

# Cancer incidence alarming among young people in Middle East, researcher finds

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Cancer cases are unusually high among middle aged people in the Middle East contrary to western countries where they usually hit people at least 20 years later.

The study by Prof. Wael M. Abdel-Rahman sees people in the Middle East developing different types of cancers when they have not yet reached 50 years of age.

Currently working at the University of Sharjah's College of Health sciences, Prof. Abdel-Rahman was a histopathologist in Egypt examining tumors and other tissues for accurate [cancer](#) diagnosis.

"I was struck by the too many cases of cancers including, colon cancer, [breast cancer](#), [skin cancer](#), [liver cancer](#), [prostate cancer](#) and many others, often in young people aged below 50 years," he says.

Prof. Abdel-Rahman was shocked by the high cancer incidence among young population "compared to the fairly old age of these diseases in the West, where they hit people 20 years later, on average."

In the Middle East, he found that "cancers were often diagnosed at an advanced stage and responded poorly to chemotherapy therefore tended to have a poor prognosis. Many of these patients died shortly after the time of the diagnosis."

"Many clinicians working in Middle Eastern countries at that time," he maintains, attributed the huge gap in cancer incidence and diagnosis between the East and the West as simply to being part of "ethnic variations."

However, Dr. Abdel-Rahman's research shows that [environmental factors](#) have a direct bearing on the high prevalence in cancer cases in one region when compared to another.

"My research that compared the Finnish versus the Egyptian colon cancer highlighted differences in molecular features, and epigenetic changes which suggested a different environmental factors," he adds.

For example, he attributes prevalence of colon cancer to a variety of environmental toxins, besides age and genetics.

Prof. Abdel-Rahman had previously performed extensive research on cancerous diseases in the West including the United Kingdom and Finland where he carried lab tests on morphological changes in cells and tissues of human body.

In the West, he notes, cancer is diagnosed usually in old age patients and at an early stage, providing the best chance for a cure.

Research furnishes epidemiological evidence of age differences in developing different types of cancers in different parts of the world, suggesting environment and lifestyle impact on cancer development.

Almost ten years ago, Prof. Abdel-Rahman embarked on research to characterize the molecular differences between the Middle East and the Western cancers, which might explain the differences in cancer incidence and age at which it struck patients.

"I started to explore this possibility in depth and at the molecular levels to understand these phenotypes and apply such knowledge in evidence-based programs for cancer prevention" he says.

In his [first research paper](#), which he produced while still working at the University of Helsinki, Finland, Prof. Abdel-Rahman collected and compared colorectal tumors from the East and West. His major conclusion: the cancers hitting both parts of the world differ at "molecular levels, too."

His findings indicate a higher colon cancer incidence in North Europe and Finland compared to North Africa and Egypt, however, "the problem in Egypt is the increasing incidence of young age cancers and

the overall increase over time."

The divergence pointed to differences in environmental exposures to toxins and potential carcinogens, substances that cause cancer like benzene, asbestos, nickel, vinyl chloride, radon and cadmium. The research results led Prof. Abdel-Rahman and colleagues to "focus on the role of environmental contaminants in cancer development."

Environmental factors, he maintains, have turned both colorectal cancers—the cancers of the colon and/or rectum—as well as breast cancer to be more threatening and most prevalent.

The examination of the impact of environmental contaminants has helped Prof. Abdel-Rahman produce numerous research papers in which he sheds light on the causes and development of cancer in the West and the Middle East relying on accurate data on the levels of exposures to these contaminants.

His efforts included publishing a [review article](#) of the literature with a bearing on the discernible differences in cancer age and incidence between the two parts of the world.

To provide a broad picture of causes, Prof. Abdel-Rahman set to examine environmental effects materials "such as the plasticizer material known as Bisphenol A (BPA) that is widely used in our daily life on the development of cancers."

BPA is present in a long list of items that we use in our daily life such as [plastic bottles](#), epoxy resins that coat some metal food cans, bottle tops, canned food containers, cash register receipts, and in recycled and carbonless copy paper.

In his [later research](#), in which he is a co-author, Prof. Abdel-Rahman has

shown that "bisphenol A and other similar toxic agents exert harmful effects on normal breast cells that could lead to breast cancer development and identified the molecular mechanisms responsible for that action."

In a more [recent co-authored article](#), he extended his data to [colon cancer](#) and found that "Bisphenol A may as well cause harmful effects that lead to cancer of the colon and rectum."

Bisphenol A, known under its scientific acronym of BPA, is one of the most widely produced chemicals in the world and used primarily in the production of polycarbonate plastics. It is found in a wide range of plastic products such plastic backs, water bottles, shatterproof windows, bottle tops and water supply pipes.

Stemming from his research findings, Prof. Abdel-Rahman is currently campaigning for restricting the use of plastic bags in a bid to limit their "well-known [harmful effects](#)" and as part of preventive measures to forestall colon, breast, skin, liver, prostate cancers, and their incidence in the Middle East.

He is now bent on research to address the relation of obesity to cancer in yet another attempt to "understand the effect of obesity on the normal cells and find whether obesity microenvironment can predispose the cells to become cancer cells.

"Many different types of cancers are associated with excess body weight, such as breast, colon and rectum, endometrial, esophageal, gallbladder, gastric, kidney, liver, ovary, pancreas and thyroid cancers as well as multiple myeloma."

According to the [World Health Organization \(WHO\)](#), obesity is a worldwide problem. WHO statistics show that more than 1.9 billion

adults are overweight, and 650 million of them were obese, including 39 million children under the age of five.

The difference between obese and underweight is gauged by Body Mass Index (BMI), which refers to a person's weight in kilograms or pounds divided by the square of height in meters or feet.

WHO says obesity kills more people than underweight and the Middle East, particularly [the Gulf region](#), obesity prevalence is estimated at 17%–48% in women and 8%–36% in men.

[Latest medical research](#) associates many types of cancers, such as breast, colon and rectum, endometrial, esophageal, gallbladder, gastric, kidney, liver, ovary, pancreas and thyroid cancers as well as multiple myeloma to obesity.

Provided by University of Sharjah

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