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Manuel Gonzalez Villa* (villa@math.wisc.edu), **Anatoly Libgober** and **Laurentiu Maxim**. *Motivic zeta functions and infinite cyclic covers*. Preliminary report.

We associate with an infinite cyclic cover of a punctured neighborhood of a simple normal crossing divisor on a complex quasi-projective manifold (assuming certain finiteness conditions are satisfied) a rational function with coefficients in the localized Grothendieck ring of algebraic varieties over the complex numbers and a motive in Grothendieck ring. We show the birational invariance of both objects and discuss, among other aspects, their relations with the motivic zeta functions and motivic Milnor fibers of and Denef and Loeser. (Received August 10, 2015)