Conclusion. Our results indicate variation in practice among providers at ECU-ID Clinic regarding the screening, the need for a follow-up, and the type of follow-up provided. Additionally, research shows that anal cancer is one of the non-defining AIDS cancers whose incidence increases as the patient ages. However, based on the data, anal cancer screening decreases as the patient ages at the ECU-ID clinic. Therefore, a standardized clinic protocol is needed, which may help improve the survival of patients with AIDS.

Disclosures. All authors: No reported disclosures.

2275. Parental Risk Factors for Fever in their Children 7–10 Days After the First Dose of Measles-Containing Vaccines
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Methods. We conducted a cohort study including children born in Kaiser Permanente Northern California between 2009 and 2016 who received an MCV between ages 1 and 2 years. Each child was linked with his/her mother and father (if possible). We defined MCV-associated fever as a clinic or emergency department visit with fever code 7–10 days after the first dose of an MCV and identified parental clinical conditions present before or after child birth in electronic health record data. We evaluated parental clinical conditions associated with MCV-associated fever in the child using chi square or T test and multivariable logistic regression analyses.

Results. The study included 244,128 children, 192,253 mothers (100% of children) and 192,253 fathers (59% of children). There were 3,750 children (1.54%) with MCV-associated fever. We identified more than 1,000 separate clinical conditions in the parents, of which 29 maternal and 11 paternal conditions were significantly associated with MCV-associated fever in the child. After adjustment for maternal and infant characteristics, including healthcare seeker behaviors, maternal fever (odds ratio [OR] 1.15, 95% confidence interval [CI] 1.06–1.24), respiratory infection with fever (OR 1.20, 95% CI 1.10–1.31), maternal fever after a MCV (OR 5.90, 95% CI 1.35–25.78), migraines (OR 1.14, 95% CI 1.05–1.24), syncope (OR 1.14, 95% CI 1.01–1.27), arrhythmias (OR 1.21, 95% CI 1.10–1.45), essential thrombocytopenia (OR 1.93, 95% CI 1.15–3.25) and Addison’s disease (OR 2.90, 95% CI 0.90–9.33) were significantly associated with infant fever after a MCV. Maternal fever (OR 1.44, 95% CI 1.20–1.72) and (OR 1.60, 95% CI 1.03–2.48) were associated with MCV-associated fever in the child.

Conclusion. Specific parental immune responses were associated with fever in their child. Further studies in this area may be related generally to genetics and particularly to familial immune responses.

Disclosures. N. P. Klein, Sanofi Pasteur: Investigator, Research grant. Merck: Investigator, Research grant. GSK: Investigator, Research grant. Pfizer: Investigator, Research support. Protein Science: Investigator, Research grant. MedImmune: Investigator, Research grant. Dynavax: Research Consultant, Grant recipient.

2276. Immune國性 of Takeda’s Bivalent Virus-Like Particle (VLP) Norovirus Vaccine (NoV) Candidate in Children From 6 Months up to 4 Years of Age
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Background. With the introduction of routine childhood rotavirus vaccination, norovirus is now becoming the major cause of medically-attended gastroenteritis in children. Takeda is developing a norovirus vaccine (NoV) that contains genotypes GI.1 and GII.4 consensus (GII.4c) sequence VLPs. We report the immunogenicity data of NoV administered to children from 6 months up to 4 years of age.

Methods. Two age cohorts (1 to < 4 years, and 6 to ≤ 12 months, n = 120 per cohort) were enrolled in this ongoing double-blinded, randomized, phase 2 dose-finding study conducted in Colombia and Panama. Children received one or two intramuscular doses of NoV formulations containing 15/15, 15/50, 50/50 or 50/150 μg of GI.I. GII.4c VLPs adjuvanted with 0.5 mg Al(OH)3. Vaccinations were on Days 1 and 2, with saline placebo as dose two to maintain blinding in one dose groups. Antibody responses to each VLP were measured on days 1, 29 and 57 as functional histo-blood group binding antigen blocking antibodies (HBGA), expressed as seroresponse rates (SRR), the proportions displaying ≥ 2-fold increases over baseline, and geometric mean titers (GMT).

