

Pregnancy and breastfeeding

This page was last modified on 27 July 2023, at 11:05.



Contents

- [Pregnancy](#)
- [Individual at risk](#)
- [Guidance at RECRUITMENT for adult volunteer donor \(NA for maternal donor \(cord blood donation\)\)](#)
- [Guidance at CT /WORK-UP](#)
- [Guidance](#)
 - [Unacceptable if:](#)
- [Breastfeeding](#)
- [Individual at Risk](#)
- [Guidance at RECRUITMENT](#)
- [Guidance at CT / WORK-UP](#)
- [Justification for Guidance](#)
- [Relevant data is reviewed and updated in Drugs and Lactation Database \(LactMed\).⁷](#)

Pregnancy

Individual at risk

Donor

Guidance at RECRUITMENT for adult volunteer donor (NA for maternal donor (cord blood donation))

ACCEPTABLE. It is very unlikely that a donor who is pregnant at recruitment will be called to donate within the first year of joining the register.

Guidance at CT/WORK-UP

QUALIFIED, see below

Guidance

Unacceptable if:

- Currently pregnant;
- Less than one week has passed for every completed week of a recent pregnancy
- Less than three months have passed since a first trimester
- The pregnancy resulted in a malignant hydatidiform mole
- The pregnancy resulted in a non-malignant hydatidiform mole and treatment and follow-up is ongoing

Breastfeeding

Individual at Risk

Donor (infant)

Guidance at RECRUITMENT

ACCEPTABLE

Guidance at CT / WORK-UP

QUALIFIED, if the donor is sufficiently informed about and accepts the fact that there are limited data on safety or is willing to interrupt breastfeeding (and throw away any expressed milk, "pump and dump") during mobilization and for three days after PBSC and for at least 24 hours after Bone Marrow Collection (discuss case per case with the attending anesthesiologist).

Justification for Guidance

In donors who breastfeed and are qualified to donate (taking the recovery period after pregnancy into consideration) the concern is that drugs used in the donation procedure may be ingested by and harmful for the infant. In line with this, several donor suitability guidance documents consider uninterrupted breastfeeding a contra-indication for PBSC and ask the donor if she is willing to interrupt breastfeeding during mobilization and for a couple of days after donation.

However, G-CSF is a normal component of breast milk. Limited research shows that filgrastim and lenograstim are poorly excreted into breastmilk¹⁻³ and are undetectable by 3 days after an injection.⁴

Evidence also suggests that G-CSF given to neonates orally is not absorbed in significant quantities.⁵ In a single-center crossover study in which 22 infants received 1 dose of rhG-CSF (100 microg/kg) (10 times the subcutaneous dose) orally, no side-effects, safety issues or significant changes in plasma G-CSF concentration were observed.⁵ In a placebo controlled study G-CSF was safely given to 8 infants suffering from necrotizing enterocolitis.⁶ These studies suggest that G-CSF mainly has a local effect on the GI tract and not systemically.

Relevant data is reviewed and updated in Drugs and Lactation Database (LactMed).⁷

Based on these data the Specialist Pharmacy Service in the UK states that filgrastim (and per expert advice) also lenograstim can be used during lactation.⁸

The recommendation is to inform the donor about the available data and to leave the decision to continue or interrupt breastfeeding to her.

References

1. Pessach I, Shimoni A, Nagler A. Granulocyte-colony stimulating factor for hematopoietic stem cell donation from healthy female donors during pregnancy and lactation: what do we know? *Hum Reprod Update*. 2013;19:259–67. [PubMed]
2. Shibata H, Yamane T, Aoyama Y, et al. Excretion of granulocyte colony-stimulating factor into human breast milk. *Acta Haematol*. 2003;110:200–1. [PubMed]
3. Nelson RC. Granulocyte colony-stimulating factor (G-CSF) in breastmilk of a nursing donor during hematopoietic progenitor cells (HPC) mobilization. *Transfusion* 2018;58 (Suppl S2):169A. Abstract. doi:10.1111/trf.14903. [CrossRef]
4. Kaida K, Ikegame K, Fujioka T, et al. Kinetics of granulocyte colony-stimulating factor in the human milk of a nursing donor receiving treatment for mobilization of the peripheral blood stem cells. *Acta Haematol*. 2007;118:176–7. [PubMed]
5. Calhoun DA, Maheshwari A, Christensen RD. Recombinant granulocyte colony-stimulating factor administered enterally to neonates is not absorbed. *Pediatrics*. 2003;112:421–3. [PubMed]
6. Canpolat FE, Yurdakok M, Korkmaz A, et al. Enteral granulocyte colony-stimulating factor for the treatment of mild (stage I) necrotizing enterocolitis: a placebo-controlled pilot study. *J Pediatr Surg*. 2006;41:1134–8. [PubMed]
1. Drugs and Lactation Database (LactMed). <https://www.ncbi.nlm.nih.gov/books/NBK501373/>
2. Specialist Pharmacy Service. <https://www.sps.nhs.uk/medicines/filgrastim/#:~:text=filgrastim>