prior notice.

OUTREACH – PUBLIC FORUMS, CANCERWISE WORKSHOP, UPCOMING EVENTS FOR THE GENERAL PUBLIC

CancerWise Workshops	Date, Time, Venue	Registration
<p>CancerWise Workshop – Stoma Care</p> <p>TOPICS:</p> <ul style="list-style-type: none"> • What is a Stoma? • Pre-operation Preparation of Patient • Living with a Stoma 	<p>27 May 2017, Saturday</p> <p>ENGLISH SESSION 1.00pm – Registration 1.30pm to 3.30pm – Workshop starts</p> <p>National Cancer Centre Singapore Peter & Mary Fu Auditorium, Level 4 11 Hospital Drive Singapore 169610</p>	<p>Free Admission</p> <p>Strictly no admission for children below 12 years old.</p> <p>Registration is a MUST as seats are limited.</p> <p>PHONE REGISTRATION ONLY</p> <p>Open for registration</p> <p>Please call: 6225 5655 Monday – Friday: 8.30am to 5.30pm</p>
<p>CancerWise Workshop – Gynaecological Cancers</p> <p>TOPICS:</p> <ul style="list-style-type: none"> • Cancers of the Female Reproductive System • Risk Factors • Signs & Symptoms • Early Detection & Screening • Treatment Options & Recent Advances 	<p>08 July 2017, Saturday</p> <p>MANDARIN SESSION 08.45am – Registration 09.15am to 10.30am – Workshop starts</p> <p>National Cancer Centre Singapore Peter & Mary Fu Auditorium, Level 4 11 Hospital Drive Singapore 169610</p>	<p>Free Admission</p> <p>Strictly no admission for children below 12 years old.</p> <p>Registration is a MUST as seats are limited.</p> <p>PHONE REGISTRATION ONLY</p> <p>Open for registration</p> <p>Please call: 6225 5655 Monday – Friday: 8.30am to 5.30pm</p>

The information is correct at Press time. NCCS reserves the right to change programmes or speaker without prior notice.

SEMINARS / FORUMS / TUMOUR BOARDS / SMC-CME ACTIVITIES FOR MEDICAL PROFESSIONALS ONLY

MAY 2017

Date	Time	Event Information	CME Pt	Registration Contact
4, 11, 18, 25	11.30 am	Lung Tumour Board Combine SGH-NCCS Meeting @ SGH Blk 2 Level 1, Radiology Conference Room	1	Christina Lee Siok Cheng 6704 8388 christina.lee.s.c@nhc.com.sg
4	5.00 pm	NCCS-SGH Joint Lymphoma Workgroup Meeting @ NCCS Level 2, Clinic C, Discussion Room	1	Nurul Amirah 6436 8720 nurul.amirah.hajis@nccs.com.sg
3, 10, 17, 24, 31	4.30 pm	NCCS Tumour Board Meetings: Sarcoma Tumour Board Meeting	1	Elaine / Ella 6436 8723 / 6436 8294 Elaine.ee.c.m@nccs.com.sg / Nursuhaila.rahmat@nccs.com.sg
3, 10, 17, 24, 31	5.00 pm	Surgical Oncology Tumour Board Meeting	1	
5, 12, 19, 26	4.30 pm	Breast Tumour Board Meeting	1	Lalitha/ Nora
8, 15, 22, 29	5.00 pm	Head & Neck Tumour Board Meeting @ NCCS Level 2, Clinic C, Discussion Room	1	6436 8236 / 6576 2037 lalitha.krishnan@singhealth.com.sg / noralina.ali@singhealth.com.sg Angela Liew 6576 1731 angela.liew.m.f@singhealth.com.sg
3, 10, 17, 24, 31	1.00 pm	Gynae-Oncology Tumour Board Meeting @ NCCS Level 1, Clinic A, Discussion Room	1	Elaine / Ella 6436 8723 / 6436 8294 elaine.ee.c.m@nccs.com.sg / Nursuhaila.rahmat@nccs.com.sg
3, 10, 17, 24	1.00 pm	S'Health Hepato-Pancreato-Biliary Tumour Board @ NCCS Level 4, Peter & Mary Fu Auditorium	1	Saratha / Carol 6436 8165 / 6436 8539 saratha.v.gopal@nccs.com.sg / carol.tang.w.c@nccs.com.sg
26	5.00 pm	NCCS Neuro Onco Tumour Board Meeting Academia, Diagnostic Tower, Level 9 Histopathology Microscopy Teaching Room	1	Saratha 6436 8165 saratha.v.gopal@nccs.com.sg
25	7.30 am	Endocrine and Rare Tumour Meeting @ NCCS Level 2, Clinic C, Discussion Room	1	Saratha 6436 8165 saratha.v.gopal@nccs.com.sg
4, 11, 18, 25	12.00 pm	Upper GI Tumour Board Meeting @ NCCS Level 4, Peter & Mary Fu Auditorium	1	Carol Tang / Ang Hui Lan 6436 8539 / 6436 8174 carol.tang.w.c@nccs.com.sg / dmoahl@nccs.com.sg

