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Brian David Conrad* (bdconrad@umich.edu). *Lifting CM abelian varieties to characteristic 0*. Preliminary report.

If A is an abelian variety over a finite field k then after passing to a finite extension on k there is an isogeny to an abelian variety that has a CM lifting in characteristic 0. Can such a CM lifting be found without introducing an isogeny or increasing the base field? Oort showed that an isogeny is sometimes unavoidable, but he left open the question of whether it may be possible to make a lifting after just an isogeny over k itself. There are two natural ways to precisely formulate this latter lifting question, and we show that the answer is affirmative for one way and negative for the other. (Received August 28, 2006)