

Tissue platinum concentrations linked to response in NSCLC

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Image courtesy of Blausen Medical

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(HealthDay) -- For patients with non-small-cell lung cancer (NSCLC) who undergo neoadjuvant platinum-based chemotherapy, tissue platinum concentrations correlate positively with improved outcome, according to a study published online Aug. 13 in the *Journal of Clinical Oncology*.

Eric S. Kim, M.D., from the University of Texas MD Anderson Cancer Center in Houston, and colleagues used flameless atomic absorption spectrophotometry to measure total platinum concentrations in 44 archived fresh-frozen [NSCLC](#) specimens from patients who underwent surgical resection after neoadjuvant platinum-based chemotherapy. The effect of tissue platinum concentration on response and survival was examined.

The researchers observed a significant association between tissue platinum concentration and percent reduction in [tumor size](#). This association was also seen with cisplatin, carboplatin, and all histology subgroups. Variables such as the number of cycles and time lapse from last chemotherapy had no significant impact on platinum concentration. Time to recurrence, progression-free survival, and overall survival were significantly longer in patients with higher platinum concentration, after adjustment for the number of cycles.

"Our data strongly support reduced drug accumulation as a significant mechanism of platinum resistance," the authors write. "Enhanced understanding of the molecular mechanism of platinum accumulation by [tumor cells](#) will be necessary to identify surrogate biomarkers for platinum accumulation that could be developed prospectively for individualizing therapy."

More information: [Abstract](#)
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