SEMINARS / FORUMS / TUMOUR BOARDS / SMC-CME ACTIVITIES FOR MEDICAL PROFESSIONALS ONLY

JUNE 2017

Date	Time	Event Information	CME Pt	Registration Contact
7, 14, 21, 28	1.00 pm	Gynae-Oncology Tumour Board Meeting @ NCCS Level 1, Clinic A, Discussion Room	1	Elaine / Ella 6436 8723 / 6436 8294 elaine.ee.c.m@nccs.com.sg / Nursuhaila.rahmat @ nccs.com.sg
7, 14, 21, 28	1.00 pm	S'Health Hepato-Pancreato-Biliary Tumour Board @ NCCS Level 4, Peter & Mary Fu Auditorium	1	Saratha / Carol 6436 8165 / 6436 8539 saratha.v.gopal@nccs.com.sg / carol.tang.w.c@nccs.com.sg
7, 14, 21, 28	4.30 pm	NCCS Tumour Board Meetings: Sarcoma Tumour Board Meeting Surgical Oncology Tumour Board Meeting Breast Tumour Board Meeting Head & Neck Tumour Board Meeting @ NCCS Level 2, Clinic C, Discussion Room	1	Elaine / Ella 6436 8723 / 6436 8294 elaine.ee.c.m@nccs.com.sg / Nursuhaila.rahmat @ nccs.com.sg Lalitha / Nora 6436 8236 / 6576 2037 lalitha.krishnan@singhealth.com.sg / noralina.ali@singhealth.com.sg Angela Liew 6576 1731 angela.liew.m.f@singhealth.com.sg
7, 14, 21, 28	5.00 pm		1	
2, 9, 16, 23, 30	4.30 pm		1	
5, 12, 19	5.00 pm		1	
1, 8, 15, 22, 29	11.30 am	Lung Tumour Board Combine SGH-NCCS Meeting @ SGH Blk 2 Level 1, Radiology Conference Room	1	Christina Lee Siok Cheng 6704 8388 christina.lee.s.c@nhc.com.sg
1	5.00 pm	NCCS-SGH Joint Lymphoma Workgroup Meeting @ NCCS Level 2, Clinic C, Discussion Room	1	Nurul Amirah 6436 8720 nurul.amirah.hajis@nccs.com.sg
29	7.30 am	Endocrine and Rare Tumour Meeting @ NCCS Level 2, Clinic C, Discussion Room	1	Saratha 6436 8165 saratha.v.gopal@nccs.com.sg
23	5.00 pm	NCCS Neuro Onco Tumour Board Meeting Academia, Diagnostic Tower, Level 9 Histopathology Microscopy Teaching Room	1	Saratha 6436 8165 saratha.v.gopal@nccs.com.sg
1, 8, 15, 22, 29	12.00 pm	Upper GI Tumour Board Meeting @ NCCS Level 4, Peter & Mary Fu Auditorium	1	Carol Tang / Ang Hui Lan 6436 8539 / 6436 8174 carol.tang.w.c@nccs.com.sg / dmoahl@nccs.com.sg