Results. Each formulation induced dosage-dependent HBGA responses after a single dose, with a further increase after a second dose. In 1- to <4-year-olds HBGA SRR against GI.I and GII.4c after one dose were 55–62% and 67–82%, respectively. SRR increased to 93–100% and 83–100% after a second dose. In 6 to ≤ 12 month-olds responses were lower after the first dose: SRRs were 10–61% and 17–65% for GI.I and GII.4c, respectively, increasing to 83–100% and 80–92% after a second dose. GMTs reflected this pattern of responses with higher GMTs for GI.I and GII.4c achieved with the 50/150 μg formulation than the other dosages after both vaccinations in both age cohorts.

Conclusion. In 6–12-month-old infants and children up to 4 years of age, robust immune responses to the bivalent norovirus VLP vaccine candidates were observed; the highest HBGA responses in both age cohorts were observed after two doses of the 50/150 μg formulation. Further clinical evaluation of these formulations is underway in infants <6 months of age.

Clinical Trial Registration (NCT: 0213312. EudraCT: 2014–000779–20)

Disclosures. T. Masuda, Takeda Pharmaceuticals International AG: Employee, Salary. I. Leefrve, Takeda Pharmaceuticals International AG: Employee, Salary. P. Mendelmen, Takeda Pharmaceuticals International AG: Employee. I. Sherwood, Takeda Pharmaceuticals International AG: Employee, Salary. S. Bok, Takeda Pharmaceuticals International AG: Employee, Salary. A. Borkowski, Takeda Pharmaceuticals International AG: Employee, Salary.

2277. Whooping Cough: Epidemiological Changes After Tdap Maternal Immunization Strategy in a Pediatric Hospital
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Methods. All laboratory PCR confirmed Bp cases between December 2003 and December 2017 were included in “R. Gutierrez” Children’s Hospital. Statistical analysis comprised comparing clinical epidemiological features, Bp hospitalization rates (per 10,000 discharges) and lethality rates (%), between pre-vaccination (PreV) 2003–2011 and post-vaccination maternal immunization strategy (PostV) 2013–2017 periods, excluding intervention year (2012).

Results. There were 350(32.6%) were Bp confirmed cases; median age 3 months (Q = 2–7 months), 38% <3 months, 68% <6 months, 83% ≤12 months; 55% females; 18% had comorbidities; prematurity 10%, malnourishment 1%, and immunosuppression 1%; 81% required hospitalization, median length of stay was 6 days (Q = 4–10 days), 17% in UCI. Confirmed cases showed a seasonal pattern predominantly from September through February (spring–summer). In comparison with PreV, PostVcases were older (3 vs. 9 months; P < 0.001), required less hospitalization (87% vs. 68%; P < 0.001), RR (23.3 vs. 10.9; P < 0.001) and LR (6.8% vs. 0%; P = 0.03) decreased and had a higher proportion of complete primary vaccination schedule (20% vs. 10%; P = 0.03), length of stay days (P = 0.51) or intensive care requirement (18% vs. 17%; P = 0.91). All fatal cases occurred in PreV.

Conclusion. After maternal immunization strategy Bp confirmed cases were older, had less hospitalization, and had a higher proportion of complete primary vaccination schedule. Hospitalization and lethality rates showed a significant decrease. There were no fatal cases in our center after this intervention.

Disclosures. All authors: No reported disclosures.

2278. Maternal Immunization Rates With Tetanus–Diphtheria–Acellular Pertussis and Influenza Vaccines in the United States: A Retrospective Claims Database Analysis
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Methods. All claims-based electronic records were observed after two doses of the 50/150 μg formulation. Further clinical evaluation of these formulations is underway in infants <6 months of age.

Clinical Trial Registration (NCT: 0213312. EudraCT: 2014–000779–20)

Disclosures. T. Masuda, Takeda Pharmaceuticals International AG: Employee, Salary. I. Leefrve, Takeda Pharmaceuticals International AG: Employee, Salary. P. Mendelmen, Takeda Pharmaceuticals International AG: Employee. I. Sherwood, Takeda Pharmaceuticals International AG: Employee, Salary. S. Bok, Takeda Pharmaceuticals International AG: Employee, Salary. A. Borkowski, Takeda Pharmaceuticals International AG: Employee, Salary.
2279. Antibiotic administration around the time of rotavirus (RV) immunization has been suggested to diminish immune responses, but data are sparse.

