About 10% of diabetic patients eventually discontinue treatment, and the discontinuation makes their symptoms worse and complicates the treatment of the disease. NTT has been collaborating with the University of Tokyo to predict the risk of treatment discontinuation by analyzing electronic health records to provide early medical support to at-risk patients.

**Features**

- A high-performance prediction model using a machine learning technique has been used for the first time to identify diabetic patients with a high risk of discontinuing treatment.
- Features have been designed using electronic health records referring to interviews with diabetes specialists and patients and applying human behavior analysis techniques.
- Broad utility is possible, as our model was designed using electronic health records standardized by Japan’s Ministry of Health, Labour and Welfare.

**Application Scenarios**

- Providing physicians with a patient’s risk of treatment discontinuation to assist medical care
- Analyzing personal health records (PHRs) of healthy people and identifying potential lifestyle diseases of people in the future

**Collaboration Partner**

The University of Tokyo and NTT collaborate to contribute to solve the major social challenge, diabetes management using their advanced clinical knowledge and data-analysis technique respectively.

*1 Prediction of whether or not the patient will visit the clinic on the appointment day
*2 Predicted ranking order of patients for number of days until treatment discontinuation
*3 J. Diabetes Science and Technology (2016.5), 59th Annual Meeting of the Japan Diabetes Society (2016.5)