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## **Air Pollution is Associated with Cancer Mortality Beyond Lung Cancer**

*A large scale epidemiological study associates some air pollutants with kidney, bladder and colorectal cancer death*

Barcelona, 30 October 2017.- Air pollution is classified as [carcinogenic](#) to humans given its association with **lung cancer**, but there is little evidence for its association with cancer at other body sites. In a new large-scale prospective study led by the **Barcelona Institute of Global Health (ISGlobal)**, an institution supported by the "la Caixa" Foundation, and **the American Cancer Society**, researchers observed an association between some air pollutants and **mortality from kidney, bladder and colorectal cancer**.

The [study](#), published in *Environmental Health Perspectives*, included **more than 600,000 adults** in the US who participated in the Cancer Prevention Study II and who were followed for 22 years (from 1982 to 2004). The scientific team examined associations of **mortality from cancer at 29 sites** with long-term residential exposure to three ambient pollutants: **PM<sub>2,5</sub>, nitrogen dioxide (NO<sub>2</sub>) and ozone (O<sub>3</sub>)**.

Over 43,000 non-lung cancer deaths were registered among the participants. **PM<sub>2,5</sub> was associated with mortality from kidney and bladder cancer**, with a 14 and 13% increase, respectively, for each 4.4 µg/m<sup>3</sup> increase in exposure. In turn, exposure to **NO<sub>2</sub> was associated with colorectal cancer death**, with a 6% increase per each 6.5 ppb increment. No significant associations were observed with cancer at other sites.

**Michelle Turner**, ISGlobal researcher and first author of the study, explains that "although a number of studies associate lung cancer with air pollution, **there is still little evidence for associations at other cancer sites**".

"This research suggests that **air pollution was not associated with death from most non lung cancers**, but the associations with kidney, bladder and colorectal cancer deserve further investigation" she adds.

### **Reference**

[Ambient Air Pollution and Cancer Mortality in the Cancer Prevention Study II](#). Turner MC, Krewski D, Diver WR, Pope CA 3rd, Burnett RT, Jerrett M, Marshall JD, Gapstur SM. Environ Health Perspect. 2017 Aug 21;125(8):087013.

### **About ISGlobal**

The Barcelona Institute for Global Health, ISGlobal, is the fruit of an innovative alliance between academic, government, and the "la Caixa" Foundation to contribute to the efforts undertaken by the international community to address the challenges in global health. ISGlobal is a consolidated

hub of excellence in research that has grown out of work first started in the world of health care by the Hospital Clínic and the Parc de Salut MAR and in the academic sphere by the University of Barcelona and Pompeu Fabra University. The pivotal mechanism of its work model is the transfer of knowledge generated by scientific research to practice, a task undertaken by the institute's Education and Policy and Global Development departments. ISGlobal a member of the CERCA programme of the Generalitat de Catalunya.

## ISGlobal's Press Office

Pau Rubio

[pau.rubio@isglobal.org](mailto:pau.rubio@isglobal.org)

003493 214 73 33 / 0034696 91 28 41

Marta Solano

[marta.solano@isglobal.org](mailto:marta.solano@isglobal.org)

003493 214 73 33 / 0034661 45 16 00

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