

Single Institution Analysis of Anesthesiology Residents' Online Question Bank Utilization and In-Training Exam Performance

C. Veilleux¹, B. Beers-Mulroy¹, T. Barker¹, J. Richard¹, W. Craig², J. Flowerdew^{1,3,4}, A. Quaye^{1,3,4}

¹ Department of Anesthesiology and Perioperative Medicine, Maine Medical Center, Portland, ME, USA

² Research Navigator, MaineHealth Institute for Research, Scarborough, ME, USA

³ Tufts University School of Medicine, Boston, MA, USA

⁴ Division of Anesthesiology, Spectrum Healthcare Partners, South Portland, ME, USA



INTRODUCTION

The American Board of Anesthesiology (ABA) In-Training Examination (ITE) is an annual 200 multiple-choice question examination administered to anesthesiology residents in ACGME accredited programs to assess their clinical and medical knowledge essential for anesthesiology practice. Individual performance is benchmarked against all ACGME anesthesiology trainees nationally within the same training year and serves to identify gaps in knowledge. Understanding evidence-based predictors of higher ITE scores can inform the development of medical education curricula, with strategies aimed at ensuring high pass rates on the ABA certification examinations. To date, no study has examined the impact of online question banks on ITE performance in anesthesiology training. To address this, we have explored whether the utilization of TrueLearn question banks improved examination performance among anesthesiology trainees.

AIM STATEMENT: To Identify relationships between the total number of TrueLearn questions completed, overall percentage of questions answered correctly, and the percentage of questions completed in tutor mode compared to ITE scores

