

All you need to know about lung cancer

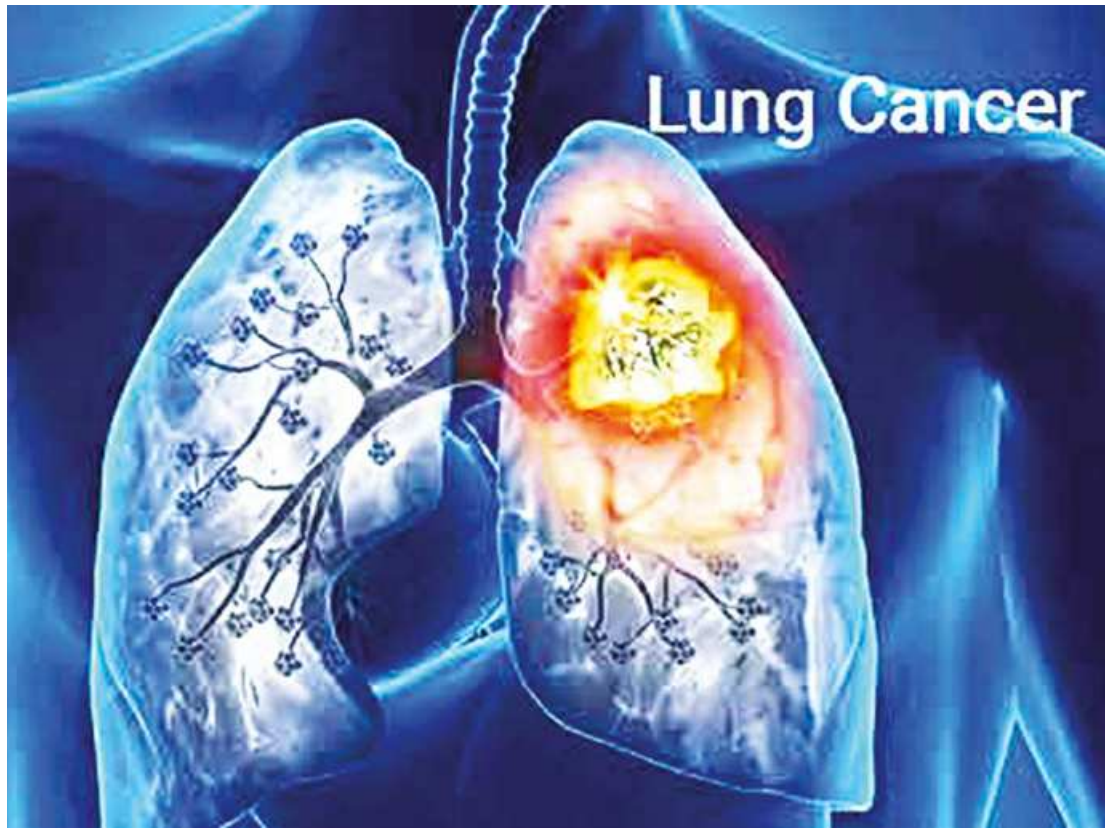
PROF DR KAZI MANZUR KADER

Lung cancer is the leading cancer worldwide in terms of incidence and mortality. Only 15% of patients who develop lung cancer survive for 5 years. There is no definitive population-based cancer registry in Bangladesh, so it is difficult to find out the incidence and mortality of any kind of cancer.

Early detection is a must, to ensure successful treatment of lung cancer. Hence, the general public needs to be educated so that they can recognise the early warning signs by themselves. This will enable them to seek timely medical intervention.

Smoking plays a great role in lung cancer. It is assumed that cigarette smoking is the most important single factor and directly responsible for at least 80% of lung cancers. The risk of lung cancer increases with the number of cigarettes smoked, years of smoking duration, earlier age at onset of smoking, degree of inhalation, nicotine content and use of unfiltered cigarettes and it decreases in proportion to the number of years after smoking cessation.

The smoke inhaled by non-smokers has a similar chemical composition to that inhaled by smokers but has higher N-nitrosamine levels and smaller size particle which remain suspended in the air and can more easily penetrate



the bronchial tree. About one-third of cases of lung cancer are in non-smokers who live with smokers.

After the combustion of tobacco, it yields smoke in two phases. One is the particulate phase and the other is the gaseous phase. More than 3000 chemicals have been identified in tobacco smoke.

Understanding the natural history of lung cancer is important for prevention, early detection, rationally planned initial curative or palliative therapy, anticipation of possible complications and the institution of therapy at the time of relapse. The natural history of a susceptible host to carcinogenic agents, which leads to progressive

changes from metaplasia, to atypia and dysplasia, and ultimately to carcinoma in situ and invasive cancer.

Signs and symptoms of lung cancer include cough, Chest pain, fever, respiratory distress, Blood mixed with cough, voice change, loss of appetite etc.

Diagnosis is based on careful history from the patient

and physical examination, pulmonary function tests, sputum for cytology, imaging studies, radionuclide scanning, bronchoscopy, percutaneous fine needle aspiration and cytology, percutaneous fine needle aspiration and biopsy and thoracoscopy etc.

Treatment of lung cancer depends on the stage of the disease and histopathology type. The treatment modalities are surgery, radiotherapy, chemotherapy, immunotherapy and targeted therapy. Surgery is possible when the disease is at an early stage. The principle of radiotherapy is to give the radiation dose to the cancer area, not to surrounding normal tissues. It is possible due to the modern-day radiotherapy technique. Sometimes radiotherapy is given for pain and palliative management also.

