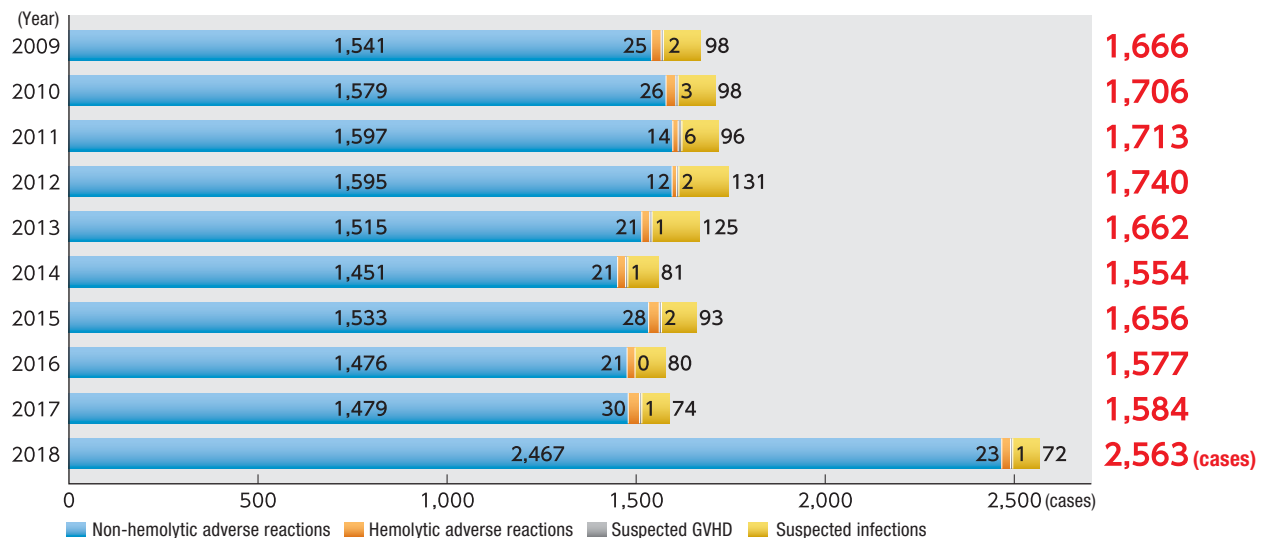


Non-hemolytic Adverse Transfusion Reactions Reported to JRC Blood Centers (2018)

Suspected transfusion-associated adverse reactions and/or transfusion-transmitted infectious cases were reported by medical institutions to JRC blood centers. This issue of Transfusion Information describes non-hemolytic adverse transfusion reaction cases, the most commonly reported cases in 2018.

Changes in the number of reported adverse reactions and infectious cases and types of adverse reactions (including ones assessed as “no cause of imputability to transfusion”)



Total of 2,467 cases of non-hemolytic adverse transfusion reactions were reported in 2018. These accounted for 96.3% of the 2,563 cases reported as transfusion-related adverse reactions and infections.

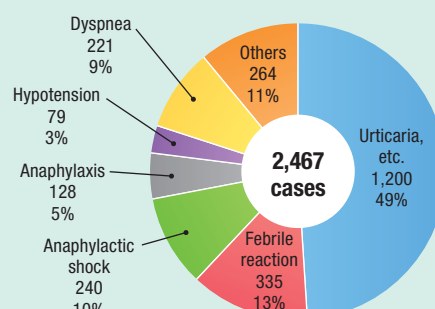
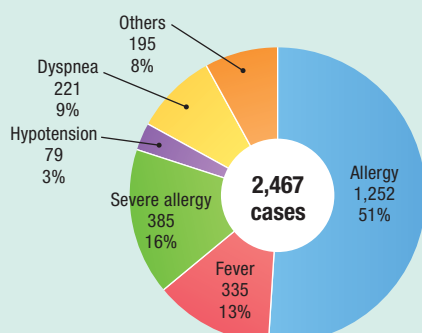
The number of cases reported in 2018 was 1.6 times the number in the previous year, due to changes in the investigation method of transfusion-related adverse reactions and infections introduced in January.

Non-hemolytic adverse transfusion reactions (2018)

Changes in the classification of non-hemolytic adverse transfusion reactions

Along with changes in the investigation method of transfusion-related adverse reactions and infections, allergic reactions such as “urticaria, etc.,” “anaphylactic shock,” and “anaphylaxis” were recategorized as “allergy” and “severe allergy” in 2018.

New classification	Conventional classification
- Allergy - Severe allergy - Fever - Hypotension - Dyspnea - Others	- Urticaria, etc. - Anaphylactic shock - Anaphylaxis - Febrile reaction - Hypotension - Dyspnea - Others
Including transfusion-related acute lung injury (TRALI) and transfusion-associated circulatory overload (TACO)	Including transfusion-related acute lung injury (TRALI) and transfusion-associated circulatory overload (TACO)



Number of reported cases and frequency by component and symptom (frequency based on the total number of bags supplied) (2018)