SEMINARS / FORUMS / TUMOUR BOARDS / SMC-CME ACTIVITIES FOR MEDICAL PROFESSIONALS ONLY

JULY 2017

Date	Time	Event Information	CME Pt	Registration Contact
6, 13, 20, 27	11.30 am	Lung Tumour Board Combine SGH-NCCS Meeting @ SGH Blk 2 Level 1, Radiology Conference Room	1	Christina Lee Siok Cheng 6704 8388 christina.lee.s.c@nhc.com.sg
6	5.00 pm	NCCS-SGH Joint Lymphoma Workgroup Meeting @ NCCS Level 2, Clinic C, Discussion Room	1	Nurul Amirah 6436 8720 nurul.amirah.hajis@nccs.com.sg
5, 12, 19, 26	4.30 pm	NCCS Tumour Board Meetings: Sarcoma Tumour Board Meeting	1	Elaine / Ella 6436 8723 / 6436 8294 elaine.ee.c.m@nccs.com.sg / Nursuhaila.rahmat@nccs.com.sg Lalitha / Nora 6436 8236 / 6576 2037 lalitha.krishnan@singhealth.com.sg / noralina.ali@singhealth.com.sg Angela Liew 6576 1731 angela.liew.m.f@singhealth.com.sg
5, 12, 19, 26	5.00 pm	Surgical Oncology Tumour Board Meeting	1	
7, 14, 21, 28	4.30 pm	Breast Tumour Board Meeting	1	
3, 10, 17, 24, 31	5.00 pm	Head & Neck Tumour Board Meeting @ NCCS Level 2, Clinic C, Discussion Room	1	
5, 12, 19, 26	1.00 pm	Gynae-Oncology Tumour Board Meeting @ NCCS Level 1, Clinic A, Discussion Room	1	Elaine / Ella 6436 8723 / 6436 8294 elaine.ee.c.m@nccs.com.sg / Nursuhaila.rahmat@nccs.com.sg
5, 12, 19, 26	1.00 pm	S'Health Hepato-Pancreato-Biliary Tumour Board @ NCCS Level 4, Peter & Mary Fu Auditorium	1	Saratha / Carol 6436 8165 / 6436 8539 saratha.v.gopal@nccs.com.sg / carol.tang.w.c@nccs.com.sg
28	5.00 pm	NCCS Neuro Onco Tumour Board Meeting Academia, Diagnostic Tower, Level 9 Histopathology Microscopy Teaching Room	1	Saratha 6436 8165 saratha.v.gopal@nccs.com.sg
27	7.30 am	Endocrine and Rare Tumour Meeting @ NCCS Level 2, Clinic C, Discussion Room	1	Saratha 6436 8165 saratha.v.gopal@nccs.com.sg
6, 13, 20, 27	12.00 pm	Upper GI Tumour Board Meeting @ NCCS Level 4, Peter & Mary Fu Auditorium	1	Carol Tang / Ang Hui Lan 6436 8539 / 6436 8174 carol.tang.w.c@nccs.com.sg / dmoahl@nccs.com.sg
21	1.00 pm	Journal Club Topic: To be advised @ NCCS Level 1, Mammo Suite Discussion Room	1	Phua Chay Sin 6704 2037 ddipcs@nccs.com.sg
28	1.00 pm	Teaching Session Topic: To be advised @ NCCS Level 1, Mammo Suite Discussion Room	1	Phua Chay Sin 6704 2037 ddipcs@nccs.com.sg

