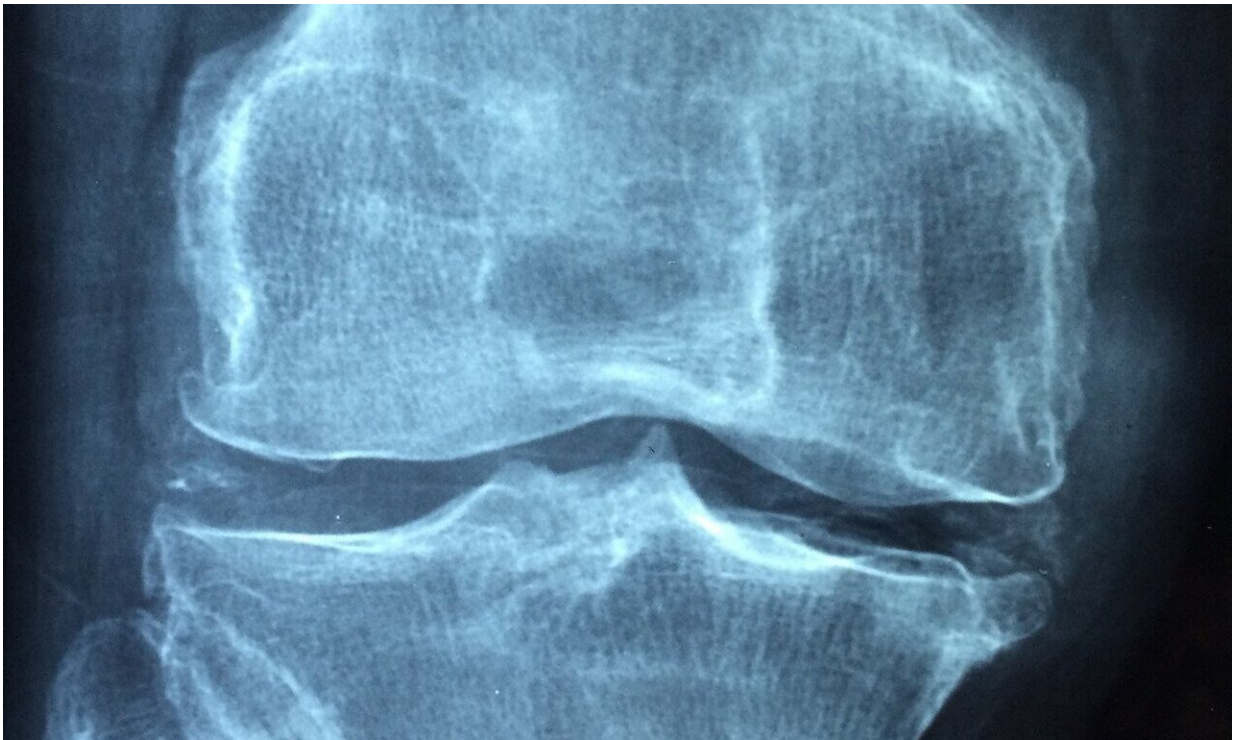


Inflammatory cytokine levels may predict outcomes in orthopedic trauma patients

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Inflammatory cytokines are molecules that are secreted by immune cells to promote inflammation. A study published in the *Journal of Orthopaedic Research* found that measuring inflammatory cytokines may help predict patient outcomes after traumatic injury, which is the leading cause of mortality in individuals under 50 years of age.

In the study of 58 patients with an average age of 40 years who experienced severe bone, joint, and muscle trauma, six patients (10%) suffered pulmonary complications and five (9%) had acute kidney injury.

Adding the cytokine interleukin-6 to predictive models of patient outcomes (such as what's called the New Injury Severity Score, or NISS) significantly improved predictions of pulmonary complications, the need for intensive care, and the length of hospital stay. Adding the cytokine interleukin-8 significantly improved predictions of [acute kidney injury](#).

"This is the first time we have combined parameters of external anatomic injury (NISS) with parameters of the internal physiologic response to injury (cytokines) to determine trauma [patient outcomes](#)," said lead author Arun Aneja, MD, Ph.D., of the University of Kentucky.

More information: Arun Aneja et al, Inflammatory cytokines associated with outcomes in orthopedic trauma patients independent of New Injury Severity score: A pilot prospective cohort study, *Journal of Orthopaedic Research* (2021). [DOI: 10.1002/jor.25183](https://doi.org/10.1002/jor.25183)

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