NHS National Services Scotland

Transfusions Associated with a positive bacterial screening (Bact/Alert™) result

SCOTTISH NATIONAL BLOOD TRANSFUSION SERVICE®

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You have been informed that your patient has received a transfusion linked to a positive bacterial screening (Bact/Alert™) result.

This leaflet will help you to understand:

- What the result means
- What actions you need to take
- Who you can contact for more information

Bacterial screening of platelets

Transfusion services in the UK screen all their platelet components for bacterial contamination using Bact/Alert™. Platelets are made, in a sterile closed system, by combining buffy coats from whole blood donations (platelet pools) or from platelet only (platelet apheresis) donations. This means that a positive bacterial screen result may be associated with platelet components +/- associated components (eg red cells or plasma).

Platelets are stored between 20 and 24 C, temperatures at which bacteria can proliferate. Therefore, bacterial screening is performed on 100% of platelets, as a blood safety measure This allows platelets to have a shelf life of 7 days and improves platelet availability for patients.

Sampling for bacterial screening is taken at least 36 hours after donation and components are held for a further 6 hours before being issued to patients, allowing identification of components at highest risk of containing bacteria. A sample of each platelet is taken and monitored until Day 8 post donation ie 1 day after platelet expiry, no matter when the platelets or associated red cell/and or plasma (platelet pools) or associated platelets (platelet apheresis) are transfused.

In 2024 the bacterial screening positive rate was 0.17% for platelet pools and 0.10% for apheresis platelets.

Positive bacterial screening result

If a bacterial screening result becomes positive at any point during testing, the medical team at the Scottish National Blood Transfusion Service (SNBTS) will be informed if associated components (platelets, red cells or plasma) have been transfused. They will contact patients' clinical teams to explain the findings and provide guidance on next steps.

What SNBTS Medical Team know when they initially contact you:

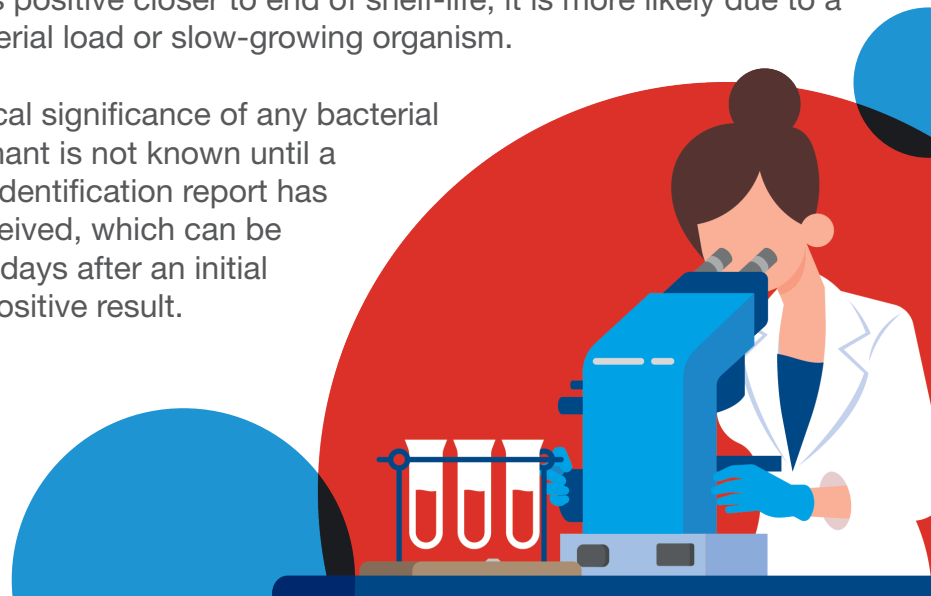
- When the Bact/Alert™ became positive (eg Day 7)
- When the component/s were transfused
- Patient's CHI number and hospital where transfused

They **do not** have details about the potential organism or patient clinical details at that point.

Significance of positive bacterial screening result

If screening becomes positive soon after donation, it is more likely due to a high bacterial load or fast-growing organism. If screening becomes positive closer to end of shelf-life, it is more likely due to a low bacterial load or slow-growing organism.

The clinical significance of any bacterial contaminant is not known until a species identification report has been received, which can be up to 14 days after an initial screen positive result.



Actions for clinical teams

Routine

- All patients should be consented prior to and appropriately monitored during their transfusion.
- Patients being transfused as a day case should be made aware of when and how to seek medical attention, if required, following discharge.

If you are made aware of a positive bacterial screening result

- Be vigilant for signs/symptoms of infection in your patient
  - If your patient has an unexplained fever or symptoms, has been or becomes unwell following transfusion, consider
    - taking blood cultures
    - commencing broad spectrum antibiotics
    - Liaison with your local microbiology team

What happens next?

Positive bacterial screening samples will be further investigated, and where required, sent for species identification and antimicrobial sensitivity testing.

Where possible, any available associated components, ie red cells and plasma, are also returned to the Jack Copland Centre (JCC) for investigative testing and the investigation may take around 3 weeks to conclude.

SNBTS medical teams will notify clinical teams of outcome of the investigation, usually by letter, once available.

Who to contact for further information?

Please contact your local SNBTS medical staff via local switchboard for further information.