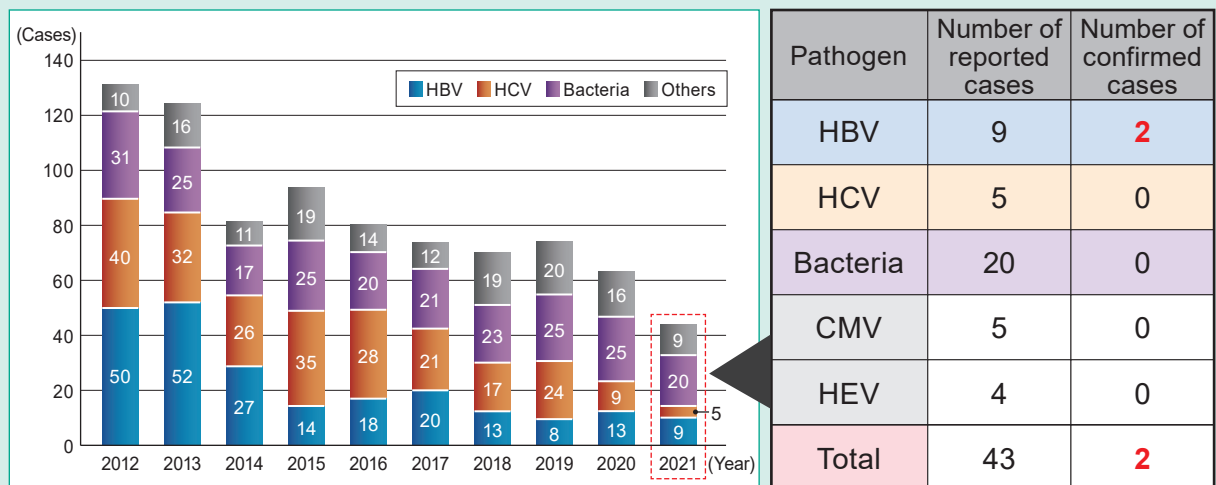


## Infection Cases That were Likely Related to Transfused Blood Components (2021)

JRCS analyzed and evaluated suspected transfusion-transmitted infection (TTI) cases voluntarily reported by medical institutions to JRC blood centers as well as cases subjected to post-donation information-based retrospective studies (lookback studies). In 2021, 2 HBV infection cases were confirmed, through detection of viral nucleic acid in repository samples of the implicated blood donations or subsequent donations.

### Yearly number of cases reported to JRC blood centers as suspected transfusion-transmitted infections and analysis results of the reported cases by pathogen in 2021



### Summary of case reports (cases confirmed to be TTIs based on detection of pathogens in relevant items such as repository samples of donated blood) (2021)

#### HBV

- Voluntary report: A case reported by a medical institution as a suspected transfusion-transmitted viral infection

Case No.	Primary disease	Blood component (year and month of blood collection)	Age	Sex	Pre-transfusion test		Post-transfusion test		ALT		Patient outcome
					Test items	Test results	Positive conversion items	Duration after transfusion	Maximum (IU/L)	Duration after transfusion	
1	Acute aortic dissection	FFP-LR (2019.12)*	60s	M	HBV-DNA HBs-Ag HBs-Ab HBc-Ab	Neg.	HBV-DNA	11 wks	1255	18 wks	Recovering
							HBs-Ag HBc-Ab	18 wks			

\* The donated blood above was negative for HBV-NAT, but turned positive at the time of the subsequent donation, 12 weeks later.

A lookback study was not conducted because it was outside of the study period specified in the "Guidelines for Lookback Studies of Blood Products" at the time.

- Post-donation information: A case identified through a lookback study conducted based on reported positive conversion in blood screening test results

Case No.	Primary disease	Blood component (year and month of blood collection)	Age	Sex	Pre-transfusion test		Post-transfusion test		ALT		Patient outcome
					Test items	Test results	Positive conversion items	Duration after transfusion	Maximum (IU/L)	Duration after transfusion	
1	Acute myeloid leukemia	Ir-PC-LR (2021.7)*	60s	M	HBs-Ag HBs-Ab HBc-Ab	Neg.	HBs-Ag	21 wks	◆	◆	Not recovered

\* The donated blood above was negative for HBV-NAT, but turned positive at the time of the subsequent donation, 4 weeks later.

◆ No data

## HBV infection cases after implementation of individual donation NAT

JRCS implemented individual donation nucleic acid amplification test (ID-NAT) in August 2014. Since then, 7 cases of HBV infection were confirmed to be caused by transfused blood components.

