

Using Confidence Bands to Compare Applicants' MCAT Scores

► Total Score Confidence Bands

Like other measurements, MCAT scores are imperfect measures of examinees' true levels of preparation. They are not perfectly precise. Examinees' scores can be dampened by factors such as fatigue, test anxiety, and less-than-optimal test room conditions, or they can be boosted by recent exposure to some of the tested topics.

Confidence bands describe the precision of MCAT total and section scores. They show the ranges in which examinees' true scores probably lie. It is important to include information about score precision in score reports and to consider this precision when using scores for decision making. The MCAT score reports show confidence bands both numerically and graphically.

MCAT total scores are reported with a confidence band of plus or minus two points, and MCAT section scores are reported with confidence bands of plus or minus one point. The figure below shows a total score of 501 and its confidence band, which ranges from 499 to 503. The diamond shape shows the confidence band graphically and indicates that the reported score is the best estimate of an applicant's true score. The reported score is in the center of the diamond, where the diamond is the tallest and the shading is the darkest.

	Score	Confidence Band	Percentile Rank of Score
MCAT Total Score	501	499  503	54%

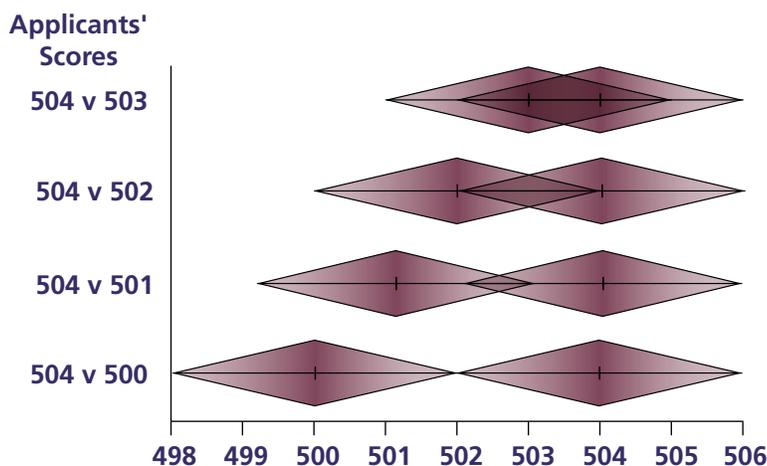
► Comparing the Scores of Two Applicants

When comparing two applicants' scores, it is important to consider how much their confidence bands overlap. Scores that are close together have confidence bands that overlap. The greater the overlap in confidence bands, the less meaningful are the differences between the scores.

The figure below displays four pairs of MCAT total scores with confidence bands that differ in their degree of overlap. The scores in the top pair, 504 versus 503, are only one point apart on the total score scale.

The figure shows that the confidence bands for these scores overlap on four score points—502, 503, 504, and 505.

In comparison, the scores in the bottom pair, 504 versus 500, are four points apart on the MCAT total score scale and have confidence bands that only overlap on one point on the total score scale—502—indicating that these scores are less comparable to each other than the first pair.



Scores that are closer together have confidence bands that overlap.