

# Use Of Irradiated Components Following Stem Cell Transplant: To Unflag Or Not?

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## BACKGROUND:

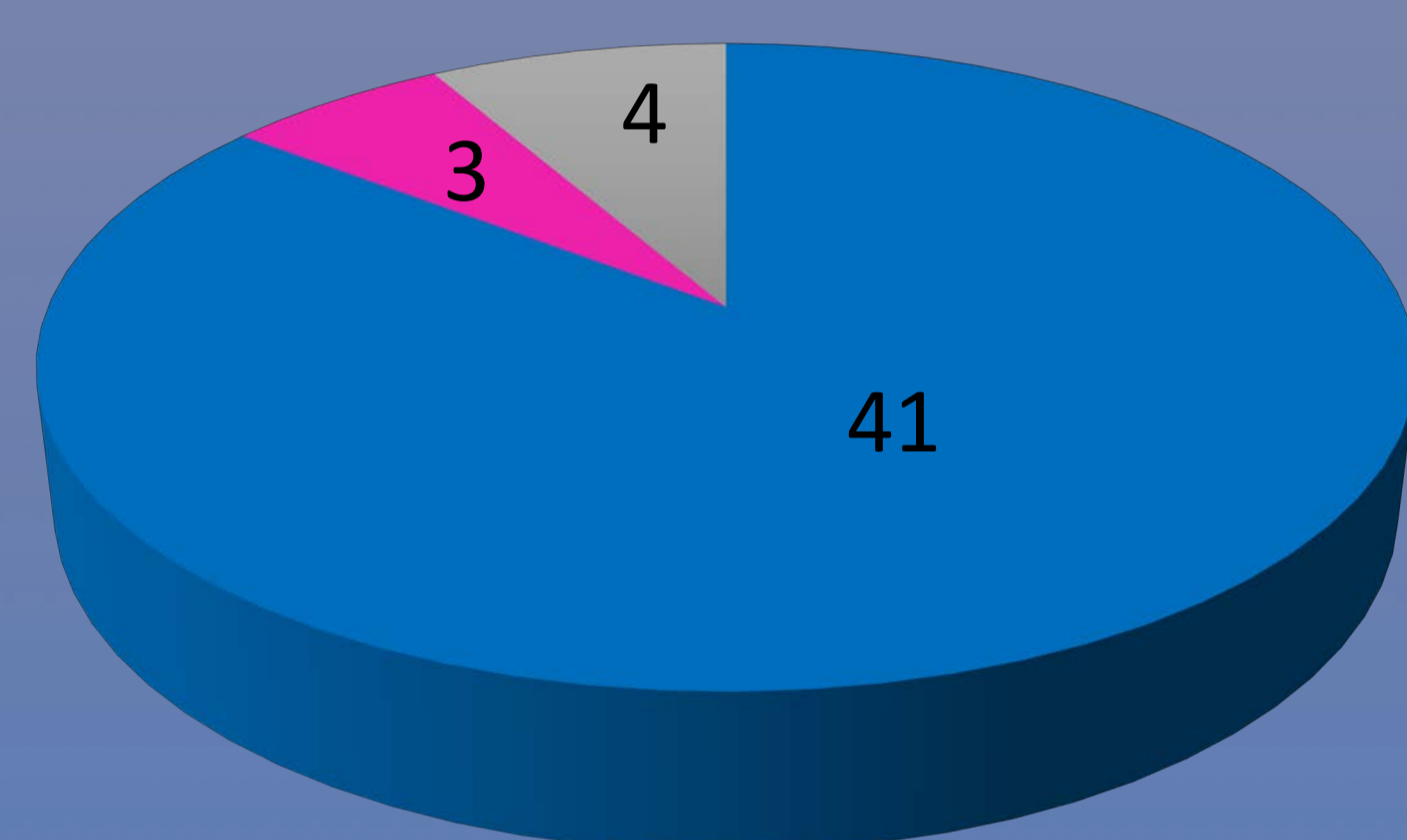
British Society of Haematology (BSH) guidelines for use of irradiated components state that irradiated components are required for a finite time following stem cell transplant (SCT).

Current practice at the Queen Elizabeth Hospital Birmingham (QEHB), is not to remove the “flag” on the laboratory information management system (LIMS) for patients who no longer require irradiated components.

## AIMS:

To ascertain whether patients who no longer require irradiated blood components continue to undergo transfusion with irradiated components unnecessarily.

