

IT is undeniable that there is an increasing number of Malaysians being diagnosed with, and battling, cancer.

Based on the National Cancer Registry of Malaysia (NCR) records, an average 20,000 Malaysians are diagnosed with cancer every year.

In Malaysia, it is estimated that the risk of males getting cancer is one in 10, and for females, one in nine.

When we talk about early detection, many people would think of cancer markers (better known as tumour markers), which are readily tested at the many commercial health labs.

However, these tests were not developed to be used on its own to screen for any cancer, noted Dr Verna Lee Kar Mun, Family Medicine Specialist and Head of IMU Healthcare Medical Clinic.

What is a tumour marker test?

A tumour marker is a substance that is produced by the body in response to cancer, or is produced by the cancer cell itself.

"Sometimes, these markers are specific to one type of cancer only, while others may not and can be seen in different types of cancer. The substances are usually found in very high levels in the blood, urine or body tissue for individuals with confirmed cancer," explained Dr Lee.

Testing for tumour markers are usually performed by taking a sample of blood or urine to analyse for specific or multiple tumour markers.

These tests are very important and repeated regularly in patients with confirmed cancer, with or without treatment.

They are carried out to monitor responses to cancer treatment (during the treatment process) or to detect recurrence of cancer (after treatment completion) in these patients.

In medicine, this is called tertiary prevention.

"One important thing to note is, even though cancer cells often produce tumour markers in very high levels, healthy normal cells in the body can produce them as well.

"In other words, non-cancerous conditions can cause markers to be elevated above the normal range because these substances are produced naturally in the body.

"There is lack of data or scientific evidence to inform healthcare providers or doctors on how to accurately interpret these tests from screening a healthy population (secondary prevention)," cautioned Dr Lee.

Doctors do not exactly know what the next appropriate step of management is if a healthy individual has an abnormal tumour marker test. Therefore, these tumour marker tests are never used as a screening test for secondary prevention.

Tumour marker tests and cancer

If repeated test results show elevated tumour marker levels, doctors will conduct further tests to confirm recurrence of cancer or treatment failure.

Essentially, tumour markers guide doctors in employing suitable cancer treatment options, for example, deciding whether to incorporate chemotherapy or radiation therapy after surgery, or selecting types of medications that would be most effective, monitoring progress of treatment, forecasting recovery rate, and observing for recurrence.

As mentioned above, different

To test, or not to

Are cancer marker tests accurate, or even useful in assessing cancer risk?



Options to screen for specific types of cancer would be mammogram (breast cancers), colonoscopy (colorectal cancers), Pap smear (cervical cancers) and faecal occult blood tests (colorectal cancers). — Wikimedia Commons

tumour markers are also used to test for different types of cancer.

However, there are also a number of cancers that do not have tumour markers.

Therefore, it would be best to speak to a doctor before deciding whether or not to have the test. Amongst other options to screen for specific types of cancer would be mammogram (breast cancers), colonoscopy (colorectal cancers), Pap smear (cervical cancers) and faecal occult blood tests (colorectal cancers).

Individuals with a high risk of cancer should talk to their family doctor and be educated and empowered on how to reduce their risk from developing the cancer from young (primary prevention).

A tumour marker test is never a screening test for cancer.

Adverse effects of tumour markers as a screening test

One may ask, "My tumour marker test result shows a very low level, therefore, am I free of cancer, right?"

"Even high levels of tumour markers is not diagnostic of cancer, and it applies the same way with a low level reading as well. We cannot rely on it independently to determine that you are free from the disease, as these markers may potentially give false-positive or false-negative results," advised Dr Lee.

When you become too concerned by the abnormal level of one tumour marker test, you may convince your doctor to focus solely on investigating if you are suf-

fering from one type of cancer, and miss out on other possibilities. Or even worse, despite getting a false-negative after a thorough process of many other invasive tests (with high costs), you may have trouble accepting that you're truly cancer-free due to the emotional turmoil experienced from believing the tumour marker test.

Thus, psychological complications or adverse effects such as generalised anxiety, excessive fear and even depressive disorders occur.

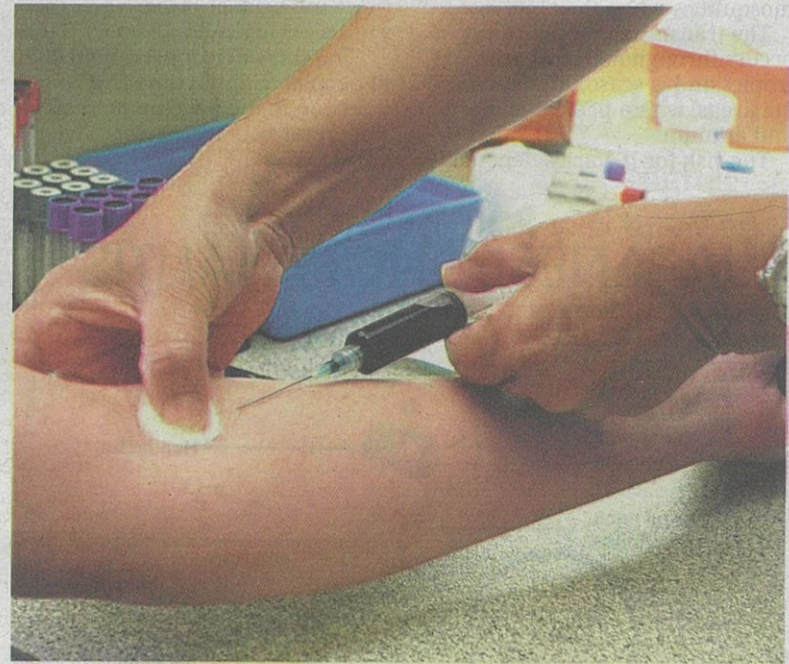
Limitations of the tumour marker test include:

- Many non-cancerous diseases can also elevate tumour marker levels.
- Some tumour marker levels have high baselines in normal individuals.
- It is difficult to obtain consistent results because tumour marker levels can change over time.
- The level of a tumour marker may not elevate until the cancer spreads (this is not helpful for early detection, screening, or observing for recurrence).
- Many common cancers do not produce tumour markers.

Questions to ask the doctor

When you are considering if a tumour marker test is necessary, here are a few suggested questions from Dr Lee that you should ask your doctor:

- Do you recommend that I undergo any tumour marker tests? If so, which ones?
- How are these tests performed? How often should I get tested?
- Can you explain the impact of



Tumour marker tests are usually carried out to monitor responses to cancer treatment or to detect recurrence of cancer.

the test results?

● If I have abnormal levels of a tumour marker, what does that mean? How does it affect my health?

● How will the tumour marker tests be used in my follow-up care?

● Where can I get more information about tumour markers?

Save yourself from going through unnecessary anxiety by checking with your doctor if the tumour marker tests are necessary for you.

Remember that these tests have their purposes and limitations, therefore, the results may sometimes fluctuate – whether it's a false-positive or a false-negative.

Should you have taken the test and if the levels are high, keep composed and speak to your doctor for an informed decision.

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