PATIENT SUPPORT PROGRAMMES – CALENDAR OF EVENTS

FOR ALL CANCER PATIENTS, CANCER SURVIVORS & CAREGIVERS

Date / Day	Time	Venue	Programme	Facilitator
FLAGSHIP PROGRAMME				
15 – 17 June Friday – Saturday	Whole Day	TBC	CanSurvive 2017: Remember. Happiness.	–
SUPPORT GROUP				
2 June Friday	6.30pm – 9.00pm	NCCS Peter & Mary Fu Auditorium, Level 4	Nasopharyngeal Cancer (NPC) Support Group: Members' Sharing – How to Live A Better & Healthier Life After Treatment	NPC Support Group Member
10 June Saturday	7.30am – 12.00pm	HortPark Singapore	Breast Cancer Support Group: Outing	Ms Cham An Gie Senior Medical Social Worker, NCCS
7 July Friday	6.30pm – 9.00pm	NCCS Peter & Mary Fu Auditorium, Level 4	Nasopharyngeal Cancer (NPC) Support Group: Members' Sharing – Muscular Exercises to Remediate/ Prevent Post Treatment Side Effects	Ms Hozaidah Binte Hosain Senior Principal Physiotherapist, SGH
8 July Saturday	2.30pm – 4.30pm	NCCS Function Room, Level 4	Sinar Harapan Support Group (Malay Support Group): Hari Raya Celebration Gathering	Ms Ernalisah Subhi Medical Social Worker, NCCS
13 July Tuesday	5.30pm – 8.30pm	NCCS Function Room, Level 4	Breast Cancer Support Group: Common Questions That We Would Like To Ask The Healthcare Providers	Ms Tan May Leng Mabel Advanced Practice Nurse, NCCS
PSYCHO-EDUCATIONAL & SOCIAL-RECREATIONAL ACTIVITIES				
16 May; 11 July Tuesday	2.00pm – 5.00pm	NCCS Function Room, Level 4	Look Good Feel Better Workshop	Volunteer Make-Up Artist
9 June Friday	2.30pm – 4.30pm	NCCS Function Room, Level 4	Living Well Programme: Tips on Breathing & Exercising Right	TBC
22 July Saturday	2.00pm – 5.00pm	NCCS Peter & Mary Fu Auditorium, Level 4	A Caregiver's Journey in Cancer Care: The Impact on Caregiving on Caregiver	Mr Brandon Goh Manager, Patient Support, NCCS
THERAPY & THERAPEUTIC GROUP				
6 May; 1 July Saturday	2.00pm – 4.30pm	NCCS Function Room, Level 4	Writing Programme: An Afternoon with the Journal, Your Friend	Ms Phyllis Wong Senior Medical Social Work Associate, NCCS
7 – 9 June Wednesday – Friday	10.00am – 3.00pm	Leukemia & Lymphoma Foundation	Children Art Therapy Programme: Art Express	Ms Saryna Ong & Mr Travis Loh Principal Medical Social Worker, NCCS
10 June Saturday	2.00pm – 4.30pm	NCCS Function Room, Level 4	Music Therapy	Ms Ng Wang Feng Board Certified Music Therapist
INTEREST GROUP				
2, 9, 16, 23 May; 6, 13, 20, 27 June; 4, 11, 18 July Tuesdays	6.30pm – 7.30pm	NCCS Function Room, Level 4	Yoga Programme: Yoga Exercise for Patients and Caregivers	Ms Debbie Tan Assistant Manager Patient Support, NCCS
17 May; 21 June; 19 July Wednesday	7.00pm – 10.00pm	NCCS Function Room, Level 4	PRINTS: Photography Interest Club	Mr Gilles Massot & Ms Marina Zuccarelli
For registration and enquiries, please contact Patient Support at 6436 8668 or email: patientsupport@nccs.com.sg			PROGRAMME REGISTRATION AND CONFIRMATION IS REQUIRED. <i>Details of the programmes may subject to changes without prior notice. Please check with organiser for any updates.</i>	

PARTNER SPOTLIGHT: TESSA THERAPEUTICS

BY TANNIS WALKER
Community Partnership

Tessa Therapeutics has been a long-standing partner of the National Cancer Centre Singapore and in 2016 made a visionary investment into the NCC Research Fund, establishing the Immunotherapy Research Fund at NCCS. Tessa Therapeutics is also a proud sponsor of Row for Hope, an annual boat race in support of the Community Cancer Fund.

Tessa Therapeutics is a clinical-stage biotechnology company focused on the development and commercialisation of cancer immunotherapies. Tessa's goal is to develop novel therapies for cancer patients who currently have very limited treatment options. Immunotherapy is widely regarded as the biggest breakthrough in the treatment of cancer since the advent of chemotherapy in the 1940's.

"We aim to develop immunotherapy treatments to provide cancer patients with real options to successfully overcome their disease. We want to save lives with our therapies," says Mr Andrew Khoo, Chief Executive Officer and Co-Founder of Tessa Therapeutics. **"We are delighted that our long-term partnership with the National Cancer Centre Singapore is enabling us to drive immunotherapy research forward and bring new therapies into the clinic."**

Immunotherapy has emerged as one of the most exciting new cancer treatments in the last few decades. In principle, it works by harnessing the body's own immune system to recognise and fight cancer cells.

The immune system is a collection of organs, cells and proteins that help protect the body from infections and other external diseases. Immunotherapy stimulates the immune system to work harder and smarter to attack and destroy cancer cells. In effect, it is a more 'natural' way to help the body fight cancer by using and energising the body's own immune cells to fight cancer cells.

Tessa Therapeutics Virus Specific T cell (VST) platform is engineered to redirect the body's powerful anti-viral immune response against cancer cells and has shown compelling results in the treatment of solid tumours.

The National Cancer Centre Singapore is a leader in this emerging field of cancer treatment. NCCS Deputy Director, Associate Professor Toh Han Chong was the first clinician scientist in Singapore to develop and deliver cellular immunotherapy to patients successfully in a clinical trial for Nasopharyngeal cancer.

NCCS Director, Professor Soo Khee Chee commented, **"The ground-breaking partnership between the NCCS and Tessa Therapeutics has allowed us to launch the world's first U.S. FDA Phase III cellular therapy trial here in Singapore. We believe that this is the first of many clinical trials we will undertake together in this emerging field of immunotherapy, for the benefit of our cancer patients."**

The support of Tessa Therapeutics, and other strong partners, will help the NCCS become one of the best cancer immunotherapy research and treatment hubs in the world.

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