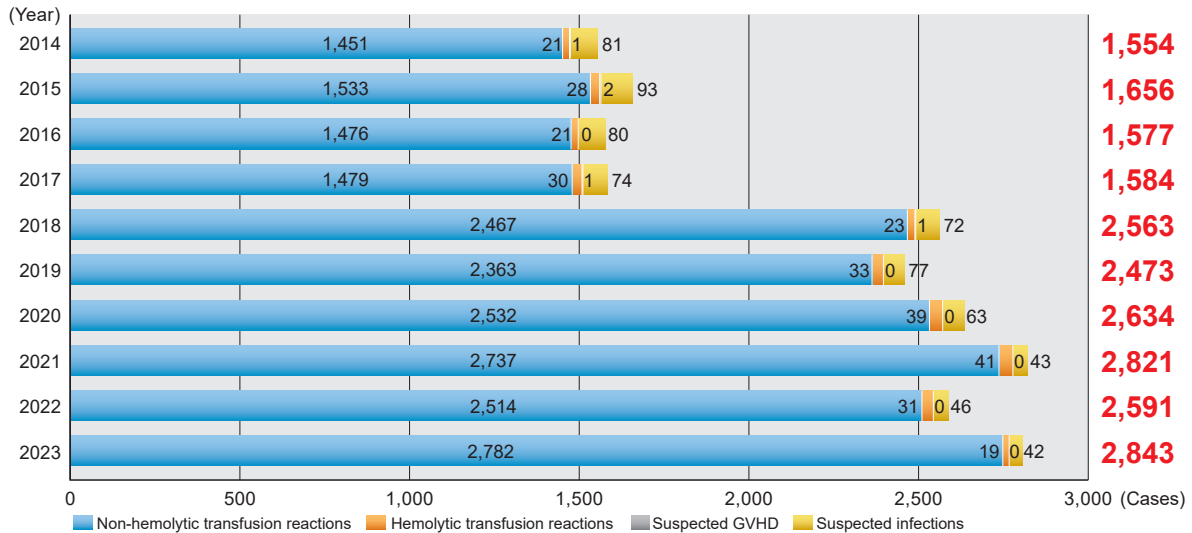


Non-hemolytic Transfusion Reactions Reported to JRC Blood Centers (2023)

Among cases of suspected transfusion-related adverse reactions and infections reported by medical institutions to JRC during 2023, the following are the most frequently reported non-hemolytic transfusion reactions.

Yearly number of reported adverse reactions and infections, and types of adverse reactions (including ones assessed as "unrelated to transfusion")



A total of 2,782 cases of non-hemolytic transfusion reactions were reported in 2023. These accounted for 98% of the 2,843 cases reported as transfusion-related reactions and infections.

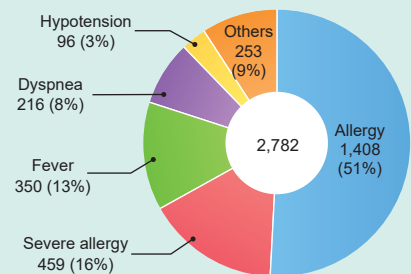
The number of reported cases increased due to changes in the investigation method for transfusion-related adverse reactions and infections that were introduced in January 2018.

Non-hemolytic transfusion reactions (2023)

Number of reported non-hemolytic transfusion reactions

Allergy was reported most frequently, accounting for 1,408 cases (51%). Allergy and severe allergy accounted for about two-thirds of the reported adverse reactions.