## Common Reasons for Needing Lifelong Irradiated Blood Components



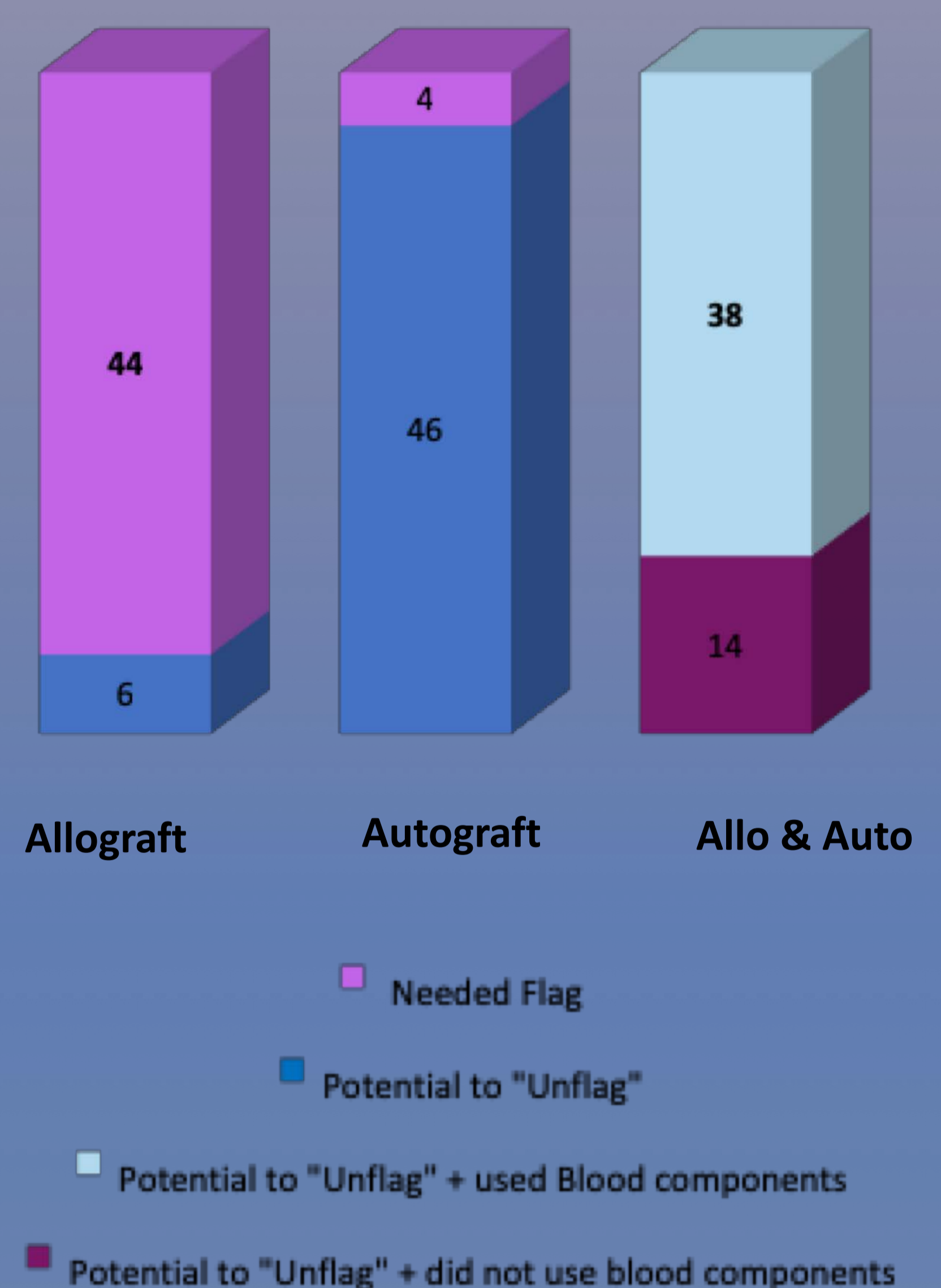
■ Purine Analogue ■ Alemtuzumab  
■ Hodgkin's Lymphoma

## METHODS:

❖ Review of 50 allografts and 50 autografts undergoing SCT in 2018 and determining any additional indications for irradiated components according to BSH guidelines.

❖ Data collected: diagnosis, conditioning chemotherapy, end date for required use of irradiated components (where applicable) any irradiated components transfused after this time.

## Patients Needing Irradiated Product Flag vs Those With The Potential To Remove The Flag



Allograft

Autograft

Allo & Auto

■ Needed Flag

■ Potential to "Unflag"

■ Potential to "Unflag" + used Blood components

■ Potential to "Unflag" + did not use blood components

## RESULTS:

❖ None of the 100 patients were transfused with irradiated components beyond the required time.

❖ 48 patients needed life long irradiated components: 41 (purine analogues), 3 (Alemtuzumab) and 4 (Hodgkin's Lymphoma).

❖ None of the patients who could have had the flag taken off, needed transfusion of blood components beyond day 100

❖ Day 0 For 50 Allografts and 50 Autografts ranged from January 2018 to July 2018

❖ Top 3 Underlying diseases were: AML(32%), MDS(30%) & ALL(8%) for Allografts ; Multiple myeloma(74%), Non Hodgkin's lymphoma(14%) & Hodgkin's Lymphoma(8%) for Autografts

❖ 26% of Autografts did not require any transfusion of components within the Day 100 period

## CONCLUSION:

We demonstrated that no changes to our current practice are required. This may be reassuring to other centres where time is spent removing patients' requirement for irradiated components from the LIMS.

A limitation to our study was the short follow-up time as patients may require transfusion at the point of disease relapse, more than two years post SCT.

## REFERENCES:

Foukaneli, T., Kerr, P., Bolton-Maggs, P.H.B., Cardigan, R., Coles, A., Genery, A., Jane, D., Kumararatne, D., Manson, A., New, H.V. and Torpey, N. (2020). Guidelines on the use of irradiated blood components. *British Journal of Haematology*.