

## S03-1 The significance of novel therapeutic strategy for diabetes mellitus -whether or not "borderline" glucose intolerance is clinical disorder.

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The number of diabetic patients has been increased in Japan, being from 6.9 to 8.2 million (19% increase) for a recent decade. In addition, that of cases of “borderline” glucose intolerance has been dramatically increased from 6.8 to 10.5 million (54% increase), who have not yet developed diabetes. Then, could it be rather confirmed that “borderline” cases are not under pathological conditions? The answer is clearly “NO”. Most of these cases suffer from dyslipidemia and hypertension, and possess the high risk of vascular events as well as diabetic patients. In other words, postprandial hyperglycemia and insulin resistant state should be treated in “borderline” cases, although not yet under diabetic conditions. The subtle increase of insulin resistance could be related to the occurrence of diabetes in the Japanese because of the lower insulin secretary capacity. The therapy should be, therefore, important for us to preserve  $\beta$  cell function.  $\alpha$ -Glucosidase inhibitors and thiazolidinediones have been shown to be effective in the amelioration of insulin secretary capacity through reduction of oxidative stress, and to retard the clinical progression of “borderline” state into diabetes. In addition, it is now expected that incretin-related agents (GLP-1 analog and DPP4 inhibitor) have also the similar effects, which will be soon available in Japan.