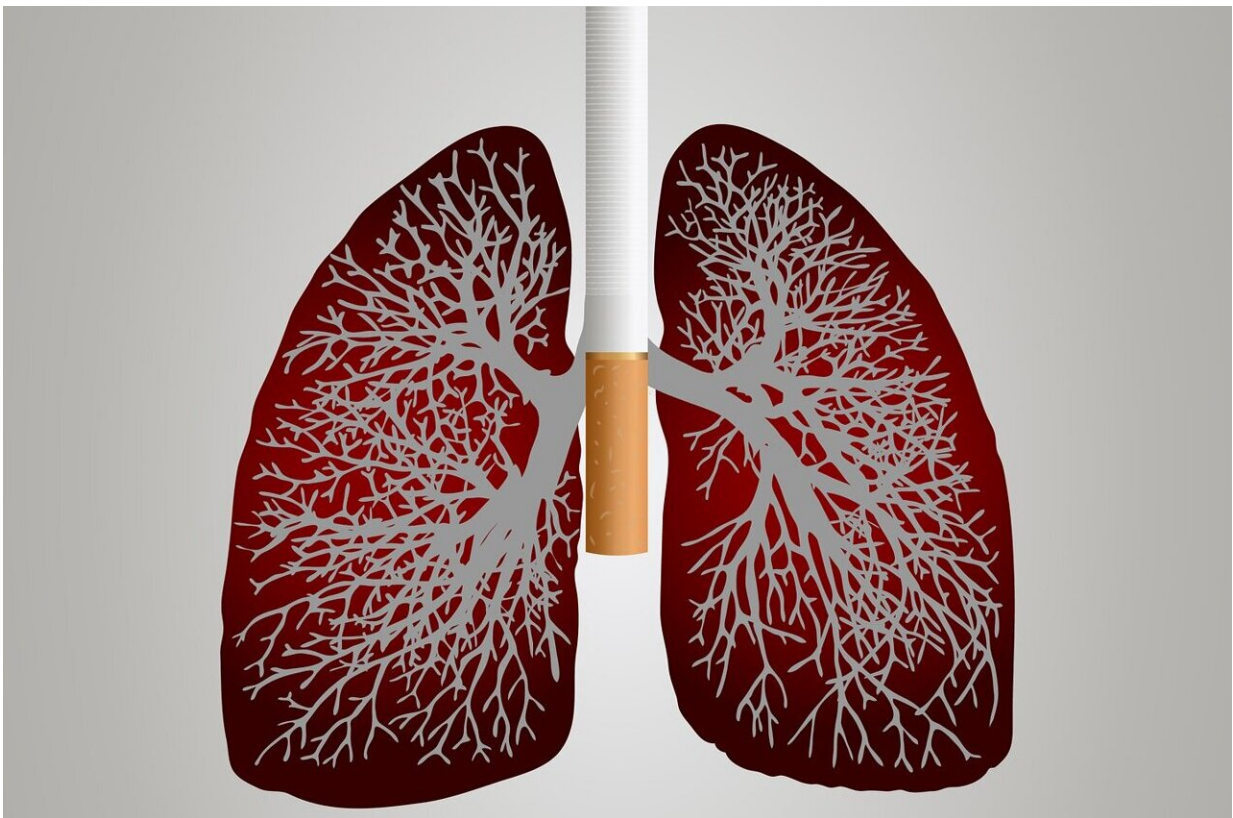


Adding metformin to chemoradiation for locally advanced non-small cell lung cancer doesn't yield survival benefits

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A combination of metformin and chemoradiation in patients with locally advanced non-small cell lung cancer (LA-NSCLC) was not found to add

survival benefit in the NRG Oncology clinical trial NRG-LU001. These results were recently published in *JAMA Oncology*.

NRG-LU001 enrolled 170 patients between August 2014 and December 2016, of which 167 were included. Of these, 81 patients were randomized to the control arm and 86 patients were randomized to the experimental arm. The control group patients received 60 Gy of radiation combined with concurrent weekly carboplatin and paclitaxel chemotherapy, followed by 2 cycles of consolidative chemotherapy every 3 weeks. The experimental group received the same regimen as the control group, combined with metformin during both the concurrent and consolidation phases of cytotoxic therapy.

The primary outcome was a 1-year progression-free survival (PFS), which was designed to detect 15% improvement in PFS from 50 percent to 65 percent. After one year, PFS was 60.4 percent in the control group and 51.3 percent in the metformin group. In the Intention-to-Treat analysis, one-year overall survival (OS) was nearly statistically identical, with the control arm at 80.2 percent OS and the metformin group at 80.8 percent. Although there were numerically fewer deaths at one year in the metformin arm (24 of 34) than the control group (30 of 33), the discrepancy was due to an increased number of deaths from causes unrelated to lung [cancer](#). There were no statistically significant differences in adverse events (AEs) observed between the [control group](#) and metformin group.

"Although metformin did not improve outcomes in this study, we are heartened by the excellent clinical outcomes in both arms compared to previous studies. Moreover, [metformin](#) may still have a role to play in NSCLC management, as it appears to affect tumor metabolism in NSCLC patients and may improve outcomes in combination with targeted therapy," said Heath Skinner, MD, Ph.D., of the UPMC Hillman Cancer Center, and the co-lead investigator of the NRG-LU001

manuscript.

More information: Heath Skinner et al, Addition of Metformin to Concurrent Chemoradiation in Patients With Locally Advanced Non–Small Cell Lung Cancer, *JAMA Oncology* (2021). [DOI: 10.1001/jamaoncol.2021.2318](https://doi.org/10.1001/jamaoncol.2021.2318)

Provided by NRG Oncology

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