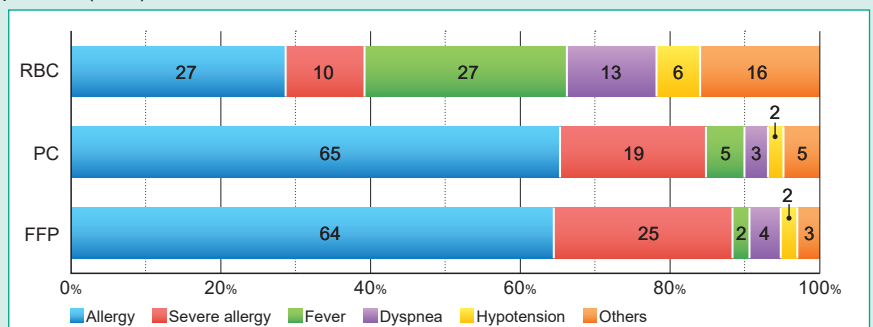
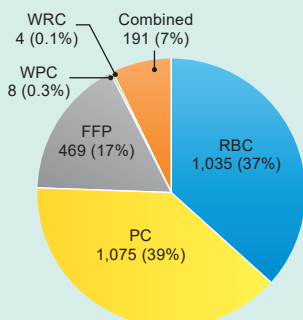
Dyspnea includes TRALI and TACO. The breakdown was TRALI in 10 cases, TACO in 94 cases, and dyspnea in 112 cases.



Involved transfused blood components and reported adverse reactions (symptoms) for each blood component

Many of the non-hemolytic transfusion reactions were caused by platelets (PCs) or red blood cells (RBCs).

Fever and dyspnea accounted for a notably higher portion in RBCs than other components, as did allergy and severe allergy in fresh frozen plasma (FFP) and PCs.



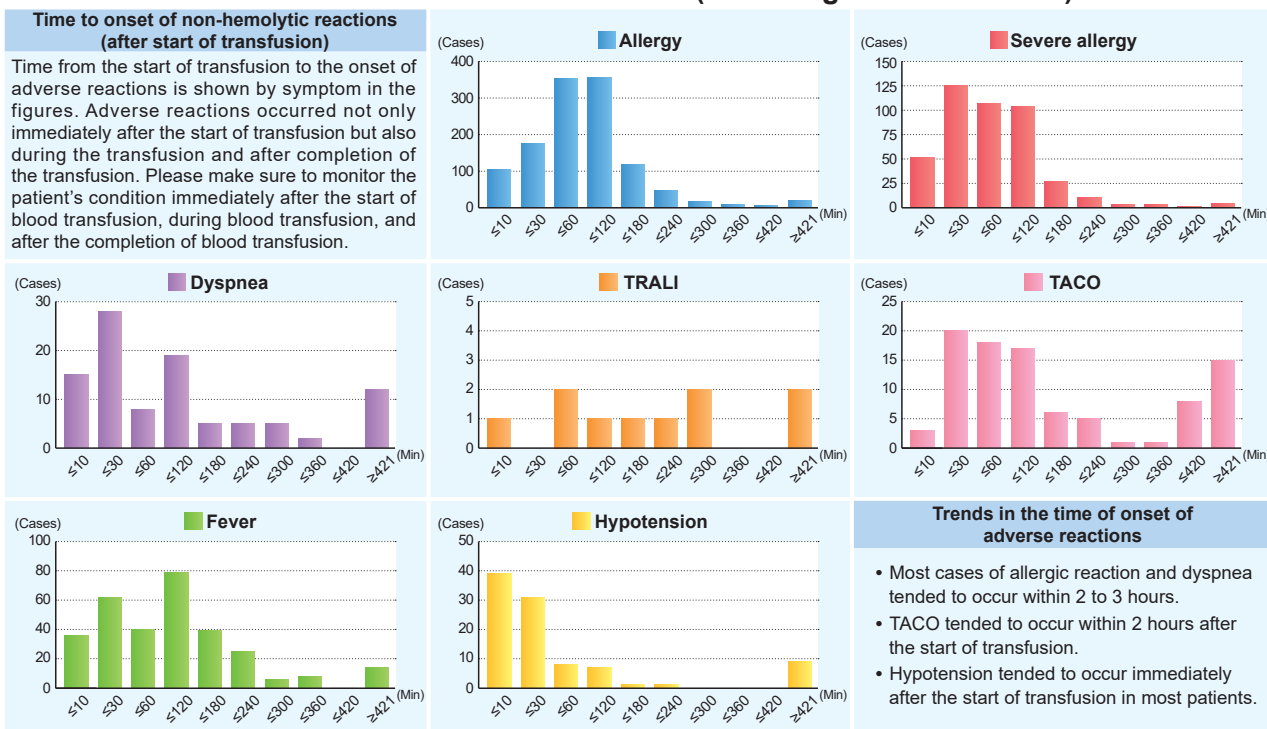
Number of reported cases and frequency by component and symptom (frequency based on the total number of bags supplied) (2023)

