Christoper William Davis*, Rice University mathematics department, 6100 Main St, Houston, TX 77005, MS-136, Houston, TX 77005. Non-triviality of knots arising from iterated infection without the use of the Tristram-Levine signature.

We give an explicit construction of linearly independent families of knots arbitrarily deep in the (n)-solvable filtration of the knot concordance group using first order signatures. A difference between previous constructions of infinite rank subgroups in the concordance group and ours is that the deepest infecting knots in the construction we present are allowed to have vanishing Tristram-Levine signatures. (Received September 16, 2011)