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Modeling Blood Filtration in the Treatment of Septic Shock GLENN FOSTER, ALFRED HUBLER, Center for Complex Systems Research, University of Illinois at Urbana-Champaign, Department of Physics — Sepsis, the overreaction of the inflammation and coagulation responses to infection, is the leading cause of death in non-coronary intensive care unit patients in the US. Anti-mediator drugs have been generally ineffective, but by considering the network of cytokine interactions, we illustrate how filtering the cytokines in the blood leads to a reduced response. We further illustrate by applying an appropriate filter to existing immune response models as well as discuss both practical and optimal filter parameters.

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