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Aarini P Panzade* (aarinippanzade@gmail.com), 421 Rockcrest Way, 421 Rockcrest Way, Louisville, KY 40245-3214. *The Effect of TIMP-1 levels, MMP-1 Levels, and Healing Times on the Wound Surface Area.*

Matrix metalloproteinases (MMPs) are enzymes that degrade all kinds of extracellular matrix proteins during the wound-healing process. TIMP-1 is a tissue inhibitor of metalloproteinases (MMPs). In this work, we are investigating how MMPs and TIMPs, and the ratio of MMPs to TIMPs affect the wound surface area and the healing time. The data that was used for this work was of sixteen patients with diabetic foot ulcers in which measurements were taken of MMPs and TIMPs during a 12-week period. A multilinear regression analysis was performed on the interaction terms of different variables and compared to the wound surface area and compared to the regression analysis done in the spring semester on just the individual variables. It was concluded that the linear regression analysis done by the interaction terms was more beneficial to the wound surface area than the one done on individual variables. (Received August 18, 2020)