better be explained by other complications of prematurity, rather than the ROP therapy treatments.

Methods: Data is being collected both retrospective and prospectively via chart review of 100 preterm neonates. Information evaluated includes gestational age, birth weight, complications of prematurity that are known to increase risk for ROP and Bayley III scores through 2 years as available.

Results: Preliminary data includes untreated control group (n = 16) and therapy group (n = 22). Of the therapy group, 15 infants had bevacizumab monotherapy and 7 had laser plus bevacizumab. The results show that while those infants treated with therapy are younger (25.40 $\pm$ 4.36 therapy group vs 27.49 $\pm$ 3.15 control group, $P = 0.010$) and smaller (0.71 $\pm$ 0.28, therapy group vs 0.87 $\pm$ 0.32 control group, $P = 0.049$) as compared to the untreated control group, the groups were not significantly different in incidence of chronic lung disease, intraventricular hemorrhage or the need for postnatal steroids. There were no significant differences in Bayley III subcategories over time, between the two groups. Trends in data indicate that there may be more significant ($P = 0.007$) delays in language in infants who receive laser and bevacizumab therapy, as compared to bevacizumab therapy alone. In addition, there was a significant ($P = 0.002$) trend that infants who received both laser and bevacizumab therapy has lower language and motor categories on the Bayley III as compared to those infants who did not require treatment.

Discussion: Infants who are more likely to require ROP treatment tend to have more independent risk factors for neurodevelopmental delays. In this pilot study, which is the first to compare ROP therapy to controls who do not receive therapy, there does not appear to be differences in short term neurodevelopmental outcomes associated with bevacizumab monotherapy treatment. Anti-VEGF therapy seems to be safe in the short-term, however, a longitudinal study is necessary to ensure the long-term neurodevelopmental outcomes.

Conclusions: In this pilot study, which is the first to compare ROP therapy to controls who do not receive therapy, there does not appear to be differences in short term neurodevelopmental outcomes associated with bevacizumab monotherapy treatment.

060 FLEX-module optical coherence tomography (OCT)—expanding the reach of OCT in evaluating childhood glaucoma. Navajyoti R. Barman, Michelle S. Go, Michael P. Kelly, Robert J. House, Jill C. Rotruck, Mays A. El-Dairi, Sharon F. Freedman

Introduction: Objective evaluation of glaucomatous optic neuropathy with OCT can be limited by very young age, inability to cooperate, or technical challenges. The HRA+OCT Spectralis with Flex module (FLEX-OCT, Heidelberg, Germany) allows supine imaging under anesthesia. This is the first study to describe its use and feasibility in imaging childhood glaucoma.

Methods: Childhood glaucoma patients undergoing examination under anesthesia and/or surgical intervention were included in this ongoing prospective study. FLEX-OCT imaging of the posterior pole was performed. Images were analyzed for peripapillary retinal nerve fiber layer (pRNFL), Bruch membrane opening (BMO), and macular pathology.

Results: FLEX-OCT successfully imaged 60 affected eyes in 41 of 47 (87.2%) enrolled patients (mean age, 5.0 $\pm$ 5.0; range, 0.06-22.5 years). Imaging failure (8 eyes [11.8%]) was attributed to imager-learning, media opacity, and technical factors. We evaluated the pRNFL global thickness, BMO, and macular appearance for 60, 40, and 51 affected eyes, respectively (mean image quality, 23.3 dB). Results were directly comparable to similarly-aged controls (mean pRFNL global thickness, 83.4 $\pm$ 33.1 μm vs 107.6 $\pm$ 10.3 μm, $P < 0.001$; mean BMO, 1602 $\pm$ 349 μm vs 1525 $\pm$ 212 μm; $P = 0.55$ for affected vs control eyes, resp.). Macular pathology, present in 14 of 51 macular scans (27.5%), included abnormal foveal pit, epiretinal membrane, localized schisis, and paracentral acute middle maculopathy.

Discussion: FLEX-OCT allowed high-quality image acquisition and analysis comparable to tabletop OCT in patients who otherwise could not be imaged.

Conclusions: The future clinical application of FLEX-OCT is broad. Further studies may improve clinical management and understanding of childhood glaucoma-related pathophysiology.

061 A comparison of respiratory outcomes after treatment for retinopathy of prematurity (ROP) with pan-retinal photocoagulation (PRP) or bevacizumab. Gerard Barry, Kate Tauber, Farzana Afroze, Elizabeth Finuncane, Scott H. Greenberg, Helena Oechsner, Gil Binenbaum, Paul Feustel

Introduction: There are limited data detailing respiratory outcomes following treatment for ROP. We aimed to compare respiratory outcomes after treatment with PRP under general anesthesia to bevacizumab using bedside sedation.

Methods: Data on 139 consecutive patients treated for ROP from 2010 to 2018 at one institution were examined. The primary outcome measure was complete return to respiratory baseline 48 hours after treatment. Multivariable regression analysis was performed.

Results: 119 patients initially treated with PRP were less likely to return to their respiratory baseline by 48 hours compared to 19 patients initially treated with bevacizumab, odds ratio 0.18 (CI 0.05-0.67), when controlling for birth weight, gender and pre-procedure respiratory support or intubation. For patients treated with laser, a return to respiratory baseline occurred in 47 (39%), 62 (52%), and 93 (78%) at 24 hours, 48 hours and 7 days respectively, compared to 14 (73%), 15 (79%) and 19 (100%) at the same intervals for the patients treated with bevacizumab. Univariate analysis of patients treated with laser showed a significant correlation between not returning to respiratory baseline at 48 hours and lower birth weight, lower gestational age, lower postmenstral age at treatment, and pre-procedure respiratory support, but no correlation with gender or multiple procedures.

Discussion: Infants in both groups were at risk of not returning to their pre-procedure respiratory baseline 48 hours after treatment.

Conclusions: Infants treated with bevacizumab using bedside sedation are more likely to return to pre-procedure respiratory baseline by 48 hours than infants treated with PRP under general anesthesia.

062 Adult strabismus surgery outcomes with adjustable and nonadjustable sutures. Siddharth Bhargava, David Shieh, Dan Liu, Jitka Zobal-Ratner, John W. Simon

Introduction: Previous series suggest adjustable sutures (AS) in adult strabismus surgery yield improved ocular alignment, better success rates, and fewer reoperations compared to nonadjustable sutures (NAS). We questioned whether this difference is clinically significant and whether it justifies the added time and discomfort required for AS.

Methods: We reviewed all available records of adults undergoing horizontal strabismus surgery by the last two authors between 2000 and 2014. Independently, the two surgeons developed a preference for NAS midway through the study period, permitting a comparison between the two treatment groups. The primary outcome was alignment in primary position two days after surgery and at last follow-up. The secondary outcome was success rate, defined as $<10^{\Delta}$ residual or consecutive deviation at last follow-up. Reoperations were deemed failures.