

## COMMENTS AND RESPONSES

### High Titer of Autoantibodies to GAD Identifies a Specific Phenotype of Adult-Onset Autoimmune Diabetes

Response to Buzzetti et al.

**B**uzzetti et al. (1) reported a presence of two subgroups of adult-onset autoimmune diabetes at the cutoff value of GAD antibodies (GADA) titer of 32 arbitrary units (AU). Our previous report on a prospective-based observation of a Japanese population demonstrated that high GADA titer (>10 AU) is critical for predicting the progression within 5 years from noninsulin treatment to insulin treatment in GADA-positive adult-onset autoimmune diabetes (2,3). For international comparison of GADA titer, we tried to convert the cutoff level of GADA titer (10 AU) measured by our assay (RSR, Cardiff, U.K.) to World Health Organization (WHO) units using WHO

GADA standard samples provided by the Diabetes Antibody Standardization Program 2005, in which Buzzetti et al. had also participated (1), and our GADA standard. A good correlation was obtained, and 10 AU corresponded to 180 WHO units, a cutoff value that will predict further progression of  $\beta$ -cell dysfunction in adult-onset autoimmune diabetes in the Japanese population. The conversion of the GADA cutoff value (32 AU) used in Buzzetti's study (1) to WHO units will be beneficial for other comparative studies.

We are afraid of the interfering effect of patients with autoimmune thyroid diseases (AITD) included in their study (1). Patients with high GADA titer (>32 AU) in Buzzetti's study included many patients with AITD (1). AITD is assumed to be a Th2-dominant state leading to an enhanced and inappropriate titer of GADA (4). It is probable that patients with a high GADA titer in adult-onset autoimmune diabetes would have a high frequency of complicated AITD. More information on the distribution of GADA titer in patients with or without AITD will be useful.

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