\textbf{RESULTS} \\

- N=276 and N=371 patients, respectively were included in the Per-Protocol and Intent-to-Treat cohorts of this study.
- On average, patients had failed 3.57 previous medication trials, indicating this is a treatment-resistant depression population.
- Combinatorial PGx-guided care was associated with improvement in patient outcomes in both the GAPP-MDD (not statistically significant) and GUIDED RCTs (Fig 1).
- In the GAPP-MDD trial, combinatorial PGx-guided care resulted in an 88% relative increase in remission compared to TAU (Fig 1).
- We conducted a meta-analysis of patient outcomes from the 3 RCTs of combinatorial PGx testing (GAPP-MDD, GUIDED, and Pine Rest—a similar, smaller RCT) (Fig 2).\citenum{1,2,3,4,5} \\

\textbf{CONCLUSIONS & IMPLICATIONS} \\

- Although underpowered to detect statistically significant differences in outcomes between arms, this study demonstrated a 1.9-fold improvement in remission rate associated with combinatorial PGx-guided treatment compared to TAU.
- The results from the GAPP-MDD trial, together with GUIDED, suggest that combinatorial PGx testing can be an additional tool to help guide the treatment of depression.

\textbf{ACKNOWLEDGEMENTS} \\

- The authors thank all the patients and families who participated in the study.
- The authors also wish to acknowledge the contributions of the study sites and staff.

\textbf{REFERENCES} \\