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Neutrinoless double beta decay and lepton flavor violation VINCENZO CIRIGLIANO, ANDRIY KURYLOV, MICHAEL RAMSEY-MUSOLF, PETR VOGEL, California Institute of Technology — We point out that extensions of the Standard Model with low scale ($\sim$ TeV) lepton number violation (LNV) generally lead to a pattern of lepton flavor violation (LFV) experimentally distinguishable from the one implied by models with GUT scale LNV. As a consequence, muon LFV processes provide a powerful diagnostic tool to determine whether or not the effective neutrino mass can be deduced from the rate of neutrinoless double beta decay. We discuss the role of $\mu \to e\gamma$ and $\mu \to e$ conversion in nuclei, which will be studied with high sensitivity in forthcoming experiments.

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