## 001482 | Characterization of intrinsic atopic dermatitis revisited using multiplex allergy diagnostics

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**Background:** Atopic dermatitis (AD) with increased total serum IgE (tIgE), atopic comorbidities and/or specific sensitizations has been reported as the so-called „extrinsic AD“ (EAD) in 75%–80% of patients, lack of these features as „intrinsic AD“ (IAD). The respective portions and definitions of IAD vary within the literature. We aimed to re-evaluate IAD using multiplex allergy diagnostics.

**Method:** Specific sensitizations of AD patients from the CK-CARE ProRaD cohort Bonn, Germany ($n = 614$) were analyzed using multiplex assays (ISAC ImmunoCAP, Thermo Fisher). IAD was defined as age-dependent normal tIgE, absence of specific sensitizations and of atopic comorbidities (allergic rhinitis (AR)/ conjunctivitis, food allergy (FA), asthma). The associations of IAD with clinical and epidemiological features were analyzed using binary logistic regression.

**Results:** Only 6.7% ($n = 41$) featured IAD, 93.3% ($n = 573$) EAD. Patients with IAD had a less severe AD with a mean Eczema Area and Severity Index of 5.9 versus (vs.) 11.4 in EAD, furthermore a lower proneness to bacterial infections and a shorter disease course with a median age of onset at 6 years and disease duration 15.5 years compared to a median age of onset at age 2 and 26.6 disease years in EAD. Odds of IAD

thus decreased in patients with longer disease duration and EASI > 7, furthermore with eosinophilia and parental atopy, especially maternal FA, maternal AR and paternal AR. Phenotypic traits associated with IAD were female gender and a lower number of atopic stigmata compared to EAD, especially palmar hyperlinearity, Herthoge sign, dirty neck, Dennie-Morgan fold and anterior neck fold.

**Conclusion:** We identified a much lower rate of IAD then previously reported using strict definitions and new multiplex allergy diagnostics. The less frequent parental atopy in IAD than in EAD suggests a weaker hereditary transmission of atopy compared to EAD. Traits associated with IAD such as lower levels of eosinophils, less severe AD and shorter disease duration point towards the development of specific sensitizations and EAD within an immunological march in severe and longstanding AD.

**Conflicts of Interest:** The authors did not specify any links of interest.