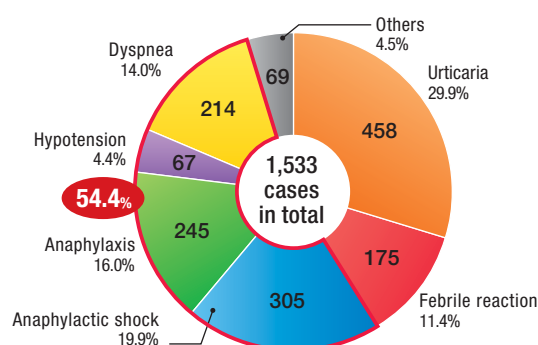


Non-hemolytic Adverse Transfusion Reactions Reported to JRC Blood Centers (2015)

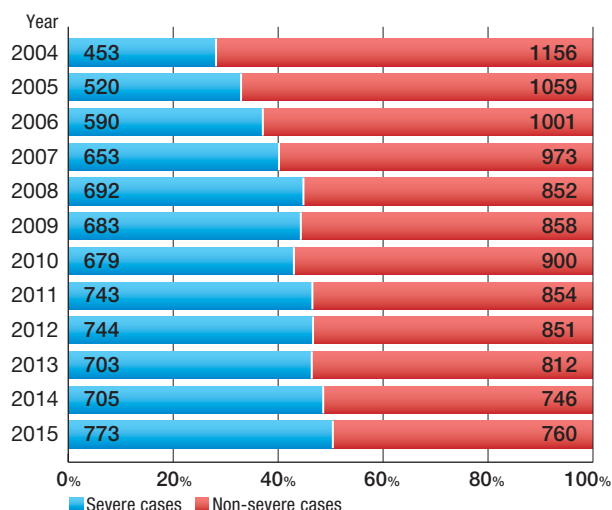
Transfusion associated adverse reactions and/or suspected transfusion-transmitted infectious cases were reported by medical institutions to JRC blood centers in 2015. This issue of Transfusion Information shows the results of analysis of non-hemolytic adverse reaction cases in 2015, the most frequently reported cases.

Breakdown of cases by symptoms

Adverse reaction cases reported by medical institutions are summarized below by symptoms. Severe cases predominantly had the following symptoms; anaphylactic shock, anaphylaxis, hypotension, and dyspnea. These cases accounted for 54.4% of the total number. Note that many of the cases suspected of transfusion related acute lung injury (TRALI) and transfusion associated circulatory overload (TACO) are included in dyspnea.

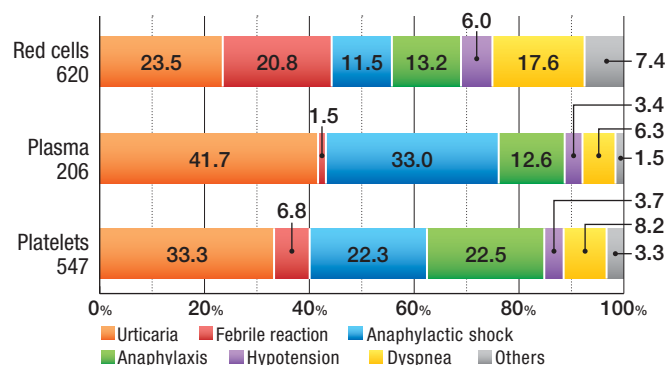
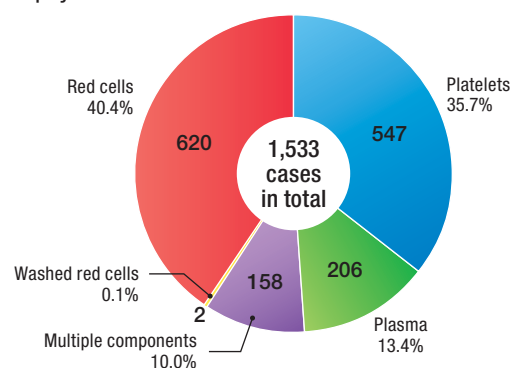


Number of reported severe/non-severe cases



Type of transfused blood components and breakdown of adverse reactions (by symptom)

Most of the non-hemolytic adverse reactions were caused by platelets or red cells. For plasma and platelets, urticaria and anaphylactic shock are more common.



