



ESTIMATING USMLE STEP 1 SCORES FROM COMLEX USA LEVEL 1 SCORES IN AN OSTEOPATHIC MEDICAL STUDENT POPULATION

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ABSTRACT

PURPOSE

With the onset of a single accreditation system and a single main residency match, residency directors will need to consider the comparability of the USMLE Step 1 scores and the COMLEX USA Level 1 scores submitted by their applicants. This study investigates whether a relationship between the scores on the two examinations exists within a population of students at Rocky Vista University College of Osteopathic Medicine (RVUCOM).

METHODS

De-identified COMLEX-USA Level 1 and USMLE Step 1 scores of 298 students who took both examinations was provided by the RVUCOM Office of the Registrar. The USMLE Step 1 and COMLEX-USA Level 1 scores were analyzed. Simplified equations were examined for ease of use in estimating how a student could potentially score on the USMLE Step 1 examination knowing their COMLEX-USA Level 1 result.

RESULTS

The simplified equation $USMLE = 0.2(COMPLEX) + 110$ gives a reasonable estimate of potential student score on the USMLE Step 1 examination for the cohort in our study.

CONCLUSION

This study shows that for our examined cohort of osteopathic medicine students, who are educated on materials tested on both examinations, a simplified equation could be utilized to estimate expected USMLE Step 1 scores from the COMLEX-USA Level 1 scores. However, one must consider that there could be a considerable margin of error in the estimate for an individual student. All available information should be examined in evaluating residency applications and no applicants should be accepted or rejected based on this single examination score estimate.

