Background Immunoglobulin E (IgE) is best known for its association with allergic diseases. Very low IgE may be a marker for other immunodeficiencies. Deficiency or low IgE is defined with IgE concentration lower than 2.5 IU/ml. A majority of studies suggest a prevalence of 1-2.6%.

The clinical significance of an isolated low IgE ("selective IgE deficiency") is unknown and is not currently included in the consensus classification of Primary Immunodeficiency Diseases (PIDD). Low IgE is suggestive of a primary humoral immunodeficiency, like Common variable immunodeficiency (CVID). In recent studies a connection between low serum IgE and low levels of one or more classes of immunoglobulins are found. The children’s group was characterized with a higher prevalence of asthma.

Both groups (children and adults) had significantly higher prevalence of chronic sinusitis, otitis media, autoimmune, and oncological diseases than controls. In our case report two cases of very low IgE are presented. Both of them have been followed up from birth.

Objective No clinically significant changes in hematology/chemistry parameters were reported after clinical trials of dupilumab in adults and adolescents with moderate to severe atopic dermatitis (AD). Here, we report long-term laboratory outcomes in adolescent patients (aged ≥ 12 to < 18 years) from an ongoing long-term open-label extension (OLE) trial (LIBERTY AD PED-OLE; NCT02612454).

Methods Patients with moderate-to-severe AD who had previously participated in 1 of 3 prior dupilumab studies were enrolled in this OLE study. In March 2017, weight-based weekly dosing (2 or 4 mg/kg) was amended to a fixed-dose regimen (300 mg every 4 weeks), which could be up-titrated in case of inadequate clinical response at Week 16 as: patients < 60 kg, 200 mg every 2 weeks (q2w); patients ≥ 60 kg, 300 mg q2w. Concomitant topical corticosteroids and topical calcineurin inhibitors were allowed. Laboratory safety data for the adolescent cohort were evaluated (data cutoff: December 15, 2018) from OLE baseline (n = 299) to Week 52 (n = 105).

Results Hematology assessments at Week 52 demonstrated that mean (standard deviation [SD]) counts of eosinophils (0.58 × 10^9/L [0.52]), basophils (0.01 × 10^9/L [0.03]), monocytes (0.46 × 10^9/L [0.17]), lymphocytes (2.17 × 10^9/L [0.65]), neutrophils (4.11 × 10^9/L [1.58]), leukocytes (7.35 × 10^9/L [2.03]), hemoglobin (139.7 g/L [13.80]), and platelets (283.5 × 10^9/L [65.28]) remained within the normal reference range for this adolescent population. Similarly, chemistry parameters at Week 52 showed no clinically relevant changes from baseline as seen from mean [SD] levels of creatinine kinase (141.6 U/L [117.3]), albumin (45.9 g/L [3.0]), protein (72.5 g/L [4.7]), bilirubin (7.0 μmol/L [5.5]), potassium (4.3 mmol/L [0.3]), alkaline phosphatase (160.1 U/L [92.0]), creatinine (57.2 μmol/L [13.4]), blood urea nitrogen (4.2 mmol/L [1.2]), lactate dehydrogenase (186.1 U/L [39.7]), and glucose (4.9 mmol/L [0.7]).

Conclusions No clinically meaningful changes in hematology/chemistry parameters were seen in adolescents with 52 weeks