Methods. We retrospectively analyzed data from a randomized RV vaccine study (NCT01266850) outlined in the Table. Concomitant antibiotic use, defined as receipt of an antibiotic 14 days before or 7 days after RV immunization, was recorded. The primary outcome was RV-specific IgA seroresponse (IgA ≥0.15) by ELISA obtained 1 month after the last dose of RV vaccine and geometric mean titer (GMT) to strain WC3 (RV5 backbone) or strain 89–12 (RV1 backbone). Only subjects who received all 3 doses of RV vaccine were included. Median IFN-gamma level at 14-day post primary immunization was 60 spot forming units (SFU)/μl. RVNA titers were measured at 14-day post primary immunization. RVNA titers ≥0.5 IU/ml were considered seroprotective against RV. GMT was calculated. T cell specific response to RV vaccine antigen was measured from peripheral blood mononuclear cells (PBMCs) using the interferon-gamma enzyme-linked immunosorbent assay (IFN-gamma ELISPOT) assay.

Results. From September to October 2017, 105 participants (52% male), 76 in 2D group and 29 in 3D group were enrolled. Median age and body weight was 70 months (IQR 59–82) and 22 kg (IQR 19–26), respectively. All participants had RV immunization at 14-day post primary immunization with GMT of 18.6 (95% CI 15.8–21.9) and 16.3 (95% CI 13.1–20.0) in 2D and 3D groups, respectively (P = 0.35). Median IFN-gamma level at 14-day post primary immunization was 60 spot forming cells (SFC) per 10^6 PBMCs and 132 SFC per 10^6 PBMCs in the 2D and 3D groups, respectively (P = 0.15).

Conclusion. The immunogenicity of 2-dose primary RV vaccines at 14-day post primary vaccination is comparable to the 3-dose regimen. Participants are currently being followed for 1-year results.

Disclosures. All authors: No reported disclosures.

2280. Antibiotic Exposure Does Not Impact Serological Responses to Rotavirus Vaccination

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Background. Antibiotic exposure around the time of rotavirus (RV) immunization has been suggested to diminish immune responses, but data are sparse.

Methods. We retrospectively analyzed data from a randomized RV vaccine study (NCT01266850) outlined in the Table. Concomitant antibiotic use, defined as receipt of an antibiotic 14 days before or 7 days after RV immunization, was recorded. The primary outcome was RV-specific IgA seroresponse (IgA ≥0.15) by ELISA obtained 1 month after the last dose of RV vaccine and geometric mean titer (GMT) to strain WC3 (RV5 backbone) or strain 89–12 (RV1 backbone). Only subjects who received all scheduled vaccine doses and phlebotomy were included. Data were assessed for homogeneity across vaccine schedule groups, stratified by antibiotic exposure. We examined differences in seroresponse adjusting for treatment group, gender, race, ethnicity, and study site using logistic regression models.

Results. Of the 1384 immunized children, 1174 (85%) met inclusion criteria.

Table: Treatment Allocation and Effect of Antibiotic Exposure on Seroresponses

| Groups | 1 | 2 | 3 | 4 |
|--------|---|---|---|---|
| Immunization | Rotarix® (RV5) | RV1, RV5, RV6, RV1/5 | Rotarix® (RV1) | 2 RV1, RV5, RV6 |
| Schedule | doses | N = 206 | N = 207 | N = 194 | N = 280 |
| Seroresponse | 21/25 (84%) | 20/20 (100%) | 18/22 (82%) | 13/15 (87%) | 32/32 (100%) |
| Antibiotic | Exposed | 167/181 (92%) | 168/187 (90%) | 158/172 (90%) | 209/272 (77%) | 238/248 (96%) |
| Seroresponse | P = 0.65 | P = 0.01 | P = 0.05 | P = 0.0001 |
| Antibiotic | Non-Exposed | 21/25 (84%) | 20/20 (100%) | 18/22 (82%) | 13/15 (87%) | 32/32 (100%) |

Nearly 10% (n = 114) of participants were antibiotic exposed; group 4 had the least antibiotic exposure (P = 0.05). No differences in GMT or seroresponses was by either WC3 or 89–12 (figure) by antibiotic exposure. In the multivariable logistic regression model, there were no significant differences for gender, race, ethnicity, site, or antibiotic exposure (P-value ≥0.5 for IgA seroresponse). The only observed difference in seroresponses was by RV vaccine group (P = 0.0001).

Conclusion. Antibiotic administration around the time of RV vaccine did not diminish RV-specific IgA seroresponses observed 1 month after the last RV vaccine dose.