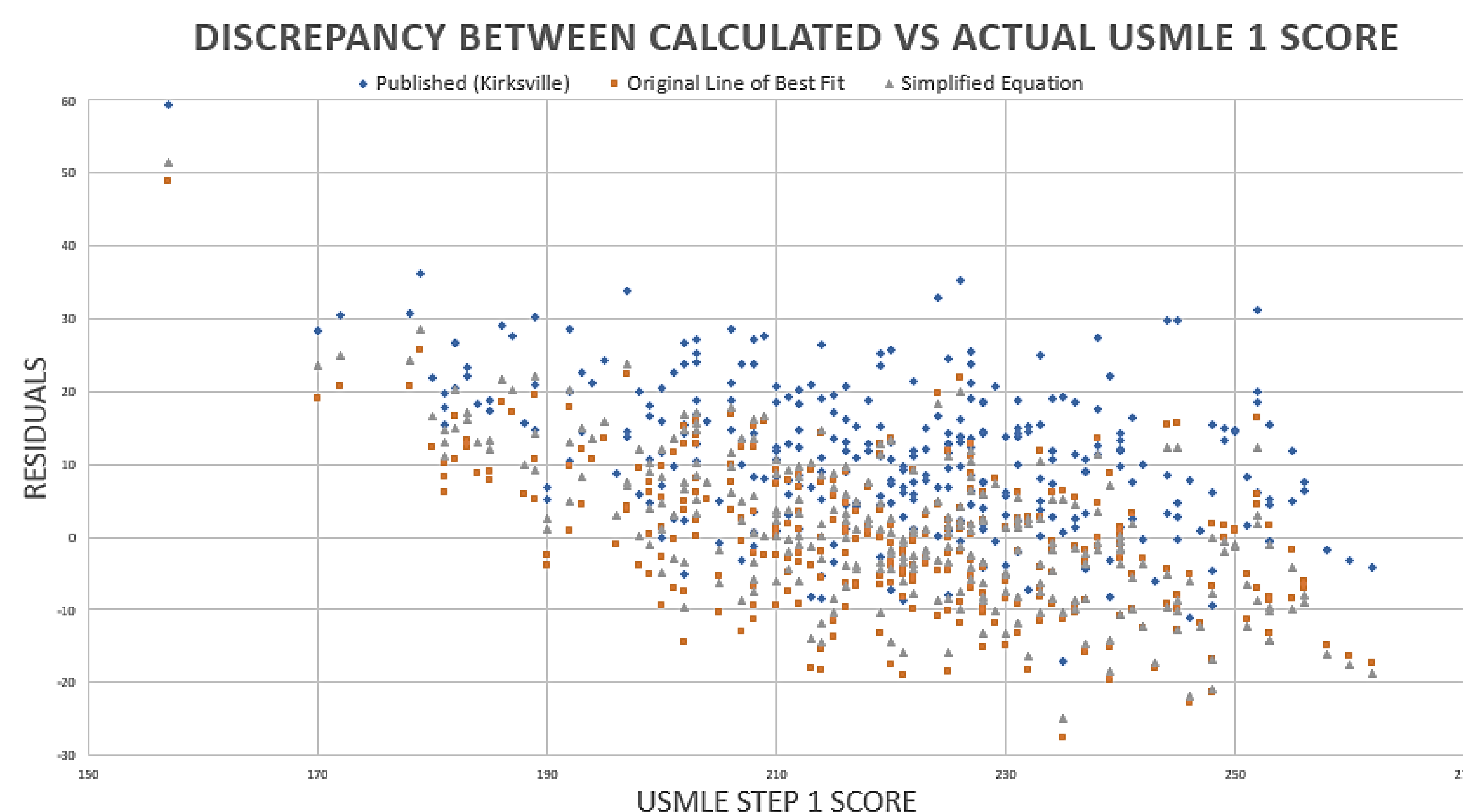
