MEDIA RELEASE

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SINGAPOREANS WITH HIGH RISK OF COLORECTAL CANCER NEED TO COMPLETE SCREENING FOR EARLY DETECTION AND TREATMENT

Key factors for high-risk individuals not going for colonoscopy include cost and concern over bowel preparation; family members and close friends play huge role in persuading these individuals to complete the colonoscopic evaluation critical for early detection.

Singapore — Colorectal cancer is one of the top cancers in Singapore, affecting more than 2,000 individuals every year. From 2013 to 2017, a total of 10,634 new cases of colorectal cancer were diagnosed in Singapore1.

It is also one of the few cancers where cancer screening has been shown to be associated with superior oncological outcomes2. In Singapore, the national colorectal cancer screening programme, Screen for Life, advocates the Faecal Immunochemical Test3 (FIT) as one of the screening tests for individuals aged 50 years and above. Individuals with positive (i.e. abnormal) FIT results have higher risks of having colorectal polyps and cancers than those who are asymptomatic or had tested negative. Should the FIT results be positive, these individuals will be referred for follow-up colonoscopy at their nearest public hospital.

However, not all patients with a positive FIT result undergo a colonoscopy.

A study conducted by clinicians from the Division of Colorectal Surgery at the National University Hospital (NUH) and the Division of Surgical Oncology at the National University Cancer Institute, Singapore (NCIS), together with researchers from NUS Saw Swee Hock School of Public Health, found that the strongest deterring factors for doing a colonoscopy or a follow-up referral consultation with a doctor was that patients found preparations for the colonoscopy procedure – which involves bowel preparation – “inconvenient” or held the perception that a colonoscopy may be a costly expense.

Associate Professor Tan Ker Kan, Head and Senior Consultant, Division of Colorectal Surgery at NUH, and Senior Consultant, Division of Surgical Oncology, NCIS, who led the study said: “Regular screening can help detect colorectal cancer early, when it is most treatable and curable. Screening using FIT and colonoscopy is important as the polyps can be detected and removed before they become cancerous. When these higher risk individuals who have a

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3 FIT consists of two stool sample collector kits that each needs to be completed over two different days within a week. If any of the two FIT kits is positive, the individual will be referred for colonoscopy at the nearest public hospital. A positive FIT result indicates that a small amount of blood that is not visible to the naked eye is present in the stool.
positive FIT result opt not to complete their post-screening follow-up, doctors would not be able to help them effectively treat the disease.”

The study surveyed 402 patients aged between 46 and 89 years-old who were referred to NUH for follow-up consultation and colonoscopy from 2017 until 2019. These patients had received at least one positive FIT result. The median age of the participants was 66 years with a slight majority of male participants (53.8%). 200 patients (50.8%) completed the subsequent colonoscopic evaluation while the rest did not. Three main themes emerged from the analysis:

1) **High level of colorectal cancer awareness among average risk individuals**
   Respondents were generally aware of the main sources of information regarding colorectal screening, and individuals who followed through with colonoscopy were more likely to express that repeated calls and reminders were not necessary. However, non-compliant individuals are more likely to prefer these reminders.

2) **Health seeking behaviour determined by degree of personal motivation**
   Most commented that it was the value of their lives that prompted them to seek medical attention and to check that they are in pink of health. In the non-compliant group, it is not the fear of the colonoscopy procedure, nor the worry of knowing the diagnosis, or the assumed embarrassment of the procedure that could account for their non-compliance. Structural barriers inconvenience of the current processes and concerns over the colonoscopy procedure itself was less of a concern. However, worries over bowel preparation and cost implications of the procedure featured strongly in the participants’ replies.

3) **Importance of social support and medical professional advocacy**
   The importance of family and close friends for social support and high regard of medical recommendation by healthcare professionals were deemed beneficial and cannot be understated when reaching out to the public. They form strong support network to reinforce the need for colorectal cancer screening. Compliant individuals were twice more likely to have received a physician’s recommendation to undergo screening than non-compliant individuals. These individuals would also hope to be accompanied by their friends and family when being reviewed by a physician.

