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A dynamical network model for frailty-induced mortality SWADHIN TANEJA, ANDREW RUTENBERG, ARNOLD MITNITSKI, KENNETH ROCKWOOD, Dalhousie University — Age-related clinical and biological deficits can be used to build a frailty index that is a simple fraction of observed to possible deficits. As a proxy measure of aging, such a frailty index is empirically a better predictor of human mortality than chronological age. We present a network dynamical model of deficits that allows us to naturally consider causal interactions between deficits, deficit formation and repair, and mortality. We investigate the information provided by various model frailty indices, how they reflect the underlying dynamics of the network, and how well they predict mortality.

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