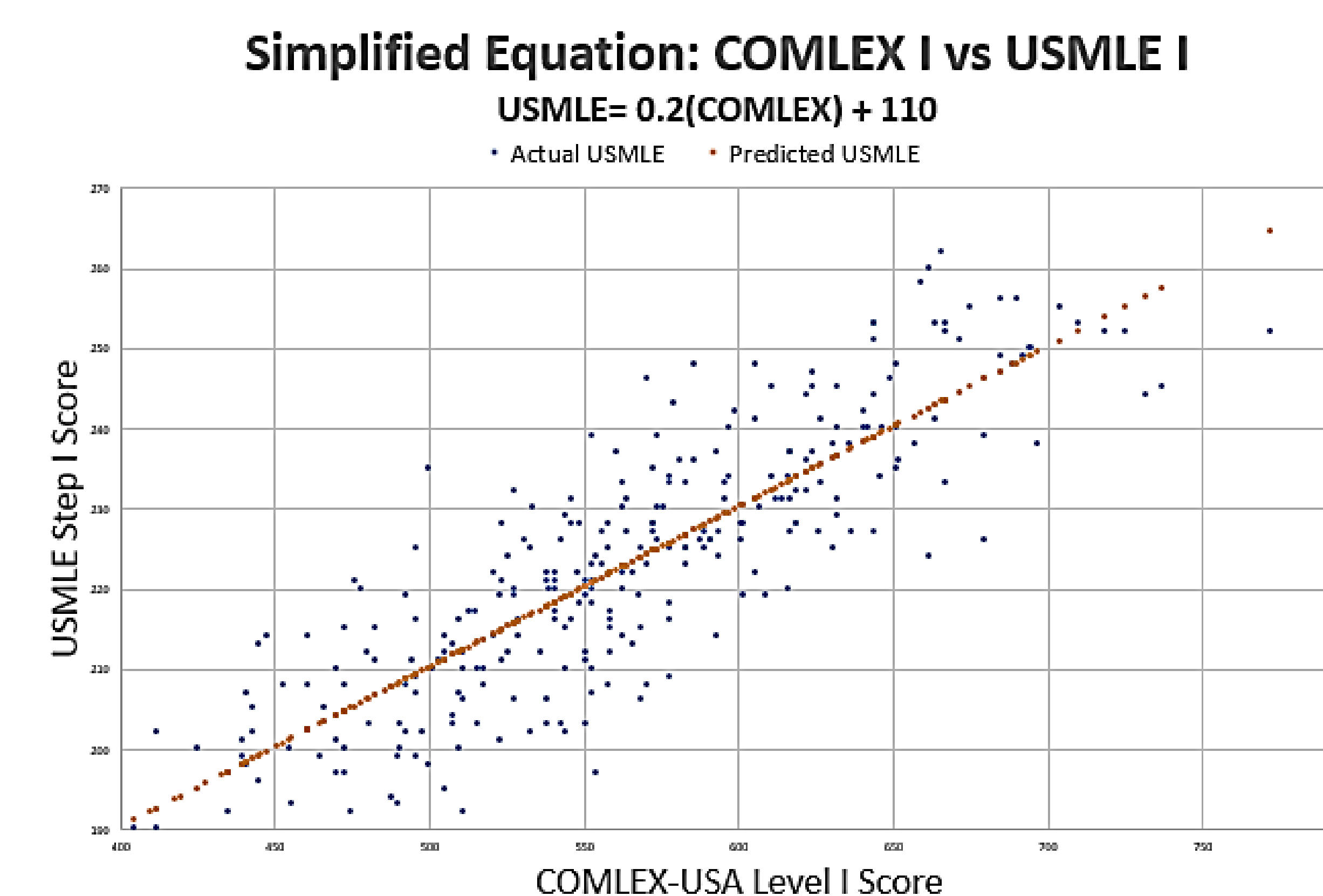
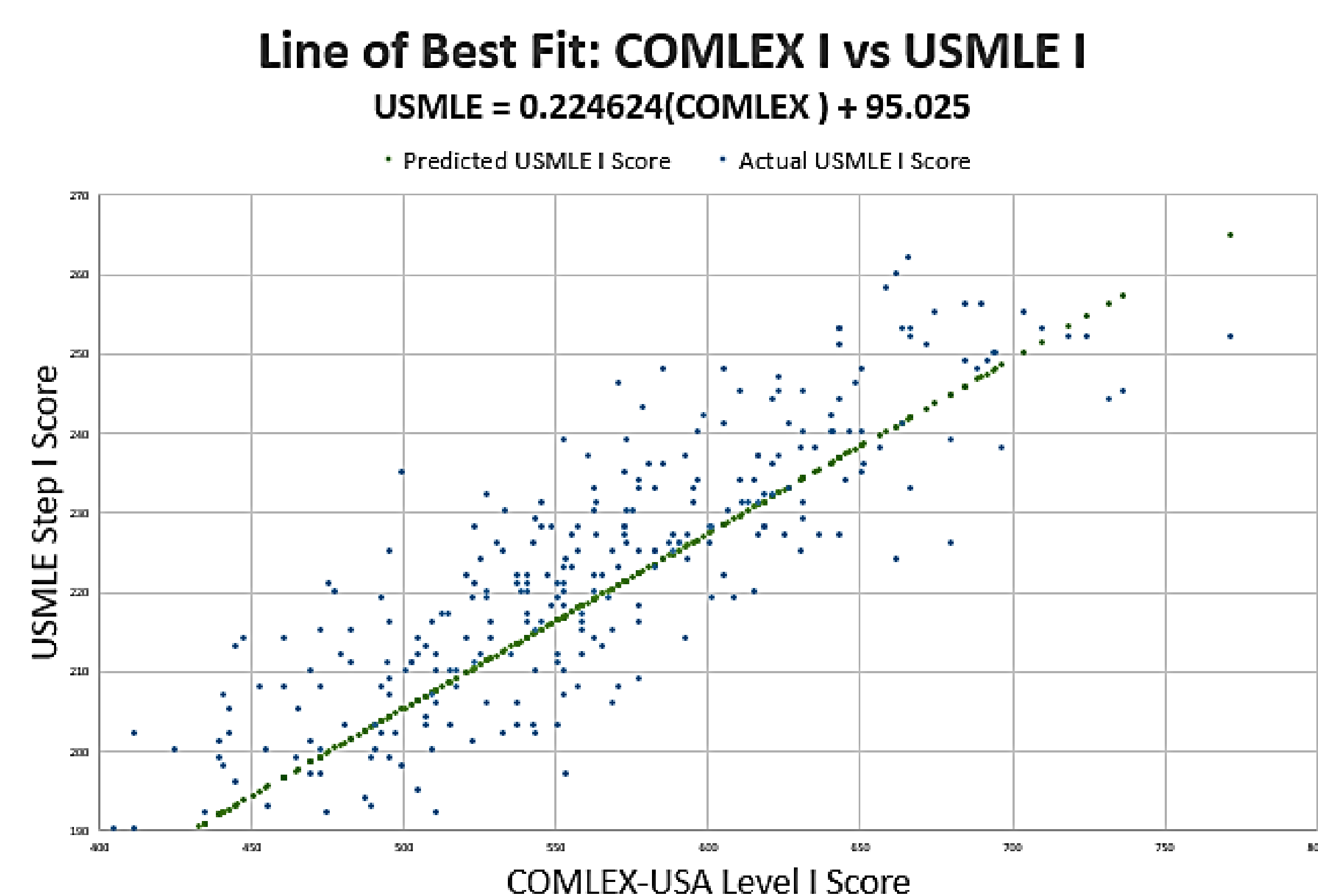