Number of reported cases and frequency by component and symptom (frequency based on the total number of bags supplied) (2015)

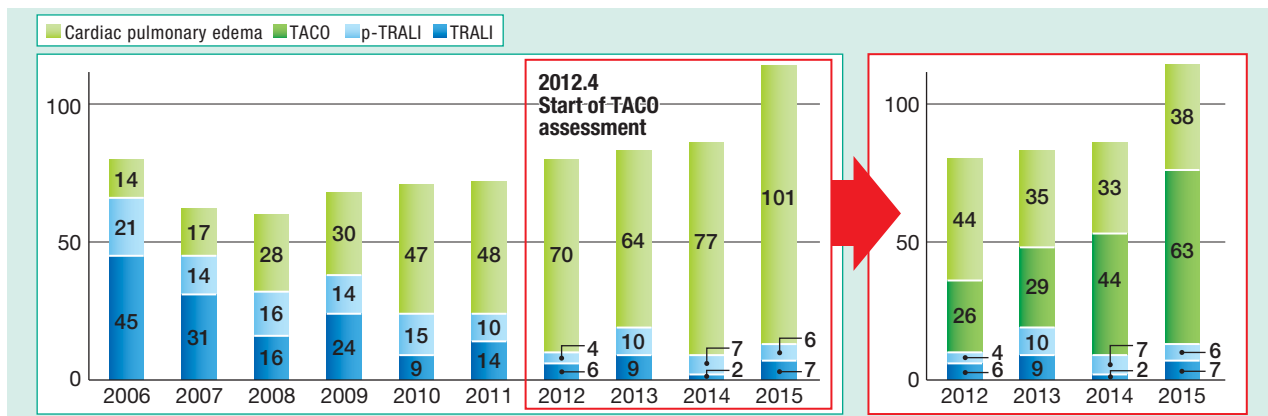
Component	Platelets	Red cells*	Plasma
Number of bags supplied	833,780	3,314,055	955,517
Urticaria	182 cases (approx. 1/ 4,600)	146 cases (approx. 1/ 23,000)	86 cases (approx. 1/ 11,000)
Febrile reaction	37 cases (approx. 1/ 23,000)	129 cases (approx. 1/ 26,000)	3 cases (approx. 1/ 319,000)
Hypotension	20 cases (approx. 1/ 42,000)	37 cases (approx. 1/ 90,000)	7 cases (approx. 1/ 137,000)
Anaphylaxis	125 cases (approx. 1/ 6,700)	83 cases (approx. 1/ 40,000)	26 cases (approx. 1/ 37,000)
Anaphylactic shock	124 cases (approx. 1/ 6,700)	71 cases (approx. 1/ 47,000)	68 cases (approx. 1/ 14,000)
Dyspnea	28 cases (approx. 1/ 30,000)	70 cases (approx. 1/ 47,000)	8 cases (approx. 1/ 119,000)
TRALI	5 cases (approx. 1/167,000)	3 cases (approx. 1/1,105,000)	1 case (approx. 1/956,000)
TACO	8 cases (approx. 1/104,000)	35 cases (approx. 1/ 95,000)	4 cases (approx. 1/ 239,000)
Others	18 cases (approx. 1/ 46,000)	46 cases (approx. 1/ 72,000)	3 cases (approx. 1/ 319,000)
Total	547 cases (approx. 1/ 1,500)	620 cases (approx. 1/ 5,300)	206 cases (approx. 1/ 4,600)

The blood components in the table include components irradiated before supply and components irradiated at medical institutions. Cases given two or more types of blood components in combination were excluded.

*Washed red cells, frozen-thawed red cells, and blood for exchange transfusion were excluded.

