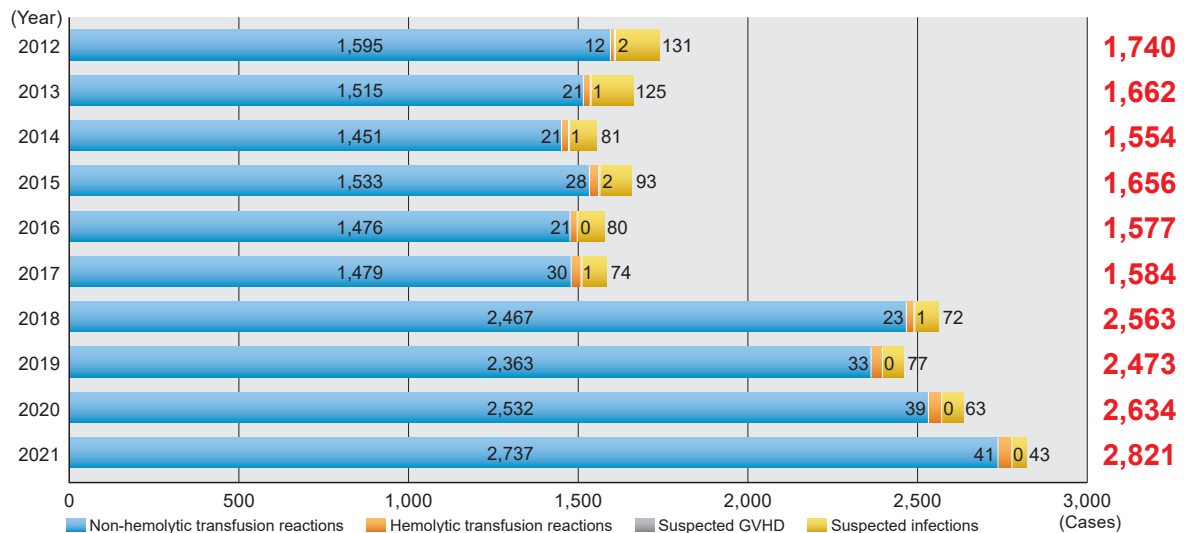


Non-hemolytic Transfusion Reactions Reported to JRC Blood Centers (2021)

Among cases of suspected transfusion-related adverse reactions and infections reported by medical institutions to JRC during 2021, 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 2,737 cases of non-hemolytic transfusion reactions were reported in 2021. These accounted for 97% of the 2,821 cases reported as transfusion-related adverse reactions and infections.

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

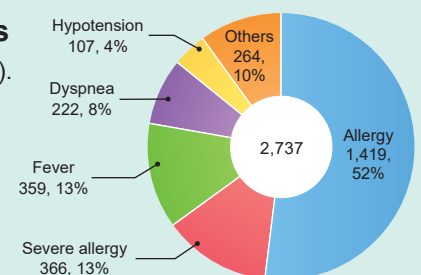
Non-hemolytic transfusion reactions (2021)

Number of reported non-hemolytic transfusion reactions

“Allergy” was reported most frequently, accounting for 1,419 cases (52%). Allergy including “Severe allergy” accounted for about two-thirds of the reported adverse reactions. Dyspnea includes TRALI and TACO.

TRALI: transfusion-related acute lung injury

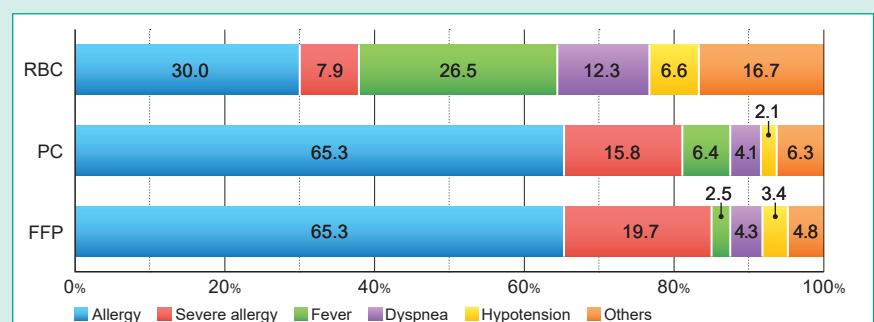
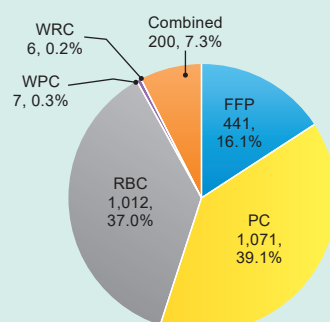
TACO: transfusion-associated circulatory overload



Breakdown of involved transfused blood components and reported blood component-respective adverse reactions (symptoms)

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

Fever and dyspnea accounted for a notably higher portion in RBC than in other components, as did allergy and severe allergy in FFP (plasma) and PC.



