

## Regular use of opium is associated with higher risk of developing a broad array of cancer types

**Lyon, France, 28 April 2020** – New results from an international prospective study, published today in *The Lancet Global Health*,<sup>1</sup> provide robust evidence indicating that regular use of opium is associated with higher risk of developing cancers in different organs of the respiratory, digestive, and urinary tracts and the central nervous system.

This report is based on more than 10 years of follow-up of 50 045 individuals within the Golestan Cohort Study, which was initiated in 2004 by the Digestive Disease Research Institute of the Tehran University of Medical Sciences (Islamic Republic of Iran), in collaboration with the International Agency for Research on Cancer (IARC) and the United States National Cancer Institute. The study documents the presence of dose-dependent associations between regular use of opium and a broad array of cancer types, including oesophageal, gastric, laryngeal, lung, pancreatic, liver, bladder, and brain cancers.

Opium is a highly addictive narcotic that is obtained from the latex of the unripe seedpod of the poppy plant. It is widely used for recreational purposes and for pain relief in some societies, particularly in Asia and North Africa. “There is emerging evidence that indicates possible carcinogenic effects of opium and its derivatives, which are categorized as opiates,” says Professor Reza Malekzadeh, who is the principal investigator of the Golestan Cohort Study, the co-senior author of this study, and a recipient of the IARC Medal of Honour. “Because of the challenges inherent in studying this exposure, there is a paucity of prospective studies of opium use with long-term follow-up. The Golestan Cohort Study is the only population-based prospective study that includes a large group of long-term opium users with validated data on opium use. Therefore, it provides a unique opportunity to assess different health hazards, including the risk of mortality and cancer among regular opium users.”

In societies where use of opium is prevalent, several factors can affect the use of this narcotic drug, including sex, socioeconomic characteristics, and underlying diseases. “In this study, we found consistent associations between opium use and risk of cancer among ever and never tobacco users, men and women, and individuals with lower and higher socioeconomic status,” says Dr Mahdi Sheikh, a postdoctoral scientist at IARC and the first author of the study. “Furthermore, all routes of opium use and all types of opium derivatives used by this population showed positive associations with cancer risk.”

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<sup>1</sup> Sheikh M, Shakeri R, Poustchi H, Pourshams A, Etemadi A, Islami F, et al. (2020). Opium use and subsequent incidence of cancer: results from the Golestan Cohort Study. *Lancet Glob Health*. Published online 28 April 2020; [https://doi.org/10.1016/S2214-109X\(20\)30059-0](https://doi.org/10.1016/S2214-109X(20)30059-0)

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In 2017, an estimated 29.2 million people worldwide used opiates, mainly as illicit drugs, according to the United Nations Office on Drugs and Crime. The global crisis of opiate misuse has resulted in thousands of deaths annually and billions of dollars in economic losses in many parts of the world.

“Given the huge increase in the use of opiates in the past few years, further global initiatives are needed to reduce opiate misuse and implement preventive strategies to mitigate their hazardous long-term effects,” says Dr Paul Brennan, Head of the Section of Genetics at IARC and the co-senior author of the study. “This report is the only prospective analysis from human studies on associations between opium use and overall and site-specific cancer incidence. It has significant implications for public health and could aid the translation of knowledge and the implementation of evidence into practice and policy decision-making.”

Because of the high priority of this topic and the emerging evidence, the [IARC Monographs programme](#) will evaluate the carcinogenicity of opium use to humans in September 2020.

### Note to the editor

The study was funded by Wereld Kanker Onderzoek Fonds, Cancer Research UK, the Tehran University of Medical Sciences (Islamic Republic of Iran), the United States National Cancer Institute, and the International Agency for Research on Cancer (IARC).

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