of valproic acid (VPA) to pregnant dams at E8. Maternal NK cells expressing the allospecific Ly49H activating receptor were knocked down by intraperitoneal administration of Ly49H-specific monoclonal antibody (3D10) on the previous day (E7). Control and L49H-depleted dams and fetuses were then evaluated for NTD prevalence at E14.

RESULTS: Ly49H knockdown was highly effective in reducing the frequency of L49H+ NK cells to background levels throughout the study period. Accordingly, the prevalence of fetuses with NTDs was twice as high in L49H-depleted dams when compared with controls given VPA alone (28.7% vs 14.5%; p < 0.05). Overall litter sizes were unchanged between the groups.

CONCLUSION: These findings establish a functional link between expression of maternal AARs and maternal “tolerance” of the abnormal fetus. Further studies are needed to define mechanisms by which maternal NK cells recognize and prevent propagation of aberrant fetal development.

**Nutritional Impact of Medical Management and Operation in Responsive and Refractory Ulcerative Colitis in Children**

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**INTRODUCTION:** With the introduction of new biologics, ulcerative colitis (UC) management in children has changed dramatically in recent years. The aim of this study was to evaluate the impact of biologic therapies and operation on nutrition in children with UC.

**METHODS:** We performed a retrospective analysis in children (aged 1 through 19 years) with UC seen at a pediatric gastroenterology clinic 1/2012 to 8/2020. We analyzed nutritional parameters over time. Patients were divided into the following groups: 1) patients treated with nonbiologics; 2) 1 biologic; 3) 2 or more biologics; and 4) operation.

**RESULTS:** There were 96 patients identified (mean ± SD follow-up: 5.0 ± 3.1 years). Thirty-six were treated with nonbiologics, 29 with 1 biologic, 21 with multiple biologics, and 8 underwent operation. In groups 2 through 4, twelve patients delayed changing to biologics for more than 6 months but their nutrition did not suffer. The mean time to operation was 2.5 years and patients failed their biologics for more than 6 months but their nutrition did not suffer. Albumin was statistically improved after operation (Fig. 1, comparing year 1 to year 6; p = 0.001). As patients failed a biologic and their regimen was changed, their nutrition persisted at low levels but did not worsen.

**CONCLUSION:** The more refractory the UC, the worse the nutritional parameters. Through multiple medical therapies, the nutritional status of UC patients is preserved but only operation changes the trajectory of BMI.

**Postoperative Length of Stay and Emergency Department Use after Appendectomy for Uncomplicated Appendicitis Is Increased in Children from Disadvantaged Communities**

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**INTRODUCTION:** Previous work has shown higher rates of complicated appendicitis in historically disadvantaged populations, including African American populations, compared with White populations. We hypothesize that social determinants of health would affect outcomes in children after appendectomy for uncomplicated appendicitis.

**METHODS:** After IRB approval, we performed a single-institution retrospective review of children who underwent appendectomy between January 2015 and January 2021. Patients’ Social Deprivation Index and Area Deprivation Index (ADI) were tabulated. Univariate statistics were compared with the Student’s t-test and Fisher exact test.

**RESULTS:** Nine hundred and forty-eight children were included for analyses. For appendectomy for uncomplicated appendicitis, emergency department (ED) utilization was higher in patients who identified as non-White (African American, Asian, or other) compared with White (11.7% vs 5%; p = 0.0032). Children who identified as African American were more likely to live in communities with higher deprivation indices compared with White children (ADI mean 77 vs 51; p < 0.0001, Social Deprivation Index mean 74 vs 36; p < 0.0001). Children living in areas of high deprivation indices had higher ED utilization (7% vs 3%; p = 0.047). Similarly, these children were more likely to have a longer length of stay (LOS) post-procedurally (mean LOS 0.87 days vs