Number of TRALI and TACO cases by year (2006-2015)

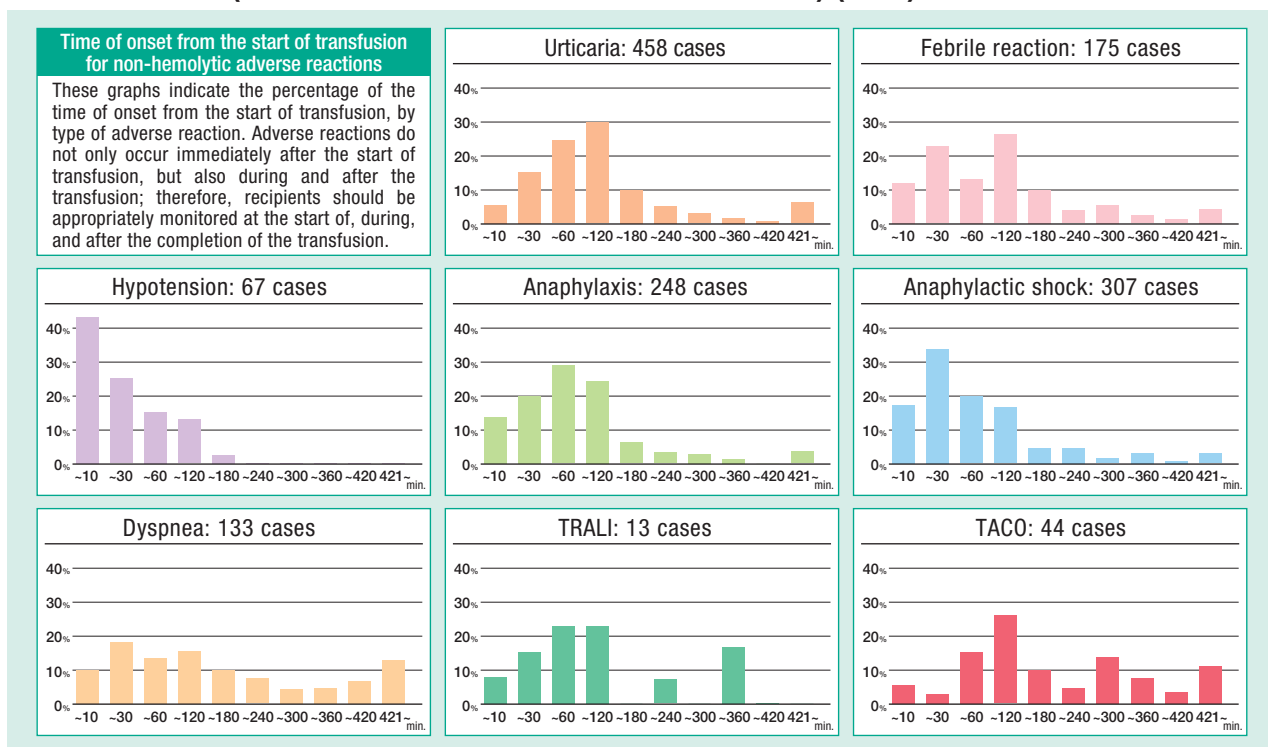
Among the suspected TRALI cases presenting with dyspnea, the following cases had been evaluated based on the diagnostic criteria by JRCS.



Since the donor's anti-leukocyte antibodies are considered one of the causes of TRALI, JRCS started the preparation of fresh frozen plasma derived from whole blood donation preferentially from male donors since 2011 as a safety measure. As a result, the number of cases evaluated as TRALI has been decreasing since 2012.

Meanwhile, in April 2012, TACO assessment (JRCS's own criteria) was introduced against cases evaluated as cardiac pulmonary edema during TRALI evaluation process, in addition to cases reported as TACO. As a result, the number of TACO cases has been increasing every year.

Time of onset (cases with unknown time of onset excluded) (2015)



Notes

Transfusion related acute lung injury (TRALI)

TRALI is defined as transfusion associated noncardiogenic pulmonary edema that is accompanied with dyspnea, tachycardia, hypotension, etc.

TRALI tends to occur within six hours of the completion of transfusion.

Acute respiratory distress syndrome (ARDS) due to other factors than transfusion and pulmonary edema due to excessive fluid administration or blood transfusion may also result in similar symptoms.

Transfusion associated circulatory overload (TACO)

TACO is defined as cardiac failure due to transfusion associated circulatory overload accompanied with dyspnea, tachycardia, hypertension, etc. Infiltrative shadows or other findings suggestive of cardiac pulmonary edema may be observed on chest radiography. TACO often occurs within six hours of the completion of transfusion.

In case any of 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's 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's 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.

For blood products and transfusion information
**Japanese Red Cross Society
Haemovigilance Information English website**

Japanese Red Cross Society Haemovigilance Information

