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Reza O Abbasian* (rabbasian@tlu.edu), TLU Dept. of Math-CS-IS, 1000 W. Court St., Seguin, TX 78155, and **Kareem K Christmas** and **John T Sieben**. *Statistics of a Proposed Mercy Rule in College Football to Reduce Major Injuries*. Preliminary report.

Over the last thirty years, eleven sports have accounted for about 2000 catastrophic injuries of high school and college players. More than half of those injuries are attributed to athletes playing football. In our work, we have utilized twelve years of data from over 10,000 college football games to develop statistical models which can be used to approximate the probability of winning as a function of score difference at various stages of the game. Using our model we can then determine the score difference, at the end of first, second and third quarter, at which there is a near-zero probability of a comeback. Given the probability distribution of major injuries in college football we will then attempt to estimate the optimal stoppage criteria, in terms of score difference and time, which produces the maximum reduction in the number of catastrophic injuries. (Received August 31, 2016)