

Better survival among women after lung cancer surgery

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There are known differences in the survival rates of women and men with lung cancer. Researchers at Karolinska Institutet set out to investigate potential reasons behind this disparity, such as the presence

of other underlying diseases and smoking status. The study, which was published in *Chest*, shows that women have better survival rates after lung cancer surgery than men, independent of other factors.

Previous studies conducted by Karolinska Institutet and other research bodies have shown a link between female sex and a lower overall disease risk, as well as better survival in many forms of [cancer](#) that affect both sexes. But one exception to this is [lung cancer](#), where female sex could be a risk factor.

Previous studies on sex differences in survival after lung cancer treatment have yielded conflicting results. A research group from Karolinska Institutet therefore set out to further investigate the link between sex and survival after lung cancer [surgery](#).

Equal treatment

"The [healthcare sector](#) is always striving to offer all patients equal treatment tailored to their individual needs," says the study's first author Erik Sachs, resident in [cardiothoracic surgery](#) at Karolinska University Hospital and doctoral student at the Department of Molecular Medicine and Surgery at Karolinska Institutet. "This kind of study can help shed light on systematic differences that ultimately affect patient outcomes."

In a national population-based registry study, researchers analyzed sex differences in survival in women and men after lung cancer surgery, taking into account a wide range of factors such as socioeconomic differences, age, smoking status, comorbidities, tumor characteristics and the type and extent of surgery. Follow-up was carried out one, five and 10 years after surgery.

The sample consisted of 6,536 patients who underwent lung cancer surgery in Sweden between 2008–2017, of which just over half were

women. The mean age was 67 years for women and 68 years for men. More women were non-smokers, and women had a lower incidence of comorbidities than men.

27 percent lower mortality

The results show that women had 27 percent lower mortality compared to men, independent of factors such as comorbidities, age, socioeconomic status, lifestyle factors, physical function, type and extent of surgery, tumor characteristics and tumor stage. The pattern of better survival in [women](#) was observed across all age categories except in the youngest patients, where the difference was not as pronounced.

"Our findings are significant, as they suggest that the prognosis for [lung](#) cancer can likely be improved, but more research is needed in this area," says Veronica Jackson, researcher at the Department of Molecular Medicine and Surgery, Karolinska Institutet, specialist in thoracic surgery, and the study's last author. "Further studies that specifically investigate the effects of lifestyle, sociocultural conditions and the presence of any inequalities in the delivery of care would likely be of value."

More information: Erik Sachs et al. Sex and survival after surgery for lung cancer: A Swedish nationwide cohort, *Chest* (2020). [DOI: 10.1016/j.chest.2020.11.010](https://doi.org/10.1016/j.chest.2020.11.010)

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