The blood components used for transfusion were negative for HBV on ID-NAT, but turned positive at the time of the blood donors' subsequent donation, and the identified HBV showed homology in viral nucleotide sequence with HBV detected in the recipients.

The genotypes of the detected HBV were A2 in 5 cases, and B2 and C2 in 1 case each.

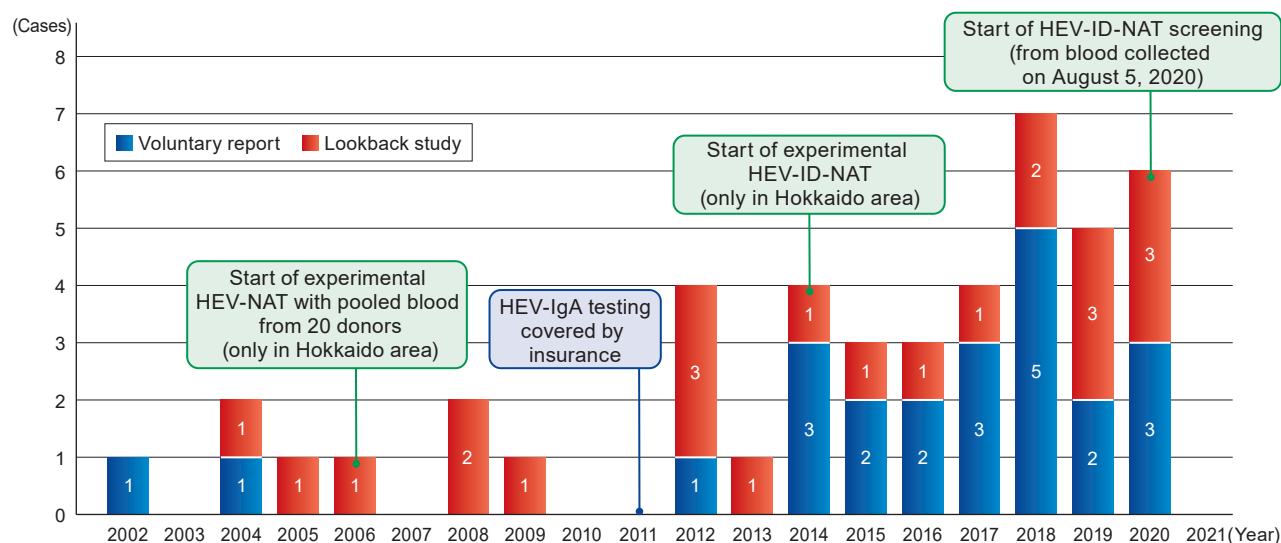
No. (Reported year)	1 (2016)	2 (2017)	3 (2018)	4 (2020)	5 (2020)	6 (2021)	7 (2021)
Causative component	PC	PC	PC	PC	PC	FFP	PC
Interval from blood donation to HBV-positive conversion	31 days	20 days	14 days	23 days	29 days	84 days	28 days
HBV Genotype	A2	C2	A2	A2	A2	A2	B2

## Yearly number of transfusion-transmitted HEV infection cases

A transfusion-transmitted HEV infection was detected for the first time in 2002, and there have been 45 confirmed cases as of 2020.

JRCS began conducting HEV-NAT on all donated blood, starting with blood collected on August 5, 2020.

As of June 2022, no cases of transfusion-transmitted HEV infection have been confirmed after the introduction of HEV-NAT.



### The following safety measures are taken in addition to HEV-NAT.

- ▶ At blood donation sites, JRCS conducts thorough interviews with donors and raises donors' awareness of the sources of HEV infection and the risks of infecting recipients.
- ▶ Prospective donors are deferred from blood donation for 6 months after eating raw or undercooked meat or entrails of pigs, boars, or deer, which pose a risk of transmitting HEV to humans.

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 2208-176

Issued by:  
Medical Information Division, Technical Department,  
Blood Service Headquarters, Japanese Red Cross Society  
1-2-1 Shiba-Koen, Minato-ku, Tokyo 105-0011, Japan  
\* For more information, please contact the medical  
representatives at your local JRC blood center.



### Japanese Red Cross Society Haemovigilance Information English website

For blood products and transfusion information

Japanese Red Cross Society  
Haemovigilance Information

Search



The website is accessible  
on smartphones and tablets.

