

# Comparison of 10-2 and 24-2 visual field event analyses



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## PURPOSE

- The 10-2 visual field (VF) provides more information in the center of the VF compared to the 24-2.
- An extension of the HFA guided progression analysis (GPA) adding event (i.e. change from baseline) analysis for 10-2 was recently proposed.
- In this preliminary, retrospective study, we compare the results of the GPA event analyses in 24-2 and 10-2 VFs.

## METHODS

- Retrospective VF series were analyzed from 66 eyes of 33 clinically managed glaucoma subjects with at least 5 visits each of 10-2 and 24-2 (or 30-2) SITA Standard VFs using HFA™ II-i or HFA3 (ZEISS, Dublin, CA).
- 10-2 and 24-2 VFs were typically alternated between visits. 24-2 VFs were extracted if the 30-2 VF was available. VFs were selected to cover the same follow-up period for the shorter of the 10-2 or 24-2 series.
- A GPA Alert result of “Possible” or “Likely” progression was considered a progression event. Cohen’s kappa was used to assess agreement between the proposed 10-2 and reference 24-2 GPA event analyses.

## CONCLUSIONS

- In this preliminary study, moderate agreement was observed overall between the event analysis results for a proposed 10-2 GPA and a reference 24-2 GPA.
- This suggests the potential clinical utility of using change from baseline analyses for 10-2 VFs to highlight progression in the central VF that may not be detected in the 24-2 VF (see Figure 2).
- Further work may include more extensive comparisons between 10-2 and 24-2 GPA event analyses in cohorts with clinically confirmed diagnoses of progression or non-progression.

## RESULTS

- Age at first exam ranged from 32.2 to 78.8 years.
- Mean 24-2 and 10-2 MD at first exam were -4.21 (standard deviation, SD: 5.53, range: -26.89 to 1.46) dB and -3.82 (SD: 5.39, range: -24.83 to 1.08) dB, respectively.
- Mean follow-up time for the 24-2 series was 6.9 (SD: 3.0, range: 1.2 to 14.0) years, with a mean inter-visit interval of 0.5 (0.1, range: 0.3 to 0.9) years.
- Mean follow-up time for the 10-2 series was 5.2 (SD: 2.8, range: 1.4 to 9.9) years, with a mean inter-visit interval of 0.9 (0.6, range: 0.3 to 3.0) years.
- Figure 1 shows that 50/66 cases (75.8%) were observed to agree, resulting in a kappa of 0.44 (95% CI: 0.20 to 0.68).

