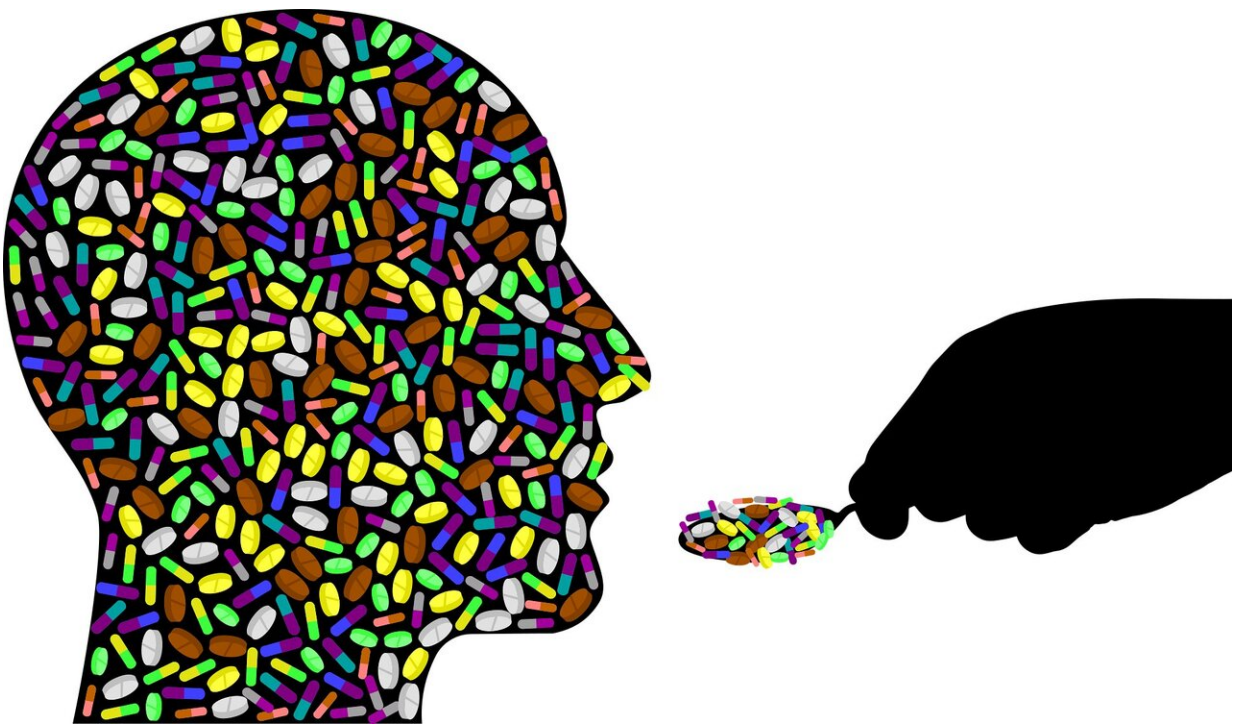


# New long-term opioid use after lung cancer surgery linked to 40% higher death risk within next 2 years

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New long-term use of opioids to quell pain after lung cancer surgery is linked to a 40% heightened risk of death from any cause within the next 2 years, finds research published online in the journal *Regional Anesthesia & Pain Medicine*.

Male sex, older age, use of chemo, anxiety and insomnia are among the factors associated with new long-term (6 or more months) use, the findings show.

Lung cancer is the leading cause of cancer death worldwide, with nearly 2.3 million diagnoses and 1.8 million deaths in 2020. New persistent post-operative [pain](#) has been reported in up to 12% of patients.

The researchers therefore wanted to know what proportion of them become opioid users for the first time following [surgery](#), whether particular factors are associated with long-term use, and if this is associated with any harmful effects within the subsequent 2 years.

They included all adults diagnosed with [lung cancer](#) and who had undergone surgery for their disease between 2011 and 2018 in South Korea, details of which were retrieved from the National Health Insurance Service (NHIS) database.

Doctors in South Korea must enter details of their patients' diagnoses, procedures, and prescription drugs in order to be reimbursed for treatment costs by the government. The database also contains background personal information, including age, sex, and household income on every registrant and the date of their death.

Codeine, dihydrocodeine, and tramadol were categorized as less potent opioids; all other opioids, such as fentanyl, morphine, oxycodone, hydromorphone and methadone, were categorized as potent opioids.

The researchers took account of other underlying conditions/disabilities, surgery type and whether it was a repeat or first time procedure, where it was performed, and whether the patient was discharged home or to long-term care.

Some 60,031 adults underwent lung cancer surgery during the study period, and after excluding those who died in hospital or within the first 6 months of discharge, the final analysis included 54,509 of them.

Six months after surgery, 3325 patients (just over 6%) who had recently been prescribed opioids were still taking them: 859 (1.6%) were on potent drugs and 2466 (4.5%) were on less potent drugs.

New long-term opioid use was associated with a heightened risk of death from any cause within the next 2 years; 17.5% (574/3325) of long-term opioid users died compared with 9.5% (4738/51,184) of those not taking opioids.

Compared with those not taking opioids, new long-term users of these drugs were 40% more likely to die within the next 2 years of any cause.

When stratified by potency, those taking less potent opioids were still 22% more likely to die; those taking more potent opioids were 92% more likely to die.

Certain factors were associated with a greater likelihood of becoming a new long-term user: older age, male sex, particular surgical procedures, especially thoracotomy where a cut was made between the ribs, longer length of hospital stay, a greater degree of disability, chemotherapy treatment, and preoperative anxiety and insomnia.

This is an observational study, and as such, can't establish cause. And the researchers highlight that they weren't able to ascertain lung health before surgery, important lifestyle behaviors, such as smoking and drinking, or tumor stage, all of which may have influenced the findings.

But previously published research indicates that opioids may help promote tumor growth and inhibit cancer cell [death](#), while also

suppressing the immune system, they note.

Additionally, they point out, "This is the first study to identify the association of new long-term [opioid use](#) with poorer long-term [survival outcomes](#) after lung cancer surgery using real-world data based on a national registration database."

**More information:** New, long-term opioid use after lung cancer surgery is associated with reduced 2-year survival: a retrospective population-based cohort study in South Korea, *Regional Anesthesia and Pain Medicine* (2022). [DOI: 10.1136/rapm-2022-103769](https://doi.org/10.1136/rapm-2022-103769)

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