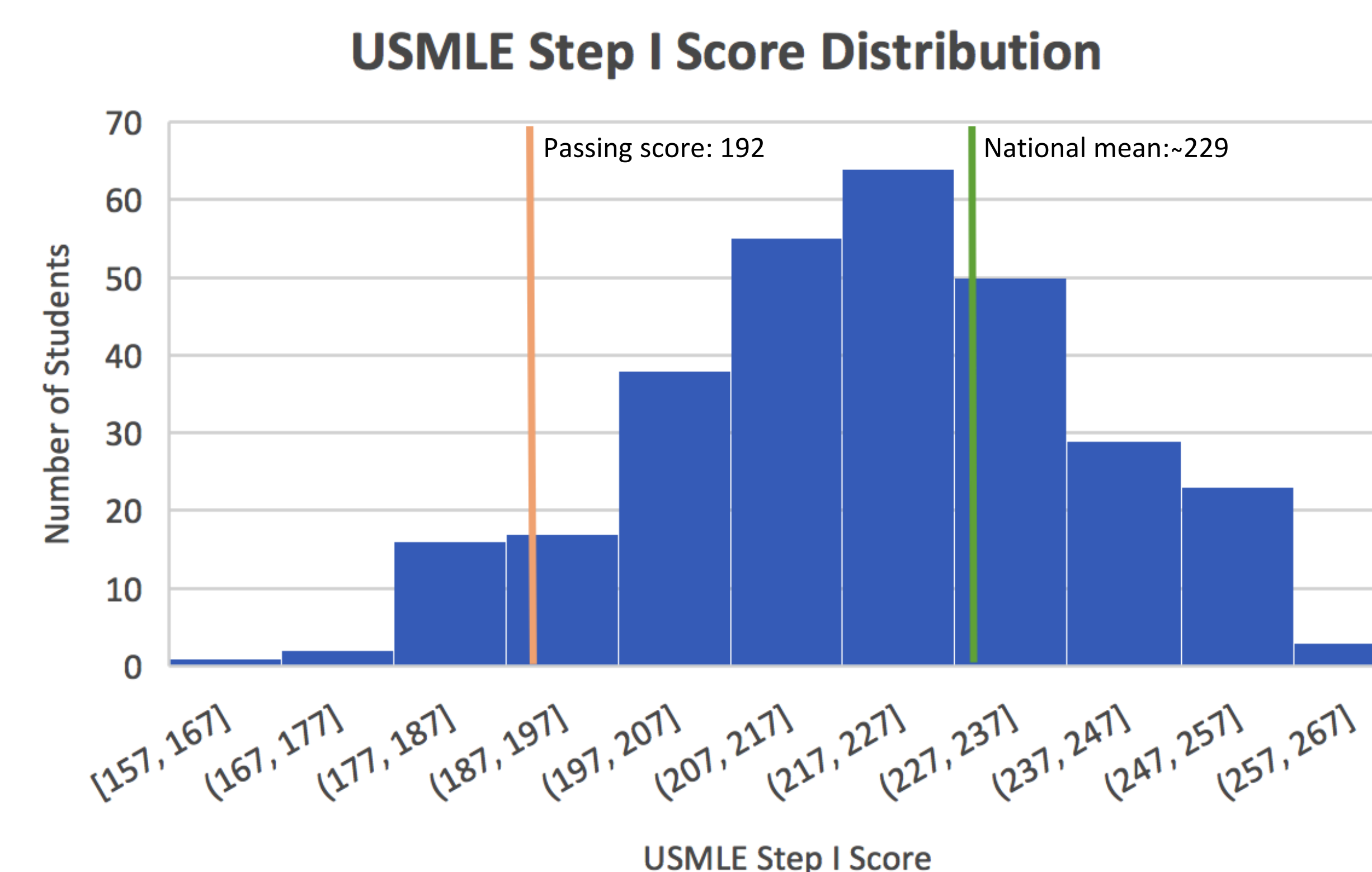
