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A fatal event in an unrelated Bone Marrow donor

This statement is being issued following the preliminary notification of the death of an unrelated bone marrow (BM) donor in the US. This very sad case has raised many questions and this statement is intended as a reminder of published data on the incidence of serious adverse events associated with BM donation that may help you in addressing those questions. If there are further details or results of analysis available that need to be shared with you, we will send you those as soon as possible.

Fatal or life-threatening complications among unrelated donors of hematopoietic stem cells are exceedingly rare. The World Marrow Donor Association (WMDA) is aware of one donor death in >250 000 collections which occurred between 1988 and 2018. The donor died of complications following a central venous catheter (CVC) placement for PBSC collection in 2011¹. There are no previous reports of unrelated donor deaths during bone marrow collection.

In 2014, a paper was published indicating that bone marrow donors have a risk of developing serious adverse events of 2.38%. The study used standardized FDA definitions that include death, life-threatening events, persistent or significant disability, but also unplanned inpatient hospitalization or prolongation of existing hospitalization to characterize an event as a serious adverse event².

True life-threatening complications (such as pulmonary embolism, aspiration) have been reported in a frequency of approximately 1 in 200² to 1 in 5 000 bone marrow collections³.

A number of fatal incidents in related donors have been described, however, the health criteria for related donors are less strict than the criteria for unrelated donors. Related donors are older (no upper age limit, substantially higher mean age even in the comparable group age 18 – 60) and comorbidities (especially cardiovascular⁴), that would lead to deferral for an unrelated donor are widely accepted.

The World Marrow Donor Association is a global association that is collecting data on serious adverse events occurring in unrelated donors and in the number of unrelated transplants⁵.

¹<https://share.wmda.info/pages/viewpage.action?pageId=297107627&preview=/297107627/333718963/20110824-CLWG-SEAR%20Alert%20August%202011.pdf>

²<http://www.bloodjournal.org/content/123/23/3655>

³ [https://www.bbmt.org/article/S1083-8791\(17\)30302-6/fulltext](https://www.bbmt.org/article/S1083-8791(17)30302-6/fulltext)

⁴ <http://www.haematologica.org/content/94/1/94>

⁵ <https://www.nature.com/articles/bmt2013104>