



Colorectal Cancer: Protect, Detect and Resect

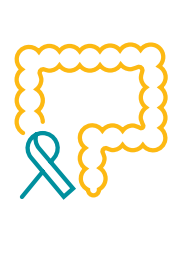
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Colorectal cancer is a prevalent yet highly preventable form of cancer. Screening is an efficient way to reduce rates and save lives. In a recent CME Talk, Dr Foo Kian Fong, Senior Consultant and Medical Oncologist at Parkway Cancer Centre and Dr Mark Wong, Senior Consultant and General & Colorectal Surgeon at Mark Wong Surgery, discussed how to protect patients from developing the disease and detect issues early through screening as well the advanced robotic surgical treatment options available.

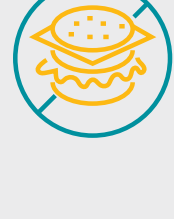
Dr Foo began by discussing the epidemiology of colorectal cancer in Singapore as well as the risks and preventive factors of the disease.



Colorectal cancer prevalence in Singapore

Worldwide, colorectal cancer is the third most common cancer in men, following lung and prostate cancer, and the second most common cancer in females. There were 1.8 million cases globally in 2018 and the highest incidences occurred in Australia, New Zealand, Europe and North America. However, in Singapore, the disease is the number one cancer in men and is second after breast cancer for women. Colorectal cancer is more common in the Chinese population, with rates similar to that of the West.

Over half of patients present late for diagnosis, typically in stages 3 and 4. Given the slow growth of the disease, detection can be made much earlier with screening processes being promoted for those aged 50 and above. Although, given the rise in rates in the West, screening as early as 45 years of age may be recommended.



Risk factors for colorectal cancer

The first risk factor is ageing, with most colorectal cancers diagnosed after age 50. Genetics also plays a part such as Familial Adenoma Polyposis and Lynch Syndrome. Non-genetics-related family history with a first-degree relative having colorectal cancer also increases one's risk as does having a personal history of colonic polyps. Inflammatory bowel diseases such as Crohn's and Colitis can result in eventual onset of colorectal cancer. Patients with renal transplant and cystic fibrosis, those with previous abdominal radiotherapy, and patients undergoing androgen deprivation therapy for prostate cancer also have increased risk.

While the above risks can't be avoided, lifestyle factors such as smoking can. The disease is also one of the eight obesity-related malignancies that account for nearly 115,000 preventable deaths in the USA each year.

While the data is not consistent, some trials suggest a link between consumption of red meat and processed meats with an increased risk of left-sided colon cancer lesions. High temperature cooking may also be a contributing factor due to the release of polycyclic aromatic fluorocarbons. Processed meat has been classified by the World Health Organization as a Group 1 carcinogenic.

There are also an increasing number of studies indicating gut microbial dysbiosis, a pathological imbalance of the microbiology community in the geology of the colon, being a risk factor.



How to prevent colon cancer

In general, protective factors include physical activity, dietary supplements, green tea, drugs like aspirin and hormone replacement therapy for women.

Exercise

One particular control study of a group of people who went for colonoscopy screening observed that those who exercise more than one hour a week have a lower prevalence of colon polyps and adenoma compared to those who exercised less than one hour a week. The meta-analysis reveals a 19% to 27% reduction of risk in those who exercise against those who are sedentary.

The American Cancer Society recommends 115 minutes of moderate aerobic exercise a week, including brisk walking or cycling, or 75 minutes per week of vigorous aerobic exercise. This should include some power boosting exercise like weightlifting two to three times a week.

Diet

There are many discordant results in the studies done on dietary factors. With regards to fibre intake, current data suggests that fibre from food grains may be more beneficial than fibre from fruit and vegetables.

A randomised study on the effects of green tea in Germany on patients who had polyps revealed a moderate preventive effect, but only in males.

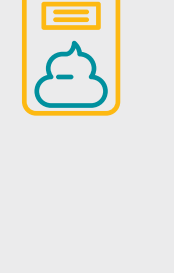
Aspirin

In observational Interventional trials, regular use of aspirin reduced risks of adenomas or colorectal cancer in the average individual between 20% to 40%. However, the dosage and duration of taking aspirin was not clear. The benefits of taking a low dose every other day for 10 years was seen only after 18 years of follow-up and did not seem to benefit people above 70 years of age.

While trials have produced different results, meta-analysis of five randomised trials involving about 14,000 patients found a 24% reduction in colon cancer. However, these benefits need to be weighed against the known risks of aspirin use namely, gastrointestinal and intracranial bleeding. As a result, the US Preventive Service Task Force (USPSTF) in 2016 recommended the taking of aspirin for people between age 50 to 59 with more than 10% annual cardiovascular risk (graded B, meaning there is a moderate to substantial benefit that must be balanced by risk).

Dr Wong moved on to discuss detection strategies through screening for the disease before explaining the advances in treatment methods for colorectal surgery.

Colorectal cancer is a preventable cancer when identified in its pre-cancerous stages called polyps. Screening can detect these non-malignant polyps, which can be removed before they change into cancerous tumours. Furthermore, even if detected early, colorectal cancer is still highly treatable. NRDO figures from 2015 show the five-year survival rate of over 95% in stage 1 cancers, which declines sharply down to 64% in stage 3. Screening is, therefore, the best defence, given that non-modifiable risk factors such as ageing and family history cannot be altered.



Resistance to screening in the Singapore population

Despite the excellent healthcare services available, the majority of colorectal cancers are still diagnosed late. Dr Wong believes this is due in part to the resistance to coming for screening, and attributes this reluctance in the population to three factors: lack of awareness, avoidance of dealing with the disease and fear of scopes.

However, as Dr Wong explained, a colonoscopy is actually a safe and comfortable procedure. The preparation to clear the bowels of stool can be done in the comfort of home the day before the procedure or even in the hospital on the morning of the procedure. The patient is sedated and comfortably asleep during the colonoscopy and so feels no discomfort. For most patients, this procedure only needs to be done every 5 to 10 years.

Patients can still opt for an alternative called FIT, a self-administered stool test that can be done in the comfort of home. The purpose is to detect invisible traces of blood in the stool. If the test is positive, a colonoscopy should be booked to exclude polyps or cancer. If one is already experiencing frank bleeding, then the FIT test is obsolete and a colonoscopy should be booked instead. The FIT test can be done annually and the kits are available at polyclinics and Guardian pharmacies.



Minimally invasive robotic surgery improves outcomes

If polyps are found during the scope procedure, these are removed at the same time and sent to the lab for analysis. Patients would be followed up based upon the lab results.

If a cancer is detected, surgery will be required that involves removing the affected portion of the colon or rectum. Treatment may be a team effort when patients require adjuvant therapy (chemotherapy or radiotherapy or both), either before or after surgery.

Dr Wong explained that the standard operations now are performed through small incisions using fine instruments with greater precision. This results in smaller wounds, less pain, a shorter hospital stay and faster return to normal activities. The magnification and dexterity of the Da Vinci robotic surgical platform is especially effective for rectal cancers, which are often situated in confined spaces. Patients recover faster and with better preservation of their urinary and sexual function, resulting in a better quality of life.

In summary, colorectal cancer is one of the most treatable cancers if it is diagnosed early, yet at present most patients are diagnosed at stage 3 and stage 4. The best way to catch these cases earlier is through ongoing screening of patients as they reach 50 years of age so that cancer may be avoided entirely or early cancers may be successfully operated on. ☀



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