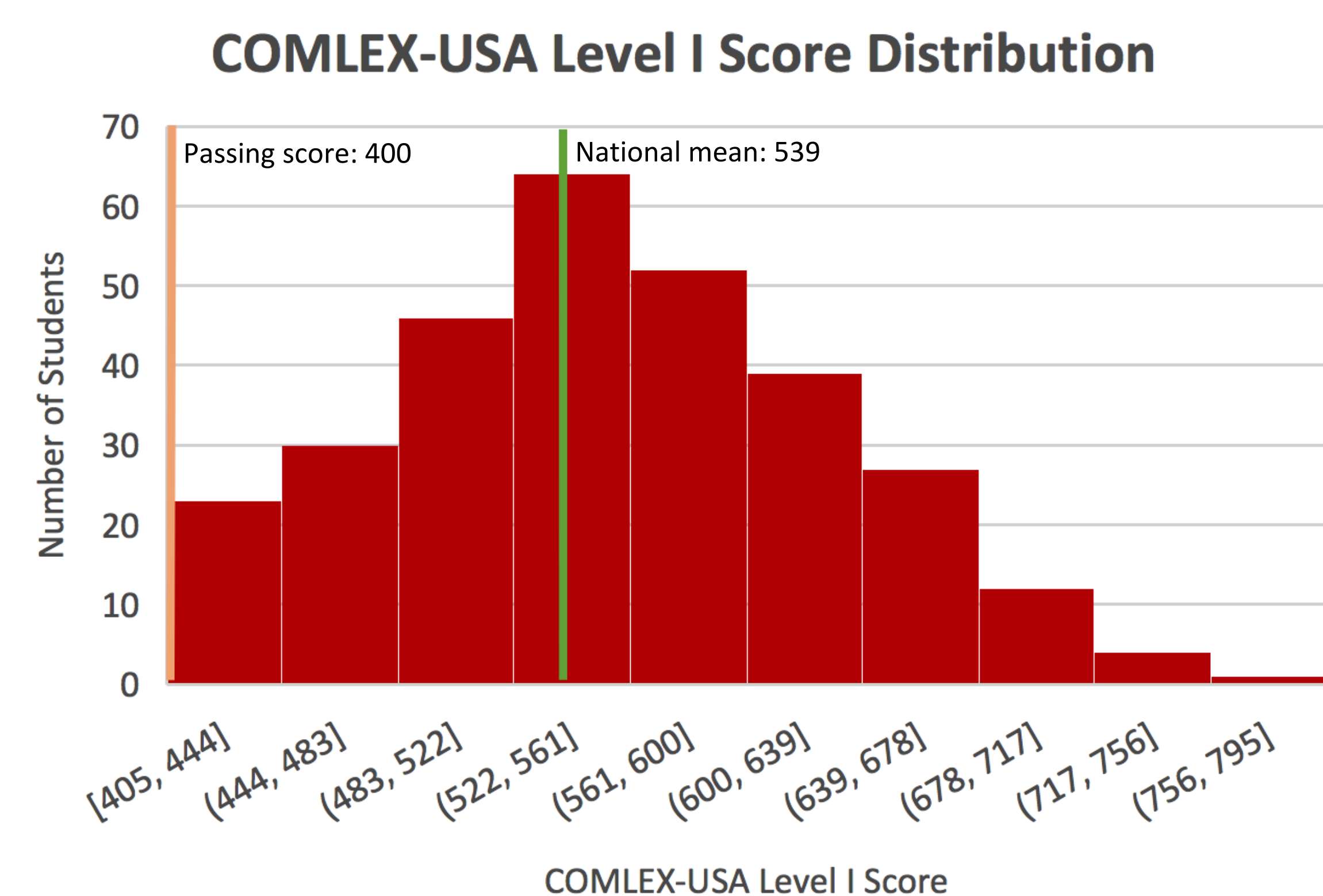
INTRODUCTION

