#### Postscript

This record is a report of the damage in the six prefectures in Tohoku region that suffered most in the Great East Japan Earthquake on March 11, 2011. However, the purpose of publishing it is to consider what we, as part of the blood service, should do to prepare for any future great earthquake.

I vividly remember the words "...never forget the lessons of the earthquake..." Itaru Nishimoto, Chief Executive Officer of the Blood Service Headquarters said at a national meeting of the directors held in Tokyo Kouku-kaikan on April 12 (Tue.), 2011, one month after the Earthquake. He said, "We learned many lessons from this Earthquake. One of them is that we should take measures against the worst possible scenario as part of risk management." Indeed, the most important lesson we learned from this Mega-earthquake is that we are not a normal company, but one which has made a contract with the government to continue our national program of blood services, even during extreme circumstances such as a Mega-earthquake, in order to help save lives. In that case, we cannot cease our functions of blood examination and production even in the aftermath of a huge earthquake. However, the JRC Miyagi Blood Center, which has a standard seismic resistance structure, lost its functions for an extensive period. On the other hand, the JRC Ishinomaki Hospital, which has a seismic isolation structure, did not, and consequently was able to play an important role in the aftermath of the earthquake without any loss of function. Therefore, the most important thing is to envision and plan for all potential disasters, as is also stated in the round table discussion in this book.

We have to prepare for a scenario where multiple great earthquakes of intensity 7 occur in Tokyo in quick succession. There, the following three factors can be assumed as the worst scenario:

- 1) First, strong shaking will cause the collapse of wooden houses, closing roads due to rubble (Wooden houses built before 1981 cannot endure earthquakes of intensity 6 Upper and above)
- 2) Immediately after the earthquake, many fires will occur simultaneously and spread around cities.

  (As in disasters such as the Great Hanshin Awaji Earthquake in 1995 and the Great Kanto Earthquake in 1923)
- 3) Finally, tsunami and spilt oil will affect coastal areas, and a great fire will break out

(Devastation such as occurred in Kesennuma City during the Great East Japan Earthquake)

According to the estimated data, about 5,400 people would die in the initial earthquake, about 126,000 people would be injured, about 5 million people would have difficulty getting home, and about 3 million people would have to be evacuated. On top of that, about 190,000 buildings would burn down, and 4,100 more people would be killed by the fires. Therefore, the following urgent measures are proposed as risk management: reinforcement construction of wooden houses, prevention against liquefaction and reinforcement of seawalls in the coastal areas, protection of pipes and prevention of run-off from containers in industrial complexes, ensuring food and water, together with first-aid and fire-fighting as part of the first response (source: "Tokyo Inland Earthquake Crisis with Shock of Intensity 7: How to Save Lives", Close-Up Gendai by NHK, April 19, 2012).

Our blood services should act based on this assumption. It should also be kept in mind that the role of helicopters may be restricted in the Tokyo airspace after an earthquake, if weather conditions make it difficult to navigate.

Further, the meltdown at the Fukushima nuclear station and subsequent poor back-up were a human disaster, according to the Nuclear Accident Investigation Committee. The release of massive radioactive materials caused by meltdown of the Fukushima nuclear stations led to pollution of vast areas of land and sea, and 160,000 people remain evacuated from their hometowns, even today, one year and four months after the earthquake. Thus, the national government, companies, mass media, and ourselves have no other choice but to accept that the present risk management is not adequate. One of the slogans of the Japanese Red Cross Society is that "we will protect human life, health, and dignity under any circumstances". I hope that this spirit will reach the national government, companies, mass media, and individuals, and that the affected areas will recover and be restored as soon as possible.

Written by Hiroshi Inoue

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Reports from Six Blood Centers in Tohoku Region

### The Blood Service Response to the Earthquake Disaster

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