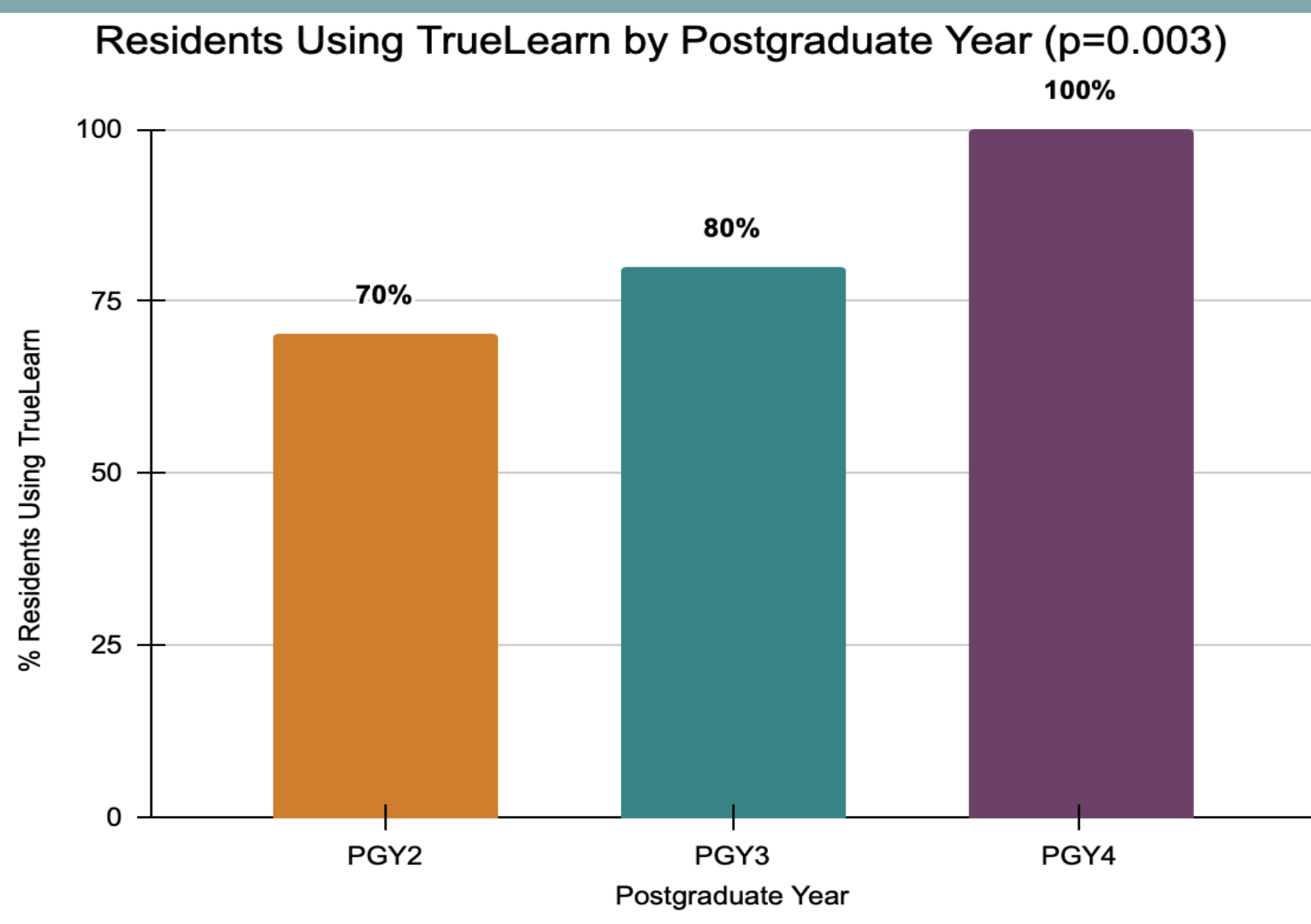
METHODS

- Retrospective review (July 2015 – July 2023, 46 MMC PGY2-4 Anesthesia residents)
- TrueLearn metrics: total # questions completed, % questions completed in tutor mode, % questions correct
- Spearman correlation (TrueLearn metrics vs ITE performance, stratified by PGY)
- T tests for ITE scores (TrueLearn users vs non-users)
- Kruskal-Wallis for non-normal continuous data across PGYs
- Chi-square for categorical comparisons

RESULTS

Relationship Between TrueLearn Usage and ITE National Percentile Scores, Stratified by PGY