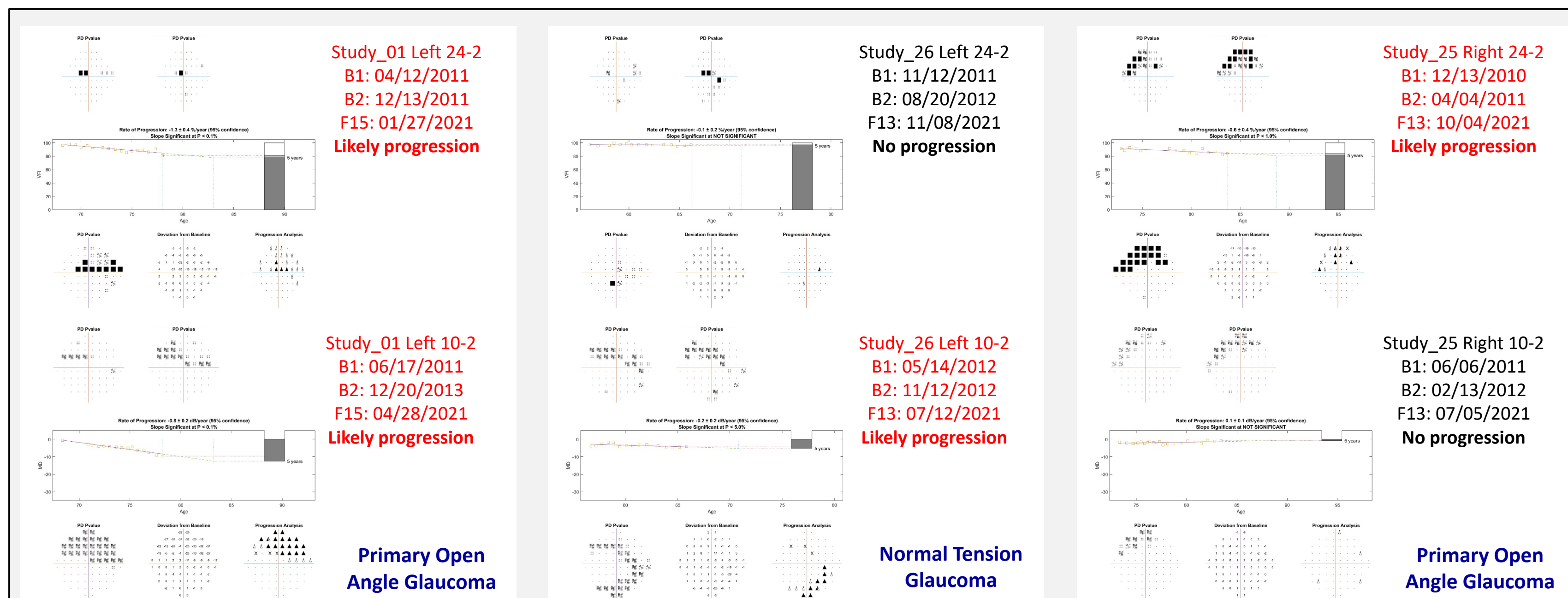
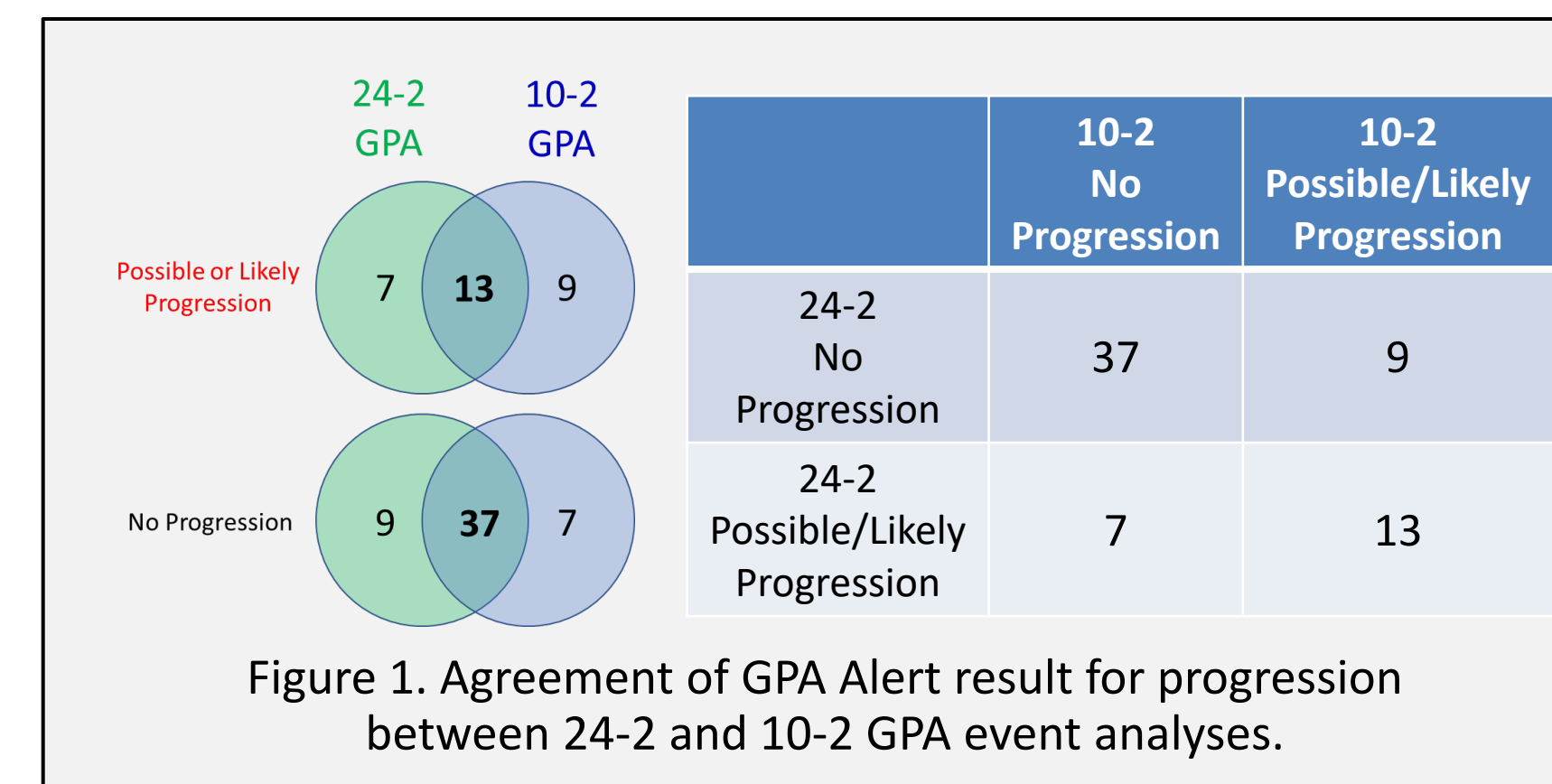


Figure 2. Examples of concordance between 24-2 and 10-2 GPA (left), discordance with 10-2 GPA indicating progression (middle), and discordance with 24-2 GPA indicating progression (right)

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Disclosures: TP (C), AI (F), GL (E) – Carl Zeiss Meditec, Inc.