Number and frequency of reported cases, by blood component and symptom (frequency based on the total number of bags supplied) (2021)

Component	PC*	RBC*	FFP
Number of bags supplied	803,763	3,289,353	878,281
Allergy	699 cases (approx. 1/ 1,200)	304 cases (approx. 1/ 11,000)	288 cases (approx. 1/ 3,100)
Severe allergy	169 cases (approx. 1/ 4,800)	80 cases (approx. 1/ 41,000)	87 cases (approx. 1/ 10,000)
Fever	69 cases (approx. 1/ 12,000)	268 cases (approx. 1/ 12,000)	11 cases (approx. 1/ 80,000)
Dyspnea	21 cases (approx. 1/ 38,000)	60 cases (approx. 1/ 55,000)	8 cases (approx. 1/ 110,000)
Hypotension	22 cases (approx. 1/ 37,000)	67 cases (approx. 1/ 50,000)	15 cases (approx. 1/ 59,000)
TACO (including cardiac pulmonary edema)	22 cases (approx. 1/ 37,000)	64 cases (approx. 1/ 51,000)	9 cases (approx. 1/ 100,000)
TRALI	1 case (approx. 1/800,000)	0 cases	2 cases (approx. 1/440,000)
Others	68 cases (approx. 1/ 12,000)	169 cases (approx. 1/ 20,000)	21 cases (approx. 1/ 42,000)
Total	1,071 cases (approx. 1/ 800)	1,012 cases (approx. 1/ 3,300)	441 cases (approx. 1/ 2,000)

The blood components in the table include components that are irradiated before supply and components that are not. Cases in which two or more types of blood components were transfused are excluded.

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

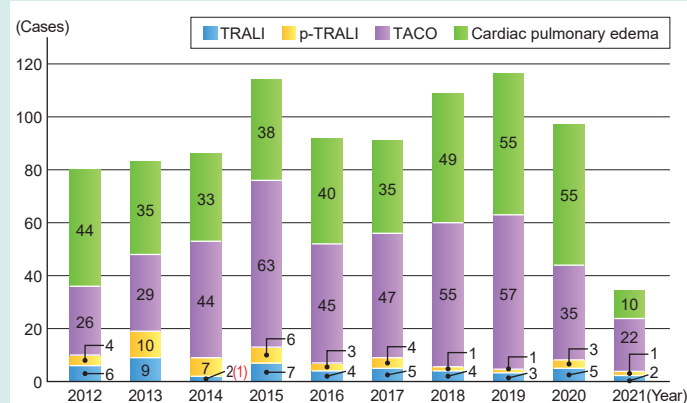
Trends in the number of TRALI and TACO cases

The following are the numbers of TRALI cases assessed based on the 2004 Canadian Consensus Conference diagnostic criteria and TACO cases assessed based on JRCS's diagnostic criteria, among suspected transfusion reaction cases involving dyspnea.

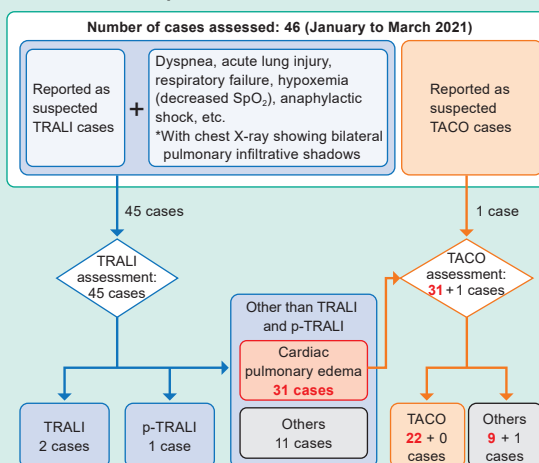
Revised TRALI criteria and newly established TACO criteria were recently published. After reviewing them, JRCS adopted the new criteria from cases reported in April 2021. The numbers of cases in the following chart are based on the criteria both before and after the change.

For more details of the criteria after the change, refer to "Notification of change of JRCS criteria for TRALI and TACO (March 2021)" (https://www.jrc.or.jp/mr/product/information/pdf/info_202103.pdf).

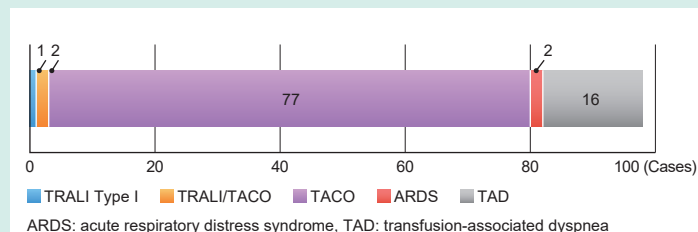
Number of cases before the change in criteria (2012 to March 2021)



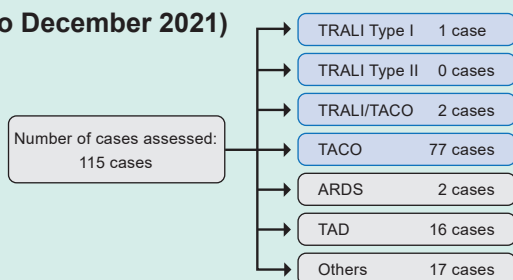
* () Cases in which an association between death and TRALI cannot be denied.
* Figures for 2021 indicate assessment results reported up to March 2021.



Number of cases after the change of the criteria (April to December 2021)



ARDS: acute respiratory distress syndrome, TAD: transfusion-associated dyspnea



Before the change in TRALI and TACO criteria in April 2021, 3 cases were assessed as TRALI (or p-TRALI), and 22 cases were assessed as TACO.

After the change in criteria in April 2021, 1 case was assessed as TRALI Type I, 2 cases were assessed as TRALI/TACO, and 77 cases were assessed as TACO.

In case of any suspected adverse reactions or infections related to transfusion of blood components, please notify the medical representatives at 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 2208-177

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representatives at your local JRC blood center.



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