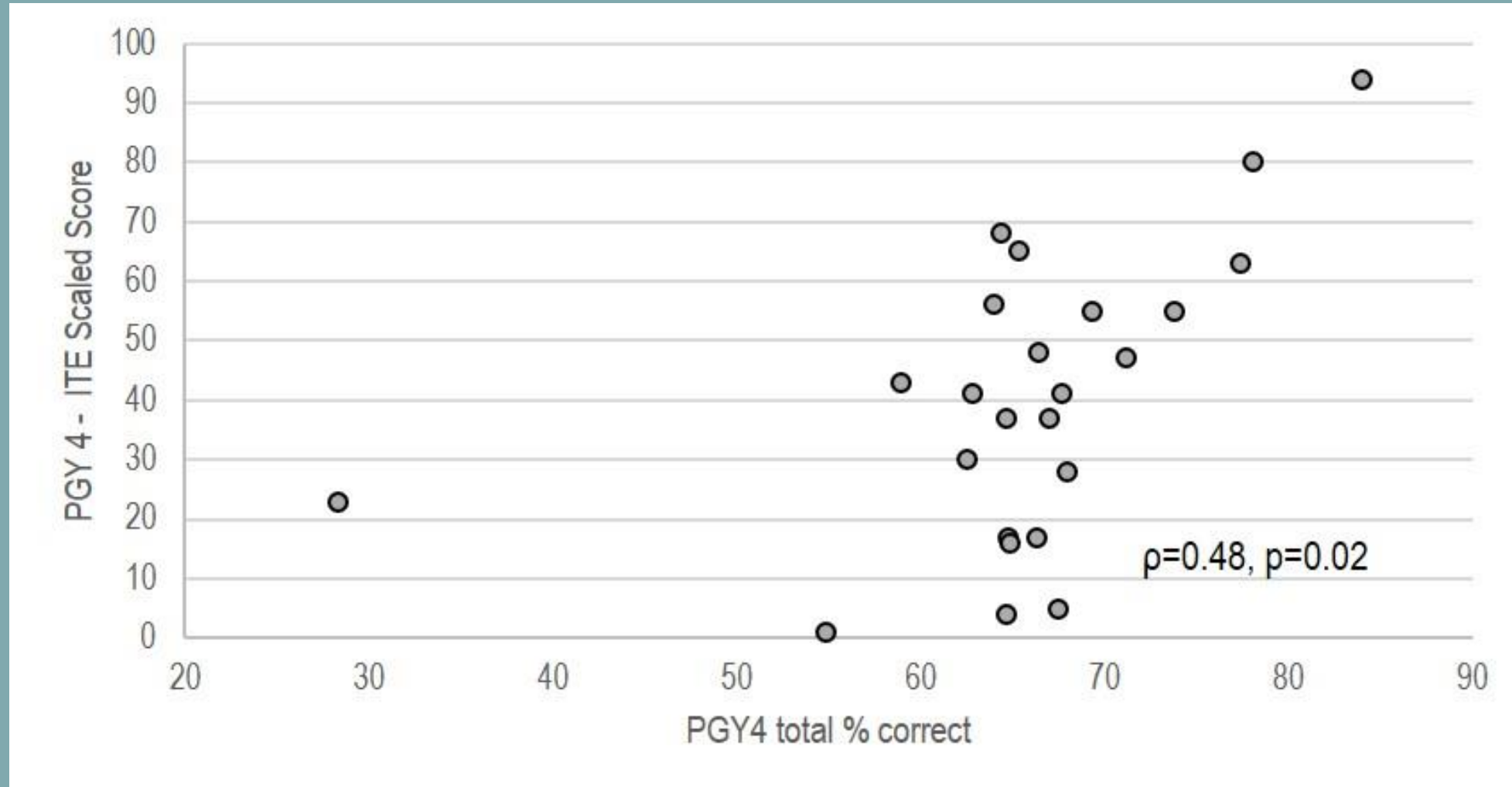
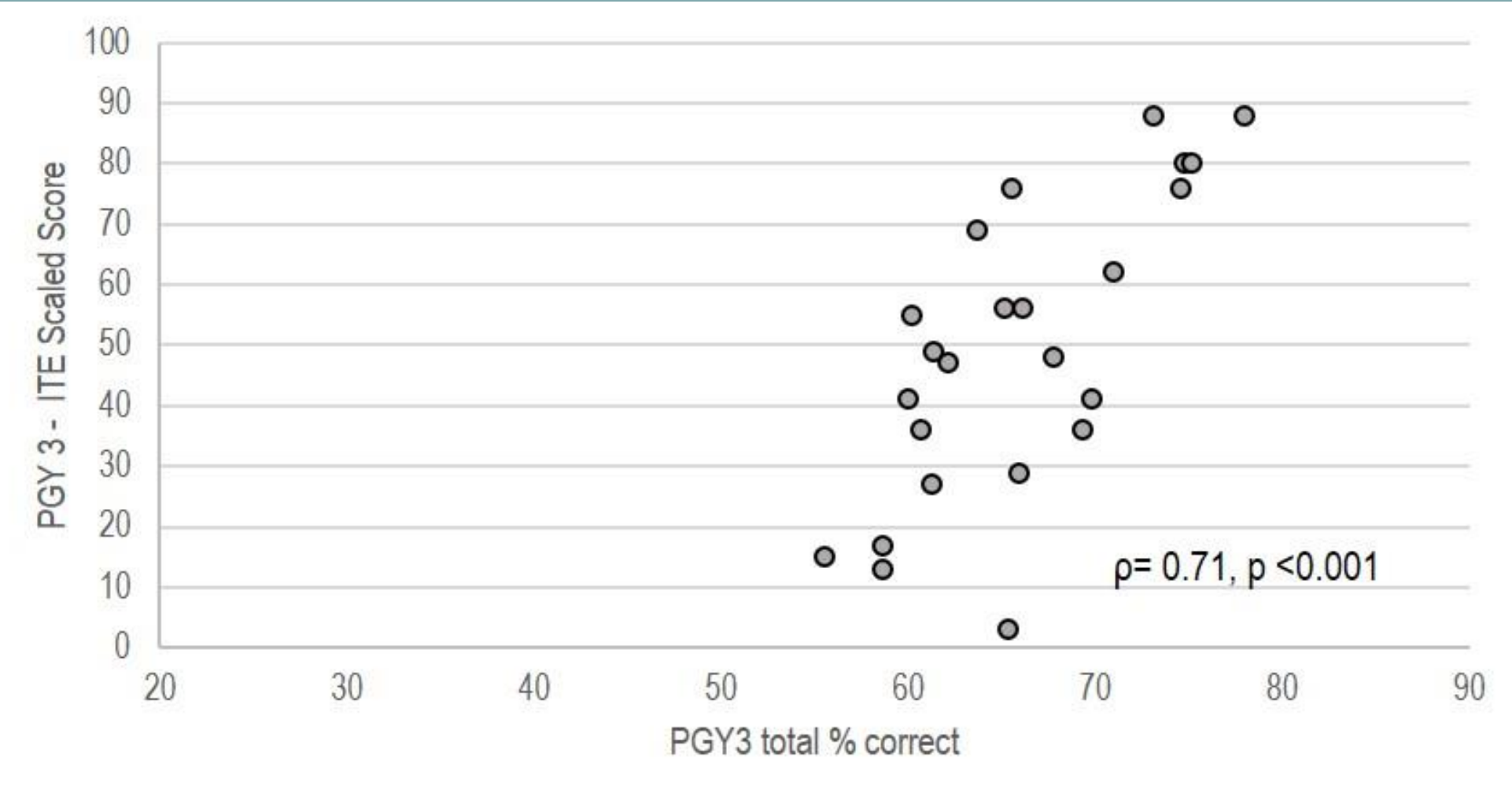
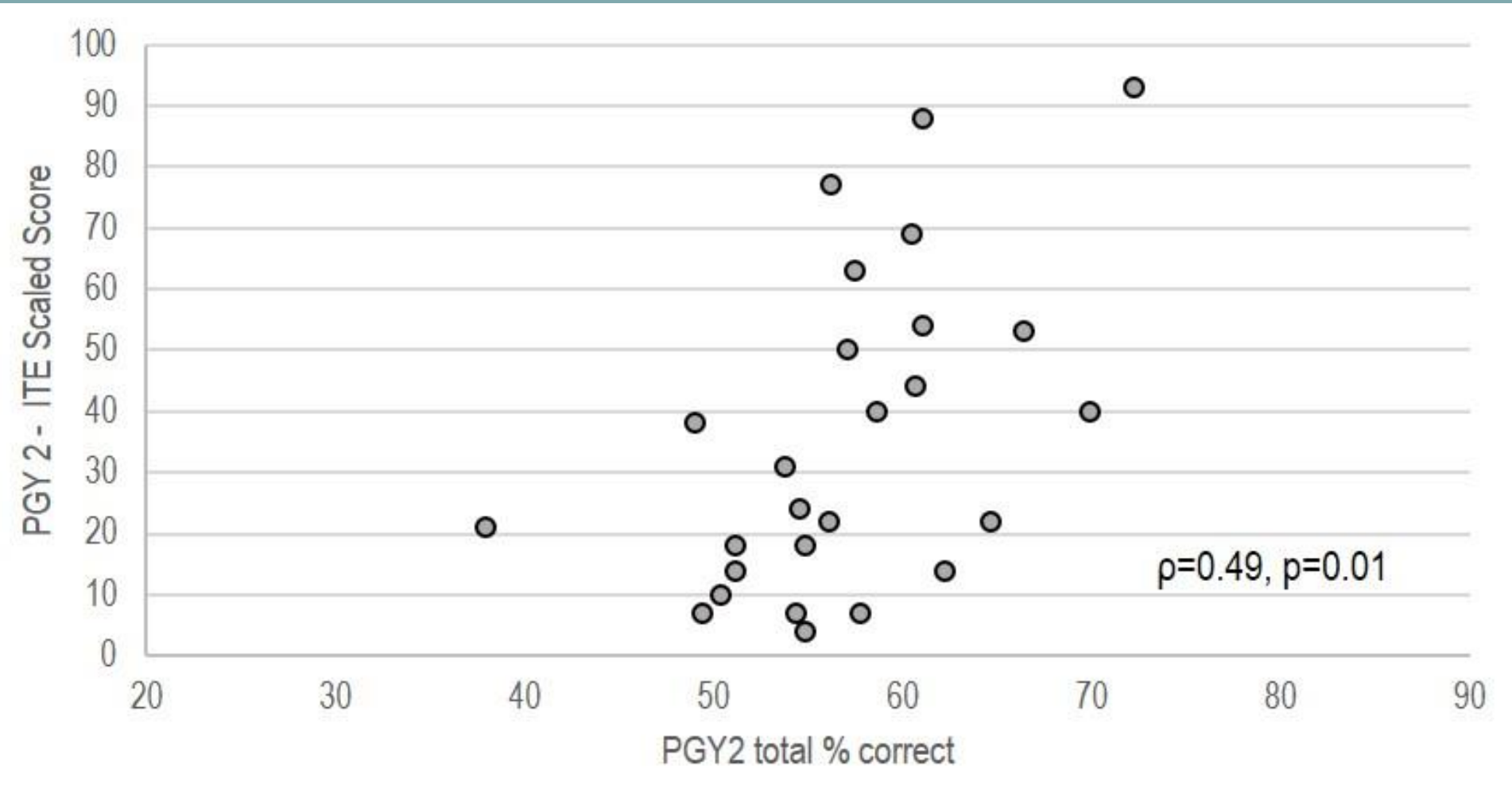
Variable	PGY2 (n, ρ , p)	PGY3 (n, ρ , p)	PGY4 (n, ρ , p)
Total Questions	37, 0.17, 0.32	30, 0.29, 0.12	25, 0.23, 0.26
% Tutored	26, -0.08, 0.71	24, 0.05, 0.82	25, 0.32, 0.12
% Correct	26, 0.55, 0.003	24, 0.71, < 0.001	24, 0.46, 0.02



Use of online question banks **increased** with PGY level

Volume of questions and tutor mode use were **not correlated** with ITE scores

% Correct on TrueLearn was **positively associated** with ITE national percentile score across PGY2–4



% Correct TrueLearn was **positively associated** with ITE scaled score across PGY2-4

CONCLUSIONS

- % Correct may serve as a marker of exam readiness and help identify residents at risk
- Findings are consistent with prior general surgery ABSITE studies, reinforcing external validity
- Question banks are a valuable adjunct, but not a substitute for overall study time and diverse educational resources

References