Components	Platelets*	Red cells*	Plasma
Number of bags supplied	808,179	3,254,881	921,141
Allergy	714 cases (approx. 1/ 1,100)	253 cases (approx. 1/ 13,000)	198 cases (approx. 1/ 4,700)
Severe allergy	167 cases (approx. 1/ 4,800)	93 cases (approx. 1/ 35,000)	87 cases (approx. 1/ 11,000)
Fever	76 cases (approx. 1/ 11,000)	235 cases (approx. 1/ 14,000)	5 cases (approx. 1/ 180,000)
Dyspnea	26 cases (approx. 1/ 31,000)	62 cases (approx. 1/ 52,000)	9 cases (approx. 1/ 100,000)
Hypotension	13 cases (approx. 1/ 62,000)	51 cases (approx. 1/ 64,000)	9 cases (approx. 1/ 100,000)
Cardiac pulmonary edema	8 cases (approx. 1/100,000)	29 cases (approx. 1/ 110,000)	4 cases (approx. 1/ 230,000)
TRALI	2 cases (approx. 1/400,000)	2 cases (approx. 1/1,600,000)	No cases
TACO	5 cases (approx. 1/160,000)	29 cases (approx. 1/ 110,000)	5 cases (approx. 1/ 180,000)
Others	52 cases (approx. 1/ 16,000)	121 cases (approx. 1/ 27,000)	9 cases (approx. 1/ 100,000)
Total	1,063 cases (approx. 1/ 760)	875 cases (approx. 1/ 3,700)	326 cases (approx. 1/ 2,800)

The blood components in the table include both components irradiated and non-irradiated before supply (The non-irradiated components can be irradiated at medical institutions). Cases transfused two or more types of blood components concurrently were excluded.

*Washed red cells, frozen-thawed red cells, blood for exchange transfusion, and washed platelets (including HLA-compatible) were excluded.

Adverse reactions to irradiated washed platelets (2018)

A total of 15 suspected cases (13 recipients) of adverse reactions to transfusion of irradiated washed platelets were reported, including 1 severe case. The recipient in the severe case was subsequently transfused with irradiated platelets and irradiated washed platelets, with no adverse reactions.

Adverse reactions reported: 15 cases

Allergy	6
Fever	6
Hypotension	1
Others	2

Irradiated washed platelets: 12,370 units

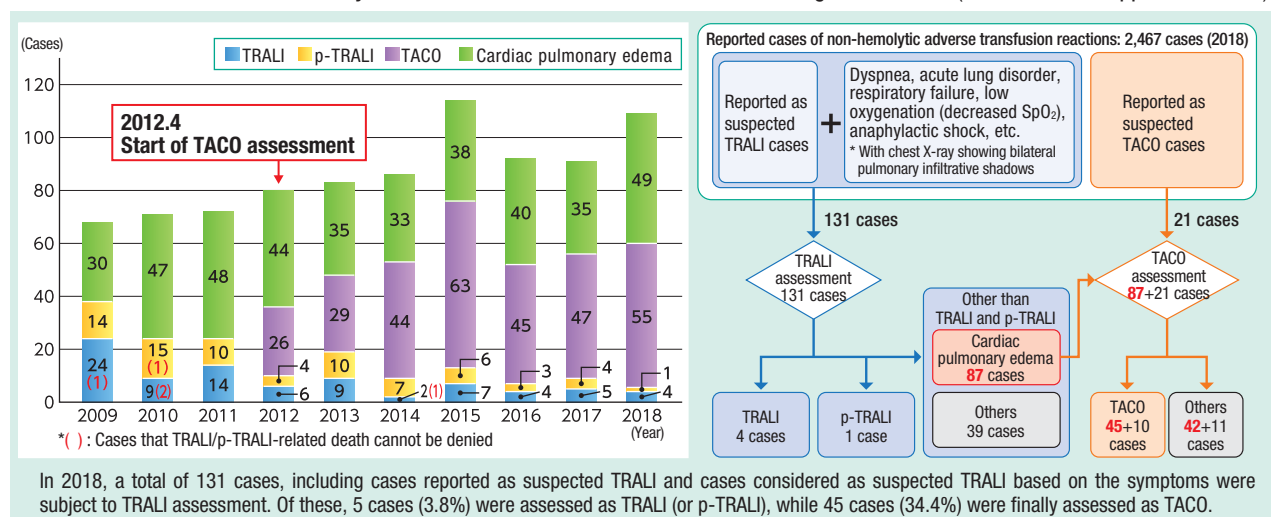
No adverse reactions were reported for 99.9% of the supplied units.

[Indication of washed platelets]

- ◆ A severe adverse reaction such as anaphylactic shock has been observed at least once in previous transfusion(s).
- ◆ An adverse reactions that cannot be prevented by premedication with drugs or other interventions, such as urticaria, fever, dyspnea, or hypotension, has been observed at least twice in previous transfusions.
- ◆ There is no other choice but to transfuse ABO incompatible-platelets, the component to be infused has an antibody titer of 128-fold or higher, or the recipient is a young child.

Numbers of TRALI and TACO cases by year (2009-2018)

Among adverse transfusion reactions presenting with dyspnea, suspected TRALI: Transfusion-Related Acute Lung Injury or TACO: Transfusion Associated Circulatory Overload cases were assessed based on the diagnostic criteria (JRCS criteria is applied for TACO).



In case of any adverse reactions and/or infections related to transfusion of blood components, please notify the medical representatives of your local JRC blood center immediately. Please provide the residual products, the recipient pre- and post-transfusion samples, and any other related materials; it is helpful to investigate and/or identify the cause. For storage of residual products and the recipient samples, refer to the "Guidelines for lookback studies of blood products."

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* For more information, please contact the medical representatives of your local JRC blood center.

Japanese Red Cross Society Haemovigilance Information English website



The website is accessible on smartphones and tablets.

For blood products and transfusion information

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