Component	Platelets*	Red blood cells*	Fresh frozen plasma
Number of bags supplied	828,776	3,328,843	884,478
Allergy	687 cases (approx. 1/ 1,200)	282 cases (approx. 1/ 12,000)	300 cases (approx. 1/ 3,000)
Severe allergy	203 cases (approx. 1/ 4,100)	103 cases (approx. 1/ 32,000)	116 cases (approx. 1/ 7,600)
Fever	56 cases (approx. 1/ 15,000)	274 cases (approx. 1/ 12,000)	11 cases (approx. 1/ 80,000)
Dyspnea	21 cases (approx. 1/ 39,000)	68 cases (approx. 1/ 49,000)	13 cases (approx. 1/ 68,000)
Hypotension	18 cases (approx. 1/ 46,000)	66 cases (approx. 1/ 50,000)	8 cases (approx. 1/ 110,000)
TACO	7 cases (approx. 1/ 120,000)	71 cases (approx. 1/ 47,000)	7 cases (approx. 1/ 130,000)
TRALI	1 case (approx. 1/ 830,000)	3 cases (approx. 1/ 1,100,000)	1 case (approx. 1/ 880,000)
Others	57 cases (approx. 1/ 15,000)	168 cases (approx. 1/ 20,000)	13 cases (approx. 1/ 68,000)
Total	1,050 cases (approx. 1/ 800)	1,035 cases (approx. 1/ 3,200)	469 cases (approx. 1/ 1,900)

The blood components in the table include both irradiated and non-irradiated components. Cases in which two or more types of blood components were transfused were excluded.

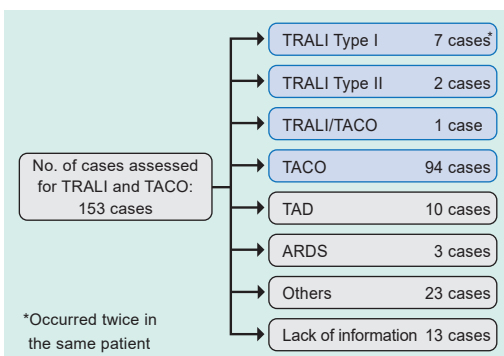
*Washed red blood cells, frozen-thawed red blood cells, blood for exchange transfusion, and washed platelets (including HLA-matched platelets) were excluded.

Time to onset of each adverse reaction in 2023 (excluding unknown cases)



*If there are multiple suspected components, the time to onset from the infusion of the first component is shown in the figures.

Breakdown of TRALI and TACO assessment (2023)



In 2023, a total of 153 case reports were subjected to TRALI and TACO assessment. Among these cases, 7 cases (4.6%) were assessed as TRALI type I, 2 cases (1.3%) as TRALI type II, 1 case (0.7%) as TRALI/TACO, and 94 cases (61.4%) as TACO. Among the 153 cases subjected to the assessment, 13 cases (8.5%) could not be assessed due to the lack of information.

Information necessary for TRALI and TACO assessment

- The following information during the period from 12 hours before the transfusion to improvement in dyspnea after onset: course of adverse reactions, vital signs, blood cell count (including differential leukocyte count), respiratory status (blood gases, oxygen saturation, etc.)
- Chest images (X-ray, CT, etc.) before and after the onset of adverse reactions

In case of any suspected adverse reactions or infections related to transfusion of blood components, please notify medical representatives of your local JRC blood center immediately. You may be asked to provide items such as residual products and the recipient's samples for investigation of causes. For storage of residual products and the recipient samples, refer to the "Guidelines for Lookback Studies of Blood Products."

Transfusion Information 2408-183

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