

Lung Cancer Demystified

The current global coronavirus pandemic is a painful reminder of how essential healthy lungs are for a healthy life. Though lung cancer is a non-communicable disease, it remains the single largest cancer killer globally, claiming approximately two million lives annually, with a similar number diagnosed each year. In Malaysia, the most current data confirmed over 11,000 new cases, averaging six new cases per day. Lung cancer is the second-most common male cancer (15%) and leading cause of cancer-related death in Malaysian men. In women, it is the joint fourth-most common cancer (5.6%), but only breast cancer is more fatal. Malaysian data is similar to findings in the UK and Australia.

LATE STAGE PRESENTATION

Alarmingly, the vast majority of cases (93-94%) here are detected too late, in incurable stage 3 (locally advanced) or stage 4 (metastatic), whereby the cancer has spread to regional lymph nodes, the opposite lung or the brain or bones via the bloodstream or lymphatics. This dreadful disease is elusive in the early stages as symptoms are often absent, minimal or non-specific. By the time one develops a persistent cough, coughs up blood, exhibits breathlessness or chest pain, it is often a sign of more advanced staged disease.

Survival or prognosis for lung cancer is determined by appropriate optimal treatment which is highly stage-dependent. Advances with genomic molecular tumour profiling has facilitated personalised bespoke immunotherapy and targeted therapies allowing patients to live longer and better, but advanced stage patients will ultimately still die from the disease as such therapies remain non-curative and prohibitively expensive. In contrast, early lung cancer (stages 1, 2 and selected cases of stage 3A) is best treated with surgical resection provided the person is medically fit for surgery. The gold

standard operation is a lobectomy to remove the tumour-residing lung lobe, as this confers the best chance of a cure and long-term survival. Surgery can often be done through a minimally invasive video assisted thoracoscopic (VATS) keyhole approach achieving less pain and a swifter recovery.

THE JOURNEY

Optimal care of any lung cancer patient requires a multi-disciplinary and multi-modality approach. Typically, one sees their GP or a chest/general physician who will recommend a chest x-ray and/or a computed tomography (CT) lung scan. A tissue biopsy done by an interventional radiologist is the next step and a histopathologist will then perform a microscopic examination to confirm if the "growth" is cancerous. Next up is a positron emission tomography (PET) scan done by a nuclear medicine specialist to stage the disease and rule out potential spread elsewhere. Finally, for localized early stage disease amenable to curative surgery, the patient will be referred to a thoracic (lung) surgeon whilst the more advanced stage patient will see an oncologist to commence chemoradiotherapy. Many patients and their caregivers will also interact with dietitians, pharmacists, physiotherapists, and the palliative care team.

PREVENTION & EARLY DETECTION

If detected early, many lung cancers are curable with excellent long-term outcomes. Global data suggests the five-year survival rate for a surgically removed stage 1A lung cancer is almost 90%. In contrast, the five-year survival rate for stage 3B/C or stage 4 tumours is approximately 5-15%. Hence it is imperative to detect the disease early. The optimal screening method is a low-dose CT lung scan. This is a quick, painless, and relatively inexpensive non-invasive test that takes literally seconds to do and is truly life-saving. Two major trials provide compelling scientific evidence to support LDCT screening of high risk

individuals, namely chronic smokers and former smokers aged 45-75 years with at least a 20-year smoking history. Other at-risk persons who may benefit from screening include those with a family history of premature lung cancer or a personal history of another cancer. Blood-based tumor biomarkers are presently not accurate enough to be used as a screening tool, but help doctors monitor response to therapy or detect a recurrence.

Screening aside, prevention remains vital. Smoking remains the single most identifiable and preventable risk factor. Cessation of tobacco smoking, including vaping and e-cigarettes, lowers the risk of developing lung cancer. The Health Ministry's nationwide smoking ban at all eateries will protect non-smokers, especially children, from secondhand smoke. Another emerging trend is the rising number of lung cancer cases in non-smoking Asian women. High-temperature wok cooking has been implicated, hence it is advisable to have an extractor fan or a well-ventilated kitchen. ■



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