

# Cooking fumes behind some cancer cases?

BY NG JUN SEN

**M**ADAM Tay, in her 50s, has early stage lung cancer. But the online trader has never touched a cigarette in her life.

Neither have her family members, including her parents and an aunt, who live with her in a flat in Tampines.

"My neighbours don't smoke. I hardly go out. I don't even keep an altar at home," says Madam Tay in Mandarin. She says she has little exposure to second-hand smoke.

What she does a lot of, however, is cook. She declines to give her full name for privacy reasons.

Now, a recent study sug-

gests that cooking food may have contributed to Madam Tay's condition.

More specifically, her use of the wok to stir-fry could have resulted in an increase of carcinogens (cancer-causing substances) in her body.

National University of Singapore's Koh Woon-Puay, with a team of researchers from the United States, spent two years gathering and putting together data from 328 Singaporean Chinese female non-smokers.

Each provided a urine sample and answered questions about her cooking habits and other factors.

The result: Frequent cooking with a wok leads to "significantly increased levels" of the



**FOOD FOR THOUGHT:** Frequent cooking with a wok leads to "significantly increased levels" of substances which can attack a person's DNA. TNP FILE PHOTO

toxicants acrolein and crotonaldehyde, substances which can attack a person's DNA.

This is due to the large amount of oil fumes created during stir-frying with a wok.

Says Professor Koh: "The problem for many of them is that the diagnosis is usually made at the late stage of disease, as this is not a diagnosis that they would expect."

Madam Tay's case is not unique.

Cigarette smoking is the main cause of lung cancer: the No. 2 killer of men and No. 3 killer of women here.

Between 2010 and last year, there was an average of 1,370 people in Singapore diagnosed with lung cancer yearly.

But three in 10 lung cancer patients here have never smoked, a study by the National Cancer Centre found.

Of these "never-smokers" with lung cancer, 70 per cent are women.

"We chose to conduct the study among Chinese female non-smokers because the incidence of lung cancer is disproportionately high relative to the very low rate of smoking in this population," says Prof Koh, a professor at the Saw Swee Hock School of Public Health and Duke-NUS Graduate Medical School.

Her team's decision to focus on this group was based on national health statistics.

Fortunately for Madam Tay, her cancer was detected early and had not spread beyond her lungs.

She had been coughing for nearly two weeks, deciding to visit a polyclinic only when the cough became distracting.

"The doctor told me the X-ray report was worrisome and referred me to a hospital. I was shocked when I found out it was lung cancer," says Madam Tay.

As there was no family history of lung cancer, she had little reason to suspect that it could happen to her.

She is undergoing treatment and was told by doctors that the survival rate in her case is around 80 per cent.

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## More research needed, but take precautions: Expert

DO NOT toss away your woks just yet. A study might have shown that frequent cooking with a wok leads to significantly higher levels of cancer-causing substances, but several doctors tell The New Paper that the study is still not conclusive enough.

Daniel Tan, a consultant at the Division of Medical Oncology at National Cancer Centre, says: "These are association studies that suggest a relationship, although there may be other factors yet to be discovered that may cause lung cancer.

"Current studies do not implicate cooking at home as being dangerous."

Wong Seng Weng, medical director and consultant specialist at Singapore Medical Group's The Cancer Centre,

says: "Most Singaporean women I have treated for lung cancer do stir-fry with a wok every now and then.

"Nevertheless, it would be too presumptuous to pin down stir-frying with a wok as the definitive cause of their lung cancer."

Koh Woon-Puay, who co-authored the study, agrees that more research needs to be done.

This is because her study did not definitively prove that the increased levels of carcinogens were significant enough to actually cause harm, says Professor Koh.

It does, however, build on previous academic studies linking wok cooking to lung cancer among Asian women.

A study in 2000 by local researchers

also found that lung cancer risk was higher among women who stir-fried their meat.

Like Prof Koh's study, it could not prove a causal relationship between stir-frying and cancer.

"These previous studies, though not definitive by themselves, provide information that fills missing gaps in our knowledge of lung cancer, like pieces of a jigsaw puzzle being put together," she says.

"While we are still not certain if exposure to cooking fumes could be a significant risk factor for lung cancer from the current state of evidence, it is still good to take precautions."

This can come in the form of proper ventilation, which can help decrease exposure to the cooking fumes.

It is also a good idea to use an exhaust hood, says Prof Koh.

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