

October 19, 2018
Sompo Holdings, Inc.
Sompo Health Support, Inc.
Toshiba Corporation
Toshiba Digital Solutions Corporation

**Joint Development of AI for Prediction of Risk of Lifestyle Diseases
Including Diabetes, Etc.
– Analysis from Checkup Data of 1,000,000 Persons –**

Sompo Holdings, Inc. (Head Office: Shinjuku-ku, Tokyo; Group CEO and President: Kengo Sakurada), Sompo Health Support, Inc. (Head Office: Chiyoda-ku, Tokyo; Representative Director and President: Hidehiro Sumi), Toshiba Corporation (Head Office: Minato-ku, Tokyo; Representative Executive Officer, President and COO: Satoshi Tsunakawa) and Toshiba Digital Solutions Corporation (Head Office: Kawasaki, Kanagawa Prefecture; Director, President and CEO: Hironobu Nishikori) jointly developed an AI technology which predicts the risk of lifestyle diseases, including diabetes and others, based on a fusion of the know-how of healthcare services of the Sompo Holding Group and the AI and big data analysis technologies of the Toshiba Group.

In the future, the two groups plan to study the development of specific services via healthcare services provided by the Sompo Holdings Group, and promote application through partnerships with other companies.

1. Background

In recent years, various prevention and health promotion efforts have been made to promote health management by analysis in which digital technologies are applied to health-related data such as health examinations, statements of medical expenses, etc.

Particularly in the case of lifestyle diseases, improvement of the lifestyles of individuals and promotion of good health by identifying the risk of onset and preventing these diseases are considered important issues, as lifestyle diseases have a variety of adverse effects, including increased medical costs and reduced productivity of employees in companies.

2. Joint Development of Lifestyle Disease Risk Prediction AI

The Sompo Holdings Group and Toshiba Group jointly developed an AI technology for prediction of the risk of three lifestyle diseases, diabetes, hypertension (high blood pressure) and

hyperlipidemia, by a fusion of the know-how of healthcare services possessed by the Sampo Holdings Group and the AI and big data analysis technologies of the Toshiba Group.

The Sampo Holdings Group has an extensive customer network and the know-how of Sampo Health Support, Inc., which provides specific health guidance to approximately 500 health insurance associations, while the Toshiba Group has big data analysis technologies developed in various fields of industry and knowledge related to healthcare data mining* as a result of joint research with universities and other institutions both in Japan and overseas.

The AI technology was developed based on medical examination data for approximately 1 million persons at institutions cooperating in the research, covering periods as long as 8 years, by applying this know-how, technology and knowledge possessed by the two Groups.

*Healthcare data mining: Technology in which data in various forms is analyzed to discover patterns and regularities is developed to the fields of disease treatment and prevention.

3. Future Development

In addition to improvement of the accuracy of the AI for prediction lifestyle disease risk, the Sampo Holdings Group and Toshiba Group will promote the development of solutions for encouraging behavior modification, for example, improvement of dietary and exercise habits. Demonstration experiments, including specific health guidance in health insurance association, are scheduled to begin during fiscal year 2018.

In addition to the development of algorithms supporting services such as health guidance to prevent aggravation of diabetes after onset of the disease, the two groups aim to develop and strengthen AI toward expansion of the range of object lifestyle diseases.

The Sampo and Toshiba Groups also plan to create new businesses by utilizing healthcare data and tie-ups with new partners beyond the boundaries of their own industries.