Almost all participants in the study perceived that screening helps to detect cancer early (96.7%) and early diagnosis will improve survival (97.5%). Similarly, the majority agreed that early treatment can reduce future medical expenses (92.1%). The majority of participants (80.2%) were aware that colorectal cancer was among the top three cancers in Singapore. Most participants knew that changes in bowel habits (73.9%) and presence of blood in stools (84.3%) were possible symptoms of colorectal cancer. Participants were also aware of common sources of screening awareness such as medical recommendation (73.9%), mainstream media e.g. newspaper and television (55.2%) and peer support (39.1%).

A/Prof Tan shared: “Our findings suggest that the family and social network around high-risk individuals play a huge role in persuading them to complete the colonoscopic evaluation. It was also clear from our findings that medical professionals are regarded highly and the advice of trained medical professionals may be integral in encouraging some of these non-compliant individuals to follow through with their follow-up screening, which is critical for early detection and treatment of colorectal cancer. This will reduce the overall healthcare and social burdens for any country.”
“Hopefully, our research can shed more light into issues pertaining to colorectal cancer screening and we can all work together to increase colorectal cancer screening rates in Singapore. For instance, our findings showed that perceived barriers and misconceptions need to be addressed so that more would be encouraged to complete the screening process. Intervention strategies to encourage the uptake of colonoscopy should consider tackling the cost and inconvenience factors while incorporating facilitators such as public health education and active promotion by medical physicians, family and friends,” said A/Prof Tan.

Dr Shyamala Thilagaratnam, Group Director, Outreach, Health Promotion Board said, “The findings from the study have reinforced what we know about barriers and motivators of screening and follow-up. HPB will continue working with key stakeholders such as the Singapore Cancer Society and our Regional Health Systems partners, including the National University Hospital, to address these barriers and motivate individuals to follow through with post-screening follow-up.”

Mr Albert Ching, Chief Executive Officer, Singapore Cancer Society said, “SCS is dedicated to minimising cancer and maximising lives through various effective and impactful cancer prevention programmes, that increase public education and awareness on early screening. Over the years, SCS has been intensifying efforts to distribute FIT kit (at no cost) to Singaporeans and Permanent Residents aged 50 years or above. Most recently, SCS has launched the FIT portal for accessibility and convenience for collection of the FIT kit. The findings from the study emphasises the importance of early detection. Through such collaborations, SCS aims to increase cancer survivorship.”

Another study led by A/Prof Tan found that individuals who tested positive for both FIT kits had a significantly higher incidence of colorectal polyps and were 12 times more likely to have colorectal cancer than those who tested positive for just one kit. The study, which analysed the data of over 1,500 patients aged 50 years and above with at least one positive FIT kit result and who were referred to NUH from January 2017 to September 2019, found that 14.2% of those with double positive FIT had colorectal cancer.

“One to two persons out of every 10 with double positive FIT will have cancer and that is a very high incidence. There is, therefore, a greater urgency to have patients with double positive FIT kit results go for colonoscopy as soon as they can. The sooner they can start treatment, be it to treat premalignant polyps or colorectal cancer, the better their chances of recovery or managing the affliction. Towards this end, NUH and NCIS are looking to help expedite colonoscopy for our double positive FIT patients to ensure prompt detection of colorectal cancer and polyps,” A/Prof Tan shared.

**Chinese Glossary**

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About the National University Hospital

The National University Hospital is a tertiary hospital and major referral centre with over 50 medical, surgical and dental specialties, offering a comprehensive suite of specialist care for adults, women and children. It is the only public hospital in Singapore to offer a paediatric kidney and liver transplant programme, in addition to kidney, liver and pancreas transplantation for adults.

The hospital was opened on 24 June 1985 as Singapore’s first restructured hospital. Each year, the Hospital attends to more than one million patients.

As an academic health institution, patient safety and good clinical outcomes are the focus of the Hospital. It plays a key role in the training of doctors, nurses, allied health and other healthcare professionals. Translational research is pivotal in the Hospital’s three-pronged focus, and paves the way for new cures and treatment.

A member of the National University Health System, it is the principal teaching hospital of the NUS Yong Loo Lin School of Medicine and the NUS Faculty of Dentistry.