More than 80% of lung cancer cases can be avoided if we stop smoking and take care of other lung diseases like infectious tuberculosis. It is important to quit smoking as soon as possible to avoid the risk of developing lung cancer. Mass awareness campaigns are of much importance to aware people about the dangerous effects of smoking.

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PERSPECTIVE



Gut microbiome altered in COVID-19 patients

The gut microbiome appears to be altered in patients with COVID-19, finds a study in Gut. Researchers compared blood and stool samples of roughly 100 patients with COVID-19 in Hong Kong with samples from other people taken before the pandemic. Nearly half the COVID-19 patients had mild disease.

Several bacteria species were associated with disease severity after adjustment for antibiotic use. For instance, compared with controls, patients with COVID-19 had smaller populations of Faecalibacterium prausnitzii and Eubacterium rectale, which have known immunomodulatory potential. Even among those who had recovered from COVID-19, the gut remained distinct from non-COVID patients a median of 6 days after testing negative.

The authors say that their results "suggest that gut microbiota composition is associated with the magnitude of the immune response to COVID-19 and subsequent tissue damage and thus could play a role in regulating disease severity." They add, "Bolstering of beneficial gut species depleted in COVID-19 could serve as a novel avenue to mitigate severe disease, underscoring the importance of managing patients' gut microbiota during and after COVID-19."

HEALTH bulletin



Stable, supportive shoes better for knee osteoarthritis pain

Stable, supportive shoes seem to be better for pain linked to knee osteoarthritis, compared with flat, flexible shoes, according to trial results published in the Annals of Internal Medicine. Other studies have contended that flat, flexible shoes could offer more pain relief.

Some 160 patients aged 50 and up with moderate-to-severe, symptomatic radiographic medial knee osteoarthritis were randomised to wear flat, flexible shoes or stable, supportive shoes for at least 6 hours per day for 6 months.

At the end of the intervention, those wearing stable, supportive shoes had significantly greater improvement in knee pain while walking — but not better physical functioning — compared with those wearing flat, flexible shoes.

The researchers conclude: "To our knowledge, our study provides the first (randomised, controlled trial) evidence to suggest that stable supportive shoes may be a useful self-management strategy in this subgroup of patients with knee osteoarthritis, supporting clinical practice guideline recommendations that, to date, have been based solely on expert opinion."

Do people infected with COVID-19 need to be vaccinated?

DR OPURBO CHOWDHURY

A common question that I get from the patients and acquaintances - is it necessary to vaccinate once you become infected? Yes, everyone needs a vaccine, whether they were infected or not. But why does everyone need to be vaccinated?

More than 200 companies in 171 countries are working on the COVID-19 vaccine, but now the news of three vaccines is on everyone's lips. These are the Oxford, Moderna and Pfizer's COVID-19 vaccines. The vaccine, developed in joint research by Pfizer and BioNTech, is 95% effective, and the UK began administering the vaccine to its citizens two weeks ago. The Moderna vaccine has been approved in the USA.

When a germ enters the body, the body kills or tries to kill the germ by its defence system. This self-defence strategy of the body is called immunity. If the body cannot kill the germ with its defence system, then the germ is killed by applying medicine. For example, people take antibiotics to kill bacteria. Similarly, the virus is a germ, but no effective drug to kill the virus has yet been discovered. Even antibiotics do nothing against the virus.

When a virus enters the body, the body kills the virus with some chemicals in its blood. These are called antibodies. Once the antibody is made, it stays in the blood for a lifetime, and the next time if the same virus enters the body, the antibody kills it. A vaccine is an artificial way to make

antibodies in the body before the virus enters the body.

After the coronavirus enters someone's body, the body makes antibodies in the blood to kill the virus in its normal way. Anyone can test for coronavirus antibodies four weeks after s/he was tested positive for COVID-19. Whether tested or not, once the virus enters the body, it must be understood that there are antibodies in the blood.

Studies have shown that the level and efficacy of antibodies in the body of many COVID-19 sufferers are quite weak. As a result, the antibody is effective for only a few weeks to a few months. After that, if the virus enters the body, there is a possibility of re-infection. As a result, many have relapsed after a few months.

How much the virus will affect you depends on the strength of the virus attack in the body and the effectiveness of the body's immune system. Antibodies may be weak in people whose signs and symptoms were weak or absent. But when strong antibodies are made in the body with the vaccine, the effectiveness of that antibody becomes much stronger and lasting longer.

Instead of the unnecessary, costly and flawed results of knowing the effectiveness of antibodies in the body after being infected with COVID-19, whether you are infected with COVID-19 or not - the vaccine will keep the body virus free for a long time.

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PHOTO: COURTESY

12th foundation anniversary of Saaol Heart Centre Bangladesh Limited celebrated

STAR HEALTH REPORT

The 12th foundation anniversary of Saaol Heart Centre Bangladesh Limited was celebrated recently at the capital, says a press release.

Mr Mohon Raihan, founder and chairman of Saaol Heart Centre Bangladesh said at the event, "Saaol Heart Centre has been established in Bangladesh as a health movement to keep the citizens of Bangladesh free from the risk of heart disease. Saaol is a social movement to make heart treatment easily accessible and available to the marginalised people across the country."

He added, "Our dream is to build the first ever non-surgical heart treatment and lifestyle hospital and medical university in Bangladesh."

Saaol Heart Center Bangladesh is the pioneer of Saaol method heart treatment in Bangladesh. It is not just a medical facility, but a social movement, remarked Mr Abdul Mannan, Secretary, Ministry of Health and Family Welfare. He said, "Popularisation of the Saaol method will reduce the budget of the health sector."

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