With the onset of a single accreditation system and a single main residency match, residency directors have considered the comparability of the USMLE Step 1 scores and the COMLEX USA Level 1 scores submitted by their applicants. The literature has reported on ways to compare the board scores of osteopathic medical students to those of allopathic medical students¹⁻⁵. This study investigates whether a relationship between the two examinations exists within the population of students at Rocky Vista University College of Osteopathic Medicine (RVUCOM).

METHODS

De-identified student score reports from the RVUCOM classes of 2018 and 2019 (n=298) were obtained from the RVU Office of the Registrar. Regression analysis was performed on the scores using Microsoft Excel version 16.16.2 (2016) for all statistical calculations. The USMLE Step 1 and COMLEX-USA Level 1 scores were analyzed via ANOVA linear regression. A line of best fit was found. Simplified equations were evaluated. Residuals between calculated and actual USMLE scores were analyzed for the best fit equation, simplified equations, and for a previously published equation ($USMLE = 0.24 \times COMPLEX + 67.97$)¹.

RESULTS



DISCUSSION & CONCLUSION

It has been a challenge to compare standardized examination results of allopathic and osteopathic medical students applying for residencies. Use of the equations from this study may assist residency directors in evaluating applicants, regardless of which exam they report. A linear correlation was found for Step 1 and Level 1 scores $USMLE = 0.224624 (COMPLEX) + 95.025$ ($p=6.8999 \times 10^{-63}$). $USMLE = 0.2(COMPLEX) + 110$ is a simplified equation that was found to be a reasonable predictor of actual USMLE scores obtained by our students. The calculated score is within 30 points (+/-11.5%) of the actual achieved score for almost all students. Use of the previously published equation $USMLE = 0.24 \times COMPLEX + 67.97$ ¹ was not accurate for our student population. Limitations of the study include a limited cohort (n=298) over a limited time span (2 years), the use of a mix of first-time (98.3%) and second-time (1.7%) COMLEX test scores, and the lack of an institutional requirement for our students to obtain a passing USMLE score to progress in their medical education or to receive licensure (possibly decreasing effort put into the examination and thereby lowering score outcomes) and some students used the USMLE as a test run taking this examination first to find areas of weakness. It should also be noted that USMLE and COMLEX scores are individually distinct as the materials tested by these examinations are not identical and results on the individual examinations should not be examined as such⁶. This study shows that a simplified equation can be utilized to estimate an expected USMLE Step 1 score, with the understanding that there may be a considerable margin of error for a specific student.

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